Contribution ID: **53** Type: **Poster presentation (90 second oral summary, 90 minute poster session & free presentation times over 3x 40m coffee breaks)**

Measuring the Delayed Crosstalk

Tuesday, 12 March 2024 14:30 (1h 30m)

We measure the signal delay of CCD crosstalk using a test stand in preparation for the LSST Camera. We use a collimated beam projector to cast a narrow streak onto the CCD, mimicking a bright satellite track. We measure the strength and delay of the crosstalk signal simultaneously, using a linear (flux-independent) and a non-linear (flux-dependent) model, on individual exposures or on all exposures, respectively. We find stronger crosstalk signals in channels closer to the projected source streak, and weaker signals in more distant channels. We can only measure a sensible signal delay up to 4 channels away, and we find an inverted trend with a smaller delay in nearby channels and larger delay in further-away channels. The measurable signal delays are found to be <0.5 pixels. We further repeat the measurement on a second data set with a different ASPIC Gain configuration in order to locate the source of crosstalk. Unfortunately, the results are yet inconclusive.

contribution subject matter

CCD sensors

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

CCD; Cross-talk

Primary author: LIANG, Shuang (Stanford University)

Co-authors: SNYDER, Adam (SLAC); UTSUMI, Yousuke (SLAC)

Presenter: LIANG, Shuang (Stanford University)

Session Classification: Poster Session

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