



12488 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1

ATLAS

Cycle: 4, Proposal Category: DD

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Bryce Bolin (PI)	Eureka Scientific Inc.
Dr. Ian Wong (CoI)	Space Telescope Science Institute
Dr. Christine Chen (CoI)	The Johns Hopkins University
Laura-May Abron (CoI)	Griffith Observatory
Dr. Ludmilla Kolokolova (CoI)	University of Maryland
Matthew Belyakov (CoI)	California Institute of Technology
Prof. Alessandro Morbidelli (CoI) (ESA Member)	Observatoire de la Cote d'Azur
Dr. Oleksandra Ivanova (CoI)	Slovak Academy of Sciences, Astronomical Institute

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	101	NIRSpecIFU-K1_PRISM	NIRSpec IFU Spectroscopy	(1) C2025K1-NEEDS-OFFSET
	705	NIRSpecIFU-K1D_PRISM	NIRSpec IFU Spectroscopy	(7) C2025K1D-NEEDS-OFFSET
	2	NIRSpecIFU-K1_PRISM_OFFSET	NIRSpec IFU Spectroscopy	(2) C2025K1-OFFSET
	3	NIRCAM_K1_FIRST_F070W	NIRCam Imaging	(5) C2025K1-NO-OFFSET
	5	MIRIIMAGING_K1_F1000W_FIRST	MIRI Imaging	(5) C2025K1-NO-OFFSET

Folder	Observation	Label	Observing Template	Science Target
	701	NIRSpecIFU-K1C_PRI SM	NIRSpec IFU Spectroscopy	(6) C2025K1C-NEEDS-OFFSET
	714	NIRSpecIFU-K1_PRIS M_TRY_2	NIRSpec IFU Spectroscopy	(9) C2025K1-NEEDS-OFFSET-TRY-2
	715	NIRSpecIFU-K1D_PRI SM_TRY_2	NIRSpec IFU Spectroscopy	(12) C2025K1D-NEEDS-OFFSET-TRY-2
	716	NIRSpecIFU-K1_PRIS M_OFFSET_TRY_2	NIRSpec IFU Spectroscopy	(10) C2025K1-OFFSET-TRY-2
	717	NIRSpecIFU-K1C_PRI SM_TRY_2	NIRSpec IFU Spectroscopy	(11) C2025K1C-NEEDS-OFFSET-TRY-2
	9	NIRCAM_K1_SECON D_F070W	NIRCam Imaging	(8) C2025K1-NO-OFFSET-V2
	711	MIRIIMAGING_K1_F 1000W_SECOND	MIRI Imaging	(8) C2025K1-NO-OFFSET-V2
	13	NIRCAM_K1_THIRD F070W	NIRCam Imaging	(8) C2025K1-NO-OFFSET-V2
	713	MIRIIMAGING_K1_F 1000W_THIRD	MIRI Imaging	(8) C2025K1-NO-OFFSET-V2

ABSTRACT

In 2025 November, Oort cloud comet C/2025 K1 (hereafter K1) was observed to split into multiple fragments. Fragmenting comets, such as K1, provides an opportunity to test the volatile contents and variability between fragments. It is believed that the original comets experienced thermal evolution and collisions between distinct planetesimals. The alteration of the original comet by these events may have differentiated its volatiles, with H₂O, CO, and CO₂ distributed in different parts of the comet. Subsequent fragmentation of the comet, as we are seeing now with K1, may result in fragments with different volatile compositions. We propose an observational test of this hypothesis by obtaining spectra of multiple comet fragments, mid-infrared imaging to estimate their sizes and size distribution, and multi-epoch imaging to measure their relative motion and evolution. Our observations will indicate the degree of variation of the volatile contents of the comet fragments, as well as their physical strength. Our observations are necessary to execute in a disruptive activation time since K1 is leaving the JWST field of view by the end of 2026 January, and is in the process of disintegrating, and therefore may not be observable again in the future.

OBSERVING DESCRIPTION

This observing program will consist of three visits: 1.) The first visit should occur in a disruptive time frame (< 14 days + 5 days for review) and consist of combined NIRSpec + NIRCам observations. 2.) The second visit should occur ~1 week after the first, and 3.) the third visit should occur

~1 week after the second to allow enough time for the fragments to separate and measure their relative motion from each other.

Our targets will have a 3-sigma sky-plane uncertainty much smaller than 1 arcsec in December 2025-January 2026, according to JPL HORIZONS. They will comfortably fit within the NIRSpec field of view at the JWST pointing accuracy. Astrometry from future follow-up observations of our targets by follow-up observers will further refine their orbits and reduce their sky-plane uncertainty. Therefore, we will not need to use target-acquisition methods, thereby saving observatory overhead time.

For our NIRSpec observations, we will use medium resolution gratings and cover an area of 3 arcsec x 3 arcsec centered on the comet at a resolution of 0.1 arcseconds. We will observe in NRSIRS2RAPID readout mode, taking 20-40 groups/integrations, one integration per exposure with a 4-point dither, for a total of 4 integrations and a total exposure time of ~1200-2400 s with the G235M/F170LP and G395M/F290LP filter grating combos. This will provide a spectrum in each spaxel with an SNR of at least >30-50 per spectral bin in our relevant wavelength region. We will not use a target acquisition method because the ephemeris uncertainty of our targets is <1 arcsecond, so the comet's optocenter will fit comfortably within the three arcsec field of view of the NIRSpec IFU. We will observe our target with non-sidereal tracking. We will use offset observations for background removal.

For our NIRCam observations, we will take two sequences on each observation. The first will use the F182M filter in the short wavelength channel, and the F250M filter in the long wavelength channel with a total exposure time of 537 s from a 5-point dither, 10 groups/integration and 1 integration per dither. For the second sequence, we will use the F150W2 and F322W2 filters with a 5-point dither pattern, 5 groups/integration, and 1 integration per dither for a total integration time of 268 s.

For the MIRI imaging observations, For the MIRI imaging observations, we will observe the comet with two filters: the F1000W and F1800W filters. For each filter, we will take 20 groups/integration, 5 integrations, and four dithers. We will use the LARGE CYCLING four-point dither pattern for these exposures. We take these observations back-to-back to mitigate the effect of lightcurve variations on the results.

Proposal 12488 - Targets - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Solar System Targets	#	Name	Level 1	Level 2	Level 3
	(1)	C2025K1-NEEDS-OFFSET	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.		
	Comments: Extended=YES				
	(2)	C2025K1-OFFSET	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.	TYPE=POS_ANGLE,RAD=480,ANG=90,REF=SUN	
	Comments: Extended=YES				
	(5)	C2025K1-NO-OFFSET	TYPE=COMET,Q=0.3341993896651457,E=1.000274 152905286,I=147.8643385901735 ,O=97.5573492557405,W=271.0250169252894,T=08- OCT- 2025:10:32:26,TTimeScale=TDB,EQUINOX=J2000,E POCH=16-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.237658381462E-8,A2=-1.528824865818E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.		
	Comments: Extended=YES				
	(6)	C2025K1C-NEEDS-OFFSET	TYPE=COMET,Q=0.3341050118631305,E=1.000223 081684567,I=147.8610292231864 ,O=97.55265074952455,W=271.0051576713078,T=08 -OCT- 2025:10:35:14,TTimeScale=TDB,EQUINOX=J2000,E POCH=28-NOV- 2025:00:00:00,EpochTimeScale=TDB		
	Comments: Extended=YES				
	(7)	C2025K1D-NEEDS-OFFSET	TYPE=COMET,Q=0.33619131402699,E=1.00236416 6387322,I=147.9316229016066 ,O=97.66475528634038,W=271.4065044115474,T=08 -OCT- 2025:10:54:40,TTimeScale=TDB,EQUINOX=J2000,E POCH=06-DEC-2025:00:00:00,EpochTimeScale=TDB		
Comments: Extended=Unknown					

Proposal 12488 - Targets - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

(8) C2025K1-NO-OFFSET-V2	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.
Comments: Extended=YES	
(9) C2025K1-NEEDS-OFFSET-TRY-2	TYPE=COMET,Q=0.3341971714153811,E=1.000245 468138755,I=147.8641579297955 ,O=97.55762966073904,W=271.0265497471729,T=08 -OCT- 2025:10:33:29,TTimeScale=TDB,EQUINOX=J2000,E POCH=12-SEP- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.55996465683E-8,A2=-1.291753798723E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.
Comments: Extended=YES	
(10) C2025K1-OFFSET-TRY-2	TYPE=COMET,Q=0.3341971714153811,E=1.000245 TYPE=POS_ANGLE,RAD=480,ANG=90,REF=SUN 468138755,I=147.8641579297955 ,O=97.55762966073904,W=271.0265497471729,T=08 -OCT- 2025:10:33:29,TTimeScale=TDB,EQUINOX=J2000,E POCH=12-SEP- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.55996465683E-8,A2=-1.291753798723E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.
Comments: Extended=YES	
(11) C2025K1C-NEEDS-OFFSET-TRY-2	TYPE=COMET,Q=0.3337986651499132,E=0.999910 1603617168,I=147.8504025013227 ,O=97.53592736952623,W=270.9460515268165,T=08 -OCT- 2025:10:32:34,TTimeScale=TDB,EQUINOX=J2000,E POCH=15-DEC-2025:00:00:00,EpochTimeScale=TDB
Comments: Extended=YES	
(12) C2025K1D-NEEDS-OFFSET-TRY-2	TYPE=COMET,Q=0.33627930513646,E=1.00245970 3720921,I=147.9347652716768 ,O=97.66981320066647,W=271.4239256080429,T=08 -OCT- 2025:10:55:34,TTimeScale=TDB,EQUINOX=J2000,E POCH=24-DEC-2025:00:00:00,EpochTimeScale=TDB
Comments: Extended=Unknown	

Proposal 12488 - Observation 101 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 101: NIRSpecIFU-K1_PRISM											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 101:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRSpecIFU-K1_PRISM (Obs 101)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1				Level 2				Level 3	
	(1)	C2025K1-NEEDS-OFFSET	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. Comments: Extended=YES									
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type		Size		Starting Point		Number of Points		Points		
	1	CYCLING		LARGE		5		5				
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	105	1	false	true	NONE	5	5	7732.112	

Proposal 12488 - Observation 101 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Sequence Observations 2, 101, Non-interruptible Group Observations 2, 101, 705 within 1 Days DEFAULT WINDOW: ANGULAR RATE C2025K1-NEEDS-OFFSET FROM JWST LESS THAN 0.075
----------------------	--

Proposal 12488 - Observation 705 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 705: NIRSpecIFU-K1D_PRISM											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 705:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRSpecIFU-K1D_PRISM (Obs 705)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1				Level 2				Level 3	
	(7)	C2025K1D-NEEDS-OFFSET	TYPE=COMET,Q=0.33619131402699,E=1.00236416 6387322,I=147.9316229016066 ,O=97.66475528634038,W=271.4065044115474,T=08 -OCT- 2025:10:54:40,TTimeScale=TDB,EQUINOX=J2000,E POCH=06-DEC-2025:00:00:00,EpochTimeScale=TDB									
	Comments: Extended=Unknown											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type		Size		Starting Point		Number of Points		Points		
	1	CYCLING		LARGE		5		5				
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	105	1	false	true	NONE	5	5	7732.112	
Special Requirements	Group Observations 2, 101, 701, 705 within 1 Days											
	DEFAULT WINDOW: ANGULAR RATE C2025K1D-NEEDS-OFFSET FROM JWST LESS THAN 0.075											

Proposal 12488 - Observation 2 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 2: NIRSpecIFU-K1_PRISM_OFFSET											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(NIRSpecIFU-K1_PRISM_OFFSET (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1				Level 2				Level 3	
	(2)	C2025K1-OFFSET	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E-9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.				TYPE=POS_ANGLE,RAD=480,ANG=90,REF=SUN					
	Comments: Extended=YES											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type			Size		Starting Point		Number of Points		Points	
	1	2-POINT-NOD										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	105	1	false	true	NONE	2	2	3092.845	

Proposal 12488 - Observation 2 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Sequence Observations 2, 101, Non-interruptible Group Observations 2, 101, 701, 705 within 1 Days DEFAULT WINDOW: ANGULAR RATE C2025K1-OFFSET FROM JWST LESS THAN 0.075
----------------------	---

Proposal 12488 - Observation 3 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 3: NIRCAM_K1_FIRST_F070W									Tue Jan 13 19:01:10 GMT 2026	
	Diagnostic Status: Warning Observing Template: NIRCam Imaging										
Diagnostics	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
	(NIRCAM_K1_FIRST_F070W (Obs 3)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1			Level 2			Level 3		
	(5)	C2025K1-NO-OFFSET	TYPE=COMET,Q=0.3341993896651457,E=1.000274 152905286,I=147.8643385901735 ,O=97.5573492557405,W=271.0250169252894,T=08-OCT- 2025:10:32:26,TTimeScale=TDB,EQUINOX=J2000,EPOCH=16-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.237658381462E-8,A2=-1.528824865818E-9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. <i>Comments: Extended=YES</i>								
Template	Module					Subarray					
	B					FULL					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions	
	1	INTRAMODULEX		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	F070W	F250M	RAPID	10	1	5	5	536.838		
	2	F150W2	F322W2	RAPID	5	1	5	5	268.419		

Proposal 12488 - Observation 3 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Offset 38.0 arcsec, -35.0 arcsec DEFAULT WINDOW: ANGULAR RATE C2025K1-NO-OFFSET FROM JWST LESS THAN 0.075
----------------------	---

Proposal 12488 - Observation 5 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 5: MIRIIMAGING_K1_F1000W_FIRST										Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning Observing Template: MIRI Imaging										
Diagnostics	(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
	(MIRIIMAGING_K1_F1000W_FIRST (Obs 5)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1			Level 2			Level 3		
	(5)	C2025K1-NO-OFFSET	TYPE=COMET,Q=0.3341993896651457,E=1.000274 152905286,I=147.8643385901735 ,O=97.5573492557405,W=271.0250169252894,T=08-OCT- 2025:10:32:26,TTimeScale=TDB,EQUINOX=J2000,EPOCH=16-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.237658381462E-8,A2=-1.528824865818E-9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. Comments: Extended=YES								
Template	Subarray										
	FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	5						LARGE	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F1000W	FASTR1	15	3	1	Dither 1	5	15	652.134	
	2	F1800W	FASTR1	15	3	1	Dither 1	5	15	652.134	

Proposal 12488 - Observation 5 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	DEFAULT WINDOW: ANGULAR RATE C2025K1-NO-OFFSET FROM JWST LESS THAN 0.075
----------------------	--

Proposal 12488 - Observation 701 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 701: NIRSpecIFU-K1C_PRISM											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 701:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRSpecIFU-K1C_PRISM (Obs 701)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1			Level 2			Level 3			
	(6)	C2025K1C-NEEDS-OFFSET	TYPE=COMET,Q=0.3341050118631305,E=1.000223081684567,I=147.8610292231864,O=97.55265074952455,W=271.0051576713078,T=08-OCT-2025:10:35:14,TTimeScale=TDB,EQUINOX=J2000,EPOCH=28-NOV-2025:00:00:00,EpochTimeScale=TDB									
	Comments: Extended=YES											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type		Size		Starting Point		Number of Points		Points		
	1	CYCLING		LARGE		5		5				
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	105	1	false	true	NONE	5	5	7732.112	
Special Requirements	Group Observations 2, 101, 701, 705 within 1 Days DEFAULT WINDOW: ANGULAR RATE C2025K1C-NEEDS-OFFSET FROM JWST LESS THAN 0.075											

Proposal 12488 - Observation 714 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 714: NIRSpecIFU-K1_PRISM_TRY_2											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning											
Observing Template: NIRSpec IFU Spectroscopy												
Diagnostics	(Visit 714:1) Warning (Form): Data Excess over lower threshold											
	(Visit 714:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
(NIRSpecIFU-K1_PRISM_TRY_2 (Obs 714)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.												
Solar System Targets	#	Name	Level 1				Level 2				Level 3	
	(9)	C2025K1-NEEDS-OFFSET-TRY-2	TYPE=COMET,Q=0.3341971714153811,E=1.000245 468138755,I=147.8641579297955 ,O=97.55762966073904,W=271.0265497471729,T=08 -OCT- 2025:10:33:29,TTimeScale=TDB,EQUINOX=J2000,E POCH=12-SEP- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.55996465683E-8,A2=-1.291753798723E-9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.									
Comments: Extended=YES												
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type			Size		Starting Point		Number of Points		Points	
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	62	3	false	true	NONE	4	12	11029.201	

Proposal 12488 - Observation 714 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Sequence Observations 716, 714 (reordered), Non-interruptible Group Observations 714, 715, 716, 717 within 1 Days DEFAULT WINDOW: ANGULAR RATE C2025K1-NEEDS-OFFSET-TRY-2 FROM JWST LESS THAN 0.075
----------------------	---

Proposal 12488 - Observation 715 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 715: NIRSpecIFU-K1D_PRISM_TRY_2											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 715:1) Warning (Form): Data Excess over lower threshold											
	(Visit 715:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(NIRSpecIFU-K1D_PRISM_TRY_2 (Obs 715)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1				Level 2				Level 3	
	(12)	C2025K1D-NEEDS-OFFSET-TRY-2	TYPE=COMET,Q=0.33627930513646,E=1.00245970 3720921,I=147.9347652716768 ,O=97.66981320066647,W=271.4239256080429,T=08 -OCT- 2025:10:55:34,TTimeScale=TDB,EQUINOX=J2000,E POCH=24-DEC-2025:00:00:00,EpochTimeScale=TDB									
	Comments: Extended=Unknown											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type		Size		Starting Point		Number of Points		Points		
	1	4-POINT-NOD										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	62	3	false	true	NONE	4	12	11029.201	
Special Requirements	Group Observations 714, 715, 716, 717 within 1 Days											
	DEFAULT WINDOW: ANGULAR RATE C2025K1D-NEEDS-OFFSET-TRY-2 FROM JWST LESS THAN 0.075											

Proposal 12488 - Observation 716 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 716: NIRSpecIFU-K1_PRISM_OFFSET_TRY_2											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 716:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(NIRSpecIFU-K1_PRISM_OFFSET_TRY_2 (Obs 716)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1				Level 2				Level 3	
	(10)	C2025K1-OFFSET-TRY-2	TYPE=COMET,Q=0.3341971714153811,E=1.000245 468138755,I=147.8641579297955 ,O=97.55762966073904,W=271.0265497471729,T=08 -OCT- 2025:10:33:29,TTimeScale=TDB,EQUINOX=J2000,E POCH=12-SEP- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=1.55996465683E-8,A2=-1.291753798723E-9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0.				TYPE=POS_ANGLE,RAD=480,ANG=90,REF=SUN					
	Comments: Extended=YES											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type			Size		Starting Point		Number of Points		Points	
	1	2-POINT-NOD										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	62	3	false	true	NONE	2	6	5514.6	

Proposal 12488 - Observation 716 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Sequence Observations 716, 714 (reordered), Non-interruptible Group Observations 714, 715, 716, 717 within 1 Days DEFAULT WINDOW: ANGULAR RATE C2025K1-OFFSET-TRY-2 FROM JWST LESS THAN 0.075
----------------------	--

Proposal 12488 - Observation 717 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 717: NIRSpecIFU-K1C_PRISM_TRY_2											Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
Diagnostics	(Visit 717:1) Warning (Form): Data Excess over lower threshold (Visit 717:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRSpecIFU-K1C_PRISM_TRY_2 (Obs 717)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.											
Solar System Targets	#	Name	Level 1			Level 2			Level 3			
	(11)	C2025K1C-NEEDS-OFFSET-TRY-2	TYPE=COMET,Q=0.3337986651499132,E=0.9999101603617168,I=147.8504025013227,O=97.53592736952623,W=270.9460515268165,T=08-OCT-2025:10:32:34,TTimeScale=TDB,EQUINOX=J2000,EPOCH=15-DEC-2025:00:00:00,EpochTimeScale=TDB									
	Comments: Extended=YES											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type		Size		Starting Point		Number of Points		Points		
	1	4-POINT-NOD										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	PRISM/CLEAR	NRSIRS2RAPID	62	3	false	true	NONE	4	12	11029.201	
Special Requirements	Group Observations 714, 715, 716, 717 within 1 Days DEFAULT WINDOW: ANGULAR RATE C2025K1C-NEEDS-OFFSET-TRY-2 FROM JWST LESS THAN 0.075											

Proposal 12488 - Observation 9 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 9: NIRCAM_K1_SECOND_F070W									Tue Jan 13 19:01:10 GMT 2026	
	Diagnostic Status: Warning Observing Template: NIRCam Imaging										
Diagnostics	(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
	(NIRCAM_K1_SECOND_F070W (Obs 9)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1			Level 2			Level 3		
	(8)	C2025K1-NO-OFFSET-V2	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. Comments: Extended=YES								
Template	Module					Subarray					
	B					FULL					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions	
	1	INTRAMODULEX		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	F070W	F250M	RAPID	10	2	10	5	1127.361		
	2	F150W2	F322W2	RAPID	10	1	5	5	536.838		

Proposal 12488 - Observation 9 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Offset 38.0 arcsec, -35.0 arcsec DEFAULT WINDOW: ANGULAR RATE C2025K1-NO-OFFSET-V2 FROM JWST LESS THAN 0.075
----------------------	---

Proposal 12488 - Observation 711 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 711: MIRIIMAGING_K1_F1000W_SECOND										Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning Observing Template: MIRI Imaging										
Diagnostics	(Visit 711:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
	(MIRIIMAGING_K1_F1000W_SECOND (Obs 711)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1			Level 2			Level 3		
	(8)	C2025K1-NO-OFFSET-V2	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. Comments: Extended=YES								
Template	Subarray										
	FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	5	LARGE						
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F1000W	FASTR1	47	1	1	Dither 1	5	5	652.134	
	2	F1800W	FASTR1	47	1	1	Dither 1	5	5	652.134	

Special Requirements	DEFAULT WINDOW: ANGULAR RATE C2025K1-NO-OFFSET-V2 FROM JWST LESS THAN 0.075
----------------------	---

Proposal 12488 - Observation 13 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 13: NIRCAM_K1_THIRD_F070W									Tue Jan 13 19:01:10 GMT 2026	
	Diagnostic Status: Warning Observing Template: NIRCam Imaging										
Diagnostics	(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (NIRCAM_K1_THIRD_F070W (Obs 13)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1	Level 2				Level 3			
	(8)	C2025K1-NO-OFFSET-V2	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. Comments: Extended=YES								
Template	Module				Subarray						
	B				FULL						
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions	
	1	INTRAMODULEX		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	F070W	F250M	RAPID	10	2	10	5	1127.361		
	2	F150W2	F322W2	RAPID	10	1	5	5	536.838		

Proposal 12488 - Observation 13 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements	Offset 38.0 arcsec, -35.0 arcsec DEFAULT WINDOW: ANGULAR RATE C2025K1-NO-OFFSET-V2 FROM JWST LESS THAN 0.075
----------------------	--

Proposal 12488 - Observation 713 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Observation	Proposal 12488, Observation 713: MIRIIMAGING_K1_F1000W_THIRD										Tue Jan 13 19:01:10 GMT 2026
	Diagnostic Status: Warning Observing Template: MIRI Imaging										
Diagnostics	(Visit 713:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
	(MIRIIMAGING_K1_F1000W_THIRD (Obs 713)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1			Level 2			Level 3		
	(8)	C2025K1-NO-OFFSET-V2	TYPE=COMET,Q=0.3342065741441698,E=1.000274 236694011,I=147.8641925723695 ,O=97.55744943748184,W=271.0243910042488,T=08 -OCT- 2025:10:32:42,TTimeScale=TDB,EQUINOX=J2000,E POCH=31-AUG- 2025:00:00:00,EpochTimeScale=TDB,R0=2.808 ,DT=0. ,A1=9.869537353516E-9,A2=-1.935203522444E- 9,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5.093,NK=4.6142 ,AMRAT=0. <i>Comments: Extended=YES</i>								
Template	Subarray										
	FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	5						LARGE	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F1000W	FASTR1	47	1	1	Dither 1	5	5	652.134	
	2	F1800W	FASTR1	47	1	1	Dither 1	5	5	652.134	

Proposal 12488 - Observation 713 - Testing the volatile variability of fragmenting Oort cloud comet C/2025 K1 ATLAS

Special Requirements

Offset -5.0 arcsec, -32.0 arcsec

DEFAULT WINDOW: ANGULAR RATE C2025K1-NO-OFFSET-V2 FROM JWST LESS THAN 0.075