2017-02-23 Meeting notes

Date

23 Feb 2017

Attendees

- Kevin Stevenson
- Jonathan Fraine
- Joseph Filippazzo
- Sarah Kendrew
- Unknown User (ggiardino@rssd.esa.int)
- Unknown User (sbirkman@rssd.esa.int)
- Unknown User (tom.greene@nasa.gov)
- Loic Albert
- Pierre-Olivier Lagage
- Unknown User (jason@astro.umontreal.ca)
- Unknown User (jml2u@virginia.edu)
- Unknown User (eas342@email.arizona.edu)
- David Lafreniere
- John Stansberry
- Unknown User (f.lahuis@sron.nl)

Goals

- Discuss simulated TSO data, file sizes, BG subtraction

Discussion items

Time	Item	Who	Notes

15 min	NIRSpec TSO CV3 Presentation	Giovanna
		
		Stephan
			• Had to divide by white light curve to remove brightness variations
			• Two main sources of systematic noise
			  ◦ 1/f noise from detector electronics
			  ◦ Flux variations from drift/jitter
			• NIRSpec should reach 200 ppm noise floor in <5 min of integration

5 min	NIRSpec	Stephan	• Real CV3 data available (see presentation) • Typical file size ~ 4 GB • Max file size ~ 20 GB • Median of "out-of-trace" pixels per column removes detector 1/f noise
5 min	NIRCam	Tom	• Jarron is simulating TSO data • Spectral BG subtraction should be "column-by-column" (cross-dispersion direction), but cannot cross strip boundaries • Image BG subtraction likely an annulus • Typical file size ~ 13 GB • Max file size ~ 173 GB • Jonathan Fraine will be PoC

10 min	NIRISS	Jason	• Have simulations for 6 different exoplanet systems
			  ◦ Source code
			  ◦ working on documentation, adding 1/f noise, etc
			• Typical file size ~ 2 GB
			• Max file size ~ 24 GB
			• Recommend “column-by-column” (in the cross-dispersion direction)
			• See slide below for 1/f subtraction

5 min	MIRI	Sarah	• Slitless LRS integrated into MIRI Simulator, currently testing
			• Typical file size ~ 10.4 GB
			• Max file size ~ 45 GB
			• Ongoing discussion about BG subtraction
			  ◦ no subtraction may work
			  ◦ off-source BG exposure seems prudent
			  ◦ Not sure if "column-by-column" (in the cross-dispersion direction) will work

	Additional discussion	All	• What data products would be needed for simulated data? What level? • What's the schedule for providing simulated data? • Does the simulated data need to have proper headers? If so, what are the constraints? • Suggested that 1/f noise subtraction should be separate from the BG subtraction • Integrating BG subtraction into 1D spectral extraction should be fine

Slides

Action items

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