

Photometric Transformation Relations for the LSST Data Preview 1

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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. \(2019\)](#).

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Facility: Rubin:Simonyi(LSSTComCam)

Software: LSST Science Pipelines ([Rubin Observatory Science Pipelines Developers 2025](#))

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