

# The Vera C. Rubin Observatory Data Preview 1

(THE VERA C. RUBIN OBSERVATORY)

(Dated: May 15, 2025)

## ABSTRACT

The Vera C. Rubin Observatory Data Preview 1

*Keywords:* Rubin Observatory – LSST

## 1. INTRODUCTION

In this paper, we present Rubin Data Preview 1.

This is the Rubin Observatory overview paper: [Ivezić et al. \(2019\)](#).

It will include a glossary of terms such as [Telescope Mount Assembly \(TMA\)](#) , [Differential Chromatic Refraction \(DCR\)](#).

## ACKNOWLEDGMENTS

This material is based upon work supported in part by the National Science Foundation through Cooperative Agreement AST-1258333 and Cooperative Support Agreement AST-1202910 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 LSSTC Institutional Members. This research has made use of NASA’s Astrophysics Data System Bibliographic Services.

*Facility:* Rubin Observatory, Rubin Hybrid US Data Access Center

*Software:* Rubin Data Butler ([Jenness et al. 2022](#)), LSST Science Pipelines ([Bosch et al. 2018, 2019](#)),

## APPENDIX

## Glossary

**DCR:** Differential Chromatic Refraction. 1

**Differential Chromatic Refraction:** The refraction of incident light by Earth's atmosphere causes the apparent position of objects to be shifted, and the size of this shift depends on both the wavelength of the source and its airmass at the time of observation. DCR corrections are done as a part of DIA. 1

**TMA:** Telescope Mount Assembly. 1

## REFERENCES

- |   |   |
|---|---|
| <p>Bosch, J., Armstrong, R., Bickerton, S.,<br/>et al. 2018, PASJ, 70, S5,<br/>doi: <a href="https://doi.org/10.1093/pasj/psx080">10.1093/pasj/psx080</a></p> <p>Bosch, J., AlSayyad, Y., Armstrong, R.,<br/>et al. 2019, in Astronomical Society of<br/>the Pacific Conference Series, Vol. 523,<br/>Astronomical Data Analysis Software<br/>and Systems XXVII, ed. P. J. Teuben,<br/>M. W. Pound, B. A. Thomas, &amp; E. M.<br/>Warner, 521,<br/>doi: <a href="https://doi.org/10.48550/arXiv.1812.03248">10.48550/arXiv.1812.03248</a></p> | <p>Ivezić, Ž., Kahn, S. M., Tyson, J. A.,<br/>et al. 2019, ApJ, 873, 111,<br/>doi: <a href="https://doi.org/10.3847/1538-4357/ab042c">10.3847/1538-4357/ab042c</a></p> <p>Jenness, T., Bosch, J. F., Salnikov, A.,<br/>et al. 2022, in Society of Photo-Optical<br/>Instrumentation Engineers (SPIE)<br/>Conference Series, Vol. 12189, Software<br/>and Cyberinfrastructure for Astronomy<br/>VII, 1218911, doi: <a href="https://doi.org/10.1117/12.2629569">10.1117/12.2629569</a></p> |
|---|---|