# Satellite Constellations

### Co-chairs: Tony Tyson, Rachel Street

Rubin Observatory Project & Community Workshop

August 10, 2023











POSTER



CCD crosstalk is non-linear and can be fit with 3 parameters

5 million on-sky measurements to calibrate

Can correct >6.5 mag sats

#### LEOsat LSST Camera Crosstalk

Daniel Polin, Adam Snyder, Tony Tyson | University of California, Davis





POSTER

#### LEOsat LSST Camera Crosstalk

Phan Kandula, Forrest Fankhauser, Tony Tyson | University of California, Davis

Model 50,000 LEOsat constellation with lab reflectance data, importing LSST schedule of observations



Predict number visible vs mag vs time in one summer night

## **LSST Mitigation Challenges**

- Streaks
  - CCD non-linear crosstalk
  - Streak masking residuals
- Variability & Glints
- Bogus events
- Science impact simulations

## Session Agenda

- 11:00 Introduction, Tony Tyson (UC Davis)
- 11:08 Overview, Meredith Rawls (U. Wash.)
- 11:20 Regulatory Considerations, Ashley Vanderley (NSF)
- 11:30 Starlink Constellation Update, David Goldstein (SpaceX)
- 11:40 Predicting Satellite Brightness, Forrest Fankhauser (UC Davis) 11:50 - Streak Masking Challenge, Adam Snyder (UC Davis)
- 12:00 Discussion
- 12:30 Adjourn



### **Reminder - Virtual Participation**



Virtual participants should be muted when they're not speaking.



In-person participants should speak into the room microphone(s), or the chair should repeat all questions into the microphone, so that the virtual participants can hear what is said.



In the Rubin2023\_PCW Slack Space, all participants can use the session's channel for Q&A and discussion. The channel name convention is, e.g.: #day1-mon-slot3a-intro-to-rubin



In Zoom, use the chat to:

- request to unmute to ask a question, or
- type your question so someone can speak it aloud.

The Zoom "raise hand" feature is generally harder for moderators to track, and is not preferred, but may be used at the discretion of the session chair.