

2020-06-03 TSO WG Meeting notes

Date

03 Jun 2020

Attendees


- [Nestor Espinoza](#)
- [Brian Brooks](#)
- [Sarah Kendrew](#)
- [Tony Keyes](#)
- [Nikolay Nikolov](#)

Meeting agenda:

1. News & announcements
2. ExoCTK updates.
3. Updates on [TSO WG tasks for FY2020](#).
4. TSO activities on each instrument branch.
5. Final definition of exoplanet consulting expert involvement on TSO WG tasks.
6. Discussion/prioritization of TSO Jira tickets.

Discussion items

Time	Item	Who	Notes
	1. News & announcements	Everyone	
	2. ExoCTK updates Nestor Espinoza (ExoCTK science lead) provided a brief summary of the objectives of the project: basically, to aid in the proposal preparation and data analysis of observations targetting the characterization of exoplanet atmospheres through transit/eclipse observations. Currently ongoing high-level tasks:		
	Task-015 : Train new ExoCTK leads	Nestor Espinoza	<ul style="list-style-type: none">▪ This task relates to the training of the new ExoCTK science lead (Nestor Espinoza). This was done through contract with Kevin Stevenson (previous lead of ExoCTK who joined JHU). Almost done — contract ending this month.
	Task-016 : Address PandExo/ExoCTK liens	Nestor Espinoza	<ul style="list-style-type: none">▪ This task relates to some extra additions that wanted to be made available for ExoCTK users on proposal tool preparation for exoplanet atmospheres. Still in progress, but going along with the proposed deadline.
	Task-017 : Make PandExo and some of ExoCTK officially supported	Nestor Espinoza	<ul style="list-style-type: none">▪ ExoCTK initial funding came from a DDRF STScI strategic proposal. However, project is being transitioned to the JMO. Unclear when this transition will happen — all depends on the final deadline for JWST Cycle 1 proposals.
	Questions		<ul style="list-style-type: none">▪ Sarah Kendrew asks about how the project is currently weighing contributions from the different instrument branches (i.e., through time spent answering questions to the ExoCTK members, or checking calculations, etc.). Nestor Espinoza acknowledges this has been a bit confusing in the past, but expects that given the project is transitioning to be officially STScI supported, this will get clarified.
25min	3. Updates on TSO WG tasks for Fiscal Year 2020		

	Pipeline readiness & preparation for TSO	Everyone	<ul style="list-style-type: none"> How tickets get prioritized for different instruments is not clear right now (e.g., white-light wavelength range ticket assigned as critical for NIRCam but "only" high for MIRI). Sarah Kendrew mentions that DMS handles this on a case-by-case basis, and reaches out to instrument branches to check for discrepancies. In the case of white-light being flagged as "critical" by NIRCAM, Nikolay Nikolov explains that this is critical for them because the full wavelength range gives rise to just larger errors in the white-light lightcurves, which makes results not useful for both commissioning and science. Sarah Kendrew has added further comments to the ticket <div style="border: 1px solid orange; padding: 10px; margin: 10px 0;">  JP-1469 - Jira project doesn't exist or you don't have permission to view it. </div> <ul style="list-style-type: none"> Nikolay Nikolov is working with Bryan Hilbert and Everett Schlwin on trying to get the best precision out of simulated data. This has led them to define parameter reference files to enable column-by-column background subtraction. This has to be customized for NIRCam, because currently there is only one for NIRISS. Sarah mentions that we should use the DMS notebook validation testing scheme to share results. Details are here: INS Validation Testing Preparation Meeting. There's a small form on this page that you can use to add yourself to the INS testers list (& be kept up to date). Tony Keyes mentions that NIRSpec started to run their CV3 data through the pipeline. Rectification step is not performed by default for NIRSpec, so that would have to be fixed apparently (see the corresponding Jira ticket). Also, there are some details about flat fields. Maria Peña-Guerrero is person in NIRSpec working on the DMS notebooks.
	Instrument & cross-instrument TSO tasks	Everyone	
30min	4. TSO activities per instrument team		
5min	NIRISS activities/updates	Nestor Espinoza	<ul style="list-style-type: none"> Currently, NIRISS team working on implementing a trace and extraction algorithm that actually works on the pipeline. Will report back to the TSO group on this in the following weeks, as the final algorithm to be decided is still to be defined.
5min	NIRCam activities /updates	Brian Brooks Nikolay Nikolov	<ul style="list-style-type: none"> Mainly pipeline testing (see above). Also looking at the ticket prioritization — with Bryan Hilbert and Brian Brooks, Nikolay Nikolov has a list of tickets.
5min	NIRSpec activities /updates	Tony Keyes	<ul style="list-style-type: none"> Spent most of time on ticket prioritization. Has a detailed list of these — in particular, spectral rectification currently not done on NIRSpec/BOTS (JP-1488), so trying to get that working.
5min	MIRI activities/updates	Sarah Kendrew	<ul style="list-style-type: none"> This week the Normal OPS 8.1 is happening (general DMS system testing). Plan to run TSO tests for MIRI with it — Sarah has been asked to produce simulated data for this run, so will be working on that. You can see what is being run on this page
	5. Exoplanet consulting expert involvement on TSO WG tasks		
	TSO simulated data & noise limitations		<ul style="list-style-type: none"> Nestor Espinoza finally assigned the expert to work on the NIRSpec CV3 data, as that data has already been reduced by an independent pipeline (so that saves the person the time to learn how to use the CalWebb pipeline). Idea is for this person to look for possible sources of systematics in the data, and report back through a memo on lines that need more testing in order to be understood. 44 hours have been allocated to the expert on this topic.
	JWST time stamps for TSO		<ul style="list-style-type: none"> The expert has been allocated 20 hours on an advisory role in this project (to, e.g., define level of precision needed for atmospheric characterization studies). <p><input type="checkbox"/> Brian Brooks and Nikolay Nikolov will get in touch with the expert to define how to move forward with this. Sarah Kendrew, Nestor Espinoza and Tony Keyes want to be invited to these meetings as well.</p>

	JWST TSO QL tool		<ul style="list-style-type: none"> Similarly to the above, 20 hours have been allocated so the expert takes and advisory role on this project. JWST TSO QL tool will follow established practices from the transiting exoplanet field (see guidelines). <p><input checked="" type="checkbox"/> Nikolay Nikolov will get in touch with the expert to define this work. Sarah Kendrew, Nestor Espinoza and Tony Keyes want to be invited as well.</p>
	Synergies with between TSO and Coronagraphic WGs		Had meeting with Julien Girard on this. Idea is to work on understanding how to use TSO + Coronagraphy. He'll be sending simulated data on this.
6. Overview of DMS TSO-related tasks			
	TSO DMSWG Dashboard		<p>Nestor Espinoza: The only unprioritized NIRISS-only ticket is JP-1177. This relates to the fact that an exposure with the F277w filter on NIRISS/SOSS can help disentangle contamination overlap between orders 1 and 2 at the red-end of order 1. This is already implemented in APT, and is in JDox, but not on the ETC.</p> <p>Nikolay Nikolov and Brian Brooks: NIRCam didn't have any unprioritized tickets, but we did add JP-1478 to the list. We also commented on the list of critical and high priority tickets. See attachment: NIRCam_comments</p> <p>Tony Keyes: There are no NIRSpec-specific tickets in the unprioritized TSO Dashboard list, but we have filed JP-1488 (BOTS Data need to be rectified) and consider it CRITICAL priority. We have reviewed the entire list of TSO Dashboard tickets (17613) and a separate NIRSpec DMS Dashboard (17609) and prepared a file with comments on NIRSpec-impact of all tickets. We did not present any of these additional comments at today's meeting, but expect to do so in the future.</p>
	Closing remarks of the meeting		