



6840 - Jupiter's Oval BA: Trends in Space and Time

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>
Jupiter - Rotation 1				
	1	NIRCam Full	NIRCam Imaging	(1) Jupiter
	2	NIRCam Sub640 int/ex p	NIRCam Imaging	(1) Jupiter
	3	NIRCam Full	NIRCam Imaging	(1) Jupiter
	4	NIRCam Sub640 dither	NIRCam Imaging	(1) Jupiter
Jupiter - Rotation 2				

JWST Proposal 6840 (Created: Friday, February 6, 2026, 4:00:13PM Eastern Standard Time) - Overview

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
	6	NIRCam Full	NIRCam Imaging	(1) Jupiter
	7	NIRCam Sub640 int/exp	NIRCam Imaging	(1) Jupiter
Jupiter - Rotation 3				
	8	NIRSpec IFU High Res	NIRSpec IFU Spectroscopy	(4) Oval_BA
Jupiter - Rotation 4				
	9	MIRI MRS IFU	MIRI Medium Resolution Spectroscopy	(2) Oval_BA-east
	10	MIRI MRS IFU	MIRI Medium Resolution Spectroscopy	(4) Oval_BA
	11	MIRI MRS IFU	MIRI Medium Resolution Spectroscopy	(5) Oval_BA-west

ABSTRACT

We propose a comprehensive study of Oval BA, a major anticyclonic vortex on Jupiter that has not been observed by JWST. NIRCam images separated by 10 hours (one Jupiter rotation) will utilize JWST's newfound ability to measure high-precision velocity fields in hazy areas (such as Oval BA) at altitudes some 35 km above the level probed by visible-wavelength imaging used in the past. This first-ever direct measurement of vertical wind shear in Oval BA---a fundamentally different class of vortex than the Great Red Spot---will advance the velocity field data from a 2D to a 3D paradigm in the JWST era. We will interpret the results using numerical simulations with vertically variable stratification, another 3D step that has profound effects on modeled vortex physics. NIRSpec IFU observations will quantitatively determine the altitude of wind tracers, and a MIRI IFU spectrum will measure the 3D thermal structure in the vortex and its surroundings. Over 15 years of archival visible-wavelength data will be used to quantify dynamical and photometric trends.

The program will advance our understanding of vortex dynamics in shear flows with variable stratification, a class of phenomena covering protoplanetary disks, terrestrial ocean vortices, and vortices on other giant planets. We will use dynamical models to extend shallow observational results into the surrounding deep atmosphere, providing a reference for future microwave retrievals. The combination of our thermal, compositional, and wind shear measurements with new numerical simulations will place constraints on the meridional and vertical flows, part of the climate circulation that cannot be directly measured.

OBSERVING DESCRIPTION

See Phase I proposal. Text will be provided in this APT text box if the program is selected.

Proposal 6840 - Targets - Jupiter's Oval BA: Trends in Space and Time

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	
	(3)	false_target	RA: 07 03 44.9952 (105.9374800d) Dec: +22 57 53.60 (22.96489d) Equinox: J2000	Proper Motion RA: 18.77 mas/yr Proper Motion Dec: -8.210000078179291 mas/yr Epoch of Position: 2000		
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. This is just for APT/Aladin visualization of mosaic footprints of Level 1 moving targets. APT/Aladin is now able to generate footprints for Level 2 moving targets but not Level 1 targets.</i></p> <p>Category=Star Description=[Bok globules]</p>						
Solar System Targets	#	Name	Level 1	Level 2	Level 3	
	(1)	Jupiter	STD=JUPITER			
	<i>Comments: Extended=YES</i>					
	(2)	Oval_BA-east	STD=JUPITER	TYPE=PGRAPHIC, LONG=329, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC		
	<i>Comments: First pointing in manual MIRI mosaic, east of Oval BA on Jupiter. Extended=YES</i>					
(4)	Oval_BA	STD=JUPITER	TYPE=PGRAPHIC, LONG=344, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC			
<i>Comments: Target centered on Oval BA (for NIRSpec and MIRI IFU observations) Uses tracking estimate prepared 5 Dec 2025. Extended=YES</i>						
(5)	Oval_BA-west	STD=JUPITER	TYPE=PGRAPHIC, LONG=359, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC			
<i>Comments: Third pointing in manual MIRI mosaic, west of Oval BA on Jupiter. Extended=YES</i>						

Proposal 6840 - Observation 1 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	<p>Proposal 6840, Observation 1: NIRCcam Full</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Imaging</p> <p><i>Comments: Visit planner windows seem to be opening consistently 100 minutes earlier than intended with the PHASE constraint, which is designed to place Oval BA as close to disk center in the images. If the proposal is selected, we will work with STScI to solve this problem.</i></p>									
	<p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(NIRCcam Full (Obs 1)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2			Level 3			
	(1)	Jupiter	STD=JUPITER							
<i>Comments: Extended=YES</i>										
Template	Module					Subarray				
	B					FULL				
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				3
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID
	1	F212N	F335M	RAPID	5	1	3	3	161.052	33269

Proposal 6840 - Observation 1 - Jupiter's Oval BA: Trends in Space and Time

Special Requirements	<p>Phase 0 to 0.029943048 with period 9.921673976 Hours and zero-phase 2460541.907870 HJD Offset 38.83 arcsec, 38.23 arcsec</p> <p>Sequence Observations 1, 2, 3, 4, Non-interruptible Group Observations 1, 6, 8 within 35 Hours</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY IO FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY EUROPA FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY GANYMEDE FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY CALLISTO FROM JWST DEFAULT WINDOW: ANGULAR RATE JUPITER FROM JWST LESS THAN 0.075 NOT OCCULTATION OF Jupiter BY IO FROM JWST NOT OCCULTATION OF Jupiter BY EUROPA FROM JWST NOT OCCULTATION OF Jupiter BY GANYMEDE FROM JWST NOT OCCULTATION OF Jupiter BY CALLISTO FROM JWST</p>
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Proposal 6840 - Observation 2 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	<p>Proposal 6840, Observation 2: NIRCam Sub640 int/exp</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	<p>(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(NIRCam Sub640 int/exp (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Solar System Targets	#	Name	Level 1	Level 2			Level 3			
	(1)	Jupiter	STD=JUPITER							
	<i>Comments: Extended=YES</i>									
Template	Module					Subarray				
	B					SUB640				
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	Optional ETC ID
	1	F164N+F150W2	F405N+F444W	RAPID	3	3	15	5	251.458	33269
Special Requirements	<p>Sequence Observations 1, 2, 3, 4, Non-interruptible</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY IO FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY EUROPA FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY GANYMEDE FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY CALLISTO FROM JWST</p> <p>DEFAULT WINDOW: ANGULAR RATE JUPITER FROM JWST LESS THAN 0.075</p> <p>NOT OCCULTATION OF Jupiter BY IO FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY EUROPA FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY GANYMEDE FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY CALLISTO FROM JWST</p>									

Proposal 6840 - Observation 3 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	<p>Proposal 6840, Observation 3: NIRCam Full</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	<p>(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(NIRCam Full (Obs 3)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Solar System Targets	#	Name	Level 1	Level 2			Level 3			
	(1)	Jupiter	STD=JUPITER							
	<i>Comments: Extended=YES</i>									
Template	Module					Subarray				
	B					FULL				
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size	Subpixel Positions	
	1	NONE				STANDARD			3	
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID
	1	F212N	F335M	RAPID	5	1	3	3	161.052	33269
Special Requirements	<p>Offset 38.83 arcsec, 38.23 arcsec</p> <p>6 After 3 by 7 Hours to 13 Hours</p> <p>Sequence Observations 1, 2, 3, 4, Non-interruptible</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY IO FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY EUROPA FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY GANYMEDE FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY CALLISTO FROM JWST</p> <p>DEFAULT WINDOW: ANGULAR RATE JUPITER FROM JWST LESS THAN 0.075</p> <p>NOT OCCULTATION OF Jupiter BY IO FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY EUROPA FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY GANYMEDE FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY CALLISTO FROM JWST</p>									

Proposal 6840 - Observation 4 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	Proposal 6840, Observation 4: NIRCam Sub640 dither Diagnostic Status: Warning Observing Template: NIRCam Imaging									
	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRCam Sub640 dither (Obs 4)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1			Level 2		Level 3		
	(1)	Jupiter	STD=JUPITER							
Comments: Extended=YES										
Template	Module					Subarray				
	B					SUB640				
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	Optional ETC ID
	1	F164N+F150W2	F405N+F444W	RAPID	3	3	15	5	251.458	33269
Special Requirements	Sequence Observations 1, 2, 3, 4, Non-interruptible									
	DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY IO FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY EUROPA FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY GANYMEDE FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY CALLISTO FROM JWST DEFAULT WINDOW: ANGULAR RATE JUPITER FROM JWST LESS THAN 0.075 NOT OCCULTATION OF Jupiter BY IO FROM JWST NOT OCCULTATION OF Jupiter BY EUROPA FROM JWST NOT OCCULTATION OF Jupiter BY GANYMEDE FROM JWST NOT OCCULTATION OF Jupiter BY CALLISTO FROM JWST									

Proposal 6840 - Observation 6 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	Proposal 6840, Observation 6: NIRCcam Full Diagnostic Status: Warning Observing Template: NIRCcam Imaging																												
	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRCcam Full (Obs 6)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.																												
Diagnosics																													
Solar System Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>Jupiter</td> <td>STD=JUPITER</td> <td></td> <td></td> </tr> <tr> <td colspan="5"><i>Comments: Extended=YES</i></td> </tr> </tbody> </table>	#	Name	Level 1	Level 2	Level 3	(1)	Jupiter	STD=JUPITER			<i>Comments: Extended=YES</i>																	
	#	Name	Level 1	Level 2	Level 3																								
(1)	Jupiter	STD=JUPITER																											
<i>Comments: Extended=YES</i>																													
Template	Module				Subarray																								
	B				FULL																								
Dithers	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Dither Type</th> <th>Primary Dithers</th> <th>Subpixel Dither Type</th> <th>Dither Size</th> <th>Subpixel Positions</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NONE</td> <td></td> <td>STANDARD</td> <td></td> <td>5</td> </tr> </tbody> </table>	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions	1	NONE		STANDARD		5																
	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions																							
1	NONE		STANDARD		5																								
Spectral Elements	<table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Dithers</th> <th>Total Exposure Time</th> <th>Optional ETC ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F212N</td> <td>F335M</td> <td>RAPID</td> <td>5</td> <td>1</td> <td>5</td> <td>5</td> <td>268.419</td> <td>33269</td> </tr> </tbody> </table>	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID	1	F212N	F335M	RAPID	5	1	5	5	268.419	33269								
	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID																			
1	F212N	F335M	RAPID	5	1	5	5	268.419	33269																				

Proposal 6840 - Observation 6 - Jupiter's Oval BA: Trends in Space and Time

Special Requirements

Phase 0.011111111 to 0.116261732 with period 9.921673976 Hours and zero-phase 2460541.907870 HJD
Offset 38.83 arcsec, 38.23 arcsec

6 After 3 by 7 Hours to 13 Hours
Group Observations 1, 6, 8 within 35 Hours
Sequence Observations 6, 7, Non-interruptible
Group Observations 6, 9 within 3 Days

DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY IO FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY EUROPA FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY GANYMEDE FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY CALLISTO FROM JWST
DEFAULT WINDOW: ANGULAR RATE JUPITER FROM JWST LESS THAN 0.075
NOT OCCULTATION OF Jupiter BY IO FROM JWST
NOT OCCULTATION OF Jupiter BY EUROPA FROM JWST
NOT OCCULTATION OF Jupiter BY GANYMEDE FROM JWST
NOT OCCULTATION OF Jupiter BY CALLISTO FROM JWST

Proposal 6840 - Observation 7 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	<p>Proposal 6840, Observation 7: NIRCcam Sub640 int/exp</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Imaging</p>									
Diagnostics	<p>(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(NIRCcam Sub640 int/exp (Obs 7)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Solar System Targets	#	Name	Level 1	Level 2			Level 3			
	(1)	Jupiter	STD=JUPITER							
	<i>Comments: Extended=YES</i>									
Template	Module					Subarray				
	B					SUB640				
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size	Subpixel Positions	
	1	INTRAMODULEBOX		8		STANDARD			1	
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID
	1	F164N+F150W2	F405N+F444W	RAPID	3	3	24	8	402.332	33269
Special Requirements	<p>Sequence Observations 6, 7, Non-interruptible</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY IO FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY EUROPA FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY GANYMEDE FROM JWST</p> <p>DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Jupiter BY CALLISTO FROM JWST</p> <p>DEFAULT WINDOW: ANGULAR RATE JUPITER FROM JWST LESS THAN 0.075</p> <p>NOT OCCULTATION OF Jupiter BY IO FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY EUROPA FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY GANYMEDE FROM JWST</p> <p>NOT OCCULTATION OF Jupiter BY CALLISTO FROM JWST</p>									

Proposal 6840 - Observation 8 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	Proposal 6840, Observation 8: NIRSpec IFU High Res Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy <i>Comments: Dither / cycling / 1, 2 --- https://jwst-docs.stsci.edu/jwst-near-infrared-spectrograph/nirspec-operations/nirspec-dithers-and-nods/nirspec-ifu-dither-and-nod-patterns (Fig. 1 bottom) --- diagonal x,y = +/- 0.25, 0.25 arcsec</i>											
Diagnostics	(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRSpec IFU High Res (Obs 8)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1			Level 2			Level 3			
	(4)	Oval_BA	STD=JUPITER			TYPE=PGRAPHIC, LONG=344, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC						
	<i>Comments: Target centered on Oval BA (for NIRSpec and MIRI IFU observations) Uses tracking estimate prepared 5 Dec 2025. Extended=YES</i>											
Template	TA Method					HFF Readout Mode						
	NONE					false						
Mosaic	Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order					
	3	1	50.0	10.0	40.0	0.0	DEFAULT					
Dithers	#	Dither Type		Size	Starting Point		Number of Points		Points			
	1	CYCLING		LARGE	1		2					
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	G235H/F170LP	NRSRAPID	3	1	false	true	NONE	2	2	85.894	175780
	2	G395H/F290LP	NRSRAPID	30	1	false	true	NONE	2	2	665.68	175780

Proposal 6840 - Observation 8 - Jupiter's Oval BA: Trends in Space and Time

Special Requirements

Between Dates 20-FEB-2026:00:00:00 and 10-APR-2026:00:00:00
Phase 0.006944444 to 0.110349455 with period 9.921673976 Hours and zero-phase 2460541.907870 HJD
Aperture PA Range 230.97164917 to 239.97164917 Degrees (V3 92.0 to 101.0)

Group Observations 1, 6, 8 within 35 Hours

DEFAULT WINDOW: NOT OCCULTATION OF Oval_BA BY JUPITER FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY IO FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY EUROPA FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY GANYMEDE FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY CALLISTO FROM JWST
DEFAULT WINDOW: ANGULAR RATE Oval_BA FROM JWST LESS THAN 0.075
SEPARATION OF Oval_BA IO FROM JWST GREATER THAN 10"
SEPARATION OF Oval_BA EUROPA FROM JWST GREATER THAN 10"
SEPARATION OF Oval_BA GANYMEDE FROM JWST GREATER THAN 10"
SEPARATION OF Oval_BA CALLISTO FROM JWST GREATER THAN 10"

Proposal 6840 - Observation 9 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	Proposal 6840, Observation 9: MIRI MRS IFU Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy												
	(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (MIRI MRS IFU (Obs 9)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(2)	Oval_BA-east	STD=JUPITER	TYPE=PGRAPHIC, LONG=329, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC									
Comments: First pointing in manual MIRI mosaic, east of Oval BA on Jupiter. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel		Simultaneous Imaging			Imager Subarray		Grating Wheel Direction				
		Channel 3		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	8	1	Dither 1	2	16	260.854	
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	2	16	260.854	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	

Proposal 6840 - Observation 9 - Jupiter's Oval BA: Trends in Space and Time

Special Requirements	Phase -0.041666667 to 0.095833333 with period 9.921673976 Hours and zero-phase 2460541.907870 HJD
	Group Observations 6, 9 within 3 Days Sequence Observations 9, 10, 11, Non-interruptible
	DEFAULT WINDOW: NOT OCCULTATION OF Oval_BA-east BY JUPITER FROM JWST
	DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-east BY IO FROM JWST
	DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-east BY EUROPA FROM JWST
	DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-east BY GANYMEDE FROM JWST
	DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-east BY CALLISTO FROM JWST
	DEFAULT WINDOW: SEPARATION OF Oval_BA-east IO FROM JWST GREATER THAN 10"
	DEFAULT WINDOW: SEPARATION OF Oval_BA-east EUROPA FROM JWST GREATER THAN 10"
	DEFAULT WINDOW: SEPARATION OF Oval_BA-east GANYMEDE FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA-east CALLISTO FROM JWST GREATER THAN 10"	
DEFAULT WINDOW: ANGULAR RATE Oval_BA-east FROM JWST LESS THAN 0.075	

Proposal 6840 - Observation 10 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	Proposal 6840, Observation 10: MIRI MRS IFU Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy												
	(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (MIRI MRS IFU (Obs 10)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Diagnosics													
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(4)	Oval_BA	STD=JUPITER	TYPE=PGRAPHIC, LONG=344, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC									
Comments: Target centered on Oval BA (for NIRSpec and MIRI IFU observations) Uses tracking estimate prepared 5 Dec 2025. Extended=YES													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel		Simultaneous Imaging			Imager Subarray		Grating Wheel Direction				
		Channel 3		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	8	1	Dither 1	2	16	260.854	
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	2	16	260.854	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	

Proposal 6840 - Observation 10 - Jupiter's Oval BA: Trends in Space and Time

Special Requirements

Sequence Observations 9, 10, 11, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Oval_BA BY JUPITER FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY IO FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY EUROPA FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY GANYMEDE FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA BY CALLISTO FROM JWST
DEFAULT WINDOW: SEPARATION OF Oval_BA IO FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA EUROPA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA GANYMEDE FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA CALLISTO FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Oval_BA FROM JWST LESS THAN 0.075

Proposal 6840 - Observation 11 - Jupiter's Oval BA: Trends in Space and Time

Fri Feb 06 21:00:13 GMT 2026

Observation	Proposal 6840, Observation 11: MIRI MRS IFU Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy												
	(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (MIRI MRS IFU (Obs 11)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Solar System Targets	#	Name	Level 1	Level 2				Level 3					
	(5)	Oval_BA-west	STD=JUPITER	TYPE=PGRAPHIC, LONG=359, LAT=-33, ALT=0, R_LONG=-0.28479302, R_LAT=0, R_ALT=0, EPOCH=19-AUG-2024:20:36:00, EpochTimeScale=UTC									
<i>Comments: Third pointing in manual MIRI mosaic, west of Oval BA on Jupiter. Extended=YES</i>													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel		Simultaneous Imaging			Imager Subarray		Grating Wheel Direction				
		Channel 3		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	8	1	Dither 1	2	16	260.854	
	1	SHORT(A)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	2	MEDIUM(B)	MRSLONG		FASTR1	5	8	1	Dither 1	2	16	260.854	
	2	MEDIUM(B)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSLONG		FASTR1	5	8	1	Dither 1	2	16	260.854	
	3	LONG(C)	MRSSHORT		FASTR1	5	8	1	Dither 1	2	16	260.854	

Proposal 6840 - Observation 11 - Jupiter's Oval BA: Trends in Space and Time

Special Requirements

Sequence Observations 9, 10, 11, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF Oval_BA-west BY JUPITER FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-west BY IO FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-west BY EUROPA FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-west BY GANYMEDE FROM JWST
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF Oval_BA-west BY CALLISTO FROM JWST
DEFAULT WINDOW: SEPARATION OF Oval_BA-west IO FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA-west EUROPA FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA-west GANYMEDE FROM JWST GREATER THAN 10"
DEFAULT WINDOW: SEPARATION OF Oval_BA-west CALLISTO FROM JWST GREATER THAN 10"
DEFAULT WINDOW: ANGULAR RATE Oval_BA-west FROM JWST LESS THAN 0.075