

Image Sensors for Precision Astronomy (ISPA 2024)



Contribution ID: 14

Type: **Oral presentation (20 minute)**

Science application driven optimization of LSST-Cam CCD clocking

Wednesday, 13 March 2024 15:30 (15 minutes)

The e2v and ITL CCDs used in Rubin Observatory's LSST-CAM are tested under realistic LSST $f/1.2$ optical beam in a lab setup. In the past this facility has been used to characterize these CCDs, exploring the systematic errors due to charge transport. Now this facility is being used to optimize the clocking scheme and voltages. The effect of different sequencers on the on-chip systematics such as non-linear crosstalk, noise, tearing, persistence, photon transfer, etc are explored. The goal is to converge on an optimal configuration for the LSST-CAM CCDs which minimizes resulting dark energy science systematics.

contribution subject matter

CCD sensors

Keywords for your contribution subject matter (this will assist SOC in accurately characterizing your contribution)

CCD clocking, CCD systematics, LSST, Rubin Observatory, Dark Energy

Primary author: Prof. TYSON, Tony (University of California, Davis)

Co-authors: SNYDER, Adam (SLAC); LAGE, Craig (UC, DAVIS); POLIN, Daniel (University of California, Davis); THAYER, John (Gregg) (SLAC); MARSHALL, Stuart (SLAC); UTSUMI, Yousuke (SLAC)

Presenter: Prof. TYSON, Tony (University of California, Davis)

Session Classification: Systematics and Sensor Characterization

Track Classification: Major ISPA Workshop Tracks: Sensor and Systematics Characterization