

2023-11-29 TSO WG Meeting notes

Date

29 Nov 2023

Attendees

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

Apologies

Agenda

- News & Announcements (all)
- TSO previous and upcoming TSO observations ([Nikolay Nikolov](#))
- TSO JWWebinar Notebooks ([Nestor Espinoza](#), [Nikolay Nikolov](#))
- Instrument roundtable check-in (all)

Discussion items

Time	Item	Who	Notes
15min	News & Announcements	Nestor Espinoza	<ul style="list-style-type: none">▪ All good with the MIR▪ A JWWebinar focussed on NIRSpec BOTS will be held in mid-December. Registration link deadline is December 8th.▪ Exoplanets 5 conference is approaching, check this link▪ Extreme Solar Systems 5 is next year too, check this link
15min	TSO previous and upcoming TSO observations	Nikolay Nikolov	<ul style="list-style-type: none">▪ Nikolay Nikolov reports on TSOs on the last two weeks: 9 new observations, 8 exoplanet targets — NIRspec/BOTS, MIRI imaging▪ 2062 had a guide star failure — however observations apparently were taken. For 2420 guide star failed, but observations didn't go through.▪ Nikolay Nikolov notes that the internal TSO monitor is going some changes because sometimes there's erroneous data on the status of observations. So beware!▪ Upcoming in the next 2 weeks, 5 more observations coming!

30min	TSO JWWebbinar Notebooks	Nestor Espinoza Nikolov	<p>Nestor Espinoza mentions that we had previous JWWebinars using simulated data, and in the upcoming one, we focus on the analysis of real data. The participants can follow along what we see using JWST data and learn. There is an introduction about TSO data, how to run the pipeline, modify parameters, explore the data and produce plots. Sessions will run on December 14th for two zones, one in the morning from 9 to 11 ET for users in that are in Europe, and one from 2 to 4 pm ET for people on the west from the east coast. Three people are working on the notebooks: Nestor Espinoza, Nikolay Nikolov and Leonardo Ubeda and cover stages 1 and 2 of the pipeline along with custom steps that produce light curves. The idea of this series of JWWebinars is to have notebooks for all instruments on JWST, which can then be converted to the TSO WG validation pipeline.</p> <p>Sarah Kendrew mentions that ESA has a workshop in the same week and she will present some of these note books, and cut and reduce some of the contents for the workshop.</p> <ul style="list-style-type: none"> ▪ Nestor Espinoza introduces the Detector1 notebook: <ul style="list-style-type: none"> ▪ He is using Astroquery to download and handle the data ▪ Presents plots of the data acquisition to check if there are issues ▪ The notebook has short introduction on data models and how to search for parameters in them; how to load the data and plot it; In the TSO tour of this notebook, there is a walk through all the steps of detector 1. The new thing is to do data quality searches, including examples of how mnemonics can be used to get different dq flags, how the saturation works. It not only marks but looks at the charge spills as well. He also shows how to change the saturation level. ▪ Michael Regan mentions that setting the saturation above 1 can damage the linearity step. Nestor Espinoza clarifies that he actually reduces the threshold, making it closer to 0.5. Michael Regan mentions that in such case, the linearity correction works even better when going down. ▪ Nikolay Nikolov introduces the spectroscopic extraction notebook: <ul style="list-style-type: none"> - Notebook can be run for both detectors — it first loads rateints, extracts and visualizes wavelength maps. - Then, it goes to correct the bad pixels relying on the data-quality flags. It replaces by using values from neighboring pixels. Sarah Kendrew asks why not use the pixel replacing function implemented in the pipeline — Nikolay Nikolov mentions there is a problem with this tool for NIRSpec. - Then spectral tracing and extraction happens, prior to some 1/f noise corrections. - Finally, you get a spectrum as a function of spectral column — and you get the white-light lightcurves and some wavelength-dependant lightcurves! ▪ Some feedback from people: <ul style="list-style-type: none"> - Brian Brooks notes that it would be good to highlight the Known Issues page somewhere, so people can go check in the future if an issue has been resolved. Nestor Espinoza thinks this is a great idea! We should put this as a note at the very beginning of the notebook. - Sarah Kendrew notes it would also be good to put a link at the top for questions about the notebook. She suggests the link goes to the JWST Helpdesk. Nestor Espinoza also thinks this is a great idea! - Michael Regan notes to add comments about running pipeline via multi-processing. Nestor Espinoza notes this will be in a "blue note" in the notebook, too.
0min	Instrument roundtable check-in	<ul style="list-style-type: none"> • Nestor Espinoza Nikolov 	

Action items

