



# 1118 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Cycle: 0, Proposal Category: COM/NIRSPEC

## INVESTIGATORS

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## OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	BOTA WATA	NIRSpec Bright Object Time Series	(1) 2MASS-J17430448+6655015
	2	FS WATA	NIRSpec Fixed Slit Spectroscopy	(1) 2MASS-J17430448+6655015
	3	IFU WATA	NIRSpec IFU Spectroscopy	(1) 2MASS-J17430448+6655015
	4	MOS FIELD WATA	NIRSpec MultiObject Spectroscopy	(12) SMP-LMC-58
	5	BOTS Verification	NIRSpec Bright Object Time Series	(13) HAT-P-14
	6	IFU WATA - Obs 3 repeat	NIRSpec IFU Spectroscopy	(1) 2MASS-J17430448+6655015
	7	ASIC reconfig after Obs 6	NIRSpec Dark	NONE
	8	MOS FIELD WATA - Obs 4 repeat	NIRSpec MultiObject Spectroscopy	(12) SMP-LMC-58
	9	ASIC reconfig after Obs 8	NIRSpec Dark	NONE

## **ABSTRACT**

This activity will verify the in-orbit performance of the NIRSpec Wide Aperture Target Acquisition procedure in terms of accuracy, timing, and ability to place targets in the other single-object apertures (fixed slits and IFU), both when directly acquiring the science target and also when acquiring a nearby offset reference star with accurately known relative coordinates. The ability to execute basic spectroscopic observations with each of these templates following the WATA acquisition will also be verified, including a time series observation of an actual transit event.

## **OBSERVING DESCRIPTION**

This proposal will conduct four tests of the NIRSpec Wide Area Target Acquisition (WATA) procedure. The selected target for three of these tests will be one of the A star standards in the northern CVZ discussed by Bohlin 2011 as standards for Spitzer, while for the fourth test the JWST wavelength calibration standard SMP LMC 58 will be used.

This program requires that the NIRSpec Astrometric Calibration has been completed, and that the resulting updates to distortion coefficients and other parameters have been put into the SIAF file, and that both APT and OSS have incorporated this new SIAF information.

For each test a spacecraft slew will first be executed to place either the primary target or a nearby reference star in the S1600 slit. An undispersed exposure will be obtained and used by the TARGLOCATE algorithm to determine the precise location of that star. The procedure then computes and commands the spacecraft ACS to execute the corrective Small-angle Maneuver (SAM) needed to center this acquisition target in the S1600 acquisition aperture. To demonstrate that the target is correctly positioned, a confirmation image of the acquisition target in the S1600 is then taken using the same exposure parameters as used for the acquisition. Subsequently OPGS computes and commands the ACS to execute any additional SAM(s) that may be needed to place the science target in the center of the desired science slit(s). A short sequence of exposures are then obtained to complete the science visit. In addition to fulfilling the primary objectives of verifying basic acquisition and observational sequences, this will as a bonus also provide an early estimate of the optical throughput (or in the case of SMP LMC 58, of the wavelength calibration) of the entire (OTE + NIRSpec) optical train.

This CAR will test four specific scenarios exercising each of the four NIRSpec templates that support WATA. For the first three, our preferred science target is 2MASS J17430448+6655015, while for the final test it will be SMP LMC 58.

The first observation will use the BOTS template to acquire 2MASS J17430448+6655015 directly into the S1600A1 aperture using

## JWST Proposal 1118 (Created: Saturday, June 4, 2022 at 1:00:51 PM Eastern Standard Time) - Overview

F140X/SUB32/NRSRAPID. A ~15 minute time sequence exposure will then be taken using PRISM/CLEAR/SUB512/NRSRAPID. This visit will test WATA when no slews are needed after the acquisition as both the TA and the science are done using the S1600A1. As this is the simplest case, it would be useful to have this visit execute first with some time for analysis before committing to the subsequent visits.

The second observation, will use the FS template, and again acquire 2MASS J17430448+6655015 directly into the S1600A1 aperture using F110W/SUB32/NRSRAPID. This will be followed by G140H/F100LP spectra in both the S200A1 and S200A2 apertures, using the three point primary dither pattern with a spatial subdither. This visit will test the case where the target is acquired directly in the S1600A1, but then needs to be moved to other locations for the science observations.

The third observation will use the IFU template, and will acquire the fainter offset star GAIA 1634280376623380096 (F110W=18.5 abmag) located about 7" N of 2MASS J17430448+6655015 using F110W/SUB2048/NRSRAPID. The primary target will then be placed in the IFU aperture, and G140M/F100LP spectra will be taken using the 4 point nod dither pattern. Leakcal images will also be taken at all dither positions. This visit will test the case of acquiring an offset target in the S1600A1 while placing the separate science target in a different aperture for the following observations.

The fourth observation will instead use the wavelength calibration standard SMP LMC 58 with the MOS template. The target will be directly acquired using F140X/SUB32/NRS, after which the target will be moved to the FIELD1 position. A custom MSA configuration creating a long slit extending over MSA quadrants 3 and 4 will be used together with the G140H/F100LP and G395M gratings to take spectra of this source. A 2 position mosaic with 3 shutter spacing will be used to dither the source along this long slit with exposures at both the zero position and at  $Y_{idl}=+2.082''$ . In addition to the usual confirmation images of the source in the S1600A1 aperture, confirmation images will be taken of the source at the FIELD1 position with the custom MSA configuration (assuming an APT bug which prevents this is fixed). This visit tests the use of mosaics and multiple gratings on a science target.

The fifth observation was added as per agreement by the JDB in order to characterize the performance of the time series observation modes of all SIs. For NIRSpec we will observe the transit of HAT-P-14b using the BOTS template in the G395H/F290LP configuration. WATA will be performed on the bright host star using F110W/SUB32/NRSRAPID, i.e. the shortest possible integration times with the narrowest TA filter. We still expect some saturation of the central pixel(s), but this should be OK and will be another good and realistic test of TA capabilities. Being an actual transit the time series observation has some scheduling constraints in terms of phase special requirements and will take ~6.8 hrs with overheads. This observation can be executed anytime after obs 1 has been successfully completed.

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As agreed with the JDB, we have shortened observation 1 of the standard star from 1 hour to ~15 minutes of integration time, as detector settling and other effects can now be studied using the longer observation 5. The net increase to this program is therefore ~1 hr in total.

Added observation 6 as a repeat of the failed observation 3 (TA target moved to science aperture instead of science target) and observation 8 as a repeat of failed observation 4 (GS acquisition failed after moving to science aperture after TA). Observations 7 and 9 are short dark observations that have to immediately follow observations 6 and 8, respectively, in order to make sure that ASIC2 is fully configured to a good state in case something goes wrong during or after WATA.

Proposal 1118 - Targets - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	2MASS-J17430448+6655015	RA: 17 43 4.4887 (265.7687029d) Dec: +66 55 1.62 (66.91712d) Equinox: J2000	Proper Motion RA: 1.124 mas/yr Proper Motion Dec: -2.714 mas/yr Parallax: 0.0005401" Epoch of Position: 2016	
<p><i>Comments: Also GDR2 - 1634280307903512064, now includes PM, Gmag=13.4843</i>  <i>Updated coordinates and proper motions to Gaia EDR3 values and epoch</i>  <i>Also 2MASS 17430448+6655015, JHK=12.979, 12.880, 12.772</i>  <i>CALSPEC spectra: 1743045_mod_001.fits and 1743045_stisnic_004.fits</i>  <i>synphot prediction using model spectrum:</i>  <i>NIC3 F110W 13.8 abmag, F160W 14.2 abmag;</i>  <i>WFC3 F110W 13.81, F160W 14.14 abmag,</i>  <i>JHK, 13.0, 12.89, 12.87 vegamag</i></p> <p><i>synphot prediction using STISNIC spectrum:</i>  <i>NIC3 F110W 13.9, F160W 14.19,</i></p> <p><i>G=19 companion about 7.485" to the N is Gaia DR3-1634280376623380096; there are NIC3 F110W/F160W images including both stars</i>  <i>Category=Calibration</i>  <i>Description=[A stars, Spectrophotometric, Target acquisition test]</i>  <i>Extended=NO</i></p>				
(11)	GAIA-EDR3-1634280376623380096	RA: 17 43 4.2544 (265.7677267d) Dec: +66 55 9.02 (66.91917d) Equinox: J2000	Proper Motion RA: -1.656 mas/yr Proper Motion Dec: -8.654 mas/yr Parallax: 0.0003348" Epoch of Position: 2016	
<p><i>Comments: Updated coordinates and proper motions to Gaia EDR3 values and epoch</i>  <i>G=19.1925, Bp=19.711, Rp=18.387, Bp-Rp = 1.324 (equivalent to about K4 4600 3.663)</i>  <i>SDSS J174304.25+665509.1 ugriz = 24.63, 20.31, 19.38, 18.65, 18.43</i>  <i>Offset star ~ 7.4" N of 2MASS-J17430448+6655015, Gaia mag about 5.6 mag fainter than prime target.</i>  <i>AKA GSC2.3 N4E9010885 Nmag=18.66</i>  <i>Also clearly visible in NIC3 F110W and F160W images</i>  <i>Measure of flux ratio in NIC3 images suggests fainter by 4.7 mag in F110W and 3.8 mag in F160W which would imply F110W ~ 18.5; F160W ~ 18.1 abmag</i>  <i>Category=Calibration</i>  <i>Description=[Target acquisition test]</i>  <i>Extended=NO</i></p>				
(12)	SMP-LMC-58	RA: 05 24 20.7523 (81.0864679d) Dec: -70 05 1.60 (-70.08378d) Equinox: J2000	Proper Motion RA: 1.767 mas/yr Proper Motion Dec: 0.245 mas/yr Epoch of Position: 2016	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>  <i>Coordinates and proper motions updated to Gaia EDR3</i>  <i>J=15.76</i>  <i>H=15.63</i>  <i>K=14.56</i>  <i>Category=ISM</i>  <i>Description=[Planetary nebulae]</i>  <i>Extended=YES</i></p>				
(13)	HAT-P-14	RA: 17 20 27.8813 (260.1161721d) Dec: +38 14 31.81 (38.24217d) Equinox: J2000	Proper Motion RA: 1.9947333570252975E-4 sec of time/yr Proper Motion Dec: -0.0066790000346372835 arcsec/yr Epoch of Position: 2015.5	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>  <i>Category=Calibration</i>  <i>Description=[Spectrophotometric, Target acquisition test]</i>  <i>Extended=NO</i></p>				

Fixed Targets

Proposal 1118 - Observation 1 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 1: BOTA WATA</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: ETC calculation: <a href="https://jwst.etc.stsci.edu/workbook.html?wb_id=7911#">https://jwst.etc.stsci.edu/workbook.html?wb_id=7911#</a></i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=127 assuming SUB32 NRSRAPID F140X workbook 11612.10</i></p>										
<b>Diagnostics</b>	<p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>		
	(1)	2MASS-J17430448+6655015	RA: 17 43 4.4887 (265.7687029d) Dec: +66 55 1.62 (66.91712d) Equinox: J2000			Proper Motion RA: 1.124 mas/yr Proper Motion Dec: -2.714 mas/yr Parallax: 0.0005401" Epoch of Position: 2016					
	<p><i>Comments: Also GDR2 - 1634280307903512064, now includes PM, Gmag=13.4843</i></p> <p><i>Updated coordinates and proper motions to Gaia EDR3 values and epoch</i></p> <p><i>Also 2MASS 17430448+6655015, JHK=12.979, 12.880, 12.772</i></p> <p><i>CALSPEC spectra: 1743045_mod_001.fits and 1743045_stisnic_004.fits</i></p> <p><i>synphot prediction using model spectrum:</i></p> <p><i>NIC3 F110W 13.8 abmag, F160W 14.2 abmag;</i></p> <p><i>WFC3 F110W 13.81, F160W 14.14 abmag,</i></p> <p><i>JHK, 13.0, 12.89, 12.87 vegamag</i></p> <p><i>synphot prediction using STISNIC spectrum:</i></p> <p><i>NIC3 F110W 13.9, F160W 14.19,</i></p> <p><i>G=19 companion about 7.485" to the N is Gaia DR3-1634280376623380096; there are NIC3 F110W/F160W images including both stars</i></p> <p><i>Category=Calibration</i></p> <p><i>Description=[A stars, Spectrophotometric, Target acquisition test]</i></p> <p><i>Extended=NO</i></p>										
<b>Acquisition</b>	<b>#</b>	<b>Target</b>	<b>TA Method</b>	<b>Subarray</b>	<b>Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	SAME	WATA	SUB32	F140X	NRSRAPID	3	1	1	0.08	11612.10
<b>Template</b>	<p>Subarray</p> <p>SUB512</p>										
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Exposures/Dith</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>	
	1	PRISM/CLEAR	NRSRAPID	10	350	1	1	350	877.884	86186.15	

Proposal 1118 - Observation 1 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

**Special Requirements**

Time Series Observation  
No Parallel  
Guide Star in Guider 1

Proposal 1118 - Observation 2 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 2: FS WATA</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec Fixed Slit Spectroscopy</p> <p><i>Comments: NRSIRS2RAPID G235H/F170LP 30 grp, 1 int, ETC7868 calc #15 - peak S/N=115</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=71.35 assuming SUB32 NRSRAPID F110W workbook 11612.11</i></p>																																
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Proposal 1118 - Observation 2 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Spectral Elements	#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Ex #	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wbkk.Calc ID
		1	G140H/F100LP	S200A1	NRSRAPID	20	1	NONE	6	6	692.367
	2	G140H/F100LP	S200A2	NRSRAPID	20	1	NONE	6	6	692.367	
Special Requirements	Guide Star in Guider 1										

Proposal 1118 - Observation 3 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 3: IFU WATA</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p> <p><i>Comments: IFU ETC calculation: <a href="https://jwst.etc.stsci.edu/workbook.html?wb_id=7908">https://jwst.etc.stsci.edu/workbook.html?wb_id=7908</a></i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=63.13 assuming SUB2048 NRSRAPID F110W (use this one in proposal) workbook 11612.14</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=191 assuming SUB2048 NRS F110W</i></p>																																														
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Special Requirements

Guide Star in Guider 1

# Proposal 1118 - Observation 4 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 4: MOS FIELD WATA</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec MultiObject Spectroscopy</p> <p><i>Comments: ETC workbook 11626</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=144, with SUB32, NRS, F140X, normalized to K=14.56, calc#19</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=70, with SUB32, NRS, F140X, normalized to J=15.76, calc#21</i></p> <p><i>Should use only these guide stars:</i></p> <p>S1HL082199                  S1HL082487                  S1HL082532                  S1HL083062                  S1HL084263                  S1HL438055                  S1HL084056                  S1HL084238                  S1HL084924</p> <p><i>Aperture "height" for FIELD1 is 205.276" and "width"=215.001" according to SIAF</i></p> <p><i>Use small mosaic to dither in Y direction only</i></p> <p><i>Row overlap of 99.4935 gives Y spacing of 2*0.5205" or ~ two shutters</i></p> <p><i>Do 3 H mode gratings to get spectrum of this wavelength calibration source at most wavelengths</i></p> <p><i>Want to also add confirmation image, but APT bug prevents using confirmation images when mosaic is also used. Should require ~ 115 s to add.</i></p>																																
	<p>(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																																
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Proposal 1118 - Observation 4 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Confirmation	#	Confirmation Type	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time
		1	Q4 Field Point 1 Long Slit	NRSIRS2RAPID	3	1	1

  

Spectral Elements	#	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
		1	1 (G235M/F170LP)	Q4 Field Point 1 Long Slit			0.0			1	1
	2	1 (G235M/F170LP)	Q4 Field Point 1 Long Slit			359.99999897698 353		-5.0	1	1	87.533
	3	2 (G395M/F290LP)	Q4 Field Point 1 Long Slit			0.0			1	1	87.533
	4	2 (G395M/F290LP)	Q4 Field Point 1 Long Slit			359.99999897698 353		-5.0	1	1	87.533

Proposal 1118 - Observation 5 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 5: BOTS Verification</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec Bright Object Time Series</p>										
<b>Diagnostics</b>	<p>(BOTS Verification (Obs 5)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.</p> <p>(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>		
	(13)	HAT-P-14	RA: 17 20 27.8813 (260.1161721d) Dec: +38 14 31.81 (38.24217d) Equinox: J2000			Proper Motion RA: 1.9947333570252975E-4 sec of time/yr Proper Motion Dec: -0.0066790000346372835 arcsec/yr Epoch of Position: 2015.5					
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Calibration</i></p> <p><i>Description=[Spectrophotometric, Target acquisition test]</i></p> <p><i>Extended=NO</i></p>										
<b>Acquisition</b>	<b>#</b>	<b>Target</b>	<b>TA Method</b>	<b>Subarray</b>	<b>Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	SAME	WATA	SUB32	F110W	NRSRAPID	3	1	1	0.08	109288
<b>Template</b>	<p><b>Subarray</b></p> <p>SUB2048</p>										
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Exposures/Dith</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>	
	1	G395H/F290LP	NRSRAPID	20	1139	1	1	1139	21598.265	109288	

## Proposal 1118 - Observation 5 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

### Special Requirements

Phase 0.9645357887086446 to 0.973539599841821 with period 4.62767 Days and zero-phase 2459030.9299226585 HJD  
Time Series Observation  
No Parallel  
Guide Star in Guider 1

Proposal 1118 - Observation 6 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 6: IFU WATA - Obs 3 repeat</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p> <p><i>Comments: IFU ETC calculation: <a href="https://jwst.etc.stsci.edu/workbook.html?wb_id=7908">https://jwst.etc.stsci.edu/workbook.html?wb_id=7908</a></i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=63.13 assuming SUB2048 NRSRAPID F110W (use this one in proposal) workbook 11612.14</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=191 assuming SUB2048 NRS F110W</i></p>																																														
	<p>(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																																														
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2	G140M/F100LP	NRSIRS2RAPID	10	1	true	true	NONE	4	4	641.911																																					



Special Requirements

Guide Star in Guider 1

Proposal 1118 - Observation 7 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

<b>Observation</b>	<p>Proposal 1118, Observation 7: ASIC reconfig after Obs 6</p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec Dark</p>	Sat Jun 04 18:00:51 GMT 2022																								
<b>Diagnostics</b>	<p>(ASIC reconfig after Obs 6 (Obs 7)) Warning (Form): PARALLEL requirement expected.</p> <p>(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																									
<b>Template</b>	<p>Subarray</p> <hr/> <p>FULL</p>																									
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#	Readout Pattern	Grating	Groups/Int	Integrations/Exp	Exposures/Dith	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID																		
1	NRSIRS2RAPID		2	1	1	1	43.767																			

# Proposal 1118 - Observation 8 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

Sat Jun 04 18:00:51 GMT 2022

<b>Observation</b>	<p><b>Proposal 1118, Observation 8: MOS FIELD WATA - Obs 4 repeat</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec MultiObject Spectroscopy</p> <p><i>Comments: ETC workbook 11626</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=144, with SUB32, NRS, F140X, normalized to K=14.56, calc#19</i></p> <p><i>ACQ exposure with ETC 1.2 gives S/N=70, with SUB32, NRS, F140X, normalized to J=15.76, calc#21</i></p> <p><i>Should use only these guide stars:</i></p> <p>S1HL082199                  S1HL082487                  S1HL082532                  S1HL083062                  S1HL084263                  S1HL438055                  S1HL084056                  S1HL084238                  S1HL084924</p> <p><i>Aperture "height" for FIELD1 is 205.276" and "width"=215.001" according to SIAF</i></p> <p><i>Use small mosaic to dither in Y direction only</i></p> <p><i>Row overlap of 99.4935 gives Y spacing of 2*0.5205" or ~ two shutters</i></p> <p><i>Do 3 H mode gratings to get spectrum of this wavelength calibration source at most wavelengths</i></p> <p><i>Want to also add confirmation image, but APT bug prevents using confirmation images when mosaic is also used. Should require ~ 115 s to add.</i></p>																																
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Confirmation	#	Confirmation Type	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time
		1	Q4 Field Point 1 Long Slit	NRSIRS2RAPID	3	1	1

  

Spectral Elements	#	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
		1	1 (G235M/F170LP)	Q4 Field Point 1 Long Slit			0.0			1	1
	2	1 (G235M/F170LP)	Q4 Field Point 1 Long Slit			359.99999897698 353		-5.0	1	1	87.533
	3	2 (G395M/F290LP)	Q4 Field Point 1 Long Slit			0.0			1	1	87.533
	4	2 (G395M/F290LP)	Q4 Field Point 1 Long Slit			359.99999897698 353		-5.0	1	1	87.533

Proposal 1118 - Observation 9 - NIRSpec Wide Aperture Target Acquisition Verification (WATA)

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<b>Observation</b>	<p><b>Proposal 1118, Observation 9: ASIC reconfig after Obs 8</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec Dark</p>																		
<b>Diagnostics</b>	<p>(ASIC reconfig after Obs 8 (Obs 9)) Warning (Form): PARALLEL requirement expected.</p> <p>(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																		
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