Vera C. Rubin Observatory
Software Test Report

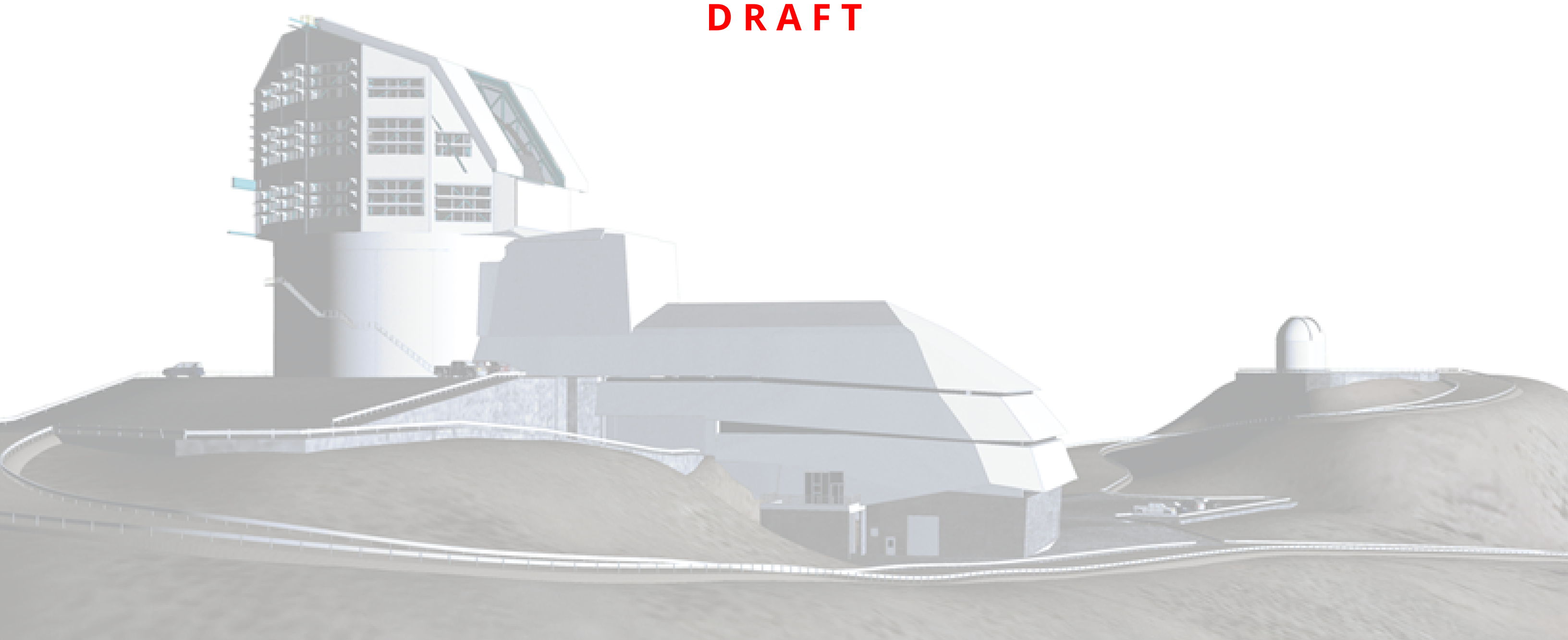
LVV-P100: TMA Pointing and Tracking Verification Test Plan and Report

Chuck Claver

SCTR-81

Latest Revision: 2023-06-29

DRAFT



Abstract

This is the test plan and report for **TMA Pointing and Tracking Verification**, an LSST milestone pertaining to the Data Management Subsystem.
This document is based on content automatically extracted from the Jira test database on 2023-06-29 . The most recent change to the document repository was on 2023-06-29.

Change Record

Version	Date	Description	Owner name
	2022-09-08	First draft	Chuck Claver

Document curator: Chuck Claver
Document source location: `https://github.com/lsst-dm/SCTR-81`
Version from source repository: b650046

Contents

LVV-P100: TMA Pointing and Tracking Verification Test Plan and Report

1 Introduction

1.1 Objectives

The objective of this test plan is to verify the TMA pointing relative offset, repeatability, and accuracy. We will also verify the TMA tracking range in azimuth and elevation and the tracking drift. In addition to these verifications, we will validate the slew and settle time and the tracking jitter. These validations will be done after UTE has verified them using the TMA encoders. This test plan will utilize a StarTracker and DIMM test setup to perform the verification and validations.

1.2 System Overview

- The system consists of the StarTracker (two tubes) and the DIMM telescope mounted on the TMA.
- The StarTracker uses jumbo frames these need to be relayed from the Hardware through a dedicated network using the cable.
- The control of the TMA is done via CSC control.
- The Dome control is either controlled through the CSC or manually.

1.3 Document Overview

This document was generated from Jira, obtaining the relevant information from the LVV-P100 Jira Test Plan and related Test Cycles (LVV-C224 LVV-C228 LVV-C229 LVV-C230 LVV-C232 LVV-C233).

Section 1 provides an overview of the test campaign, the system under test (TMA), the applicable documentation, and explains how this document is organized. Section 2 provides additional information about the test plan, like for example the configuration used for this test or related documentation. Section 3 describes the necessary roles and lists the individuals assigned to them.

Section 4 provides a summary of the test results, including an overview in Table 2, an overall assessment statement and suggestions for possible improvements. Section 5 provides detailed results for each step in each test case.

The current status of test plan LVV-P100 in Jira is **Draft** .

1.4 References

[1] **[DMTN-140]**, Comoretto, G., 2021, *Documentation Automation for the Verification and Validation of Rubin Observatory Software*, DMTN-140, URL `https://dmtn-140.lsst.io/`, Vera C. Rubin Observatory Data Management Technical Note

[2] **[DMTN-178]**, Comoretto, G., 2021, *Docsteady Usecases for Rubin Observatory Constructions*, DMTN-178, URL `https://dmtn-178.lsst.io/`, Vera C. Rubin Observatory Data Management Technical Note

[3] **[LSE-160]**, Selvy, B., 2013, *Verification and Validation Process*, LSE-160, URL `https://ls.st/LSE-160`

2 Test Plan Details

2.1 Data Collection

Observing is not required for this test campaign.

2.2 Verification Environment

At the summit inside the main dome, using the final TMA hardware.

2.3 Entry Criteria

The soak test is executed, and the performance is understood.

1. LVV-T2748 (1.0) TMA Pointing and Tracking - Soak Test with Random Steps using MT-Mount

Hardware:

1. StarTracker available
2. TMA Interface build and available
3. SMR Reference installed
4. IT/Electrical connections established
5. Dome rotation possible

Software:

1. System Control – Minimum needed to run the test
   (a) TMA readiness/functionality
   (b) Rubin / Tekniker interfaces: Presentation of the TMA control interface
   (c) Pointing

   (d) Tracking
   (e) Dome rotation

2. Generic Camera CSC
   (a) Header services
   (b) LFA Readiness
   (c) Image access from LFA
   (d) Optional Goal: Larger software integration with the TCS

2.4 Exit Criteria

- All necessary data are taken.
- Data are analyzed and compared with FAT.
- All related tickets closed or in the case of FRACAS tickets progressed as far as possible.
- All test steps results are filled.
- The test plan report is generated.

2.5 Related Documentation

Docushare collection where additional relevant documentation can be found:

- Verification artifacts:
  - Star tracker data in the LFA of the EFD
  - Dimm data in the LFA of the EFD
  - Analysis products
    * Plot on the boresight estimation

  No DocuShare collection for this test plan is foreseen.

2.6 PMCS Activity

Primavera milestones related to the test campaign:

- None

3 Personnel

The personnel involved in the test campaign is shown in the following table.

	T. Plan LVV-P100 owner:	**Chuck Claver**	
	T. Cycle LVV-C224 owner:	**Chuck Claver**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-T2707	Holger Drass	JIRAUSER20616	Telescope and Dome operator(s). For the Tailgate meeting, all personnel involved in observations with the main telescope during the night.
LVV-T2706	Roberto Tighe		Integration Specialist Telescope Operator Systems Engineer
LVV-T2705	Chuck Claver		Optics specialist Integration specialist
	T. Cycle LVV-C228 owner:	**Chuck Claver**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-T2707	Chuck Claver		Telescope and Dome operator(s). For the Tailgate meeting, all personnel involved in observations with the main telescope during the night.
LVV-T2714	Chuck Claver	Holger Drass	Two observing specialists.
LVV-T2730	Chuck Claver	JIRAUSER20616	Oversight TMA and Dome operator Startracker Test Script executer Data Analyzer SE support
LVV-T2715	Chuck Claver		2x Observing Specialist
	T. Cycle LVV-C229 owner:	**Chuck Claver**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-T2707	Chuck Claver	JIRAUSER20609	Telescope and Dome operator(s). For the Tailgate meeting, all personnel involved in observations with the main telescope during the night.
LVV-T2714	Chuck Claver		Two observing specialists.

LVV-T2731	Chuck Claver	Ioana Sotuela	Observing Specialist Systems Engineer
LVV-T2715	Chuck Claver		2x Observing Specialist
	T. Cycle LVV-C230 owner:	**Chuck Claver**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-T2707	Chuck Claver		Telescope and Dome operator(s). For the Tailgate meeting, all personnel involved in observations with the main telescope during the night.
LVV-T2714	Chuck Claver		Two observing specialists.
LVV-T2732	Chuck Claver	Holger Drass	Observing Specialist Systems Engineer
LVV-T2715	Chuck Claver		2x Observing Specialist
	T. Cycle LVV-C232 owner:	**Chuck Claver**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-T2738	Chuck Claver	Holger Drass	Data analyst Systems Engineer
LVV-T2703	Chuck Claver		Data analyst Systems Engineer
LVV-T2749	Holger Drass		Data analyst SE specialist
	T. Cycle LVV-C233 owner:	**Chuck Claver**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-T2707	Chuck Claver		Telescope and Dome operator(s). For the Tailgate meeting, all personnel involved in observations with the main telescope during the night.
LVV-T2714	Chuck Claver		Two observing specialists.
LVV-T2740	Chuck Claver		Observing Specialist Systems Engineer
LVV-T2715	Chuck Claver		2x Observing Specialist

4 Test Campaign Overview

4.1 Summary

T. Plan LVV-P100:	**TMA Pointing and Tracking Verification**			Draft
T. Cycle LVV-C224:	**TMA Pointing and Tracking - Positional Calibration and Instrument Characterisation**			In Progress
Test Cases	**Ver.**	**Status**	**Comment**	**Issues**
LVV-T2707	2	Pass		
LVV-T2706	1	Not Executed		
LVV-T2705	1	Not Executed		
T. Cycle LVV-C228:	**TMA Pointing and Tracking - Part 1 and last Part - Pointing using StarTracker 50" - Pointing Repeatability 1" – StarTracker**			In Progress
Test Cases	**Ver.**	**Status**	**Comment**	**Issues**
LVV-T2707	2	Not Executed		
LVV-T2714	1	Pass	Done as part of the tailgate meeting and daily routines of the observers. See the night log for details.	
LVV-T2730	1	Fail	Dome position is not aligned with TMA. CSC shows the different value.	
LVV-T2715	1	Not Executed		
T. Cycle LVV-C229:	**TMA Pointing and Tracking - Part 2 - Reverse on the Sky Part 1 - 50"- StarTracker**			In Progress
Test Cases	**Ver.**	**Status**	**Comment**	**Issues**
LVV-T2707	2	Pass		
LVV-T2714	1	Not Executed		
LVV-T2731	1	Fail		
LVV-T2715	1	Not Executed		
T. Cycle LVV-C230:	**TMA Pointing and Tracking - Part 4 - Offset 0.2" + Slew and Settle + TMA Tracking Jitter – Using the DIMM.**			In Progress
Test Cases	**Ver.**	**Status**	**Comment**	**Issues**
LVV-T2707	2	Not Executed		
LVV-T2714	1	Not Executed		
LVV-T2732	1	Fail		
LVV-T2715	1	Not Executed		
T. Cycle LVV-C232:	**TMA Pointing and Tracking - Analysis - In Depth**			In Progress
Test Cases	**Ver.**	**Status**	**Comment**	**Issues**
LVV-T2738	1	In Progress		

LVV-T2703	1	Not Executed		
LVV-T2749	1	Not Executed		
T. Cycle LVV-C233:	**TMA Pointing and Tracking - Part 3 - Tracking at Random Positions - 50" - StarTracker**			Not Executed
Test Cases	**Ver.**	**Status**	**Comment**	**Issues**
LVV-T2707	2	Not Executed		
LVV-T2714	1	Not Executed		
LVV-T2740	1	Not Executed		
LVV-T2715	1	Not Executed		

Table 2: Test Campaign Summary

4.2 Overall Assessment

Not yet available.

4.3 Recommended Improvements

Not yet available.

5 Detailed Test Results

5.1 Test Cycle LVV-C224

Open test cycle *TMA Pointing and Tracking - Positional Calibration and Instrument Characterisation* in Jira.

Test Cycle name: TMA Pointing and Tracking - Positional Calibration and Instrument Characterisation
Status: In Progress

Preparation for the requirements verification for the pointing and tracking using the Star Tracker and the DIMM on a dedicated mounting plate connector to the top end of the TMA. This test cycle includes the test cases to prepare the

- Metrology of the TMA
- Calibration of the StarTracker with respect to the TMA
- DIMM with respect to the StarTracker

5.1.1 Software Version/Baseline

Star Tracker software version:
Dimm software version:
CSC software version:
Analysis software repository:

5.1.2 Configuration

Not provided.

5.1.3 Test Cases in LVV-C224 Test Cycle

5.1.3.1 LVV-T2707 - Evening Summit Tailgate Meeting - TMA and Dome Testing Safety Assurance

Version **2**. Status **Approved**. Open *LVV-T2707* test case in Jira.

Ensure the safety of observation with the main telescope during nighttime operations.
Tailgate Meeting: Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

Note: Version two is for tests that do not involve moving or opening the dome.

Preconditions:
All nonessential personnel has vacated the area.

Execution status: **Pass**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Pass**

Description
Daytime info collection:

- Revise the last Summit Daylog about changes that might influence the work during the night.
- Confirm that all the workers in the TMA and Dome areas have already left. This is best performed during the walk-through at the end of the day.

Expected Result
Is the observatory ready to observe?

Actual Result

Step 2 Step Execution Status: **Pass**

Description

Night Shift Leader

Identify the Night Shift Leader (first and the second half of the night).

Note: This is the person responsible for deciding when

- the dome is going to be closed.
- to stop observing due to technical issues

Expected Result

One person is identified as the Night Shift Leader for each shift.

Actual Result

Early shift: Bruno Q. /Late shift: Karla Aubel

Step 3 Step Execution Status: **Pass**

Description

Tailgate Meeting:

Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

1. If the Dome slit doors are not moving automatically, make sure that there are three persons with slit closer training available to close the slit manually.
2. Verify that there are enough persons with driver training available.
3. If the StarTracker is going to be used:
   (a) Clarify who is taking the off the caps in the evening.
   (b) Take a test image before opening the Dome.
   (c) Clarify who is installing the caps in the morning.
4. Discuss if surrounding observatories need to be informed. (Necessary when light is switched on in the

dome during the night.)

5. If surrounding observatories need to be informed, clarify who is going to inform them and what information should be transmitted.
6. Check weather conditions and weather forecasts are within the specifications for observations.
7. Describe the tasks planned for the night.

Expected Result

All involved personnel understands their roles and responsibilities.

- If the Dome slit doors are not moving automatically, there are at least two persons with slit closer training available to close the slit manually.
- There are enough people with driver training available.
- If the StarTracker is used,
  - the caps are taken off in the evening by:
  - the test image is taken by:
  - the StarTracker caps are installed in the morning by:
- If surrounding observatories need to be informed,
  - they are informed by:
  - The following information will be transmitted:
- The weather conditions permit us to open the dome and do the planned testing.
- The tasks planned for the night are:

Actual Result

https://confluence.lsstcorp.org/display/LSSTCOM/23.05.31+-+M1M3+Test+Log

Weather is ok. Sufficient number of drivers.

Step 4 Step Execution Status: **Not Executed**

Description

Tailgate Meeting – Part II:

If new personnel is participating in the nightly summit activities:

- Clarify that all personnel has PPE.
- Clarify that persons that need to go up into altitude have fall protection training.

- Confirm that we have enough personnel to open/close the dome shutter if required.
- Remind everybody that the emergency phone numbers are on the control room table.
- Do we have anyone else in the building? Confirm their location.

Expected Result

- All personnel has the required PPE.
- Persons that need to go up into altitude have the fall protection training
- Everybody acknowledges that the emergency phone numbers are on the control room table.

Actual Result

Step 5	Step Execution Status: **Pass**

Description

TMA and Dome contact

Person in charge of the TMA interlocks

Dome responsible

Expected Result

TMA and Dome contacts are known

Actual Result

Step 6	Step Execution Status: **Pass**

Description

Radio Communication

- Make sure one radio is switched to channel 1, and the volume is high
  - Paramedics, mountain assistants (in replacement of the paramedics), guards, and surrounding observatories are listening to this channel.
- Make sure one radio is switched to channel 3, and the volume is high

  - Rubin's internal coordination channel

Expected Result

The radios are switched on and on high volume.

Actual Result

Step 7 Step Execution Status: **Pass**

Description

Cars

- Make sure enough cars are available to go to the hotel.
- Make sure the keys for the cars are available.

Expected Result

Sufficient cars and their keys are available.

Actual Result

Step 8 Step Execution Status: **Not Executed**

Description

ComCam safety

Put ComCam in a safe state for moving. This includes:

1. CryoTels are under observation for vibrations (i.e. a microphone or webcam is observing them and operating correctly)
2. Turbo pumps are off

Expected Result

ComCam is in a safe state for TMA movement.

Actual Result

Step 9	Step Execution Status: **Pass**

Description

TMA moving space

Go to the dome and visually verify that there is unrestricted space for the TMA movement.

Expected Result

The space is clear and no objects will be struck when the TMA moves.

Actual Result

Clear by day crew.

Step 10	Step Execution Status: **Pass**

Description

Alarm system check

Once available:

- Confirm that any audio and visual alarms are operating properly. (Need details on what, if any, alarms should be checked)
- Confirm that the safety systems for earthquakes and fire are working.

Expected Result

All alarms are functioning properly.

- Earthquake alert system is working:
- The fire system is working:

Actual Result

Step 11	Step Execution Status: **Not Executed**

Description

LOTO status:

If LOTO procedures are in use:
Set LOTO per (PROCEDURE, attached) at the following locations:

1. LOTO at the Dome
2. LOTO of the TMA Drives

Expected Result

The appropriate panels have been locked out or released.

Actual Result

Step 12	Step Execution Status: **Pass**

Description

Final walkthrough:

Perform a final walkthrough of the dome. Make sure all personnel is cleared out.

Expected Result

The dome is clear and safe for TMA movement.
The final walkthrough was performed by:

Actual Result

Step 13	Step Execution Status: **Not Executed**

Description

Dome closure:

If the Dome door GIS is available:
Exit the Dome, close the door (any details about what specific door)

Expected Result
The GIS system is active.

Actual Result

Step 14 Step Execution Status: **Not Executed**

Description
Dome clearance:

The Dome clearance is an EIE task, and they have to sign off.
If EIE is not available, perform these steps:

- Make sure that the dome crane is in the parking position. (Hook up)
- Position of the manlifts. Make sure the manlift supports are stored and are not on the rotation part of the dome.
- Walkthrough and make sure that there are no obstacles to move.

Example Code
https://confluence.lsstcorp.org/display/LTS/Dome+Remote+Software+Control+Procedure

Expected Result
The Dome is cleared for nightly operations.

Actual Result

Step 15 Step Execution Status: **Not Executed**

Description
PFlow lift
This is part of EIE's safety check.
If EIE is not available, perform this step:

- The Pflow lift must be stored before moving the dome.

Expected Result
The PFlow lift is stored properly

Actual Result

Step 16 Step Execution Status: **Not Executed**

Description
Shutter closer
If you have to close the shutter, the Dome must be under LOTO.
Note: There is no LOTO available at the moment. Use the procedure attached to this test case and the information from the following link:
https://confluence.lsstcorp.org/display/LTS/Dome+Remote+Software+Control+Procedure

Expected Result
The shutter was closed in a safe way.

Actual Result

Step 17 Step Execution Status: **Not Executed**

Description
GIS activation:
If the GIS for the Dome is available:

- activate the Dome GIS system.

Expected Result
If possible, the Dome GIS is activated.

Actual Result

Step 18 Step Execution Status: **Pass**

Description

Signoff

As a signoff, mark this step as passed

Expected Result

Safety Assurance is confirmed to be complete, and testing may proceed.

Actual Result

5.1.3.2 LVV-T2706 - StarTracker Positional Calibration

Version **1**. Status **Approved**. Open *LVV-T2706* test case in Jira.

This procedure provides a 2-point calibration between the optical axes of the TMA and StarTracker.
It assumes the TMA azimuth axis is co-aligned with the optical axis when the TMA is pointed at zenith as indicated by an elevation encoder value of 90 degrees.
For the pointing tests, the azimuth and elevations are the two axes that matter and should be measured.

This procedure has two parts:
1) Calibrate the StarTracker's line-of-sight to the reference axis as defined by the center of TMA azimuth rotation.
2) Establish the index reference of azimuth = 0 deg (180?) and altitude/latitude reference in elevation with the TMA pointing at the South Celestial Pole (SCP).

In each instance, the StarTracker will produce arcing star trails. The arcs will be fitted to find the center of rotation in StarTracker pixels (X, Y).
For part 1 of this procedure, this position will serve as the reference location for which the

World Coordinate (WCS) system is derived using astrometry.net.
For part 2, the circle center represents the SCP. Iteratively the pointing of the TMA with offset such that SCP (X,Y) coincides with the Zenith reference (X,Y) determined in Part 1.
The encoder values here are noted, and physical markings are placed on the TMA (position TBD).

Notes:

- This uses the Laser Tracker Metrology.
- Flexure check of the Star Tracker's mechanical support with respect to TMA flexure vs. Elevation Angle...??
  - Determine lat-lon of azimuth track - e.g. rotation centre.
- There will be an offset between the optical axis of the StarTracker with the TMA optical axis.
- The internal "optical" axis, as defined by the littering the M1M3 SMRs (see previous calibration procedure), will be calibrated to the azimuth-elevation cordite references as part of the final construction of the pointing model when the optics are installed in the presence of ComCam.

Preconditions:
StarTracker is installed on the TMA.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1	Step Execution Status: **Not Executed**

Description

5.2 Part 1: TMA Line-of-Site Calibration:

Expected Result

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

TMA pointing:

Point the TMA to zenith - elevation = 90.000000 degrees

Verify zenith orientation with a precision inclinometer.

Expected Result

The TMA points into the Zenith.

The inclinometer shows 90 deg.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

StarTracker plate vs. TMA calibration:

Determine the TEA plane and the StarTracker plate to determine the orientation with respect to each other using the laser tracker.

- Measure StarTracker and M1M3 SMR references.

Expected Result

List fo StarTracker and M1M3 SMR positions.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

Analyze the laser tracker data:

- M1M3: Fit a circle, determine the centered vector normal
- StarTracker: Fit a plane, determine the centered vector normal
- Calculate 3-space angles between M1M3 and StarTracker vector normal references
- Calculate the difference between reference vector normals at zenith and those determined in the Initial Metrology Procedure

Expected Result

The angles between the vectors normals are known.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA Zenith rotation

With TMA pointed at the zenith

- Command the TMA to rotate about the Azimuth axis only
- While the TMA is in motion, take a series of exposures (EXPTIME TBD) with the StarTracker (both optical systems)

Expected Result

The StarTracker images show circular arcs.

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description

TMA bore-sight determination

- Stack/combine individual images to generate an image for analysis that has at least 180 degrees of arc to it.
- Analyze the combined StarTracker to determine the pixel (X, Y) of the circle center.
  - Chuck has a simple Python script using the Hough transform that does this. It is computationally intensive but works. Other methods are welcome.
- Note the coordinates of the cycle center in the StarTracker arc-trail image. This will be considered at the bore-sight of the TMA.
- Depending on the confidence level of the vector normal references, an angular correction can be applied to the circle center to transfer the reference to the M1M3 vector normal.
- The reference pixel (X,Y) will subsequently be used with astrometry.net as the WCS reference when estimating the Ra-Dec of the StarTracker images during the pointing verification tests.

Expected Result

Combined images with a least 180 deg arcs.
Reference (X,Y)-pixel value for astrometry.net is known

Actual Result

Step 7 Step Execution Status: **Not Executed**

Description

5.3 Part 2: Calibration of Elevation Dependence

Expected Result

Actual Result

Step 8 Step Execution Status: **Not Executed**

Description

Telescope pointing

Point the TMA to the South Celestial Pole (SCP)

Expected Result

The TMA points to the SCP.

Actual Result

Step 9 Step Execution Status: **Not Executed**

Description

Measure StarTracker and M1M3 SMR references

This repeats the previous measurement at a different inclination and considers therefore the TMA's flexure due to gravity.

- M1M3: Fit a circle, determine the vector normal
- StarTracker: Fit a plane, determine the vector normal
- Calculate 3-space angles between M1M3 and StarTracker references
- Calculate the difference between reference vector normals at the zenith, and this determined in the Initial Metrology Procedure

Expected Result

Plots showing the changes of SMR positions depending on elevation.

Actual Result

Step 10 Step Execution Status: **Not Executed**

Description

Taking StarTracker images - TMA pointing to the SCP

- Keep the TMA stationary - e.g. no tracking
- Obtain a series (e.g. 100 or more) of back-to-back StarTracker images
- 10-sec exposures – stars not saturated.

Expected Result
Images showing arcs are available.

Actual Result

Step 11	Step Execution Status: **Not Executed**

Description
SCP StarTracker Image analysis

- Run the StarTracker Images through any preprocessing - e.g. ISR (Image Signature Removal)
- Run the processed StarTracker images through astrometry.net to obtain WCS solutions centered on the reference determined at the zenith
- Calculate the mean, stdev, and time series in Ra-Dec for all solutions
- Calculate the mean, stdev, and time series in Az-El for all solutions
- Calculate the offset between the reference Ra-Dec and the South Celestial Pole - e.g., Az = 180.000000, El = Observatory Latitude
  We need the precise geophysical (Lat-Lon) coordinates of the azimuth track center. Do we have these values in our metrology?
- Compare the offsets from the SMR references with those from the on-sky measurements.
- Develop a simple Sin(el), Cos(el) model for TMA+StarTracker flexure
  This model will be applied to the on-sky-pointing verification test measurements.
- Determine the actual resolution of the long and short focal length StarTracker. Astronmetry net will provide the plate scale

Expected Result
Actual resolution of the long and short focal length StarTracker.

Actual Result

Step 12	Step Execution Status: **Not Executed**

Description

Ra-Dec characterization

- Calculate the mean, stdev, and time series in Ra-Dec for all solutions
- Calculate the offset between the reference Ra-Dec and the South Celestial Pole - e.g., Az = 180.000000, El = Observatory Latitude
  We need the precise geophysical (Lat-Lon) coordinates of the azimuth track center.
- Do we have these values in our metrology?

Expected Result

- Plots showing the mean and stdev for the observed Ra-Dec positions.
- Values for the difference between the South Celestial Pole and the AZ=180 and El= Obs. Latitude

Actual Result

Step 13	Step Execution Status: **Not Executed**

Description

Az-El characterization

- Calculate the mean, stdev, and time series in Az-El for all solutions

Expected Result

Plots for the mean, stdev and time series in Az-EL coordinates.

Actual Result

Step 14	Step Execution Status: **Not Executed**

Description

Laser Tracker vs. on-sky measurement comparison

- Compare the offsets from the SMR references with those from the on-sky measurements.

Expected Result

Plot showing the difference between Laser Tracker and on-sky measurements.

Actual Result

Step 15 Step Execution Status: **Not Executed**

Description

TMA + StarTracker flexure model

This model will be applied to the on-sky-pointing verification test measurements.

- Develop a simple Sin(el), Cos(el) model for TMA+StarTracker flexure

Expected Result

The equation describing the flexure of the TMA.
Plot the flexure model.

Actual Result

5.3.0.1 LVV-T2705 - DIMM Calibration with respect to the StarTracker

Version **1**. Status **Approved**. Open *LVV-T2705* test case in Jira.

Provide a 2-point calibration between the optical axes of the TMA and StarTracker.
It assumes the TMA azimuth axis is co-aligned with the optical axis when the TMA is pointed at the zenith, as indicated by an elevation encoder value of 90 degrees.
For the pointing tests, the azimuth and elevations are the two axes that matter and should be measured. The internal "optical" axis, as defined by the littering of the M1M3 SMRs (see

previous calibration procedure), will be calibrated to the azimuth-elevation cordite references as part of the final construction of the pointing model when the optics are installed in the presence of ComCam (Note a similar but extended procedure can/will be used with ComCam to re-verify the TMA pointing performance.
Notes:

- Following interaction with Pelayo, it has been realized TMA Chile Metrology Report referenced two coordinate systems. Pages 1-4 are in the external TMA azimuth-elevation coordinates, whereas from page 5 on are in the internal TMA coordinates.
- All indications are that there is good alignment between the Zenith pointing vector defined by the TMA azimuth track and the optical axis defined by the pointing vector from the M1M3 SMR fit.
- There is a substantial body of metrology that is either missing, in places unknown but accessible, or inaccessible. As we enter more integrated verification must be rectified.

Associate the center of the DIMM center to the Star tracker.

Preconditions:
The StarTracker and DIMM must be working.
The CSC for TMA and Dome must be working.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1	Step Execution Status: **Not Executed**

Description
Make the reference between the TMA interface plane to the plane where the StarTracker is mounted.

Where the U-shaped bars are mounted, at the vertex, the center, and at one more position, SMRs should be mounted.

Expected Result

Show the normal vector is intersecting the optical axis
What is the angular of the StarTracker plane and the optical axis

Actual Result

Step 2	Step Execution Status: **Not Executed**

Description

Repeat the measurement at Zenith and Horizon.

Expected Result

A slight difference due to the gravitations bending of the TMA.

Actual Result

Step 3	Step Execution Status: **Not Executed**

Description

ComCam – StarTracker – Interface plane relation
This is a sanity check and will help later to associate ComCam images with the TMA orientation.

- Use the ComCam SMR and redo the measurements to establish the plane for ComCam.
- Compare normal vectors for the Star Tracker plane, the Interface Plane, and the ComCam Plane.

Expected Result

Set of values showing the differences in the vectors for ComCam and the StarTracker

Actual Result

Step 4	Step Execution Status: **Not Executed**

Description

Take images with the DIMM and the StarTracker at the same time.

Expected Result

Both images

- appear on Rubin TV
- are stored in the LFA
- a link stored in the EFD
- the link can be accessed through Chronograph.

Actual Result

Step 5	Step Execution Status: **Not Executed**

Description

Pointing outside of the dome

To determine the offset between the StarTracker and the DIMM

- Point the TMA at the weather tower/ DIMM tower.
- Connect the Laser Tracker via a CSC during the testing.
  - This needs Dave and IT to get the Laser Tracker into the Network and the EFD.

Expected Result

Images with all three instruments are available.

Actual Result

Step 6	Step Execution Status: **Not Executed**

Description

Instruments center difference in Pixel

Find the center of rotation in the DIMM images.

Calculate the difference in Pixel in Az and El of both instruments.

Expected Result
The number of pixels in X and Y between the center of the StarTracker and the center of the DIMM are known.

Actual Result

Step 7	Step Execution Status: **Not Executed**

Description
Determine the dome position with respect to the StarTracker's FoV.
This ensures that we have enough tracking distance without being obscured by the dome.

Expected Result
The dome position is known and it is confirmed that there is enough time to track.

Actual Result

5.4 Test Cycle LVV-C228

Open test cycle *TMA Pointing and Tracking - Part 1 and last Part - Pointing using StarTracker 50" - Pointing Repeatability 1" – StarTracker* in Jira.

Test Cycle name: TMA Pointing and Tracking - Part 1 and last Part - Pointing using StarTracker 50" - Pointing Repeatability 1" – StarTracker
Status: In Progress

Requirements verification for the pointing and tracking using the Star Tracker and the DIMM on a dedicated mounting plate connector to the top end of the TMA.
Short-focal StarTracker. 7" per pixel resolution. Precision is about 1".
Long-focal StarTracker is even better. 375 mm objective. 3.1" arc pixel resolution.

5.4.1 Software Version/Baseline

Star Tracker software version:
Dimm software version:
CSC software version:
Analysis software repository:

5.4.2 Configuration

Not provided.

5.4.3 Test Cases in LVV-C228 Test Cycle

5.4.3.1 LVV-T2707 - Evening Summit Tailgate Meeting - TMA and Dome Testing Safety Assurance

Version **2**. Status **Approved**. Open *LVV-T2707* test case in Jira.

Ensure the safety of observation with the main telescope during nighttime operations.
Tailgate Meeting: Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

Note: Version two is for tests that do not involve moving or opening the dome.

Preconditions:
All nonessential personnel has vacated the area.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1	Step Execution Status: **Not Executed**

Description

Daytime info collection:

- Revise the last Summit Daylog about changes that might influence the work during the night
- Revise at 16.00 CLT to have time for questions.

Expected Result

Is the observatory ready to observe?

Actual Result

Step 2	Step Execution Status: **Not Executed**

Description

Night Shift Leader

Identify the night shift leader (first and second half of the night).

Note: This is the person responsible for deciding when

- the dome is going to be closed.
- to stop observing due to technical issues

Expected Result

One person is identified as the night shift leader.

Actual Result

Step 3	Step Execution Status: **Not Executed**

Description

Tailgate Meeting:
Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

1. If the Dome slit doors are not moving automatically, make sure that there are three persons with slit closer training available to close the slit manually.
2. Verify that there are enough persons with driver training available.
3. If the StarTracker is used, clarify who is taking the off the caps in the evening.
4. If the StarTracker is used, clarify who is installing the caps in the morning.
5. Discuss if surrounding observatories need to be informed.
6. If surrounding observatories need to be informed, clarify who is going to inform them and what information should be transmitted.
7. Check weather conditions and weather forecasts are within the specifications for observations.
8. Describe the tasks planned for the night.

Expected Result
All involved personnel understands their roles and responsibilities.

- If the Dome slit doors are not moving automatically, there are three persons with slit closer training available to close the slit manually.
- There are enough people with driver training available.
- If the StarTracker is used, the caps are taken off in the evening by:
- If the StarTracker is used, the StarTracker caps are installed in the morning by:
- Discuss if surrounding observatories need to be informed.
- If surrounding observatories need to be informed,
  - they are informed by:
  - The following information will be transmitted:
- The weather conditions permit us to open the dome and do the planned testing.
- The tasks planned for the night are:

Actual Result

Step 4	Step Execution Status: **Not Executed**

Description

Tailgate Meeting – Part II:
If new personal is participating in the nightly summit activities:

- Clarify that all personnel has the PPE
- Clarify that persons that need to go up into altitude have the fall protection training
- Remind everybody that the emergency phone numbers are on the control room table.

Expected Result

- All personnel has the required PPE.
- Persons that need to go up into altitude have the fall protection training
- Everybody acknowledges that the emergency phone numbers are on the control room table.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description
TMA and Dome contact
Person in charge of the TMA interlocks
Dome responsible

Expected Result
TMA and Dome contacts are known

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description
Radio communication

- Make sure one radio is switched to channel 1 and the volume is high

  - Paramedics, mountain assistants (in replacement of the paramedics), guards, and surrounding observatories are listening to this channel.

- Make sure one radio is switched to channel 3, and the volume is high

  - Rubin's internal coordination channel

Expected Result
The radios are switched on and on high volume.

Actual Result

Step 7 Step Execution Status: **Not Executed**

Description
Cars

- Make sure enough cars are available to go to the hotel.
- Make sure the keys for the cars are available.

Expected Result
Sufficient cars and their keys are available.

Actual Result

Step 8 Step Execution Status: **Not Executed**

Description
ComCam safety

Put ComCam in a safe state for moving. This includes:

1. CryoTels are under observation for vibrations (i.e. a microphone or webcam is observing them and operating correctly)
2. Turbo pumps are off

Expected Result
ComCam is in a safe state for TMA movement.

Actual Result

Step 9 Step Execution Status: **Not Executed**

Description
TMA moving space

Go to the dome and visually verify that there is unrestricted space for the TMA movement.

Expected Result
The space is clear and no objects will be struck when the TMA moves.

Actual Result

Step 10 Step Execution Status: **Not Executed**

Description
Alarm system check
Once available:

- Confirm that any audio and visual alarms are operating properly. (Need details on what, if any, alarms should be checked)
- Confirm that the safety systems for earthquakes and fire are working.

Expected Result
All alarms are functioning properly.

- Earthquake alert system is working:
- The fire system is working:

Actual Result

Step 11	Step Execution Status: **Not Executed**

Description

LOTO status:

If LOTO procedures are in use:
Set LOTO per (PROCEDURE, attached) at the following locations:

1. LOTO at the Dome
2. LOTO of the TMA Drives

Expected Result

The appropriate panels have been locked out or released.

Actual Result

Step 12	Step Execution Status: **Not Executed**

Description

Final walkthrough:

Perform a final walkthrough of the dome. Make sure all personnel is cleared out.

Expected Result

The dome is clear and safe for TMA movement.
The final walkthrough was performed by:

Actual Result

Step 13	Step Execution Status: **Not Executed**

Description

Dome closure:
If the Dome door GIS is available:
Exit the Dome, close the door (any details about what specific door)

Expected Result
The GIS system is active.

Actual Result

Step 14 Step Execution Status: **Not Executed**

Description
Dome clearance:

The Dome clearance is an EIE task, and they have to sign off.
If EIE is not available, perform these steps:

- Make sure that the dome crane is in the parking position. (Hook up)
- Position of the manlifts. Make sure the manlift supports are stored and are not on the rotation part of the dome.
- Walkthrough and make sure that there are no obstacles to move.

Example Code
https://confluence.lsstcorp.org/display/LTS/Dome+Remote+Software+Control+Procedure

Expected Result
The Dome is cleared for nightly operations.

Actual Result

Step 15 Step Execution Status: **Not Executed**

Description
PFlow lift
This is part of EIE's safety check.

If EIE is not available, perform this step:

- The Pflow lift must be stored before moving the dome.

Expected Result

The PFlow lift is stored properly

Actual Result

Step 16 Step Execution Status: **Not Executed**

Description

Shutter closer

If you have to close the shutter, the Dome must be under LOTO.

Note: There is no LOTO available at the moment. Use the procedure attached to this test case and the information from the following link:

https://confluence.lsstcorp.org/display/LTS/Dome+Remote+Software+Control+Procedure

Expected Result

The shutter was closed in a safe way.

Actual Result

Step 17 Step Execution Status: **Not Executed**

Description

GIS activation:

If the GIS for the Dome is available:

- activate the Dome GIS system.

Expected Result

If possible, the Dome GIS is activated.

Actual Result

Step 18	Step Execution Status: **Not Executed**

Description

Signoff

As a signoff, mark this step as passed

Expected Result

Safety Assurance is confirmed to be complete, and testing may proceed.

Actual Result

5.4.3.2 LVV-T2714 - Configure Observatory Environment for Nighttime Operations

Version **1**. Status **Approved**. Open *LVV-T2714* test case in Jira.

At the beginning of the night, prepare the observatory for nightly operations.

Preconditions:

Dome and the TMA, or at least the TMA must available for observations.

Execution status: **Pass**

Final comment:

Done as part of the tailgate meeting and daily routines of the observers. See the night log for details.

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Telescope preparation:

- Remove the caps on top of the StarTracker telescopes and the DIMM.
- Check the instrument's health status by taking a test image.

Expected Result

The caps are removed.

The test image is taken and stored correspondingly.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Calibration images:

Not needed at the moment, to be included if data analysis reveals the need.

- Take 10 "darks" with the StarTracker and the DIMM instruments. Use the same exposure time as for the images.
- Take 10 "sky flats" with the StarTracker and the DIMM instruments.

Expected Result

The Darks and flats are stored in the expected location.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

Auxillary systems nighttime preparations:

- Switch off the UMA in the afternoon.

Expected Result
The UMA is switched off.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description
Night logging page:
Start the night log similar to the AuxTel night log:

https://confluence.lsstcorp.org/display/LSSTCOM/Night+Logs

Expected Result
Page created with template information.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description
TMA preparation

- Check the Oil Supply System (OSS) on the EUI
- Follow the attached manual to startup the TMA.

Expected Result
The OSS is operational:

Actual Result

Step 6	Step Execution Status: **Not Executed**

Description

CSC activation:

Use L.O.V.E to bring the CSC to the enabled state.

Expected Result

All needed CSCs are in the enabled state.

Actual Result

5.4.3.3 LVV-T2730 - StarTracker Pointing and Tracking Test - Forward Azimuth Pattern

Version **1**. Status **Approved**. Open *LVV-T2730* test case in Jira.

Collect data with the StarTracker following the azimuth pattern -270, -180, -90, 0, 90, 180, 270 deg. Nominal at four elevation angles 15, 45, 75, 85 deg. Minimum at the three angles: 15, 45, 85 deg.

This test

- is foreseen the first of four tests
- takes about one-half summer night in the full version.

The analysis is done with the test case: LVV-T2738

Note: Tracking does not start at elevations higher than 85.0 deg. Same for Az, we can not go up to 270 deg. We had to use 250 deg.

Preconditions:
SITCOM-704 First Pointing Model Generation - Data Acquisition Preparation must be completed

Track for 10 min without the dome following.

Execution status: **Fail**

Final comment:
Dome position is not aligned with TMA. CSC shows the different value.

Detailed steps results:

Step 1.1	Step Execution Status: **Fail**

Description
Point the Dome and the TMA

- Command the Dome to Pointing 1 to -270deg
- Command the TMA to Pointing 1 at Az= -270 deg, El= 15 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result
Pointing to Az=269.5 Elev.=20 to test motion. Not moving. failed.
Trying Az= 265, but failed.
Trying Az= 260, failed.
Az= 259, failed. Az=250, failed and Az=240, failed too. Az= 200, failed.

private_revCode: c5f1e359, private_sndStamp: 1679532564.5338726, private_rcvStamp: 1679532564.534221, private_seqNum: 21044

00:50

Az= 175, worked!
Az= 181, worked!
Az= 186, worked!

Az= 260, Failed!
Last executed at 2023-03-22 22:09:24 in 352ms

```
Script.MTCS WARNING: mtptg not in <State.ENABLED: 2>: <State.FAULT: 3>

EUI 01:09:24.762 23/03/23
The defined extrapolation time was exceeded.

2023-03-23 01:09:24.055 ERROR [31766] [OuterState::error@40] error number:6651 reason:Error MTMount replied error for trackTa
```

Step 1.2	Step Execution Status: **Pass**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result
Moving to a mag= 2 star near Az= 188 El= 21
Moving the dome to 195
Engaging the breaks

Step 1.3	Step Execution Status: **Pass**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -270 deg, El= 15 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

az= 208 el= -508 taking image, ok.

Step 1.4 Step Execution Status: **Pass**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 1.5 Step Execution Status: **Pass**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..

Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Starting forward grid:

```
az_grid=[250,180,90,0,-90,-180,-250]
el_grid=[20,45,70,85]
```

We found that the dome position is not aligned with TMA. CSC shows the different value(az=250deg) from the real dome position (az=236deg). Fixed

Forward Grid finished ok.

Step 1.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 1.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 2.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 2 to -270deg
- Command the TMA to Pointing 2 at Az= -270 deg, El= 45 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 2.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 2.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -270 deg, El= 45 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 2.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 2.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 2.6	Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 2.7	Step Execution Status: **Not Executed**

Description

Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 3.1 Step Execution Status: **Not Executed**

Description
Point the Dome and the TMA

- Command the Dome to Pointing 4 to -270deg
- Command the TMA to Pointing 4 at Az= -270 deg, El= 85.0 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 3.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 3.3	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -270 deg, El= 85.0 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 3.4	Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 3.5	Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 3.6 Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 3.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 4.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 5 to -180deg
- Command the TMA to Pointing 5 at Az= -180 deg, El= 85.0 deg.

Expected Result

The dome starts the movement.
The TMA starts to move.

Actual Result

Step 4.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 4.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -180 deg, El= 85.0 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 4.4	Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 4.5	Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 4.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 4.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 5.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 7 to -180deg
- Command the TMA to Pointing 7 at Az= -180 deg, El= 45 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 5.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 5.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -180 deg, El= 45 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 5.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 5.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 5.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 5.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 6.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 8 to -180deg
- Command the TMA to Pointing 8 at Az= -180 deg, El= 15 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 6.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 6.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -180 deg, El= 15 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 6.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 6.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing

- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 6.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 6.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 7.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 9 to -90deg
- Command the TMA to Pointing 9 at Az= -90 deg, El= 15 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 7.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 7.3 Step Execution Status: **Not Executed**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= -90 deg, El= 15 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 7.4 Step Execution Status: **Not Executed**

Description
Stop the Dome
Verify that the Dome is stopped so that it does not move during the observations.

Expected Result
The Dome is stopped.

Actual Result

Step 7.5 Step Execution Status: **Not Executed**

Description
Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 7.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 7.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 8.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 10 to -90deg
- Command the TMA to Pointing 10 at Az= -90 deg, El= 45 deg.

Expected Result

The dome starts the movement.
The TMA starts to move.

Actual Result

Step 8.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 8.3 Step Execution Status: **Not Executed**

Description

Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= -90 deg, El= 45 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 8.4 Step Execution Status: **Not Executed**

Description

Stop the Dome
Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 8.5	Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 8.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 8.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 9.1 Step Execution Status: **Not Executed**

Description
Point the Dome and the TMA

- Command the Dome to Pointing 12 to -90deg
- Command the TMA to Pointing 12 at Az= -90 deg, El= 85.0 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 9.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 9.3	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -90 deg, El= 85.0 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 9.4	Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 9.5	Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 9.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 9.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 10.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 13 to 0deg
- Command the TMA to Pointing 13 at Az= 0 deg, El= 85.0 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 10.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 10.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 0 deg, El= 85.0 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 10.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 10.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 10.6 Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 10.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 11.1	Step Execution Status: **Not Executed**

Description
Point the Dome and the TMA

- Command the Dome to Pointing 15 to 0deg
- Command the TMA to Pointing 15 at Az= 0 deg, El= 45 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 11.2	Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 11.3	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 0 deg, El= 45 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 11.4	Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 11.5	Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 11.6 Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 11.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 12.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 16 to 0deg
- Command the TMA to Pointing 16 at Az= 0 deg, El= 15 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 12.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 12.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 0 deg, El= 15 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 12.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 12.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 12.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 12.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 13.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 17 to 90deg
- Command the TMA to Pointing 17 at Az= 90 deg, El= 15 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 13.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 13.3 Step Execution Status: **Not Executed**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= 90 deg, El= 15 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 13.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 13.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 13.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 13.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 14.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 18 to 90deg
- Command the TMA to Pointing 18 at Az= 90 deg, El= 45 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 14.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 14.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 90 deg, El= 45 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 14.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 14.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 14.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 14.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 15.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 20 to 90deg
- Command the TMA to Pointing 20 at Az= 90 deg, El= 85.0 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 15.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 15.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 90 deg, El= 85.0 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 15.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 15.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 15.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 15.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 16.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 21 to 180deg
- Command the TMA to Pointing 21 at Az= 180 deg, El= 85.0 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 16.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 16.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 180 deg, El= 85.0 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 16.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 16.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 16.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 16.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 17.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 23 to 180deg
- Command the TMA to Pointing 23 at Az= 180 deg, El= 45 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 17.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 17.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 180 deg, El= 45 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 17.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 17.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 17.6 Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 17.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 18.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 24 to 180deg
- Command the TMA to Pointing 24 at Az= 180 deg, El= 15 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 18.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 18.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 180 deg, El= 15 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 18.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 18.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 18.6 Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 18.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 19.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 25 to 270deg
- Command the TMA to Pointing 25 at Az= 270 deg, El= 15 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 19.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 19.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 270 deg, El= 15 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 19.4 Step Execution Status: **Not Executed**

Description
Stop the Dome
Verify that the Dome is stopped so that it does not move during the observations.

Expected Result
The Dome is stopped.

Actual Result

Step 19.5 Step Execution Status: **Not Executed**

Description
Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 19.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 19.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 20.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 26 to 270deg
- Command the TMA to Pointing 26 at Az= 270 deg, El= 45 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 20.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 20.3 Step Execution Status: **Not Executed**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= 270 deg, El= 45 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 20.4	Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 20.5	Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 20.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 20.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 21.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 28 to 270deg
- Command the TMA to Pointing 28 at Az= 270 deg, El= 85.0 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 21.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 21.3 Step Execution Status: **Not Executed**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= 270 deg, El= 85.0 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 21.4 Step Execution Status: **Not Executed**

Description
Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result
The Dome is stopped.

Actual Result

Step 21.5 Step Execution Status: **Not Executed**

Description
Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 21.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 21.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 22.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 22 to -270deg
- Command the TMA to Pointing 22 at Az= -270 deg, El= 75 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 22.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 22.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -270 deg, El= 75 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 22.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 22.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 22.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 22.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 23.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 23 to -180deg
- Command the TMA to Pointing 23 at Az= -180 deg, El= 75 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 23.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 23.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -180 deg, El= 75 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 23.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 23.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 23.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 23.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 24.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 24 to -90deg
- Command the TMA to Pointing 24 at Az= -90 deg, El= 75 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 24.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 24.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= -90 deg, El= 75 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 24.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 24.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 24.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 24.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 25.1 Step Execution Status: **Not Executed**

Description
Point the Dome and the TMA

- Command the Dome to Pointing 25 to 0deg
- Command the TMA to Pointing 25 at Az= 0 deg, El= 75 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 25.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 25.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 0 deg, El= 75 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 25.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 25.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data
The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 25.6 Step Execution Status: **Not Executed**

Description
Image verification:
Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result
Astrometry.net finds a solution.

Actual Result

Step 25.7 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in test case LVV-T2739.

Expected Result
Image quality is sufficient.

Actual Result

Step 26.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 26 to 90deg
- Command the TMA to Pointing 26 at Az= 90 deg, El= 75 deg.

Expected Result

The dome starts the movement.

The TMA starts to move.

Actual Result

Step 26.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Wait for the TMA to reach the commanded position.

Expected Result

The Dome reaches the commanded position.

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

The TMA reaches the commanded position.

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 26.3 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target Az= 90 deg, El= 75 deg.

Expected Result

TMA reaches the commanded position.

Actual Result

Step 26.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 26.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 26.6	Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 26.7	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 27.1	Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 27 to 180deg
- Command the TMA to Pointing 27 at Az= 180 deg, El= 75 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 27.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 27.3 Step Execution Status: **Not Executed**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= 180 deg, El= 75 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 27.4 Step Execution Status: **Not Executed**

Description

Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 27.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 27.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 27.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

Step 28.1 Step Execution Status: **Not Executed**

Description

Point the Dome and the TMA

- Command the Dome to Pointing 28 to 270deg
- Command the TMA to Pointing 28 at Az= 270 deg, El= 75 deg.

Expected Result
The dome starts the movement.
The TMA starts to move.

Actual Result

Step 28.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.
Wait for the TMA to reach the commanded position.

Expected Result
The Dome reaches the commanded position.
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.
The TMA reaches the commanded position.
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 28.3 Step Execution Status: **Not Executed**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target Az= 270 deg, El= 75 deg.

Expected Result
TMA reaches the commanded position.

Actual Result

Step 28.4 Step Execution Status: **Not Executed**

Description
Stop the Dome

Verify that the Dome is stopped so that it does not move during the observations.

Expected Result

The Dome is stopped.

Actual Result

Step 28.5 Step Execution Status: **Not Executed**

Description

Track position and take images

Star tracking for 20 synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

or

Star tracking for 10 min and take synchronized exposures with 5,4,6 seconds for wide, narrow, fast cameras.

Note: Taking 20 images is good for pointing evaluation..
Taking images for 10 min is needed for tracking evaluation

Test Data

The Dome should not move during the observations.

Expected Result

- The TMA tracks the given position for 10 min, and the cameras take images or 20 images ar take per pointing
- A series of images is successfully taken with the StarTracker and can be seen via RubinTV.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Image verification:

Look at RubinTV and verify that astrometry.net found an astrometric solution.

Expected Result

Astrometry.net finds a solution.

Actual Result

Step 28.7 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in test case LVV-T2739.

Expected Result

Image quality is sufficient.

Actual Result

5.4.3.4 LVV-T2715 - Configure Observatory Environment for Daytime Operations

Version **1**. Status **Approved**. Open *LVV-T2715* test case in Jira.

After using the observatory during the nighttime, prepare the observatory for daytime operations.

Preconditions:

The observatory was used during nighttime.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

CSCs

- Transition the CSCs into STANDBY state

Expected Result

All CSCs are in their standbyState.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Telescope daytime preparations:

- Switch off or bring into standby the StarTracker and DIMM instruments
- Install the caps on top of the StarTracker telescopes and the DIMM

Expected Result

The caps are installed.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

Dome:

- Bring the dome into the park position

Until the dome shutter is motorized:

- Send a message to the site manager :
  - confirming that nightly operations have finished
  - asking for a dome closer before the sun starts to shine on the StarTracker and the DIMM.

Expected Result

Dome closure is organized.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

Auxillary systems daytime preparations:

If needed for daytime operations:

- Switch on the UMA in the morning.
- When available and need to be modified for the day:
  - Oil supply system on standby?
  - Dynalyne into standby?

Expected Result

All auxiliary systems are in the states suitable for daytime operations.

- The UMA is switched on.

Actual Result

Step 5	Step Execution Status: **Not Executed**

Description

TMA position in the morning

- Park the TMA in the position needed for the next day.

Expected Result

TMA parked in the corresponding position.

Actual Result

Step 6	Step Execution Status: **Not Executed**

Description

Night log

- Close the night log by writing a summary of the nightly events
- Send a link with the summary to the site manager.

Expected Result

The night log is closed.

Actual Result

5.5 Test Cycle LVV-C229

Open test cycle *TMA Pointing and Tracking - Part 2 - Reverse on the Sky Part 1 - 50"- StarTracker* in Jira.

Test Cycle name: TMA Pointing and Tracking - Part 2 - Reverse on the Sky Part 1 - 50”- Star-Tracker
Status: In Progress

Requirements verification for the pointing and tracking using the Star Tracker and the DIMM on a dedicated mounting plate connector to the top end of the TMA.

5.5.1 Software Version/Baseline

Star Tracker software version:
Dimm software version:
CSC software version:
Analysis software repository:

5.5.2 Configuration

Not provided.

5.5.3 Test Cases in LVV-C229 Test Cycle

5.5.3.1 LVV-T2707 - Evening Summit Tailgate Meeting - TMA and Dome Testing Safety Assurance

Version **2**. Status **Approved**. Open *LVV-T2707* test case in Jira.

Ensure the safety of observation with the main telescope during nighttime operations.
Tailgate Meeting: Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

Note: Version two is for tests that do not involve moving or opening the dome.

Preconditions:
All nonessential personnel has vacated the area.

Execution status: **Pass**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Pass**

Description

Daytime info collection:

- Revise the last Summit Daylog about changes that might influence the work during the night.
- Confirm that all the workers in the TMA and Dome areas have already left. This is best performed during the walk-through at the end of the day.

Expected Result

Is the observatory ready to observe?

Actual Result

Yes, parking position with el=-0.05 (horizon) az=153 align with rails

---

Step 2 Step Execution Status: **Pass**

Description

Night Shift Leader

Identify the Night Shift Leader (first and the second half of the night).

Note: This is the person responsible for deciding when

- the dome is going to be closed.
- to stop observing due to technical issues

Expected Result

One person is identified as the Night Shift Leader for each shift.

Actual Result
E - David, Late - Yijung

Step 3 Step Execution Status: **Pass**

Description
Tailgate Meeting:
Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

1. If the Dome slit doors are not moving automatically, make sure that there are three persons with slit closer training available to close the slit manually.
2. Verify that there are enough persons with driver training available.
3. If the StarTracker is going to be used:
   (a) Clarify who is taking the off the caps in the evening.
   (b) Take a test image before opening the Dome.
   (c) Clarify who is installing the caps in the morning.
4. Discuss if surrounding observatories need to be informed. (Necessary when light is switched on in the dome during the night.)
5. If surrounding observatories need to be informed, clarify who is going to inform them and what information should be transmitted.
6. Check weather conditions and weather forecasts are within the specifications for observations.
7. Describe the tasks planned for the night.

Expected Result
All involved personnel understands their roles and responsibilities.

- If the Dome slit doors are not moving automatically, there are at least two persons with slit closer training available to close the slit manually.
- There are enough people with driver training available.
- If the StarTracker is used,
  - the caps are taken off in the evening by:
  - the test image is taken by:
  - the StarTracker caps are installed in the morning by:
- If surrounding observatories need to be informed,
  - they are informed by:

- The following information will be transmitted:

- The weather conditions permit us to open the dome and do the planned testing.
- The tasks planned for the night are:

Actual Result

- If the Dome slit doors are not moving automatically, there are at least two persons with slit closer training available to close the slit manually: yes, 4 people on summit can do.
- There are enough people with driver training available.Yes- 4 people
- If the StarTracker is used,
  - the caps are taken off in the evening by: Yijung
  - the test image is taken by: Brian or observers
  - the StarTracker caps are installed in the morning by: Yijung
- If surrounding observatories need to be informed,
  - Not necessary
- The weather conditions permit us to open the dome and do the planned testing.: yes humidity and cloud cover are all good.
- The tasks planned for the night are:
- # afternoon (all equal priority)
  test CSC enabling of drives
  re-check az, el limits
  random walk
  get dome moving

  # after sunset (simultaneously)
  • star tracker measure camera offset with bright star
  • star streaming after getting star in fast camera
  • test 3.5 degree offsetting sequence
  # after twilite (in priority order)
  1. grid for validating pointing model (only if new one is available)
  az_grid=[180,120,60,0,-60,-120]
  el_grid=[25,40,55]
  then
  az_grid=[-180,-90,0,90]
  el_grid=[80]
  2. long tracks (10 minutes at each position) on a sparse grid (use LVVT2370 notebook)
  az_grid = [120, 30, 30, 120]
  el_grid = [35, 55, 75]

3. complete execution of LVV-T2732 random offset grid
az_grid = [135, 45, -45, -135]
el_grid = [25, 35, 45, 55, 65, 75]
number_of_exposures = 5
n_offsets = 5
offset_size = 3.5 # degrees
track_time = 60.
4. (if scheduler is ready) remaining time for scheduler observations of orion field or LMC

Step 4 Step Execution Status: **Pass**

Description

Tailgate Meeting – Part II:
If new personnel is participating in the nightly summit activities:

- Clarify that all personnel has PPE.
- Clarify that persons that need to go up into altitude have fall protection training.
- Confirm that we have enough personnel to open/close the dome shutter if required.
- Remind everybody that the emergency phone numbers are on the control room table.

Expected Result

- All personnel has the required PPE.
- Persons that need to go up into altitude have the fall protection training
- Everybody acknowledges that the emergency phone numbers are on the control room table.

Actual Result

- All personnel has the required PPE. YES
- Persons that need to go up into altitude have the fall protection training YES
- Everybody acknowledges that the emergency phone numbers are on the control room table. YES.

Step 5 Step Execution Status: **Pass**

Description

TMA and Dome contact

Person in charge of the TMA interlocks

Dome responsible

Expected Result

TMA and Dome contacts are known

Actual Result

TMA: Alberto Dome: Lorenzo

Step 6	Step Execution Status: **Pass**

Description

Radio Communication

- Make sure one radio is switched to channel 1, and the volume is high
  - Paramedics, mountain assistants (in replacement of the paramedics), guards, and surrounding observatories are listening to this channel.
- Make sure one radio is switched to channel 3, and the volume is high
  - Rubin's internal coordination channel

Expected Result

The radios are switched on and on high volume.

Actual Result

Yes we have at least three radios.

Step 7	Step Execution Status: **Pass**

Description

Cars

- Make sure enough cars are available to go to the hotel.
- Make sure the keys for the cars are available.

Expected Result
Sufficient cars and their keys are available.

Actual Result
Yes, one automatic cars.

Step 8 Step Execution Status: **Not Executed**

Description
ComCam safety

Put ComCam in a safe state for moving. This includes:

1. CryoTels are under observation for vibrations (i.e. a microphone or webcam is observing them and operating correctly)
2. Turbo pumps are off

Expected Result
ComCam is in a safe state for TMA movement.

Actual Result
Comcam is not cooling now.

Step 9 Step Execution Status: **Pass**

Description
TMA moving space

Go to the dome and visually verify that there is unrestricted space for the TMA movement.

Expected Result
The space is clear and no objects will be struck when the TMA moves.

Actual Result
Yes, checked by Robinson.

Step 10 Step Execution Status: **Pass**

Description

Alarm system check

Once available:

- Confirm that any audio and visual alarms are operating properly. (Need details on what, if any, alarms should be checked)
- Confirm that the safety systems for earthquakes and fire are working.

Expected Result

All alarms are functioning properly.

- Earthquake alert system is working:
- The fire system is working:

Actual Result

Yes Earth quake and fire alarm are all activated.

Step 11 Step Execution Status: **Pass**

Description

LOTO status:

If LOTO procedures are in use:

Set LOTO per (PROCEDURE, attached) at the following locations:

1. LOTO at the Dome
2. LOTO of the TMA Drives

Expected Result

The appropriate panels have been locked out or released.

Actual Result

LOTO on OSS for tma and E-stop for dome

Step 12	Step Execution Status: **Pass**

Description

Final walkthrough:

Perform a final walkthrough of the dome. Make sure all personnel is cleared out.

Expected Result

The dome is clear and safe for TMA movement.
The final walkthrough was performed by:

Actual Result

Yes. Done by EiE and night observers

Step 13	Step Execution Status: **Not Executed**

Description

Dome closure:

If the Dome door GIS is available:
Exit the Dome, close the door (any details about what specific door)

Expected Result

The GIS system is active.

Actual Result

not implemented yet

Step 14	Step Execution Status: **Pass**

Description

Dome clearance:

The Dome clearance is an EIE task, and they have to sign off.
If EIE is not available, perform these steps:

- Make sure that the dome crane is in the parking position. (Hook up)
- Position of the manlifts. Make sure the manlift supports are stored and are not on the rotation part of the dome.

- Walkthrough and make sure that there are no obstacles to move.

Example Code
https://confluence.lsstcorp.org/display/LTS/Dome+Remote+Software+Control+Procedure

Expected Result
The Dome is cleared for nightly operations.

Actual Result
yes cleared for night operation.

Step 15 Step Execution Status: **Pass**

Description
PFlow lift
This is part of EIE's safety check.
If EIE is not available, perform this step:

- The Pflow lift must be stored before moving the dome.

Expected Result
The PFlow lift is stored properly

Actual Result
pflow lift in the 3rd floor

Step 16 Step Execution Status: **Pass**

Description
Shutter closer
If you have to close the shutter, the Dome must be under LOTO.
Note: There is no LOTO available at the moment. Use the procedure attached to this test case and the information from the following link:
https://confluence.lsstcorp.org/display/LTS/Dome+Remote+Software+Control+Procedure

Expected Result
The shutter was closed in a safe way.

Actual Result
Estop will be engaged

Step 17 Step Execution Status: **Not Executed**

Description
GIS activation:
If the GIS for the Dome is available:

- activate the Dome GIS system.

Expected Result
If possible, the Dome GIS is activated.

Actual Result
no dome GIS is activated yet

Step 18 Step Execution Status: **Pass**

Description
Signoff
As a signoff, mark this step as passed

Expected Result
Safety Assurance is confirmed to be complete, and testing may proceed.

Actual Result
Yijung

5.5.3.2 LVV-T2714 - Configure Observatory Environment for Nighttime Operations

Version **1**. Status **Approved**. Open *LVV-T2714* test case in Jira.

At the beginning of the night, prepare the observatory for nightly operations.

Preconditions:
Dome and the TMA, or at least the TMA must available for observations.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Telescope preparation:

- Remove the caps on top of the StarTracker telescopes and the DIMM.
- Check the instrument's health status by taking a test image.

Expected Result

The caps are removed.
The test image is taken and stored correspondingly.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Calibration images:

Not needed at the moment, to be included if data analysis reveals the need.

- Take 10 "darks" with the StarTracker and the DIMM instruments. Use the same exposure time as for the images.
- Take 10 "sky flats" with the StarTracker and the DIMM instruments.

Expected Result

The Darks and flats are stored in the expected location.

Actual Result

Step 3	Step Execution Status: **Not Executed**

Description

Auxillary systems nighttime preparations:

- Switch off the UMA in the afternoon.

Expected Result

The UMA is switched off.

Actual Result

Step 4	Step Execution Status: **Not Executed**

Description

Night logging page:

Start the night log similar to the AuxTel night log:

https://confluence.lsstcorp.org/display/LSSTCOM/Night+Logs

Expected Result

Page created with template information.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA preparation

- Check the Oil Supply System (OSS) on the EUI
- Follow the attached manual to startup the TMA.

Expected Result

The OSS is operational:

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description

CSC activation:

Use L.O.V.E to bring the CSC to the enabled state.

Expected Result

All needed CSCs are in the enabled state.

Actual Result

5.5.3.3 LVV-T2731 - StarTracker Pointing and Tracking Test - Reverse Azimuth Pattern

Version **1**. Status **Approved**. Open *LVV-T2731* test case in Jira.

Collect data with the StarTracker following the reverse azimuth pattern with respect to the forward Azimuth pattern (https://jira.lsstcorp.org/secure/Tests.jspa#/testCase/LVV-T2731) The azimuth here is pattern 270, 180, 90, 0, -90, -180, -270 deg. Nominal at four elevation angles 15, 45, 70, 85 deg. Minimum at the three angles: 15, 45, 85 deg.

This test

- is foreseen the second of four tests
- takes about one-half summer night

Preconditions:
The safety test case and nightly operations test case have been executed.

Execution status: **Fail**

Final comment:

Detailed steps results:

Step 1.1 Step Execution Status: **Fail**

Description

Point the Dome:

Command the Dome to Pointing 1 to 270

Expected Result

The Dome starts moving.

Actual Result

Can't reach that position or even 258 deg.

az_grid=[258,180,90,0,-90,-180,-258] el_grid=[20,45,70,85]

Step 1.2 Step Execution Status: **Pass**

Description

Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 1.3 Step Execution Status: **Pass**

Description
Point the TMA
Command the TMA to Pointing 1 at 270 , 15 .

Expected Result
The TMA starts moving

Actual Result

Step 1.4 Step Execution Status: **Pass**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 1.5 Step Execution Status: **Pass**

Description
Image preparation
If the preparation to take images takes longer than 10sec, do repositioning to target 270, 15 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 1.6	Step Execution Status: **Pass**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 1.7	Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 1.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 2.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 2 to 270

Expected Result

The Dome starts moving.

Actual Result

Step 2.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 2.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 2 at 270 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 2.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 2.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 2.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 2.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 2.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 3.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 4 to 270

Expected Result

The Dome starts moving.

Actual Result

Step 3.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 3.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 4 at 270 , 85 .

Expected Result

The TMA starts moving

Actual Result

Step 3.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 3.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 85 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 3.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 3.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 3.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 4.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 5 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 4.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 4.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 5 at 180 , 85 .

Expected Result

The TMA starts moving

Actual Result

Step 4.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 4.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 85 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 4.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 4.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 4.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 5.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 7 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 5.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 5.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 7 at 180 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 5.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 5.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 5.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 5.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 5.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 6.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 8 to 180

Expected Result
The Dome starts moving.

Actual Result

Step 6.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 6.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 8 at 180 , 15 .

Expected Result
The TMA starts moving

Actual Result

Step 6.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 6.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 6.6	Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 6.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 6.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 7.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 9 to 90

Expected Result
The Dome starts moving.

Actual Result

Step 7.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 7.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 9 at 90 , 15 .

Expected Result
The TMA starts moving

Actual Result

Step 7.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 7.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 7.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 7.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 7.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 8.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 10 to 90

Expected Result

The Dome starts moving.

Actual Result

Step 8.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 8.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 10 at 90 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 8.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 8.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 45 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 8.6 Step Execution Status: **Not Executed**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 8.7 Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 8.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 9.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 12 to 90

Expected Result

The Dome starts moving.

Actual Result

Step 9.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 9.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 12 at 90 , 85 .

Expected Result

The TMA starts moving

Actual Result

Step 9.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 9.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 85 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 9.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 9.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 9.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 10.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 13 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 10.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 10.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 13 at 0 , 85 .

Expected Result

The TMA starts moving

Actual Result

Step 10.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 10.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 85 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 10.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 10.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 10.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 11.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 15 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 11.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 11.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 15 at 0 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 11.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 11.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 11.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 11.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 11.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 12.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 16 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 12.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 12.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 16 at 0 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 12.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 12.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 12.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 12.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 12.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 13.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 17 to -90

Expected Result
The Dome starts moving.

Actual Result

Step 13.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 13.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 17 at -90 , 15 .

Expected Result
The TMA starts moving

Actual Result

Step 13.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 13.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 13.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 13.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 13.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 14.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 18 to -90

Expected Result
The Dome starts moving.

Actual Result

Step 14.2	Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 14.3	Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 18 at -90 , 45 .

Expected Result
The TMA starts moving

Actual Result

Step 14.4	Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 14.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 14.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 14.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 14.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 15.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 20 to -90

Expected Result

The Dome starts moving.

Actual Result

Step 15.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 15.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 20 at -90 , 85 .

Expected Result

The TMA starts moving

Actual Result

Step 15.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 15.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 85 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 15.6 Step Execution Status: **Not Executed**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 15.7 Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 15.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 16.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 21 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 16.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 16.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 21 at -180 , 85 .

Expected Result

The TMA starts moving

Actual Result

Step 16.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 16.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 85 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 16.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 16.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 16.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 17.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 23 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 17.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 17.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 23 at -180 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 17.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 17.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 17.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 17.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 17.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 18.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 24 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 18.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 18.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 24 at -180 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 18.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 18.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 18.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 18.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 18.8 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 19.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 25 to -270

Expected Result
The Dome starts moving.

Actual Result

Step 19.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 19.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 25 at -270 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 19.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 19.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 19.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 19.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 19.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 20.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 26 to -270

Expected Result
The Dome starts moving.

Actual Result

Step 20.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 20.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 26 at -270 , 45 .

Expected Result
The TMA starts moving

Actual Result

Step 20.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 20.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 20.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 20.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 20.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 21.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 28 to -270

Expected Result
The Dome starts moving.

Actual Result

Step 21.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 21.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 28 at -270 , 85 .

Expected Result
The TMA starts moving

Actual Result

Step 21.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 21.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 85 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 21.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 21.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 21.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 22.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 22 to 270

Expected Result

The Dome starts moving.

Actual Result

Step 22.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 22.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 22 at 270 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 22.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 22.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 75 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 22.6 Step Execution Status: **Not Executed**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 22.7 Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 22.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 23.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 23 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 23.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 23.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 23 at 180 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 23.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 23.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 23.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 23.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 23.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 24.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 24 to 90

Expected Result

The Dome starts moving.

Actual Result

Step 24.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 24.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 24 at 90 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 24.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 24.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 24.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 24.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 24.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 25.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 25 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 25.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 25.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 25 at 0 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 25.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 25.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 25.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 25.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 25.8	Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 26.1	Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 26 to -90

Expected Result
The Dome starts moving.

Actual Result

Step 26.2	Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 26.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 26 at -90 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 26.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 26.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 26.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 26.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 26.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 27.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 27 to -180

Expected Result
The Dome starts moving.

Actual Result

Step 27.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 27.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 27 at -180 , 75 .

Expected Result
The TMA starts moving

Actual Result

Step 27.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 27.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 27.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 27.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 27.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 28.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 28 to -270

Expected Result
The Dome starts moving.

Actual Result

Step 28.2	Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 28.3	Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 28 at -270 , 75 .

Expected Result
The TMA starts moving

Actual Result

Step 28.4	Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 28.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 28.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

5.5.3.4 LVV-T2715 - Configure Observatory Environment for Daytime Operations

Version **1**. Status **Approved**. Open *LVV-T2715* test case in Jira.

After using the observatory during the nighttime, prepare the observatory for daytime operations.

Preconditions:
The observatory was used during nighttime.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1	Step Execution Status: **Not Executed**

Description

CSCs

- Transition the CSCs into STANDBY state

Expected Result

All CSCs are in their standbyState.

Actual Result

Step 2	Step Execution Status: **Not Executed**

Description

Telescope daytime preparations:

- Switch off or bring into standby the StarTracker and DIMM instruments
- Install the caps on top of the StarTracker telescopes and the DIMM

Expected Result

The caps are installed.

Actual Result

Step 3	Step Execution Status: **Not Executed**

Description

Dome:

- Bring the dome into the park position

Until the dome shutter is motorized:

- Send a message to the site manager :
  - confirming that nightly operations have finished
  - asking for a dome closer before the sun starts to shine on the StarTracker and the DIMM.

Expected Result
Dome closure is organized.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description
Auxillary systems daytime preparations:
If needed for daytime operations:

- Switch on the UMA in the morning.
- When available and need to be modified for the day:
  - Oil supply system on standby?
  - Dynalyne into standby?

Expected Result
All auxiliary systems are in the states suitable for daytime operations.

- The UMA is switched on.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA position in the morning

- Park the TMA in the position needed for the next day.

Expected Result

TMA parked in the corresponding position.

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description

Expected Result

Actual Result

Step 7 Step Execution Status: **Not Executed**

Description

Night log

- Close the night log by writing a summary of the nightly events
- Send a link with the summary to the site manager.

Expected Result

The night log is closed.

Actual Result

5.6 Test Cycle LVV-C230

Open test cycle *TMA Pointing and Tracking - Part 4 - Offset 0.2" + Slew and Settle + TMA Tracking Jitter – Using the DIMM.* in Jira.

Test Cycle name: TMA Pointing and Tracking - Part 4 - Offset 0.2" + Slew and Settle + TMA Tracking Jitter – Using the DIMM.
Status: In Progress

Data collection for the pointing and tracking requirements verification using the Star Tracker and the DIMM.
Star Tracker and the DIMM will be mounted on dedicated connector plates to the top end of the TMA.

Slew and Settle:

- Track on position one, slew to position two, and Track on position two.
- In four seconds, the mount should settle.
- Timestamps come from the EFD.
- acquire a bright star with the DIMM
- initiate exposure series at ~75 Hz for 15s. Mean and STD of the centroid
- Offset to 3.5 deg. To be reached in 4s. The trigger is the offset command. We wait for the MCS command + a reasonable amount of time. To be done at survey cadence. No images at the offset position (likely no bright star there).
- Issue the second command to go to the first position. We stay for 35 seconds.
- We use the same star and 5 times 3.5 AZ, 5 times 3.5 deg EL, and 5 x 3.5 deg random positions.

5.6.1 Software Version/Baseline

Star Tracker software version:
Dimm software version:
CSC software version:
Analysis software repository:

5.6.2 Configuration

Not provided.

5.6.3 Test Cases in LVV-C230 Test Cycle

5.6.3.1 LVV-T2707 - Evening Summit Tailgate Meeting - TMA and Dome Testing Safety Assurance

Version **2**. Status **Approved**. Open *LVV-T2707* test case in Jira.

Ensure the safety of observation with the main telescope during nighttime operations.
Tailgate Meeting: Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

Note: Version two is for tests that do not involve moving or opening the dome.

Preconditions:
All nonessential personnel has vacated the area.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Expected Result

Actual Result

5.6.3.2 LVV-T2714 - Configure Observatory Environment for Nighttime Operations

Version **1**. Status **Approved**. Open *LVV-T2714* test case in Jira.

At the beginning of the night, prepare the observatory for nightly operations.

Preconditions:
Dome and the TMA, or at least the TMA must available for observations.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Telescope preparation:

- Remove the caps on top of the StarTracker telescopes and the DIMM.
- Check the instrument's health status by taking a test image.

Expected Result

The caps are removed.
The test image is taken and stored correspondingly.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Calibration images:

Not needed at the moment, to be included if data analysis reveals the need.

- Take 10 “darks” with the StarTracker and the DIMM instruments. Use the same exposure time as for the images.
- Take 10 “sky flats” with the StarTracker and the DIMM instruments.

Expected Result

The Darks and flats are stored in the expected location.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

Auxillary systems nighttime preparations:

- Switch off the UMA in the afternoon.

Expected Result

The UMA is switched off.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

Night logging page:

Start the night log similar to the AuxTel night log:

https://confluence.lsstcorp.org/display/LSSTCOM/Night+Logs

Expected Result

Page created with template information.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA preparation

- Check the Oil Supply System (OSS) on the EUI
- Follow the attached manual to startup the TMA.

Expected Result

The OSS is operational:

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description

CSC activation:

Use L.O.V.E to bring the CSC to the enabled state.

Expected Result
All needed CSCs are in the enabled state.

Actual Result

5.6.3.3 LVV-T2732 - StarTracker Pointing and Tracking Test - Pointing Offset 0.2" - Slew and Settle - TMA Tracking Jitter Validation – DIMM

Version **1**. Status **Approved**. Open *LVV-T2732* test case in Jira.

The objective of this test is

- the TMA achieves pointing repeatability within the value of 1arcsec RMS for any motion within the pointing range. (LTS-103-REQ-0011-V-01: 2.1.5_1)
- to characterize the settling time and settling behavior after a move.

The observations for the TMA settling characterization are done by

1. Centering star on the DIMM
2. Slew off and back to center a star with the active damping active.
3. Slew off and back to center a star with the active damping deactivated.
4. Analyze the data using LVV-T2749

TMA Tracking Jitter Validation:

- Using the DIMM. Tracking siderially is obligatory.
- Encoder stream at 50 Hz, Nyquist sampling at 100 -150 Hz.
- The standard frequency is 75Hz smaller frames allow for higher.
- StarTracker and DIMM are mounted and working at the same time.

NOTE:

- The Dome needs an offset of a min of 0.6 deg for the TMA motion during tracking, or else the Dome would need to be moved.
- If not stated otherwise, the TMA damping is turned on.

Preconditions:
These preconditions are taken from the FAT:

- The TMA interlock system is fully operative and tested.
- MCS is ready for operation.
- The encoder system is active and calibrated.
- All the TMA subsystems hardware (mechanical and electrical) is available for operation and fully connected.
- No alarms are active in TMA IS.

Preconditions for the summit tests:

This test case needs the DIMM to reach the needed precision. The DIMM must be installed and working.

Execution status: **Fail**

Final comment:

Detailed steps results:

Step 1.1	Step Execution Status: **In Progress**

Description

Position the dome

Command the Dome to Pointing 1 to temp

Expected Result

The Dome starts moving.

Actual Result

Step 1.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 1.3	Step Execution Status: **Fail**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 1 at -270 , 15 .

Expected Result

The TMA starts moving.

Actual Result

```
az_grid = [135, 45, -45, -135]
el_grid = [25, 35, 45, 55, 65, 75]
```

```
number_of_exposures = 5
n_offsets = 5
offset_size = 3.5 # degrees
track_time = 60.
```

Step 1.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 1.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 1.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 1 at -270, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 2.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 1 at -270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 2.1	Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 2 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 2.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 2.3	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 2 at -270 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 2.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 2.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 2.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 2 at -270, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.

- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 3.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 2 at -270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 3.1	Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 3 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 3.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 3.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 3 at -270 , 75 .

Expected Result

The TMA starts moving.

Actual Result

Step 3.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 3.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 3.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 3 at -270, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 4.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 3 at -270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 4.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 4 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 4.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 4.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 4 at -270 , 86.5 .

Expected Result

The TMA starts moving.

Actual Result

Step 4.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 4.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 4.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 4 at -270, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 5.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 4 at -270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 5.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 5 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 5.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 5.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 5 at -180 , 86.5 .

Expected Result

The TMA starts moving.

Actual Result

Step 5.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 5.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 5.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 5 at -180, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 6.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 5 at -180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 6.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 6 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 6.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 6.3	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 6 at -180 , 75 .

Expected Result

The TMA starts moving.

Actual Result

Step 6.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 6.5	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 6.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 6 at -180, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 7.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 6 at -180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 7.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 7 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 7.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 7.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 7 at -180 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 7.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 7.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 7.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 7 at -180, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 8.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 7 at -180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 8.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 8 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 8.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 8.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 8 at -180 , 15 .

Expected Result

The TMA starts moving.

Actual Result

Step 8.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 8.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 8.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 8 at -180, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 9.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 8 at -180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 9.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 9 to {Dome AZ}

Expected Result
The Dome starts moving.

Actual Result

Step 9.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 9.3 Step Execution Status: **Not Executed**

Description
Point the TMA to (Az, El)-pattern position
Point the TMA to Pointing 9 at -90 , 15 .

Expected Result
The TMA starts moving.

Actual Result

Step 9.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 9.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 9.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 9 at -90, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 10.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 9 at -90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 10.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 10 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 10.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 10.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 10 at -90 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 10.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 10.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.

- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 10.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 10 at -90, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 11.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 10 at -90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 11.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 11 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 11.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 11.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 11 at -90 , 75 .

Expected Result
The TMA starts moving.

Actual Result

Step 11.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 11.5 Step Execution Status: **Not Executed**

Description
Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 11.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 11 at -90, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 12.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 11 at -90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 12.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 12 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 12.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 12.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 12 at -90 , 86.5 .

Expected Result

The TMA starts moving.

Actual Result

Step 12.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 12.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 12.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 12 at -90, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 13.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 12 at -90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 13.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 13 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 13.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 13.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 13 at 0 , 86.5 .

Expected Result

The TMA starts moving.

Actual Result

Step 13.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 13.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 13.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 14.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 14.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 14 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 14.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 14.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 14 at 0 , 75 .

Expected Result

The TMA starts moving.

Actual Result

Step 14.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 14.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 14.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 15.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 15.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 15 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 15.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 15.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 15 at 0 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 15.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 15.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 15.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 16.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 16.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 16 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 16.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 16.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 16 at 0 , 15 .

Expected Result

The TMA starts moving.

Actual Result

Step 16.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 16.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 16.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 17.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 17.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 17 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 17.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 17.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 17 at 90 , 15 .

Expected Result

The TMA starts moving.

Actual Result

Step 17.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 17.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 17.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 18.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 18.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 18 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 18.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 18.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 18 at 90 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 18.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 18.5	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 18.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 19.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 19.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 19 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 19.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 19.3	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 19 at 90 , 75 .

Expected Result

The TMA starts moving.

Actual Result

Step 19.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 19.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 19.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 20.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 20.1	Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 20 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 20.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 20.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 20 at 90 , 86.5 .

Expected Result

The TMA starts moving.

Actual Result

Step 20.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 20.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.

- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 20.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 21.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 21.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 21 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 21.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 21.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 21 at 180 , 86.5 .

Expected Result
The TMA starts moving.

Actual Result

Step 21.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 21.5 Step Execution Status: **Not Executed**

Description
Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 21.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 22.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 22.1	Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 22 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 22.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 22.3	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 22 at 180 , 75 .

Expected Result

The TMA starts moving.

Actual Result

Step 22.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 22.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 22.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 23.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 23.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 23 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 23.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 23.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 23 at 180 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 23.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 23.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 23.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 24.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 24.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 24 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 24.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 24.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 24 at 180 , 15 .

Expected Result

The TMA starts moving.

Actual Result

Step 24.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 24.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 24.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 25.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 25.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 25 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 25.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 25.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 25 at 270 , 15 .

Expected Result

The TMA starts moving.

Actual Result

Step 25.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 25.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 25.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 26.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 26.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 26 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 26.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 26.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 26 at 270 , 45 .

Expected Result

The TMA starts moving.

Actual Result

Step 26.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 26.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 26.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 27.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 27.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 27 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 27.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 27.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 27 at 270 , 75 .

Expected Result

The TMA starts moving.

Actual Result

Step 27.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 27.5 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 27.7 Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 28.0 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 28.1 Step Execution Status: **Not Executed**

Description

Position the dome

Command the Dome to Pointing 28 to {Dome AZ}

Expected Result

The Dome starts moving.

Actual Result

Step 28.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 28.3 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position

Point the TMA to Pointing 28 at 270 , 86.5 .

Expected Result

The TMA starts moving.

Actual Result

Step 28.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 28.5	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Pattern Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.6	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.7	Step Execution Status: **Not Executed**

Description

Move TMA to the 1. random distance of 3.5deg

Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

- The TMA reaches the commanded offset position.
- The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition*inPosition parameter = true.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description
Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description
Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 28.9	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.0	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position.
- DIMM image quality is sufficient

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 1 at -270, 15. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 2 at -270, 45. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 3 at -270, 75. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 4 at -270, 86.5. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 5 at -180, 86.5. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 6 at -180, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 7 at -180, 45. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 8 at -180, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 9 at -90, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 10 at -90, 45. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 11 at -90, 75. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 12 at -90, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description
Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El.

Expected Result
The TMA reaches the commanded offset position.

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1	Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.1 Step Execution Status: **Not Executed**

Description

Move TMA to the 2. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El.

Expected Result

The TMA reaches the commanded offset position.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.2	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.2	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.3	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 1 at -270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 2 at -270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 3 at -270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 4 at -270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 5 at -180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 6 at -180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 7 at -180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 8 at -180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 9 at -90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 10 at -90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 11 at -90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 12 at -90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.4 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 1 at -270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 2 at -270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 3 at -270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 4 at -270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 5 at -180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 6 at -180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 7 at -180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 8 at -180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 9 at -90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 10 at -90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 11 at -90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 12 at -90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5	Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.5 Step Execution Status: **Not Executed**

Description

Move TMA to the 3. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.6 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets

- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.

- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.7	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 1 at -270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 2 at -270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 3 at -270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 4 at -270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 5 at -180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 6 at -180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 7 at -180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 8 at -180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 9 at -90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 10 at -90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 11 at -90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 12 at -90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.8	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 1 at -270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 2 at -270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 3 at -270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 4 at -270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 5 at -180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 6 at -180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 7 at -180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 8 at -180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 9 at -90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 10 at -90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 11 at -90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 12 at -90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9	Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 29.9 Step Execution Status: **Not Executed**

Description

Move TMA to the 4. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.0 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets

- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.

- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.1	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 1 at -270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 2 at -270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 3 at -270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 4 at -270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 5 at -180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 6 at -180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 7 at -180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 8 at -180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 9 at -90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 10 at -90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 11 at -90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 12 at -90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.2 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 1 at -270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 2 at -270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 3 at -270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 4 at -270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 5 at -180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 6 at -180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 7 at -180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 8 at -180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 9 at -90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 10 at -90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 11 at -90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 12 at -90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 13 at 0, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 14 at 0, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 15 at 0, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 16 at 0, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 17 at 90, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 18 at 90, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 19 at 90, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 20 at 90, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 21 at 180, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 22 at 180, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 23 at 180, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 24 at 180, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3	Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 25 at 270, 15. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 26 at 270, 45. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 27 at 270, 75. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.3 Step Execution Status: **Not Executed**

Description

Move TMA to the 5. random distance of 3.5deg

- Point the TMA to a random 3.5 deg combined offset in AZ and EL from Pointing 28 at 270, 86.5. Record the exact position of the offset in AZ and El

Expected Result

- The TMA reaches the commanded offset position.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.

- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4 Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.
- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.4	Step Execution Status: **Not Executed**

Description

Find DIMM Object and DIMM Offset

- While tracking, take a 10-sec exposure with the StarTracker.

- Load the image into an image viewer.
- Overlay the GAIA catalog.
- Select a star brighter than XXX mag (bright enough for the DIMM).
- Calculate the pixel offset between the StarTracker and the DIMM.
- Transform the offset into AZ and EL offsets.

Expected Result

- An image was successfully taken with the StarTracker and is of sufficient quality.
- AZ and EL offsets are available.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets

- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.

- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5	Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.5 Step Execution Status: **Not Executed**

Description

Move TMA to the DIMM position and Take DIMM images

- Command the TMA to the DIMM position by applying the offsets
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the DIMM position.
- DIMM imaging quality is sufficient.

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 1 at -270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 2 at -270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 3 at -270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 4 at -270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 5 at -180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 6 at -180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 7 at -180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 8 at -180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 9 at -90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 10 at -90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 11 at -90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 12 at -90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 12 at -90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 13 at 0 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 14 at 0 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 15 at 0 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 16 at 0 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 17 at 90 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 18 at 90 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 19 at 90 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 20 at 90 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 21 at 180 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 22 at 180 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 23 at 180 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 24 at 180 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6	Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 25 at 270 + DIMM offset, 15 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 26 at 270 + DIMM offset, 45 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 27 at 270 + DIMM offset, 75 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.6 Step Execution Status: **Not Executed**

Description

Point the TMA to (Az, El)-pattern position + DIMM pattern offset and take DIMM images

- Point the TMA back to Pointing 28 at 270 + DIMM offset, 86.5 + DIMM offset.
- While tracking, take DIMM images with XXXs exposure time and inspect the quality.

Expected Result

- TMA reaches the position
- DIMM image quality is sufficient

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7	Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

Step 30.7 Step Execution Status: **Not Executed**

Description

TMA Settle Characterisation:

Repeat the previous step with the TMA damping turned off.

Expected Result

- The TMA takes longer to settle.
- The inPosition event arrives later to the EFD.

Actual Result

5.6.3.4 LVV-T2715 - Configure Observatory Environment for Daytime Operations

Version **1**. Status **Approved**. Open *LVV-T2715* test case in Jira.

After using the observatory during the nighttime, prepare the observatory for daytime operations.

Preconditions:
The observatory was used during nighttime.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description
CSCs

- Transition the CSCs into STANDBY state

Expected Result
All CSCs are in their standbyState.

Actual Result

Step 2	Step Execution Status: **Not Executed**

Description

Telescope daytime preparations:

- Switch off or bring into standby the StarTracker and DIMM instruments
- Install the caps on top of the StarTracker telescopes and the DIMM

Expected Result

The caps are installed.

Actual Result

Step 3	Step Execution Status: **Not Executed**

Description

Dome:

- Bring the dome into the park position

Until the dome shutter is motorized:

- Send a message to the site manager :
  - confirming that nightly operations have finished
  - asking for a dome closer before the sun starts to shine on the StarTracker and the DIMM.

Expected Result

Dome closure is organized.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

Auxillary systems daytime preparations:

If needed for daytime operations:

- Switch on the UMA in the morning.
- When available and need to be modified for the day:
  - Oil supply system on standby?
  - Dynalyne into standby?

Expected Result

All auxiliary systems are in the states suitable for daytime operations.

- The UMA is switched on.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA position in the morning

- Park the TMA in the position needed for the next day.

Expected Result

TMA parked in the corresponding position.

Actual Result

Step 6	Step Execution Status: **Not Executed**

Description

Expected Result

Actual Result

Step 7	Step Execution Status: **Not Executed**

Description

Night log

- Close the night log by writing a summary of the nightly events
- Send a link with the summary to the site manager.

Expected Result

The night log is closed.

Actual Result

5.7 Test Cycle LVV-C232

Open test cycle *TMA Pointing and Tracking - Analysis - In Depth* in Jira.

Test Cycle name: TMA Pointing and Tracking - Analysis - In Depth
Status: In Progress

Requirements verification for the pointing and tracking using the Star Tracker and the DIMM on a dedicated mounting plate connector to the top end of the TMA.

5.7.1 Software Version/Baseline

Star Tracker software version:
Dimm software version:
CSC software version:
Analysis software repository:

5.7.2 Configuration

Not provided.

5.7.3 Test Cases in LVV-C232 Test Cycle

5.7.3.1 LVV-T2738 - StarTracker Pointing and Tracking Test In-Depth Analysis, Pointing, Offset, Tracking Drift

Version **1**. Status **Approved**. Open *LVV-T2738* test case in Jira.

The objective of this test case is the **analysis of the data** taken to verify that the

- TMA achieves a pointing accuracy of 50 arcsec RMS relative to its own reference system for any motion within the pointing range.
- TMA achieves pointing repeatability within the value of 1arcsec RMS for any motion within the pointing range. (LTS-103-REQ-0011-V-01: 2.1.5_1)

NOTE: The Dome needs an offset of a min of 0.6 deg for the TMA motion during tracking, or else the Dome would need to be moved.

Preconditions:
At least one dataset for the forward or reverse, or random pointing pattern must be available.

Execution status: **In Progress**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **In Progress**

Description

Use the existing data to plot the tracking drift for the DIMM data in Az and El and calculate the resulting RMS.
mcs = Mount Control System
Plot:

- AZ_sky versus time
- EL_sky versus time
- AZ_mcs versus time
- EL_mcs versus time
- (AZ_sky - AZ_mcs) versus time
- (EL_sky - EL_mcs) versus time

Include the following information:

- Start and end AZ/EL as appropriate
- AZ/EL midpoint of time series as appropriate
- Start and end times

Expected Result

The RMS of the tracking drift is less than or equal to 1 arcsec.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

If the plots show differences in Az and El, the following additional analysis shall be done:

1. Conduct a least-squares linear fit versus time.

2. Include uncertainty analysis of slope and y-intercept: Best-fit slope and y-intercept and their 1-sigma deviations
3. De-trend the difference data by the slope of the most likely linear fit.
4. Plot the marginal histogram of the de-trended difference data for AZ and EL.
5. Generate histogram plots for de-trended AZ_sky - AZ_mcs and EL_sky - EL_mcs.
6. Fit a model to the histogram (expectation is a simple gaussian or perhaps a double gaussian to capture wings of the distribution
7. Calculate histogram statistics - mean, mode STDev

Note:
MCS = Mount control system = measured AZ
Sky= calculated values taken from the astrometry.net solution

Expected Result

1. It is expected the tracking drift will be linear over the time baseline of the individual time series for each (Az, El) in the pointing grid.
   A higher-order model can also be used, but this will require follow-up investigations to understand why the drift is not linear.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

Use the existing data to calculate the RMS for each measured position for each step, do the RMS for all steps, and calculate the error.

Expected Result

- The RMS of the position was calculated.
- The plots show the repeatability per pointing location. Each point was reached at least 5 times from a random 3.5 deg offset, and the corresponding plot shows a 5-point delta AZ vs. delta EL. Plot a circle for the expected value and one for the reached RMS.

- Choose different colors for going forward and backward through the pointings.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

After all of the pointing locations have been reached 5 times:

- Plot the difference between the demand and measured position for El anf Az. (Delta EL vs Delta Az)
- Plot the in different colors the forward and backward moving.
- Plot the ring for expected RMS and measured RMS.
- Histogramm for delta Az, delta EL.
- fit the historgram with a gausian (nominal)
  - Fitted mean measures the accuracy
  - Fitted width to meet repeatability requirement.

Expected Result

All values are within 50 arcsec.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

Verify the TMA north is in the general north direction.

Expected Result

The TMA's north is about 0deg in azimuth.

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description

Take the data from the accelerometers and derive the acceleration and jerk values during the tests.

Test Data

Note: It is expected that the TMA operates outside of the maximum slewing rates. A deviation request may be required from UTE. However, the data from this test should show that the values are safe for the TMA and the requirement can be accepted as is.

Expected Result

The analysis shows the acceleration and jerk values are within the maximum slewing rates as defined in LTS-103 Section 2.2.2.1.

Actual Result

5.7.3.2 LVV-T2703 - TMA Tracking Jitter Validation - Data Analysis

Version **1**. Status **Approved**. Open *LVV-T2703* test case in Jira.

Analyze the data taken with the DIMM to characterize the TMA tracking Jitter.

Notes from the data acquisition:

- Using the DIMM. Tracking siderially is obligatory.
- Encoder stream at 50 Hz, Nyquist sampling at 100 -150 Hz.
- The standard frequency is 75Hz smaller frames allow for higher.
- StarTracker and DIMM are mounted and working at the same time.
- Observing strategy:
  - Same observing pattern as the forward grid.
  - The object is selected on the StarTracker.
  - The offset to the DIMM is applied.

- DIMM streaming is used to confirm that the star is centered on the DIMM.
- This is done in parallel with the Slew and Settle data acquisition.

Preconditions:
Data for the Tracking Jitter are taken.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1	Step Execution Status: **Not Executed**

Description

- Plot the Az and El vs time while the TMA was tracking.
- Calculate the RMS of the Tracking jitter.

Expected Result
The RMS of the tracking jitter in Az and El are within the allowed range.

Actual Result

5.7.3.3 LVV-T2749 - Slew and Settle analysis

Version **1**. Status **Approved**. Open *LVV-T2749* test case in Jira.

Analyze data to characterize the settling after a slew.

Preconditions:

Data were taken during observations for: LVV-T2732

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Settling characterization:

1. Compute the star centroid from the Fast Camera data
2. Plot the star centroid vs. time
3. Fit a sin wave to the data
4. Determine the damping time

Test Data

Notes for the implementation:

- Generic Camera CSC does not do high-speed streaming
- Dave has a version of AVT streaming code that can stream to FITS files
- Dome-seeing monitor code does do the streaming and centroiding
- There maybe an issue with seeing injecting noise to the measurement
- DIMM can in principle save a stream as through VimbaView

Expected Result

1. Ringing during settlement should be at the 1st fundamental frequency of the mount at XXX Hz.
2. A decaying sin wave is observed.
3. The damp time is below XXX sec.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Accelerometer data analysis:

Analyze the accelerometer data:
Plot accelerations at EL close to the zenith and close to the Horizon.
AZ should be large.

Note:
Main concern is for a 3.5 degree offset.

Expected Result

The maximum acceleration and jerk at slew are within the requirement.

Slew and settle should be within the requirements.

Actual Result

5.8 Test Cycle LVV-C233

Open test cycle *TMA Pointing and Tracking - Part 3 - Tracking at Random Positions - 50" - StarTracker* in Jira.

Test Cycle name: TMA Pointing and Tracking - Part 3 - Tracking at Random Positions - 50" - StarTracker
Status: Not Executed

Requirements verification for the pointing and tracking using the Star Tracker and the DIMM on a dedicated mounting plate connector to the top end of the TMA.

5.8.1 Software Version/Baseline

Star Tracker software version:
Dimm software version:
CSC software version:
Analysis software repository:

5.8.2 Configuration

Not provided.

5.8.3 Test Cases in LVV-C233 Test Cycle

5.8.3.1 LVV-T2707 - Evening Summit Tailgate Meeting - TMA and Dome Testing Safety Assurance

Version **2**. Status **Approved**. Open *LVV-T2707* test case in Jira.

Ensure the safety of observation with the main telescope during nighttime operations.
Tailgate Meeting: Hold a tailgate for the upcoming task with personnel on the summit working during the night. Go over any relevant procedures, roles, and responsibilities.

Note: Version two is for tests that do not involve moving or opening the dome.

Preconditions:
All nonessential personnel has vacated the area.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Verify that there is unrestricted space for the TMA movement.

Expected Result

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Expected Result

Actual Result

5.8.3.2 LVV-T2714 - Configure Observatory Environment for Nighttime Operations

Version **1**. Status **Approved**. Open *LVV-T2714* test case in Jira.

At the beginning of the night, prepare the observatory for nightly operations.

Preconditions:
Dome and the TMA, or at least the TMA must available for observations.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

Telescope preparation:

- Remove the caps on top of the StarTracker telescopes and the DIMM.
- Check the instrument's health status by taking a test image.

Expected Result

The caps are removed.
The test image is taken and stored correspondingly.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Calibration images:

Not needed at the moment, to be included if data analysis reveals the need.

- Take 10 "darks" with the StarTracker and the DIMM instruments. Use the same exposure time as for the images.
- Take 10 "sky flats" with the StarTracker and the DIMM instruments.

Expected Result

The Darks and flats are stored in the expected location.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

Auxillary systems nighttime preparations:

- Switch off the UMA in the afternoon.

Expected Result

The UMA is switched off.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

Night logging page:

Start the night log similar to the AuxTel night log:

https://confluence.lsstcorp.org/display/LSSTCOM/Night+Logs

Expected Result

Page created with template information.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA preparation

- Check the Oil Supply System (OSS) on the EUI
- Follow the attached manual to startup the TMA.

Expected Result
The OSS is operational:

Actual Result

Step 6 Step Execution Status: **Not Executed**

Description
CSC activation:

Use L.O.V.E to bring the CSC to the enabled state.

Expected Result
All needed CSCs are in the enabled state.

Actual Result

5.8.3.3 LVV-T2740 - StarTracker Pointing and Tracking Test - Tracking at Random Positions

Version **1**. Status **Approved**. Open *LVV-T2740* test case in Jira.

Collect data with the StarTracker following the reverse azimuth pattern with respect to the forward Azimuth pattern (https://jira.lsstcorp.org/secure/Tests.jspa#/testCase/LVV-T2731)
The azimuth and elevation pattern here is randomized. The values used are coming from the pool of 270, 180, 90, 0, -90, -180, -270 deg Azimuth angles and 15, 45, 86,5 deg elevation angles. Optionally Azimuth angels at Elevation 75 can be added.

This test

- is foreseen the third of four tests
- takes about one summer night (7 hours) in the full version and a bit more than 5hours in the shortened version.

Preconditions:
TMA and Dome are controlable from the CSC.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 1 to 270

Expected Result
The Dome starts moving.

Actual Result

Step 1.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 1.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 1 at 270 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 1.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 1.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 1.6	Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 1.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 1.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 2.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 2 to -180

Expected Result

The Dome starts moving.

Actual Result

Step 2.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 2.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 2 at -180 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 2.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 2.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 2.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 2.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 2.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 3.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 4 to 90

Expected Result
The Dome starts moving.

Actual Result

Step 3.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 3.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 4 at 90 , 86.5 .

Expected Result
The TMA starts moving

Actual Result

Step 3.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 3.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 86.5 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 3.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 3.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 3.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 4.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 5 to -270

Expected Result

The Dome starts moving.

Actual Result

Step 4.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 4.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 5 at -270 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 4.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 4.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 15 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 4.6 Step Execution Status: **Not Executed**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 4.7 Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 4.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 5.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 7 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 5.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 5.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 7 at 180 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 5.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 5.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 5.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 5.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 5.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 6.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 8 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 6.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 6.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 8 at 0 , 86.5 .

Expected Result

The TMA starts moving

Actual Result

Step 6.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 6.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 86.5 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 6.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 6.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 6.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 7.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 9 to -90

Expected Result

The Dome starts moving.

Actual Result

Step 7.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 7.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 9 at -90 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 7.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 7.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 7.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 7.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 7.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 8.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 10 to 270

Expected Result

The Dome starts moving.

Actual Result

Step 8.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 8.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 10 at 270 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 8.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 8.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 8.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 8.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 8.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 9.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 12 to -180

Expected Result

The Dome starts moving.

Actual Result

Step 9.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 9.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 12 at -180 , 86.5 .

Expected Result

The TMA starts moving

Actual Result

Step 9.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 9.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 86.5 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 9.6	Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 9.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 9.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 10.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 13 to 90

Expected Result
The Dome starts moving.

Actual Result

Step 10.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 10.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 13 at 90 , 45 .

Expected Result
The TMA starts moving

Actual Result

Step 10.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 10.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 10.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 10.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 10.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 11.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 15 to -270

Expected Result

The Dome starts moving.

Actual Result

Step 11.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 11.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 15 at -270 , 86.5 .

Expected Result

The TMA starts moving

Actual Result

Step 11.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 11.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 86.5 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 11.6 Step Execution Status: **Not Executed**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 11.7 Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 11.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 12.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 16 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 12.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 12.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 16 at 180 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 12.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 12.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 12.6	Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 12.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 12.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 13.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 17 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 13.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 13.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 17 at 0 , 15 .

Expected Result

The TMA starts moving

Actual Result

Step 13.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 13.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 13.6	Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 13.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 13.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 14.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 18 to -90

Expected Result

The Dome starts moving.

Actual Result

Step 14.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 14.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 18 at -90 , 86.5 .

Expected Result

The TMA starts moving

Actual Result

Step 14.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 14.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 86.5 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 14.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 14.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 14.8	Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 15.1	Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 20 to 270

Expected Result
The Dome starts moving.

Actual Result

Step 15.2	Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 15.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 20 at 270 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 15.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 15.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 15.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 15.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 15.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 16.1	Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 21 to -180

Expected Result
The Dome starts moving.

Actual Result

Step 16.2	Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 16.3	Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 21 at -180 , 15 .

Expected Result
The TMA starts moving

Actual Result

Step 16.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 16.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 16.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 16.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 16.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 17.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 23 to 90

Expected Result
The Dome starts moving.

Actual Result

Step 17.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 17.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 23 at 90 , 15 .

Expected Result
The TMA starts moving

Actual Result

Step 17.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 17.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 15 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 17.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 17.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 17.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 18.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 24 to -270

Expected Result

The Dome starts moving.

Actual Result

Step 18.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 18.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 24 at -270 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 18.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 18.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 45 .

Expected Result
TMA reaches the commanded position.

Actual Result

Step 18.6 Step Execution Status: **Not Executed**

Description
Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 18.7 Step Execution Status: **Not Executed**

Description
On-the-fly Image Quality Check
While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 18.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 19.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 25 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 19.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 19.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 25 at 180 , 86.5 .

Expected Result

The TMA starts moving

Actual Result

Step 19.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 19.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 86.5 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 19.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 19.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 19.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 20.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 26 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 20.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 20.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 26 at 0 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 20.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 20.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 20.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 20.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 20.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 21.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 28 to -90

Expected Result

The Dome starts moving.

Actual Result

Step 21.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 21.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 28 at -90 , 45 .

Expected Result

The TMA starts moving

Actual Result

Step 21.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 21.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 45 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 21.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 21.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 21.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 22.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 22 to 270

Expected Result

The Dome starts moving.

Actual Result

Step 22.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 22.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 22 at 270 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 22.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 22.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 270, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 22.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 22.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 22.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

Step 23.1 Step Execution Status: **Not Executed**

Description
Point the Dome:
Command the Dome to Pointing 23 to -180

Expected Result
The Dome starts moving.

Actual Result

Step 23.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 23.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 23 at -180 , 75 .

Expected Result
The TMA starts moving

Actual Result

Step 23.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 23.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -180, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 23.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 23.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 23.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 24.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 24 to 90

Expected Result
The Dome starts moving.

Actual Result

Step 24.2 Step Execution Status: **Not Executed**

Description
Wait for the Dome to reach the commanded position.

Expected Result
The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 24.3 Step Execution Status: **Not Executed**

Description
Point the TMA
Command the TMA to Pointing 24 at 90 , 75 .

Expected Result
The TMA starts moving

Actual Result

Step 24.4 Step Execution Status: **Not Executed**

Description
Wait for the TMA to reach the commanded position.

Expected Result
The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 24.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 90, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 24.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 24.7	Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 24.8	Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 25.1	Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 25 to -270

Expected Result

The Dome starts moving.

Actual Result

Step 25.2	Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 25.3	Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 25 at -270 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 25.4	Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 25.5	Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -270, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 25.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 25.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 25.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 26.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 26 to 180

Expected Result

The Dome starts moving.

Actual Result

Step 26.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 26.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 26 at 180 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 26.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 26.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 180, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 26.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 26.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 26.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 27.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 27 to 0

Expected Result

The Dome starts moving.

Actual Result

Step 27.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 27.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 27 at 0 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 27.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 27.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target 0, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 27.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 27.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result

RubinTV is showing an astrometric solution.

Actual Result

Step 27.8 Step Execution Status: **Not Executed**

Description

Offline analysis results

Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result

Image quality is sufficient.

Actual Result

Step 28.1 Step Execution Status: **Not Executed**

Description

Point the Dome:

Command the Dome to Pointing 28 to -90

Expected Result

The Dome starts moving.

Actual Result

Step 28.2 Step Execution Status: **Not Executed**

Description

Wait for the Dome to reach the commanded position.

Expected Result

The *MTDome_logevent_azMotion* and *MTDome_logevent_elMotion* inPosition parameter = true.

Actual Result

Step 28.3 Step Execution Status: **Not Executed**

Description

Point the TMA

Command the TMA to Pointing 28 at -90 , 75 .

Expected Result

The TMA starts moving

Actual Result

Step 28.4 Step Execution Status: **Not Executed**

Description

Wait for the TMA to reach the commanded position.

Expected Result

The *MTMount_logevent_azimuthInPosition* and *MTMount_logevent_elevationInPosition* inPosition parameter = true.

Actual Result

Step 28.5 Step Execution Status: **Not Executed**

Description

Image preparation

If the preparation to take images takes longer than 10sec, do repositioning to target -90, 75 .

Expected Result

TMA reaches the commanded position.

Actual Result

Step 28.6 Step Execution Status: **Not Executed**

Description

Track position and take images

Take a StarTracker image with 10s exposure time.

If the time the available:

- Track a position for 10 min and take StarTracker images.

Expected Result

- If time is available: The TMA is tracking a given position for 10 min and taking images.
- At least one image is successfully taken with the StarTracker.

Actual Result

Step 28.7 Step Execution Status: **Not Executed**

Description

On-the-fly Image Quality Check

While tracking and taking images, check the images on RubinTV for an astrometric solution.

Expected Result
RubinTV is showing an astrometric solution.

Actual Result

Step 28.8 Step Execution Status: **Not Executed**

Description
Offline analysis results
Offline analysis in Test case LVV-T2739 Says that we do not have sufficient image quality.

Expected Result
Image quality is sufficient.

Actual Result

5.8.3.4 LVV-T2715 - Configure Observatory Environment for Daytime Operations

Version **1**. Status **Approved**. Open *LVV-T2715* test case in Jira.

After using the observatory during the nighttime, prepare the observatory for daytime operations.

Preconditions:
The observatory was used during nighttime.

Execution status: **Not Executed**

Final comment:

Detailed steps results:

Step 1 Step Execution Status: **Not Executed**

Description

CSCs

- Transition the CSCs into STANDBY state

Expected Result

All CSCs are in their standbyState.

Actual Result

Step 2 Step Execution Status: **Not Executed**

Description

Telescope daytime preparations:

- Switch off or bring into standby the StarTracker and DIMM instruments
- Install the caps on top of the StarTracker telescopes and the DIMM

Expected Result

The caps are installed.

Actual Result

Step 3 Step Execution Status: **Not Executed**

Description

Dome:

- Bring the dome into the park position

Until the dome shutter is motorized:

- Send a message to the site manager :
  - confirming that nightly operations have finished
  - asking for a dome closer before the sun starts to shine on the StarTracker and the DIMM.

Expected Result

Dome closure is organized.

Actual Result

Step 4 Step Execution Status: **Not Executed**

Description

Auxillary systems daytime preparations:

If needed for daytime operations:

- Switch on the UMA in the morning.
- When available and need to be modified for the day:
  - Oil supply system on standby?
  - Dynalyne into standby?

Expected Result

All auxiliary systems are in the states suitable for daytime operations.

- The UMA is switched on.

Actual Result

Step 5 Step Execution Status: **Not Executed**

Description

TMA position in the morning

- Park the TMA in the position needed for the next day.

Expected Result
TMA parked in the corresponding position.

Actual Result

Step 6	Step Execution Status: **Not Executed**

Description

Expected Result

Actual Result

Step 7	Step Execution Status: **Not Executed**

Description
Night log

- Close the night log by writing a summary of the nightly events
- Send a link with the summary to the site manager.

Expected Result
The night log is closed.

Actual Result

A Documentation

The verification process is defined in LSE-160. The use of Docsteady to format Jira information in various test and planing documents is described in DMTN-140 and practical commands are given in DMTN-178.

B Acronyms used in this document

Acronym	Description
CSC	Commandable SAL Component
ComCam	The commissioning camera is a single-raft, 9-CCD camera that will be installed in LSST during commissioning, before the final camera is ready.
DIMM	Differential Image Motion Monitor
DMTN	DM Technical Note
EFD	Engineering and Facility Database
EIE	European Industrial Engineering - Italian engineering company (Dome)
EUI	Engineering User Interface System
FITS	Flexible Image Transport System
FRACAS	Failure Reporting Analysis and Corrective Action System
FoV	Field of View (also denoted FOV)
GIS	Global Interlock System
IS	Interface Scientist
ISR	Instrument Signal Removal
IT	Information Technology
LFA	Large File Annex
LMC	Large Magellanic Cloud
LOTO	Lock Out Tag Out
LSE	LSST Systems Engineering (Document Handle)
LSST	Legacy Survey of Space and Time (formerly Large Synoptic Survey Telescope)
LTS	LSST Telescope and Site (Document Handle)
LVV	LSST Verification and Validation
M1M3	Primary Mirror Tertiary Mirror
OSS	Observatory System Specifications; LSE-30

PMCS	Project Management Controls System
PPE	Personal Protection Equipment
RMS	Root-Mean-Square
SE	System Engineering
SITCOM	System Integration, Test and Commissioning
SMR	Spherical Mirror Retroreflectors
TBD	To Be Defined (Determined)
TCS	Telescope Control System
TEA	Top End Assembly
TMA	Telescope Mount Assembly
UMA	Air Improvement Unit (Spanish)
WCS	World Coordinate System