Draft version August 11, 2025
Typeset using LaTeX **modern** style in AASTeX7

Photometric Transformation Relations for the LSST Data Preview 1

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(Dated: August 11, 2025)

ABSTRACT

Here we provide photometric transformation relations between the LSST Commissioning Camera data in the Data Preview 1 data set and other well-known optical/NIR photometric systems (Dark Energy Survey, PanSTARRS-1, Euclid, etc.)

From Meagan's Thesis: Astronomical survey systems are used around the world to collect data from the surrounding cosmic neighborhood and beyond. Different optical filters are used to collect different kinds of data, and each survey system uses its own filters specified for its mission. The transformation equations provided in this thesis help to begin bridging the gaps between filter systems, allowing more data to be used overall.

1. INTRODUCTION

LSSTComCam (SLAC National Accelerator Laboratory & NSF-DOE Vera C. Rubin Observatory 2024)

Science pipelines (Rubin Observatory Science Pipelines Developers 2025)

Data Preview 1 paper (Vera C. Rubin Observatory 2025)

Data Preview 1 dataset (NSF-DOE Vera C. Rubin Observatory 2025)

Put your paper here.

1.1. *Background:*

1.1.1. *DES*

1.1.2. *LSST*

1.2. *Methods:*

1.2.1. *Matching stars*

1.2.2. *Plotting*

1.2.3. *Synthetic & Acquisition*

(expand some?)

1.3. *Results & Discussion:*

1.3.1. *DES-LSST-synthetic?*

1.3.2. *DES-LSST-ConCam*

1.3.3. *DES-LSST-ConCam-Interpolations?*

1.4. *Conclusions:*

how much

1.5. *Figures:*

I assume the relevant ones.

This is the Rubin Observatory overview paper: Ž. Ivezić et al. (2019).

ACKNOWLEDGMENTS

This material is based upon work supported in part by the National Science Foundation through Cooperative Agreements AST-1258333 and AST-2241526 and Cooperative Support Agreements AST-1202910 and AST-2211468 managed by the Association of Universities for Research in Astronomy (AURA), and the Department of Energy under Contract No. DE-AC02-76SF00515 with the SLAC National Accelerator Laboratory managed by Stanford University. Additional Rubin Observatory funding comes from private donations, grants to universities, and in-kind support from LSST-DA Institutional Members.

Facility: Rubin:Simonyi(LSSTComCam)

Software: LSST Science Pipelines (Rubin Observatory Science Pipelines Developers 2025)

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