

2023-10-18 TSO WG Meeting notes

Date

18 Oct 2023

Attendees

- [Brian Brooks](#)
- [Knicole Colon](#)
- [Rosa Diaz](#)
- [Nestor Espinoza](#)
- [Sarah Kendrew](#)
- [Nikolay Nikolov](#)
- [Everett Schlawin](#)
- [Leonardo Ubeda](#)

Agenda

- News & Announcements (all)
- Previous and upcoming TSO observations (Nikolov)
- Work strategy for FY2024 tasks (Espinoza, all).
- Instrument roundtable check-in (all)

Discussion items

Time	Item	Who	Notes
5min	News & Announcements	Nestor Espinoza Sarah Kendrew	• there is an upcoming workshop on Improving JWST Data Products Workshop; Everyone working with data is encouraged to attend; virtual access is available: https://www.stsci.edu/contents/events/stsci/2023/november/improving-jwst-data-products-workshop
10min	Previous and upcoming TSO observations	Nikolay Nikolov Nestor Espinoza	Nikolay Nikolov presented past and upcoming TSO observations; All observations successfully went, but the status visit reports for some of them still need updates on their statuses Nestor Espinoza shows and discusses a tilt event that appear in new JWST data and makes the point that tilt events are still there. STScI has a webpage where tilt events are logged in addition to the telescope team that performs further analysis. Knicole Colon asks whether users should report tilt events if seen in their data. Nestor Espinoza replies that tilt event have a value for the TSO WG and likely community, yet there isn't a policy to collect such information. Users are encouraged to report tilt events related to TSO to the TSO WG and/or STScI. Rosa Diaz asks how often tilt events occur. Nestor Espinoza replies that small events often occur, but remain hard to detect and mentions that the telescope group works on monitoring tilt events.

25min	Work strategy for FY2024 tasks	Nestor Espinoza Sarah Kendrew	Nestor Espinoza presents the list of tasks for FY24 and outlines that several of these tasks are underway with progress. 1. Systematics Investigation (Task 3.2) • Charge migration: Leonardo Ubeda has made a lot of progress on the charge migration technical report and currently completing last updates on plots. • MIRI ramps: Nestor Espinoza and Sarah Kendrew are collaborating on MIRI data analysis and mention improvements in the jump detection step, where the large number of nans that were previously seen are fixed now and will likely improve data quality on archive after reprocessing is completed. • NIRSpec visit-long slopes: Leonardo Ubeda and Nikolay Nikolov have made progress on the visit-long slope study by analyzing data and obtaining mnemonics from the EDB for looking at correlations. More results will be shown in upcoming TSO WG meetings. 2. Pipeline Validation (Task 3.1) • Nestor Espinoza mentions that data selection for the pipeline tests need to be made, as well as what tests to be included for each instrument. He invites the members of the TSO WG to reach out and share their views. A plan will be presented during the next TSO WG and completed with feedback from members. Currently, the vision is to have data sets that include small/large number of groups and a common target for all instrument, if possible. Obvious choices include ERS and commissioning observations of WASP-39b and HAT-P-14b (transits) available on the MAST. The plan is to have eclipses too. A key goal for the project is the target to be easy to analyze and produce multiple observing products, including transmission and emission spectra for review and identification of differences in a newer version of the pipeline. • Sarah Kendrew mentions that it would be good to also include MIRI imaging mode in this project. She asked if external tools will be used for the pipeline validation. Nestor Espinoza mentions that initially, the project will aim to use STScI tools and some standard additional tools to ease for example spectral extraction until STScI tools become ready. It is not excluded to use additional tools, such as Eureka! in the future, as the project progresses. • Rosa Diaz asks if the testing plan will also envision an inclusion in the automatic testing, and if so whether we will provide notebooks. Nestor Espinoza explains that initially, the project will be kept within the TSO WG, but if its impact starts to become major, it is not excluded to have it as part of the automatic testing. There are challenges, including defining good metrics for assigning 'success' or 'fail' of individual steps, so at this point the project products would require human checking. • Nikolay Nikolov and Nestor Espinoza should start a document that outlines the envisioned tests to be included in the Pipeline Validation and present it to the rest of the TSO WG members on the next meeting. The TSO WG members are invited to provide feedback, additional ideas for tests and data to be included in the document. • This project includes writing new TSO-related testing notebooks.
10min	Instrument roundtable check-in	Nestor Espinoza Sarah Kendrew Brian Brooks Everett Schlawin Nikolay Nikolov	SOSS: Nestor Espinoza mentions an implementation of a notebook for the community that will enable prediction of the trace location for SOSS. MIRI: Sarah Kendrew mentions work on characterization of MIRI background and analysis on existing data obtained prior/after science observations. NIRSpec: Nikolay Nikolov mentions requests by several users on the HeiDesk and work on pipeline testing. He points out an issue with the pixel replacement step when used with the call command at stage 3, which currently executes but skips. He has created a ticket for resolving it. NIRCam: Everett Schlawin mentions ongoing work on moving the location of NRC grismTS to enable a better mitigation of 1/f-noise. Brian Brooks discusses resolved issue about timing header keyword and INT_TIMES, which will be resolved with the new data reprocessing for MAST.

Action items

- ☐ [Nikolay Nikolov](#) and [Nestor Espinoza](#) should write a document that lists obvious tests that need to be included in the Pipeline Validation project and present at upcoming TSO WG meetings