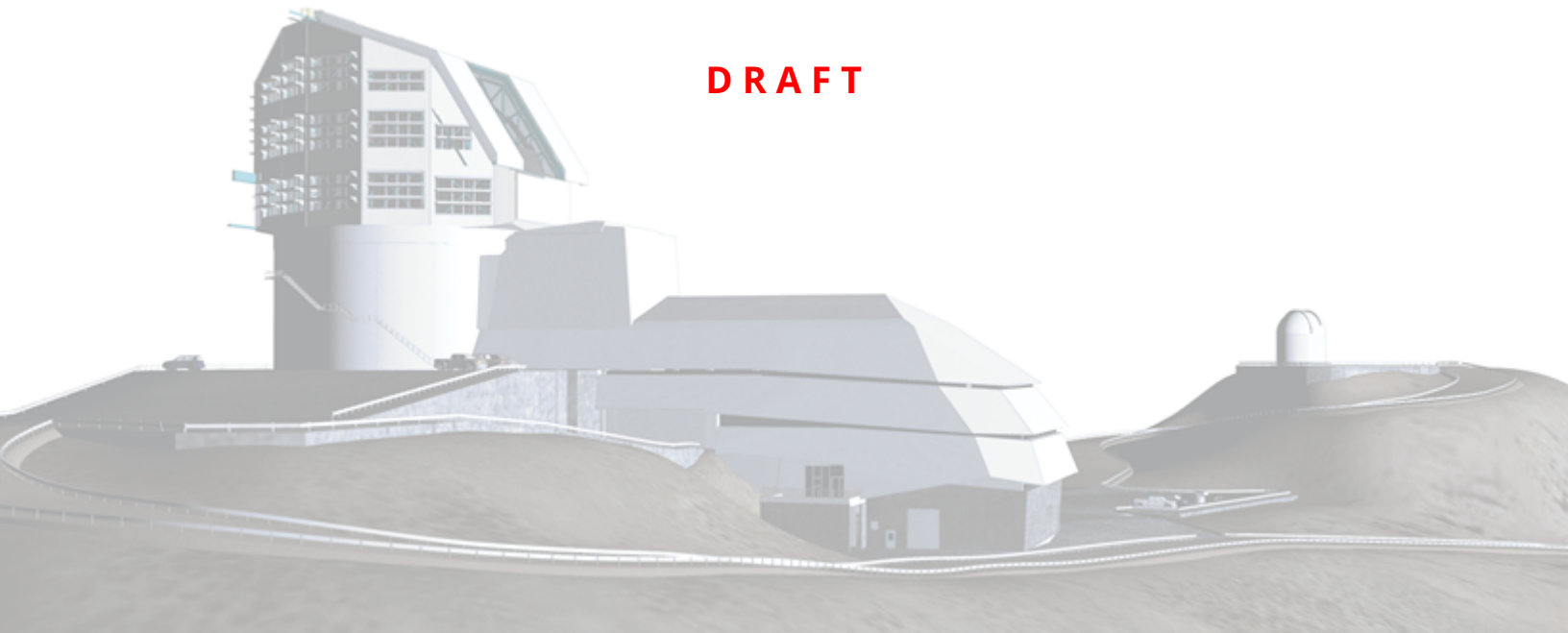

Vera C. Rubin Observatory
Software Test Report

System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light Test Plan

Elana Urbach

SCTR-111

Latest Revision: 2025-01-29

DRAFT

Abstract

This is the test plan for **Throughput for Focused Light** (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 2025-01-29 . The most recent change to the document repository was on 2025-01-29.

Change Record

Version	Date	Description	Owner name
	2025-01-28	First draft	Elana Urbach

Document curator: Elana Urbach
Document source location: `https://github.com/lsst-dm/SCTR-111`
Version from source repository: 20ee091

Contents

System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light Test Plan

1 Introduction

1.1 Objectives

This acceptance test campaign will verify system-level science performance metrics in the OSS and LSR associated with throughput for focused light.

1.2 System Overview

None

1.3 Document Overview

This document was generated from Jira, obtaining the relevant information from the LVV-P134 Jira Test Plan and related Test Cycles (LVV-R303).

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 **??** provides detailed results for each step in each test case.

The current status of test plan LVV-P134 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

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-P134 owner:	**Elana Urbach**	
	T. Cycle LVV-R303 owner:	**Elana Urbach**	
Test Cases	**Assigned to**	**Executed by**	**Additional Test Personnel**
LVV-E3888	Elana Urbach	Undefined	
LVV-E3889	Elana Urbach	Undefined	

4 Test Campaign Overview

4.1 Summary

T. Plan LVV-P134:	**System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light**	Draft
T. Cycle LVV-R303:	**System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light (ComCam)**	Not Executed

Test Cases	**Ver.**
LVV-E3888	1.0(d)
LVV-E3889	1.0(d)

Table 2: Test Campaign Summary

4.2 Overall Assessment

None

4.3 Recommended Improvements

5 Detailed Tests

5.1 Test Cycle LVV-R303

Open test cycle *System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light (ComCam)* in Jira.

Test Cycle name: System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light (ComCam)
Status: Not Executed

Test campaign supporting "System-level Science Verification Acceptance Test Campaign: Throughput for Focused Light" using ComCam.

5.1.1 Software Version/Baseline

Not provided.

5.1.2 Configuration

Not provided.

5.1.3 Test Cases in LVV-R303 Test Cycle

5.1.3.1 LVV-E3888 - Verify single-visit depth for unresolved point sources in multiple bands

Version **1.0(d)**. Open *LVV-E3888* test case in Jira.

Verify that the single-visit 5-sigma (i.e., S/N = 5) depth for unresolved point sources in each of 6 LSST filters meets the specification, assuming the reference conditions specified in LSR-REQ-0089 scaled appropriately for each filter.

Preconditions:

None

Final comment:
None

Detailed steps :

5.1.3.2 LVV-E3889 - Verify total optical throughput in multiple bands

Version **1.0(d)**. Open *LVV-E3889* test case in Jira.

Verify that the total optical throughput, i.e., the total system response integral over a given filter bandpass meets or exceeds the specified parameters for each of the six LSST filters.

Preconditions:
None

Final comment:
None

Detailed steps :

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
DMTN	DM Technical Note
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