2023-09-06 TSO WG Meeting notes

Date

06 Sept 2023

Attendees

- Brian Brooks
- Elena Manjavacas
- Everett Schlawin
- Knicole Colon
- Loic Albert
- Nestor Espinoza
- Nikolay Nikolov
- Rosa Diaz

Apologies

- Leonardo Ubeda
- Sarah Kendrew

Agenda

- News & Announcements (all)
- TSO previous and upcoming TSO observations (Nikolay Nikolov)
- FY2024 plan updates (Nestor Espinoza)
- Instrument roundtable check-in (all)

Discussion items

Time	Item	Who	Notes
15min	News & Announcements	Nestor Espinoza Everett Schlawin	• Nestor Espinoza mentions that ExoCTK will be updated in the coming weeks and will likely appear in a newsletter. Some items include an updated decontamination tool for SOSS to account for distortion and an update on Pandexo. Testing is ongoing. • Everett Schlawin mentions that Michael Zhang delivered Pandexo code modifications that allow saving calculations and other additions and asks if these will be included. It appears more coordination with the Pandexo development team is needed and additional testing before officially including these new additions. It is likely to have these additions included for Cycle 4. • Nestor Espinoza mentions the STScI hosted "Improving JWST Data Products Workshop" with an approaching deadline for abstract submission: September 22nd. Link to the workshop page: https://www.stsci.edu/contents/events/stsci/2023/november/improving-jwst-data-products-workshop
10min	TSO previous and upcoming TSO observations	Nikolay Nikolov	Nikolay Nikolov shows TSO observations over the past three weeks covering four archived TSOs. Note for Nikolay Nikolov to check TTRBs for reasons of repeating observations in future reports. Upcoming are nine observations including sky background measurements for SOSS. There are no TSOs with status "Implementation" for the next 3 weeks.
15min	FY2024 plan updates	Nestor Espinoza	Nestor Espinoza discusses the FY2024 plan for the TSO WG, which will be submitted by the end of September. The plan includes: 1. TSO Pipeline validation: identify data sets (small/large number of groups); write code; run 2. Algorithm implementation: CRs/Jump step; Charge migration; 1/f-noise mitigation 3. Instrumental Systematics: visit-to-visit slopes; Backgrounds; Mnemonics; Time stamp calibration

20min	Instrument roundtable check-in	Nestor Espinoza Nikolay Nikolov	MIRI: no updates NIRISS: Loic Albert mentions the team is working on renewing spectral extraction algorithms and updating reference files; Nestor Espinoza mentions work on tracking the visit-to-visit variation of the trace and wavelength solution. Each SOSS visit there is a shift in the filter wheel position and that introduces offsets in the wavelength solution; NIRISS team member Tyler Baynes has analyzed data and found a model that predicts the wavelength displacement as a function of the filter position; The new package that will deliver such corrections to the community will be released soon, and it will be called PASTA SOSS. Nestor Espinoza mentions that he shared the spelunker NIRIS FGS pipeline with the NASA team and exchanged information on data analysis/data features with them. Will aim to introduce the same timing system for FGS data as for all JWST instruments; this would allow inter data comparisons; The FGS pipeline now produces better version of the photometry. NIRCam: Nikolay Nikolov mentions that the TSO activities have been focused on the D2P project and calibration uncertainties. He mentions that the WFSS field-dependent wavelength solution has been updated using commissioning and new calibration data, including at the TSO aperture. The trace position is accurate down to ~0.25px and wavelength to a ~2.5 angstroms. Nikolay Nikolov mentions an overall effort across all JWST instruments to close pipeline ticket and assign priorities to tickets. Particularly for "Flux summation in white_light step of TSO3" (can be closed) and "Raise the default sigma for jump detection" (needs to be placed on hold owing to a change of context of the pipeline). Everett Schlawin mentions work on the variation of the wavelength solution on separate visits and reports sub pixel variations of the order of tenths of a pixel. Everett Schlawin mentions that it is hard to monitor spectral variations using few stellar absorption lines. NIRSpec: Elena Manjavacas mentions that the wavelength precision is not great for PRISM there is some shift, but the rest of the dispersive elements have good wavelength calibration.

Aon ction items

- [ ]