



2768 - Uranus high spatial resolution global map from NIRCcam

Cycle: 2, Proposal Category: GTO

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	URANUS-Lon1	NIRCcam Imaging	(1) URANUS
	2	URANUS-Lon2	NIRCcam Imaging	(1) URANUS
	3	URANUS-Lon3	NIRCcam Imaging	(1) URANUS

ABSTRACT

We will use NIRCcam to produce novel science in addition to following up the anticipated Cycle 1 investigations with the other JWST instruments. High-resolution images of the planet at three separate longitudes will generate a 360-degree map. These data will provide detailed context for the expected Cycle 1, and will also add critical new observations sensitive to the tropospheric hazes and the auroral activity in the upper atmosphere of Uranus. The entire system will be in the field of view with chance to observe the rings and satellites.

OBSERVING DESCRIPTION

Observing Uranus with NIRCcam to create high-resolution images of the planet at three separate longitudes to generate a 360-degree map. Uranus rotates in 17 hours, 14 minutes. The time between adjacent sets should therefore be around 5-6 hours. Each of the three longitudes will have around 1.5 hours of executable time. These data will provide detailed context for the expected Cycle 1, and will also add critical new observations sensitive to the tropospheric hazes and the auroral activity in the upper atmosphere of Uranus. The filters were chosen to match the science objectives and fit within the allocated time. Use of the RAPID mode will ensure that we get snapshots of the planetary system and reduce any smearing caused by integrating over longer exposure times. Using INTRAMODULEBOX dithering pattern will support the short planetary disk exposures, while still having a square FOV for moons. We will take multiple groups/integrations per filter pair to increase SNR but decrease the risk of saturation from localized bright features.

Proposal 2768 - Targets - Uranus high spatial resolution global map from NIRCam

Solar System Targets	#	Name	Level 1	Level 2	Level 3
	(1)	URANUS	STD=URANUS		
<i>Comments: Extended=YES</i>					

Proposal 2768 - Observation 1 - Uranus high spatial resolution global map from NIRCam

Fri Sep 16 18:01:28 GMT 2022

Observation	Proposal 2768, Observation 1: URANUS-Lon1 Diagnostic Status: Warning Observing Template: NIRCam Imaging									
	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3					
	(1)	URANUS	STD=URANUS							
<i>Comments: Extended=YES</i>										
Template	Module					Subarray				
	B					FULL				
Dithers	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions				
	1	INTRAMODULEBOX	5	STANDARD	1					
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F210M	F410M	RAPID	10	1	5	5	536.838	121912
	2	F182M	F480M	RAPID	10	1	5	5	536.838	121912
Special Requirements	DEFAULT WINDOW: ANGULAR RATE URANUS FROM JWST LESS THAN 0.03									

Proposal 2768 - Observation 2 - Uranus high spatial resolution global map from NIRCcam

Fri Sep 16 18:01:28 GMT 2022

Observation	Proposal 2768, Observation 2: URANUS-Lon2 Diagnostic Status: Warning Observing Template: NIRCcam Imaging									
	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3					
	(1)	URANUS	STD=URANUS							
<i>Comments: Extended=YES</i>										
Template	Module					Subarray				
	B					FULL				
Dithers	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions				
	1	INTRAMODULEBOX	5	STANDARD		1				
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F210M	F410M	RAPID	10	1	5	5	536.838	121912
	2	F182M	F480M	RAPID	10	1	5	5	536.838	121912
Special Requirements	DEFAULT WINDOW: ANGULAR RATE URANUS FROM JWST LESS THAN 0.03									

Proposal 2768 - Observation 3 - Uranus high spatial resolution global map from NIRCam

Fri Sep 16 18:01:28 GMT 2022

Observation	Proposal 2768, Observation 3: URANUS-Lon3 Diagnostic Status: Warning Observing Template: NIRCam Imaging									
	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3					
	(1)	URANUS	STD=URANUS							
<i>Comments: Extended=YES</i>										
Template	Module					Subarray				
	B					FULL				
Dithers	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions				
	1	INTRAMODULEBOX	5	STANDARD		1				
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F210M	F410M	RAPID	10	1	5	5	536.838	121912
	2	F182M	F480M	RAPID	10	1	5	5	536.838	121912
Special Requirements	DEFAULT WINDOW: ANGULAR RATE URANUS FROM JWST LESS THAN 0.03									