

2017-05-18 TrEX WG Meeting notes

Date

18 May 2017

Attendees

- [Kevin Stevenson](#)
- [Sarah Kendrew](#)
- [Jonathan Fraine](#)
- David Lafreniere
- [Unknown User \(eas342@email.arizona.edu\)](#)
- [Unknown User \(jarronl@email.arizona.edu\)](#)
- [Unknown User \(jason@astro.umontreal.ca\)](#)
- [Loïc Albert](#)
- Pierre-Olivier Lagage
- [John Stansberry](#)
- [Unknown User \(tom.greene@nasa.gov\)](#)

Goals

Discussion items

Time	Item	Who	Notes															
	Simulated Data		• Deadline is May 31st • Need Level1b data ◦ There is a tool available in the JWST pipeline called create_data that converts FITSWRITER files to DMS level 1b ◦ Convert FITSWRITER file to DMS level 1b • "Small" data sets in all TSO modes (simple, noise free) • "Medium" data set containing simulated transit with realistic uncertainties • "Large" data set for memory management and archival distribution purposes • Need matching APT files • See below for PDF of required header keywords • Place files on central storage ◦ /grp/jwst/dms/TSO • Everett presented update on NIRCcam simulated data (see slides below)															
	Bright Target Acquisition (TA)		• NIRCcam TA uses medium filter (F335M) and NGROUPS=3 • Saturation limit is K=7.02 • 4 GTO targets exceed this limit (HD 189733, HD 209458, HD 149026, GJ 436) • Implementation of a narrow filter for TA improves limit by ~2.5 mag, but won't likely be possible until Cycle 2 • Option A: TA on offset target ◦ Positive: Requires no additional capabilities ◦ Negative: Limited to < 30" separation, requires both positions be know very precisely, faintness limits • Option B: TA on saturated target ◦ Positive: No offset uncertainty, better pointing consistency, doesn't require nearby offset star ◦ Negative: May require changes to flag saturated pixels ◦ John Stansberry to test how far into saturation we can reasonably go ◦ Faint offset targets aren't an issue, K=18.5 using DEEP8 and NGROUPS=65 • Option C: Add TA through a narrow-band filter to APT and OSS ◦ Positive: Improves saturation limit to ~K=5.5 ◦ Negatives: ▪ Requires changes to APT, PPSDB, OPGS, OSS ▪ May require separate 'apertures' to be defined for TA in the 2 filters (calibration issue). • Option D: Allow TA using NGROUPS=1, 2 ◦ Positive: Improves saturation limit by ~1.2 mag ◦ Negative: Requires bigger changes to OSS than Option C, and APT changes (at least). <table><tr><th>System</th><th>Offset Distance (")</th><th>Offset Jmag</th></tr><tr><td>HD 189733</td><td>11.5</td><td>10.1</td></tr><tr><td>HD 209458</td><td>32.9</td><td>15.7</td></tr><tr><td>HD 149026</td><td>20.4</td><td>13.9</td></tr><tr><td>GJ 436</td><td>26.4</td><td>16.4</td></tr></table>	System	Offset Distance (")	Offset Jmag	HD 189733	11.5	10.1	HD 209458	32.9	15.7	HD 149026	20.4	13.9	GJ 436	26.4	16.4
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	Proposal Instructions for JWST		• Waiver for exposure limit on MIRI TSO imaging • Implement new Special Requirement "Time Series Observation" for some JWST templates • Sarah Kendrew working on table of TSO modes (mandatory, optional, not available), may include in JDox
	JWST Documentation		• Many JDox pages are going live tomorrow (May 19th) • Instrument team members should review relevant pages and supply feedback if changes are needed • Still working on TSO landing page that provides a broad overview and directs users to additional pages for more detailed information
	Best NIRISS Observing Practices	Loic	• Loic recommends using F277 filter to measure position of first order trace (without second order overlap) • Filter/grism combination not currently supported in APT for science observations • Loic Albert to look into prioritizing this change with respect to other tasks

Attachments

 Required+Heade...+Exposures.pdf	 2017_05_18_nirc..._tso_update.pdf
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Action items

