



Vera C. Rubin Observatory  
Software Test Report

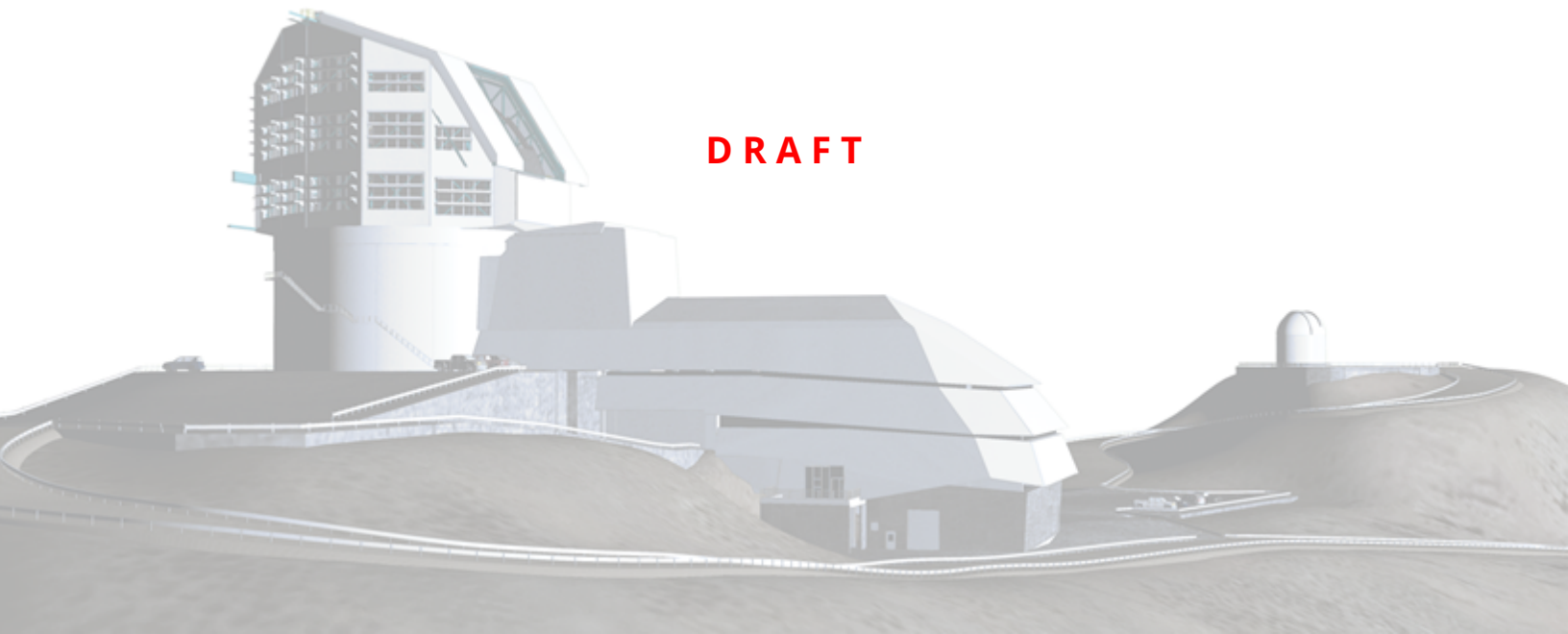
# System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization Test Plan and Report

Christopher Waters

SCTR-114

Latest Revision: 2025-01-31

**DRAFT**



## Abstract

This is the test plan and report for **Instrument Signature Removal and Detector Characterization** (System-level Science Verification Acceptance Test Campaign), an LSST milestone pertaining to the Project System Engineering and Commissioning. This document is based on content automatically extracted from the Jira test database on 2025-01-31 . The most recent change to the document repository was on 2025-02-05.

Draft

## Change Record

Version	Date	Description	Owner name
	2025-01-31	First draft	Christopher Waters

*Document curator:* Christopher Waters

*Document source location:* <https://github.com/lstt-dm/SCTR-114>

*Version from source repository:* 18ad257

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# System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization Test Plan and Report

## 1 Introduction

### 1.1 Objectives

This acceptance test campaign will verify system-level science performance metrics in the OSS and LSR associated with instrument signature removal and detector characterization.

### 1.2 System Overview

None

### 1.3 Document Overview

This document was generated from Jira, obtaining the relevant information from the LVV-P136 Jira Test Plan and related Test Cycles ( LVV-R299 ).

Section 1 provides an overview of the test campaign, the system under test (Science Verification), 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-P136 in Jira is **Draft** .

### 1.4 References

- [1] **[DMTN-140]**, Comoretto, G., 2021, Documentation Automation for the Verification and Validation of Rubin Observatory Software, URL <https://dmtn-140.lsst.io/>, Vera C. Rubin Observatory Data Management Technical Note DMTN-140
- [2] **[DMTN-178]**, Comoretto, G., 2021, Docsteady Usecases for Rubin Observatory Constructions, URL <https://dmtn-178.lsst.io/>, Vera C. Rubin Observatory Data Management Technical Note DMTN-178
- [3] **[LSE-160]**, Selvy, B., 2013, Verification and Validation Process, URL <https://ls.st/LSE-160>, Vera C. Rubin Observatory LSE-160

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## 2 Test Plan Details

### 2.1 Data Collection

Observing is not required for this test campaign.

### 2.2 Verification Environment

None

### 2.3 Entry Criteria

None

### 2.4 Exit Criteria

None

### 2.5 Related Documentation

Docushare collection where additional relevant documentation can be found:

- None

### 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-P136 owner:		<b>Christopher Waters</b>		
T. Cycle LVV-R299 owner:		<b>Christopher Waters</b>		
<b>Test Cases</b>	<b>Assigned to</b>	<b>Executed by</b>	<b>Additional Test Personnel</b>	
LVV-T1065	Christopher Waters	Waters	Undefined	
LVV-T450	Christopher Waters	Waters	Undefined	TBD.
LVV-T1066	Christopher Waters	Waters	Undefined	
LVV-T312	Christopher Waters	Waters	Undefined	
LVV-T1046	Christopher Waters	Waters	Undefined	
LVV-T526	Yosuke Utsumi		Undefined	
LVV-T554	Yosuke Utsumi		Undefined	
LVV-T1040	Yosuke Utsumi		Undefined	
LVV-T1038	Yosuke Utsumi		Undefined	
LVV-T1039	Yosuke Utsumi		Undefined	
LVV-T1034	Yosuke Utsumi		Undefined	
LVV-T1035	Yosuke Utsumi		Undefined	
LVV-T1037	Yosuke Utsumi		Undefined	
LVV-T1048	Yosuke Utsumi		Undefined	
LVV-T3117	Yosuke Utsumi		Undefined	

## 4 Test Campaign Overview

### 4.1 Summary

T. Plan LVV-P136:		<b>System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization</b>			Draft
T. Cycle LVV-R299:		<b>System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization (ComCam)</b>			Not Executed
Test Cases	Ver.	Status	Comment	Issues	
LVV-T1065					
Execution	LVV-E3897	Not Executed	None		
LVV-T450					
Execution	LVV-E3898	Not Executed	None		
LVV-T1066					
Execution	LVV-E3899	Not Executed	None		
LVV-T312					
Execution	LVV-E3900	Not Executed	None		
LVV-T1046					
Execution	LVV-E3901	Not Executed	None		
LVV-T526					
Execution	LVV-E3906	Not Executed	None		
LVV-T554					
Execution	LVV-E3907	Not Executed	None		
LVV-T1040					
Execution	LVV-E3908	Not Executed	None		
LVV-T1038					
Execution	LVV-E3909	Not Executed	None		
LVV-T1039					
Execution	LVV-E3910	Not Executed	None		
LVV-T1034					
Execution	LVV-E3911	Not Executed	None		
LVV-T1035					
Execution	LVV-E3912	Not Executed	None		
LVV-T1037					
Execution	LVV-E3913	Not Executed	None		
LVV-T1048					
Execution	LVV-E3914	Not Executed	None		

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LW-T3117

Execution LW-E3925 Not Executed None

---

Table 2: Test Campaign Summary

## 4.2 Overall Assessment

None

## 4.3 Recommended Improvements

None

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## 5 Detailed Test Results

### 5.1 Test Cycle LVV-R299

Open test cycle *System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization (ComCam)* in Jira.

Test Cycle name: System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization (ComCam)

Status: Not Executed

Test campaign to support "System-level Science Verification Acceptance Test Campaign: Instrument Signature Removal and Detector Characterization" using ComCam.

#### 5.1.1 Software Version/Baseline

Not provided.

#### 5.1.2 Configuration

Not provided.

#### 5.1.3 Test Cases in LVV-R299 Test Cycle

##### 5.1.3.1 LVV-T1065 - Bias Image Pixel Noise Test

Version **1.0(d)**. Status **Defined**. Open *LVV-T1065* test case in Jira.

Measure read noise with bias images, using imaging pixels.

#### **Preconditions:**

Bias images collected. SuperBias image created. Gains for conversion from counts to electrons.

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3897 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3897 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.2 LVV-T450 - Science Data Pixel Noise Test #1

Version **1.0(d)**. Status **Defined**. Open *LVV-T450* test case in Jira.

To measure the per pixel noise on a selected science image. This test will calculate the noise by analyzing a science image and calculating the sigma in the image overscan region.

#### **Preconditions:**

An appropriate science image with a 15 second exposure must exist. Need Gains to convert from counts to electrons.

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3898 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps

results LVV-R299-LVV-E3898 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3898 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.3 LVV-T1066 - Sky imaging test of cross-talk accuracy and stability

Version **1.0(d)**. Status **Defined**. Open *LVV-T1066* test case in Jira.

Quantify cross-talk accuracy and stability on sky images

**Preconditions:**

Nominal cross-talk correction matrix.

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3899 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps

results LVV-R299-LVV-E3899 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3899 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

#### 5.1.3.4 LVV-T312 - Test cross-talk stability and accuracy for AP, DRP

Version **1.0(d)**. Status **Defined**. Open *LVV-T312* test case in Jira.

verify stability and accuracy of cross-talk elements for AP and DRP production (if different)

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None



Detailed steps results LVV-R299-LVV-E3900 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3900 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.5 LVV-T1046 - Crosstalk functionality exists

Version **1.0(d)**. Status **Defined**. Open *LVV-T1046* test case in Jira.

Verify that the crosstalk functionality exists in the alert production pipeline

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3901 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3901 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.6 LVV-T526 - Usable Pixel Fraction

Version **1.0(d)**. Status **Defined**. Open *LVV-T526* test case in Jira.

The maximum fraction of pixels scientifically unusable per sensor (out of the total allowable fraction of sensors meeting this performance) will not exceed PixFrac(1 percent). The maximum allowable fraction of sensors with fraction PixFrac unusable pixels will not exceed SensorFraction (15 percent)

#### **Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3906 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps

results LVV-R299-LVV-E3906 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3906 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.7 LVV-T554 - Single exposure dynamic range

Version **1.0(d)**. Status **Defined**. Open *LVV-T554* test case in Jira.

Verify that objects within the specified dynamic range of a single image are not saturated

#### **Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3907 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps

results LVV-R299-LVV-E3907 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3907 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.8 LVV-T1040 - Attenuation of gain variation of an hour

Version **1.0(d)**. Status **Defined**. Open *LVV-T1040* test case in Jira.

Verify the attenuation of errors due to gain variation over one hour time scales

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3908 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3908 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.9 LVV-T1038 - Attenuation of large scale gain variation errors

Version **1.0(d)**. Status **Defined**. Open *LVV-T1038* test case in Jira.

Verify the attenuation of errors due to gain variation

#### **Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3909 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps



results LVV-R299-LVV-E3909 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3909 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.10 LVV-T1039 - Attenuation of small scale gain variation over short time scales

Version **1.0(d)**. Status **Defined**. Open *LVV-T1039* test case in Jira.

Verify the attenuation of errors due to gain variation over short time scales

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3910 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3906-1454302725:



**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3910 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

#### 5.1.3.11 LVV-T1034 - Effect of gain on photometric repeatability -- 12 hours

Version **1.0(d)**. Status **Defined**. Open *LVV-T1034* test case in Jira.

Verify effect of uncorrected gain variations on photometric repeatability on 12 hour time scales

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3911 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3911 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.12 LVV-T1035 - Effect of gain variations on photometric repeatability -- 1 hr

Version **1.0(d)**. Status **Defined**. Open *LVV-T1035* test case in Jira.

Verify the effect of gain variations on photometric repeatability over 1 hour time scales

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3912 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3912 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.13 LVV-T1037 - Gain variation -- 1 hr

Version **1.0(d)**. Status **Defined**. Open *LVV-T1037* test case in Jira.

Verify amount of gain variation in one hour

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3913 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3913 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

#### 5.1.3.14 LVV-T1048 - Crosstalk coefficient measurement capability

Version **1.0(d)**. Status **Defined**. Open *LVV-T1048* test case in Jira.

Verify that the LSST system is able to measure crosstalk coefficients during downtime

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3914 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3914 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

### 5.1.3.15 LVV-T3117 - Amplifier Scale Sensor Gain Allocations

Version **1.0(d)**. Status **Draft**. Open *LW-T3117* test case in Jira.

Verify the FPA sensor gain variation errors

**Preconditions:**

None

Execution status: **Not Executed**

Final comment:

None

Detailed steps results LVV-R299-LVV-E3925 LVV-E3897-1451784401:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3898-1451784402:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3899-1451788809:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3900-1451788810:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3901-1451791648:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3906-1454302725:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3907-1454310700:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3908-1454329439:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3909-1454329440:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3910-1454329441:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3911-1454329443:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3912-1454329446:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3913-1454329448:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3914-1454340293:

**Note:** Steps "Not Executed" and with No Result are not shown in this report. Detailed steps results LVV-R299-LVV-E3925 LVV-E3925-1456109508:

**Note:** Steps "Not Executed" and with No Result are not shown in this report.

## 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
AP	Alert Production
DMTN	DM Technical Note
DRP	Data Release Production
FPA	Focal Plane Array
LSE	LSST Systems Engineering (Document Handle)
LSR	LSST System Requirements; LSE-29
LSST	Legacy Survey of Space and Time (formerly Large Synoptic Survey Telescope)
LVV	LSST Verification and Validation
OSS	Observatory System Specifications; LSE-30
PMCS	Project Management Controls System
PSE	Project Systems Engineering
TBD	To Be Defined (Determined)