

2016-09-16 Meeting notes

Date

16 Sept 2016

Attendees

- [Nikole Lewis](#)
- [Joseph Filippazzo](#)
- [Kevin Stevenson](#)
- [Unknown User \(eas342@email.arizona.edu\)](#)
- [Unknown User \(jdfraine@email.arizona.edu\)](#)

Goals

Discussion items

Time	Item	Who	Notes
	General Updates	Nikole Lewis	
	TSO Branch of Pipeline Overview	Nikole Lewis	
	'Optimal' CalTSO3 Photometry Procedure Proposal	Everett Schlawin, Jonathan Fraine	Jonathan Fraine Multiple methods of background subtraction available to users in the pipeline. Four methods of centering. For out of focus data, flux-weighted centering misses the target by a pixel or two. Gaussian centering is precise but very temperamental. Take a median image and MAD image and compare to flag cosmic rays through the data cube. Background calculation <ol style="list-style-type: none">1. Median of the whole frame (not for weak lens case)2. Median of an annulus around the source (avoids flat fielding problems) Might be the best method.3. Median of whole frame with source masked
	'Optimal' CalTSO3 Spectral Extraction Proposal	Kevin Stevenson	Kevin Stevenson Compared results from spectral extraction methods in CALTSO3 pipeline Added hot pixels and cosmic rays to test Basic: Sum along column Standard: Sum fluxes within 16 pixels of trace Optimal: Weighted spectral extraction (Horne 1986) Make a stack from all images and make a median image from which to get a trace mask. Made a mask for the traces and used the rest for background subtraction The choice of spectral extraction dilutes the white light transit depth predicted by the model Standard and optimal methods are equivalent if bad pixels are removed. Optimal is necessary and safest way if cosmic rays are present.
	Other Proposals?	all	Stephan Birkmann "Columns of Death" are a symptom of a moving bias across the frames. 2 column wide defect that moves one column each integration. Weaker for NIRISS, pronounced in NIRSpec Tracked by the reference pixels so could be subtracted. At what step in the pipeline though? Loic says a rolling reset can be used on NIRISS, resetting 1/4 ramps before each integration.
	General Discussion	all	

Spectral Extraction Code



NIRISS_SOSS-SpecExtract.zip

Location of NIRISS/SOSS data: https://www.dropbox.com/s/tisfrbjmur7d5hg/datagen_hd209.tgz?dl=0

Action items

