

# 2024-01-10 TSO WG Meeting notes

## Date

10 Jan 2024

## Attendees

- [Brian Brooks](#)
- [Loic Albert](#)
- [Michael Regan](#)
- [Nestor Espinoza](#)
- [Nikolay Nikolov](#)
- [Sarah Kendrew](#)

## Apologies

- [Everett Schlawin](#)

## Meeting agenda:

- News & Announcements (all).
- Previous and upcoming TSO observations (Nikolov).
- Status of TSO WG work (all).
- Possible TSO SASP 2023 ideas (all).
- Instrument roundtable check-in.

## Discussion items

Time, min	Item	Who	Notes
05	News & Announcements	<a href="#">Nestor Espinoza</a> <a href="#">Sarah Kendrew</a>	<ul style="list-style-type: none"><li>• <a href="#">Nestor Espinoza</a> advertises the STScI Space Astronomy Summer Program - SASP 2024, which is a good opportunity for undergraduate students to spend 1.5 months in the summer working on an astronomy (science, instrumental, or outreach) project. A prime example is the development of the FGS photometric pipeline 'Spelunker' by <a href="#">Nestor Espinoza</a>'s 2023 student Derod Deal.</li><li>• <a href="#">Sarah Kendrew</a> the JWST MIRI team has successfully recruited a TSO expert, who will join STScI this April and will join the TSO WG as MIRI representative.</li></ul>
15	Previous and upcoming TSO observations	<a href="#">Nikolay Nikolov</a>	<ul style="list-style-type: none"><li>• <a href="#">Nikolay Nikolov</a> traditionally presented the status of previous and upcoming TSO observations +/-2 weeks from today. There are 3 archived and 11 upcoming observations, covering transits, eclipses, a phase curve and accretion variability.</li><li>• <a href="#">Loic Albert</a> mentions a coordinate typo issue that slipped through the cracks and led to useless NIRISS SOSS data. He also mentions several occurrences, where the NIRISS TA would not fail in the case the search aperture happens to be on a portion of the detector, where a hot pixel is present, but no star. <a href="#">Nestor Espinoza</a> mentions that this has been brought to the attention of the NIRISS team and efforts are ongoing to quickly resolve the issue. <a href="#">Sarah Kendrew</a> also mentions that a coordinate type made by the PI of MIRI program has occurred in the past. <a href="#">Nikolay Nikolov</a> suggests that APT parsing code that he has available for TrExoLiSTS and JWST TSO and CalMonitor can be adapted in conjunction with catalog search to verify the coordinates and identify obvious issues in an automatic fashion by the IS reviewer.</li></ul>

30	Status of TSO WG work	<a href="#">Nestor Espinoza</a> , <a href="#">Sarah Kendrew</a> , <a href="#">Nikolay Nikolov</a>	<ul style="list-style-type: none"> <li>• <a href="#">Nestor Espinoza</a> delivers a top level summary of all TSO FY2024 tasks: <ul style="list-style-type: none"> <li>◦ Pipeline validation: <ul style="list-style-type: none"> <li>▪ proper data sets have been selected including: <ul style="list-style-type: none"> <li>• Spectroscopy - ERS 1366, obs 3, WASP-39b, NIRSpec BOTS with G395H</li> <li>• Imaging - TRAPPIST-1</li> </ul> </li> <li>▪ <a href="#">Nestor Espinoza</a> and <a href="#">Nikolay Nikolov</a> delivered <a href="#">JWebbinar on December 14 and 15, 2023</a>, where they presented <a href="#">Jupyter Notebooks</a> that guide the users how to run the STScI pipeline and obtain data products of high quality. These notebooks are used as the backbone of this pipeline verification project. <a href="#">Nikolay Nikolov</a> mentions that besides the workarounds for Spec2, he has produced also Spec2 with STScI pipeline functions, except one for the 1/f-noise with a <a href="#">Jupyter Notebook available here</a>.</li> <li>▪ <a href="#">Nestor Espinoza</a> has experimented with code and data sets and has identified the best imaging data set for MIRI: TRAPPIST observation. He will work with <a href="#">Sarah Kendrew</a> to define the final details of the pipeline. <a href="#">Sarah Kendrew</a> mentions that she has developed notebook for Spec2 for the ESA JWebbinar for MIRI and will deliver this to <a href="#">Nestor Espinoza</a> for MIRI.</li> <li>▪ <a href="#">Nestor Espinoza</a> mentions that there is still a lot to be done, for example a pipeline for NIRCcam and NIRISS, but we are on track.</li> </ul> </li> <li>◦ Charge Migration <ul style="list-style-type: none"> <li>▪ <a href="#">Nestor Espinoza</a> summarizes charge migration effort lead by <a href="#">Leonardo Ubada</a> in progress with the analysis completed and draft version of a technical report in preparation. He mentions that this project is close to completion and will bring the final draft for review and feedback by the TSO WG with a special attention from <a href="#">Michael Regan</a>. <a href="#">Michael Regan</a> mentions that in his to do list issn update on the non-linearity correction.</li> </ul> </li> <li>◦ Visit-long flux change in NIRSpec BOTS <ul style="list-style-type: none"> <li>▪ <a href="#">Nikolay Nikolov</a> gives a summary of the project and its status. He mentions that <a href="#">Leonardo Ubada</a> has done an excellent work in analyzing the data, developed code and retrieved engineering mnemonics from the EDB to look for correlations with the flux of the star. Plots and correlation coefficients have been computed and produced and currently the project is headed toward summarizing the results. Additional data sets will be analyzed, and a list has been established with the sole to confirm if any identified correlation is not tentative. <a href="#">Michael Regan</a> asks if the flux of the star shows the decrease after background subtraction. <a href="#">Nestor Espinoza</a> and <a href="#">Nikolay Nikolov</a> confirm and mention that the analysis code can be rerun without subtraction.</li> </ul> </li> </ul> </li> </ul>
05	Possible TSO SASP 2023 ideas	<a href="#">Nestor Espinoza</a> , <a href="#">Sarah Kendrew</a>	<ul style="list-style-type: none"> <li>• <a href="#">Nestor Espinoza</a> invites the TSO WG members from STScI to consider project ideas for the upcoming SASP 2024 call and outlines the approaching deadline on January 18th (next week).</li> <li>• <a href="#">Sarah Kendrew</a> mentions that the MIRI team has ideas, and several of them will likely be assigned to the new member of the team.</li> </ul>
05	Instrument roundtable check-in	All	<ul style="list-style-type: none"> <li>• <a href="#">Loic Albert</a> mentions a recovery of NIRISS.</li> <li>• <a href="#">Nikolay Nikolov</a> mentions that he has created a monitor web-page for all JWST calibration data - <a href="#">CalMonitor: JWST</a>, where one can look for TSO complementary calibration data, such as zodiacal backgrounds, darks, flats, etc.</li> </ul>

## Action items

