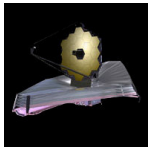

4458 - Nirspec Subarray Spectroscopic Flats (CAL-NRS-204)

Cycle: 2, Proposal Category: CAL/NIRSPEC

INVESTIGATORS

Name	*Institution*
Ms. Cheryl Pavlovsky (PI)	**Space Telescope Science Institute**

OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
NRS-204 Cy 2: NIRSpec internal spectral flatfield subarrays				
	1	NRS-204 Cy 2: NRS internal spec flats subarray PRISM	NIRSpec Internal Lamp	NONE
	2	NRS-204 Cy 2: NRS internal spec flats subarray G140H	NIRSpec Internal Lamp	NONE
	3	NRS-204 Cy 2: NRS internal spec flats subarray G235H, G395H	NIRSpec Internal Lamp	NONE
	4	NRS-204 Cy 2: NRS internal spec flats subarray G140M	NIRSpec Internal Lamp	NONE
	5	NRS-204 Cy 2: NRS internal spec flats subarray G235M, G395M	NIRSpec Internal Lamp	NONE

ABSTRACT

This program will acquire the spectroscopic (lamp) flats for the FS mode using the ALLSLITS subarray. Observations will be acquired for all of the NIRSpec disperser/lamp combinations. These observations are essential for minimizing flat field calibration noise for FS and/or BOTS observations that need improved signal-to-noise. In addition to the commissioning and cycle 1 flats, these flats will further decrease the noise from flat fielding

process for science observation processing. The S-flat is one part of the 3 component NIRSpec flat field in addition to the Fflat and the Dflat.

This calibration program is provisional and may change in response to system developments and the Cycle 2 science program.

OBSERVING DESCRIPTION

ALLSLITS exposures taken with all 9 disperser/ lamp configurations (filter set to OPAQUE).
subarray gain is always 2.
Uses internal lamp flat template therefore parallel slew only special requirement is required.
The flat field response is purely a property of the detector pixel, therefore data for other subarrays can be cutout of the ALLSLITS subarray.
Sub2048 and Sub512 are used with prism and medium gratings because S1600A1 will saturate too quickly.

Integrations are selected to avoid saturation.

cycle through all exposures with a particular grating before moving on to minimize GWA moves.

All exposures are in a single visit. Total time investment for high S/N flats is approximately 1.2 hours.

TIMING CONSTRAINTS:

Observation

Proposal 4458, Observation 1: NRS-204 Cy 2: NRS internal spec flats subarray PRISM

Wed May 10 21:25:41 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Internal Lamp

Diagnostics

(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Spectral Elements

#	Operating Mode	Subarray	Lamp	MSA Configuration	Grating	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	FIXEDSLIT	ALLSLITS	FLAT5	ALLCLOSED	PRISM	NRSRAPID	7	10	10	439.725	
2	BRIGHTOBJ	SUB512	FLAT4	ALLCLOSED	PRISM	NRSRAPID	2	500	500	349.48	

Special Requirements

No Parallel Attachments

Observation

Proposal 4458, Observation 2: NRS-204 Cy 2: NRS internal spec flats subarray G140H Wed May 10 21:25:41 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Internal Lamp

Diagnostics

(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Spectral Elements

#	Operating Mode	Subarray	Lamp	MSA Configuration	Grating	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	FIXEDSLIT	ALLSLITS	FLAT1	ALLCLOSED	G140H	NRSRAPID	12	10	10	714.425	
2	FIXEDSLIT	ALLSLITS	FLAT4	ALLCLOSED	G140H	NRSRAPID	12	10	10	714.425	

Special Requirements

No Parallel Attachments

Observation

Proposal 4458, Observation 3: NRS-204 Cy 2: NRS internal spec flats subarray G235H, G395H Wed May 10 21:25:41 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Internal Lamp

Diagnostics

(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Spectral Elements

#	Operating Mode	Subarray	Lamp	MSA Configuration	Grating	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	FIXEDSLIT	ALLSLITS	FLAT2	ALLCLOSED	G235H	NRSRAPID	12	10	10	714.425	
2	FIXEDSLIT	ALLSLITS	FLAT3	ALLCLOSED	G395H	NRSRAPID	8	10	10	494.665	

Special Requirements

No Parallel Attachments

Observation

Proposal 4458, Observation 4: NRS-204 Cy 2: NRS internal spec flats subarray G140M

Wed May 10 21:25:41 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Internal Lamp

Diagnostics

(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Spectral Elements

#	Operating Mode	Subarray	Lamp	MSA Configuration	Grating	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	FIXEDSLIT	ALLSLITS	FLAT1	ALLCLOSED	G140M	NRSRAPID	4	10	10	274.905	
2	FIXEDSLIT	ALLSLITS	FLAT4	ALLCLOSED	G140M	NRSRAPID	4	10	10	274.905	
3	BRIGHTOBJ	SUB2048	FLAT1	ALLCLOSED	G140M	NRSRAPID	8	10	10	81.385	
4	BRIGHTOBJ	SUB2048	FLAT4	ALLCLOSED	G140M	NRSRAPID	8	10	10	81.385	

Special Requirements

No Parallel Attachments

Observation

Proposal 4458, Observation 5: NRS-204 Cy 2: NRS internal spec flats subarray G235M, G395M

Wed May 10 21:25:41 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Internal Lamp

Diagnostics

(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Spectral Elements

#	Operating Mode	Subarray	Lamp	MSA Configuration	Grating	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	FIXEDSLIT	ALLSLITS	FLAT2	ALLCLOSED	G235M	NRSRAPID	5	10	10	329.845	
2	BRIGHTOBJ	SUB2048	FLAT2	ALLCLOSED	G235M	NRSRAPID	10	10	10	99.425	
3	FIXEDSLIT	ALLSLITS	FLAT3	ALLCLOSED	G395M	NRSRAPID	4	10	10	274.905	
4	BRIGHTOBJ	SUB2048	FLAT3	ALLCLOSED	G395M	NRSRAPID	8	10	10	81.385	

Special Requirements

No Parallel Attachments