



9317 - Investigating Saturn's Equatorial Winds at Equinox

Cycle: 4, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Saturn North-South Scan				
	2	SouthPole-MIRI	MIRI Medium Resolution Spectroscopy	(1) Saturn-SouthPole
	3	SouthMidLat-MIRI	MIRI Medium Resolution Spectroscopy	(2) Saturn-SouthMidLat
	4	SouthEquator-MIRI	MIRI Medium Resolution Spectroscopy	(3) Saturn-SouthEquator
	5	NorthEquator-MIRI	MIRI Medium Resolution Spectroscopy	(4) Saturn-NorthEquator
	6	NorthMidLat-MIRI	MIRI Medium Resolution Spectroscopy	(5) Saturn-NorthMidLat
	7	NorthPole-MIRI	MIRI Medium Resolution Spectroscopy	(6) Saturn-NorthPole
	1	Background-MIRI	MIRI Medium Resolution Spectroscopy	(7) Saturn-Offset

ABSTRACT

We propose a time-critical multi-wavelength study to develop a 3D picture of Saturn's equatorial region near equinox using 12 orbits of HST WFC3/UVIS and 10.6 hours of JWST MIRI/MRS. Saturn's stratospheric temperatures, vertical windshears, and meridional flows are influenced by seasonal temperature gradients, as well as wave-driven equatorial oscillations. We propose to test 5 hypotheses: 1) The speed, structure, and altitude of Saturn's stratospheric equatorial jet has changed since 2015 due to modulation by the equatorial oscillation; 2. Planetary-scale stratospheric

circulations will switch direction at equinox; 3: Saturn's tropical windshear zones are asymmetric about the equator due to seasonal contrasts, affecting the 3D structure of the equatorial zonal jet; 4. Saturn's post-winter clouds and hazes (south) will be thinner and have different composition than post-summer (north); 5: Stratospheric hydrocarbons will be symmetric about the equator at high pressures but show deeper local maxima at northern and southern latitudes. We will address these hypotheses by using the powerful combined broad wavelength coverage of these two instruments to measure atmospheric temperatures, cloud-traced wind fields, and compositional tracers of upper altitude meridional circulation. These values will be compared with 2015 HST + Cassini solstice values, as well as 2022 MIRI data, to better understand the combined effects of solar insolation and wave-driven oscillations on atmospheric circulation. The unique geometry present around equinox, with both hemispheres simultaneously visible, will not repeat until 2039.

OBSERVING DESCRIPTION

For the JWST component of this program, we propose a north-south scan along Saturn's central meridian using MIRI/MRS, with six separate pointings required to cover all latitudes without gaps, in addition to a final offset to take a background. Each tile of the north-south scan will require MIRI/MRS observations in all subbands and gratings to span the full spectral range, with no preference for the order of the gratings (A->C or C->A). Extended source dithering will be used to correct for detector artifacts and flatfield effects.

The central latitudes have been calculated based on the geometry on 2025-12-01T00:00:00, and refinements may be needed if a different FoR window is selected.

Background observations will not require dithering, and are primarily used to identify persistent artifacts and foreground effects in the telescope.

The minimum number of groups is selected for MIRI to avoid saturation, and the number of integrations have been guided by both ETC and data available from Cycle 1. Desaturation will be used to recover spectra that are saturated, as successfully applied during Cycle 1. A non-interruptable timing constraint has been added to cut down on any major slews.

Proposal 9317 - Targets - Investigating Saturn's Equatorial Winds at Equinox

Solar System Targets	#	Name	Level 1	Level 2	Level 3
	(1)	Saturn-SouthPole	STD=SATURN	TYPE=TORUS, LONG=0, LAT=-62.2, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0	
	<i>Comments: Viewing specific latitude on the central meridian, specific longitude is not important.</i>				
	<i>Extended=YES</i>				
	(2)	Saturn-SouthMidLat	STD=SATURN	TYPE=TORUS, LONG=0, LAT=-30.4, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0	
	<i>Comments: Viewing specific latitude on the central meridian, specific longitude is not important.</i>				
	<i>Extended=YES</i>				
	(3)	Saturn-SouthEquator	STD=SATURN	TYPE=TORUS, LONG=0, LAT=-9.7, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0	
<i>Comments: Viewing specific latitude on the central meridian, specific longitude is not important.</i>					
<i>Extended=YES</i>					
(4)	Saturn-NorthEquator	STD=SATURN	TYPE=TORUS, LONG=0, LAT=9.0, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0		
<i>Comments: Viewing specific latitude on the central meridian, specific longitude is not important.</i>					
<i>Extended=YES</i>					
(5)	Saturn-NorthMidLat	STD=SATURN	TYPE=TORUS, LONG=0, LAT=29.7, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0		
<i>Comments: Viewing specific latitude on the central meridian, specific longitude is not important.</i>					
<i>Extended=YES</i>					
(6)	Saturn-NorthPole	STD=SATURN	TYPE=TORUS, LONG=0, LAT=61.4, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0		
<i>Comments: Viewing specific latitude on the central meridian, specific longitude is not important.</i>					
<i>Extended=YES</i>					
(7)	Saturn-Offset	STD=SATURN	TYPE=POS_ANGLE, RAD=120, ANG=90, REF=NORTH		
<i>Comments: Extended=YES</i>					

Proposal 9317 - Observation 2 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 2: SouthPole-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Background-MIRI (Obs 1)] Comments: BETWEEN requirement for coordination with HST GO 18102.												
	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (SouthPole-MIRI (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1			Level 2			Level 3				
	(1)	Saturn-SouthPole	STD=SATURN			TYPE=TORUS, LONG=0, LAT=-62.2, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0							
Comments: Viewing specific latitude on the central meridian, specific longitude is not important. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray		Grating Wheel Direction			
		All MRS			NO			FULL		Allow Auto Reorder			
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			EXTENDED SOURCE			NEGATIVE					
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	

Proposal 9317 - Observation 2 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Between Dates 16-NOV-2025 and 02-DEC-2025

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-SouthPole BY SATURN FROM JWST

DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-SouthPole BY TITAN FROM JWST

DEFAULT WINDOW: SEPARATION OF Saturn-SouthPole RHEA FROM JWST GREATER THAN 10"

DEFAULT WINDOW: SEPARATION OF Saturn-SouthPole TITAN FROM JWST GREATER THAN 10"

DEFAULT WINDOW: ANGULAR RATE Saturn-SouthPole FROM JWST LESS THAN 0.075

Proposal 9317 - Observation 3 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 3: SouthMidLat-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Background-MIRI (Obs 1)]												
	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (SouthMidLat-MIRI (Obs 3)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnostics													
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(2)	Saturn-SouthMidLat	STD=SATURN	TYPE=TORUS, LONG=0, LAT=-30.4, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0									
Comments: Viewing specific latitude on the central meridian, specific longitude is not important. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel		Simultaneous Imaging			Imager Subarray		Grating Wheel Direction				
		All MRS		NO			FULL		Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For				Direction				
	1	4-Point			EXTENDED SOURCE				NEGATIVE				
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	

Proposal 9317 - Observation 3 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-SouthMidLat BY SATURN FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-SouthMidLat BY TITAN FROM JWST
DEFAULT WINDOW: SEPARATION OF Saturn-SouthMidLat RHEA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Saturn-SouthMidLat TITAN FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Saturn-SouthMidLat FROM JWST LESS THAN 0.075

Proposal 9317 - Observation 4 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 4: SouthEquator-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Background-MIRI (Obs 1)]												
	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (SouthEquator-MIRI (Obs 4)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(3)	Saturn-SouthEquator	STD=SATURN	TYPE=TORUS, LONG=0, LAT=-9.7, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0									
Comments: Viewing specific latitude on the central meridian, specific longitude is not important. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray				Grating Wheel Direction					
		All MRS	NO	FULL				Allow Auto Reorder					
Dithers	#	Dither Type			Optimized For				Direction				
	1	4-Point			EXTENDED SOURCE				NEGATIVE				
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	

Proposal 9317 - Observation 4 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-SouthEquator BY SATURN FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-SouthEquator BY TITAN FROM JWST
DEFAULT WINDOW: SEPARATION OF Saturn-SouthEquator RHEA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Saturn-SouthEquator TITAN FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Saturn-SouthEquator FROM JWST LESS THAN 0.075

Proposal 9317 - Observation 5 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 5: NorthEquator-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Background-MIRI (Obs 1)]												
	(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NorthEquator-MIRI (Obs 5)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(4)	Saturn-NorthEquator	STD=SATURN	TYPE=TORUS, LONG=0, LAT=9.0, RAD=58232, POL E_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0									
Comments: Viewing specific latitude on the central meridian, specific longitude is not important. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel	Simultaneous Imaging				Imager Subarray		Grating Wheel Direction				
		All MRS	NO				FULL		Allow Auto Reorder				
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/E xp	Exposures/Dit h	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	

Proposal 9317 - Observation 5 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-NorthEquator BY SATURN FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-NorthEquator BY TITAN FROM JWST
DEFAULT WINDOW: SEPARATION OF Saturn-NorthEquator RHEA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Saturn-NorthEquator TITAN FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Saturn-NorthEquator FROM JWST LESS THAN 0.075

Proposal 9317 - Observation 6 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 6: NorthMidLat-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Background-MIRI (Obs 1)]												
	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NorthMidLat-MIRI (Obs 6)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnostics													
Solar System Targets	#	Name	Level 1				Level 2				Level 3		
	(5)	Saturn-NorthMidLat	STD=SATURN				TYPE=TORUS, LONG=0, LAT=29.7, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0						
Comments: Viewing specific latitude on the central meridian, specific longitude is not important. Extended=YES													
Acquisition	#											Target	
	1											NONE	
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
		All MRS				NO			FULL		Allow Auto Reorder		
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	

Proposal 9317 - Observation 6 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-NorthMidLat BY SATURN FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-NorthMidLat BY TITAN FROM JWST
DEFAULT WINDOW: SEPARATION OF Saturn-NorthMidLat RHEA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Saturn-NorthMidLat TITAN FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Saturn-NorthMidLat FROM JWST LESS THAN 0.075

Proposal 9317 - Observation 7 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 7: NorthPole-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Background-MIRI (Obs 1)]												
	(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NorthPole-MIRI (Obs 7)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(6)	Saturn-NorthPole	STD=SATURN	TYPE=TORUS, LONG=0, LAT=61.4, RAD=58232, POLE_LONG=0, POLE_LAT=90, O_LONG=0, O_LAT=0, O_RAD=0									
Comments: Viewing specific latitude on the central meridian, specific longitude is not important. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray		Grating Wheel Direction			
		All MRS			NO			FULL		Allow Auto Reorder			
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	4	32	521.708	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	4	32	521.708	

Proposal 9317 - Observation 7 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-NorthPole BY SATURN FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-NorthPole BY TITAN FROM JWST
DEFAULT WINDOW: SEPARATION OF Saturn-NorthPole RHEA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Saturn-NorthPole TITAN FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Saturn-NorthPole FROM JWST LESS THAN 0.075

Proposal 9317 - Observation 1 - Investigating Saturn's Equatorial Winds at Equinox

Fri Oct 10 18:01:55 GMT 2025

Observation	Proposal 9317, Observation 1: Background-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [SouthPole-MIRI (Obs 2), SouthMidLat-MIRI (Obs 3), SouthEquator-MIRI (Obs 4), NorthEquator-MIRI (Obs 5), NorthMidLat-MIRI (Obs 6), NorthPole-MIRI (Obs 7)]												
	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Background-MIRI (Obs 1)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1				Level 2				Level 3		
	(7)	Saturn-Offset	STD=SATURN				TYPE=POS_ANGLE,RAD=120,ANG=90,REF=NORTH						
<i>Comments: Extended=YES</i>													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging		Imager Subarray		Grating Wheel Direction			
		All MRS				NO		FULL		Allow Auto Reorder			
Dithers	#	Dither Type				Optimized For				Direction			
	1	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	SHORT(A)	MRSLONG		FASTR1	5	4	1	Dither 1	2	8	127.652	12638
	1	SHORT(A)	MRSSHORT		FASTR1	5	4	1	Dither 1	2	8	127.652	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	4	1	Dither 1	2	8	127.652	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	4	1	Dither 1	2	8	127.652	
	3	LONG(C)	MRSLONG		FASTR1	5	4	1	Dither 1	2	8	127.652	
	3	LONG(C)	MRSSHORT		FASTR1	5	4	1	Dither 1	2	8	127.652	

Proposal 9317 - Observation 1 - Investigating Saturn's Equatorial Winds at Equinox

Special Requirements

Sequence Observations 1, 2, 3, 4, 5, 6, 7, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Saturn-Offset BY SATURN FROM JWST

DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Saturn-Offset BY TITAN FROM JWST

DEFAULT WINDOW: SEPARATION OF Saturn-Offset RHEA FROM JWST GREATER THAN 10"

DEFAULT WINDOW: SEPARATION OF Saturn-Offset TITAN FROM JWST GREATER THAN 10"

DEFAULT WINDOW: ANGULAR RATE Saturn-Offset FROM JWST LESS THAN 0.075