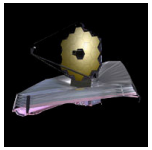

3786 - Sizing up silicates at six small stars: characterising planetary debris orbiting white dwarfs

Cycle: 2, Proposal Category: GO

INVESTIGATORS

Name	*Institution*
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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
0510+2315				
	4	NIRSPEC	NIRSpec Fixed Slit Spectroscopy	(2) 0510+2315
	5	MIRI LRS	MIRI Low Resolution Spectroscopy	(2) 0510+2315
	6	MIRI imaging	MIRI Imaging	(2) 0510+2315
0529-3401				
	10	NIRSPEC	NIRSpec Fixed Slit Spectroscopy	(4) 0529-3401
	11	MIRI LRS	MIRI Low Resolution Spectroscopy	(4) 0529-3401
	12	MIRI imaging	MIRI Imaging	(4) 0529-3401
0611-6931				
	13	NIRSPEC	NIRSpec Fixed Slit Spectroscopy	(5) 0611-6931
	14	MIRI LRS	MIRI Low Resolution Spectroscopy	(5) 0611-6931
	15	MIRI imaging	MIRI Imaging	(5) 0611-6931
1814-7354				
	25	NIRSPEC	NIRSpec Fixed Slit Spectroscopy	(9) 1814-7354

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	26	MIRI LRS	MIRI Low Resolution Spectroscopy	(9) 1814-7354
	27	MIRI imaging	MIRI Imaging	(9) 1814-7354
2329+407				
	28	NIRSPEC	NIRSpec Fixed Slit Spectroscopy	(10) 2329+407
	29	MIRI LRS	MIRI Low Resolution Spectroscopy	(10) 2329+407
	30	MIRI imaging	MIRI Imaging	(10) 2329+407
0420-731				
	31	NIRSPEC	NIRSpec Fixed Slit Spectroscopy	(11) 0420-731
	32	MIRI LRS	MIRI Low Resolution Spectroscopy	(11) 0420-731
	33	MIRI imaging	MIRI Imaging	(11) 0420-731

ABSTRACT

White dwarf planetary systems are a powerful complement to conventional exoplanet studies, as they record the bulk compositions of planetesimals being accreted by their host stars. Discerning their elemental abundances is now almost routine work, and we will soon be flooded with such data from multi-object spectroscopic surveys. Yet despite the immense benefit of this empirical ground truth to planet formation studies, its true potential can only be realised if the origins of the material are also known. Fortunately, the photospheric metals are supplied to the star from a circumstellar disk, which is observable in the infrared. These disks are dynamic environments, offering rich opportunities for theorists to wind back their evolution, and ultimately to constrain the source reservoirs for the material.

We propose near- and mid-infrared observations of a sample of dusty white dwarfs to characterise the mineralogy, grain size, and geometry of their debris disks. Each of these parameters are fundamental to theories of disk evolution, but at present there are almost no data with which to constrain them. Half of our targets exhibit optical emission lines from gas, interpeted as a signature of enhanced collisional activity, and our grain size measurements will test that hypothesis. NIRSpec spectroscopy will measure the thermal continuum, probing disk geometry while also sensitive to previously-unseen emission lines and solid-state features. MIRI spectroscopy, supplemented with longer-wavelength photometry, will measure the solid-state features that trace the disk mineralogy, in particular the silicate feature at 10 microns, whose strength depends on grain size.

OBSERVING DESCRIPTION

We use MIRI LRS to characterise six white dwarf debris disks, aiming to measure their grain size and mineralogy via solid-state features, most prominently the 10-micron silicate feature. We extend coverage to 21 microns with MIRI imaging photometry in order to capture the thermal continuum (with potential contributions from cooler dust) and the silicate feature at 18 microns.

NIRSpec medium-resolution spectroscopy is used to meaure the thermal continuum at high S/N, and to capture any subtle solid-state features or gas emission lines.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	0510+2315	RA: 05 10 2.0965 (77.5087354d) Dec: +23 15 40.82 (23.26134d) Equinox: J2000	Proper Motion RA: -0.0032136257962061435 sec of time/yr Proper Motion Dec: -0.038445000041065214 arcsec/yr Parallax: 0.015313" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[White dwarfs]* *Extended=NO*				
(4)	0529-3401	RA: 05 29 14.3225 (82.3096771d) Dec: -34 01 8.62 (-34.01906d) Equinox: J2000	Proper Motion RA: -3.2977358568901506E-5 sec of time/yr Proper Motion Dec: -0.03252499996051483 arcsec/yr Parallax: 0.004266" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[White dwarfs]* *Extended=NO*				
(5)	0611-6931	RA: 06 11 31.7660 (92.8823583d) Dec: -69 31 0.59 (-69.51683d) Equinox: J2000	Proper Motion RA: 0.0043059769322796974 sec of time/yr Proper Motion Dec: 0.100407 arcsec/yr Parallax: 0.006986" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[White dwarfs]* *Extended=NO*				
(9)	1814-7354	RA: 18 14 17.6040 (273.5733500d) Dec: -73 55 2.60 (-73.91739d) Equinox: J2000	Proper Motion RA: -0.015390294595545197 sec of time/yr Proper Motion Dec: -0.17815100000007078 arcsec/yr Parallax: 0.015548" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[White dwarfs]* *Extended=NO*				
(10)	2329+407	RA: 23 31 36.0228 (352.9000950d) Dec: +41 01 29.16 (41.02477d) Equinox: J2000	Proper Motion RA: 0.023365845923717102 sec of time/yr Proper Motion Dec: -0.09842199999638979 arcsec/yr Parallax: 0.028021" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[White dwarfs]* *Extended=NO*				

	(11)	0420-731	RA: 04 19 37.8444 (64.9076850d) Dec: -73 03 44.29 (-73.06230d) Equinox: J2000	Proper Motion RA: 0.004983324074091198 sec of time/yr Proper Motion Dec: 0.014002 arcsec/yr Parallax: 0.011800" Epoch of Position: 2015.5

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Observation

Proposal 3786, Observation 4: NIRSPEC

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Fixed Slit Spectroscopy

Diagnostics

(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	0510+2315	RA: 05 10 2.0965 (77.5087354d) Dec: +23 15 40.82 (23.26134d) Equinox: J2000	Proper Motion RA: -0.0032136257962061435 sec of time/yr Proper Motion Dec: -0.038445000041065214 arcsec/yr Parallax: 0.015313" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	WATA	SUB32	F110W	NRSRAPIDD6	3	1	1	0.26	145649.1

Template

Slit	Subarray
S200A1	FULL

Dithers

#	Primary Dither Positions	Sub-Pixel Pattern
1	2	NONE

Spectral Elements

#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Exp	#	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395M/F290LP	S200A1	NRSIRS2RAPID	10	1	1	NONE	2	2	320.956	145649.2
2	G235M/F170LP	S200A1	NRSIRS2RAPID	15	1	2	NONE	2	2	466.844	145649.3
3	G140M/F100LP	S200A1	NRSIRS2RAPID	20	1	3	NONE	2	2	612.733	145649.4

Special Requirements	Group Observations 4, 5, 6, Non-interruptible

Observation

Proposal 3786, Observation 5: MIRI LRS

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI LRS (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	0510+2315	RA: 05 10 2.0965 (77.5087354d) Dec: +23 15 40.82 (23.26134d) Equinox: J2000	Proper Motion RA: -0.0032136257962061435 sec of time/yr Proper Motion Dec: -0.038445000041065214 arcsec/yr Parallax: 0.015313" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	4	1	1	11.1	145649.6

Template

Subarray	Obtain Verification Image?
FULL	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	11.1		F560W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	80	4	8	1	2	1792.676	145649.7

Special Requirements

Background Limited. Background no more than 30th percentile above minimum

Group Observations 4, 5, 6, Non-interruptible

Observation

Proposal 3786, Observation 6: MIRI imaging

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	0510+2315	RA: 05 10 2.0965 (77.5087354d) Dec: +23 15 40.82 (23.26134d) Equinox: J2000	Proper Motion RA: -0.0032136257962061435 sec of time/yr Proper Motion Dec: -0.038445000041065214 arcsec/yr Parallax: 0.015313" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

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	4						LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1500W	FASTR1	10	1	1	Dither 1	4	4	111.002	145649.8
2	F1800W	FASTR1	10	1	1	Dither 1	4	4	111.002	145649.9
3	F2100W	FASTR1	14	1	1	Dither 1	4	4	155.402	145649.10

Special Requirements

Group Observations 4, 5, 6, Non-interruptible

Observation

Proposal 3786, Observation 10: NIRSPEC

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Fixed Slit Spectroscopy

Diagnostics

(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	0529-3401	RA: 05 29 14.3225 (82.3096771d) Dec: -34 01 8.62 (-34.01906d) Equinox: J2000	Proper Motion RA: -3.2977358568901506E-5 sec of time/yr Proper Motion Dec: -0.03252499996051483 arcsec/yr Parallax: 0.004266" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	WATA	SUB2048	F110W	NRSRAPID	3	1	1	3.628	145651.1

Template

Slit	Subarray
S200A1	FULL

Dithers

#	Primary Dither Positions	Sub-Pixel Pattern
1	2	NONE

Spectral Elements

#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Exp	#	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395M/F290LP	S200A1	NRSIRS2RAPID	20	1	1	NONE	2	2	612.733	145651.2
2	G235M/F170LP	S200A1	NRSIRS2RAPID	35	1	2	NONE	2	2	1050.4	145651.3
3	G140M/F100LP	S200A1	NRSIRS2RAPID	50	1	3	NONE	2	2	1488.067	145651.4

Special Requirements	Group Observations 10, 11, 12, Non-interruptible

Observation

Proposal 3786, Observation 11: MIRI LRS

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI LRS (Obs 11)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	0529-3401	RA: 05 29 14.3225 (82.3096771d) Dec: -34 01 8.62 (-34.01906d) Equinox: J2000	Proper Motion RA: -3.2977358568901506E-5 sec of time/yr Proper Motion Dec: -0.03252499996051483 arcsec/yr Parallax: 0.004266" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	4	1	1	11.1	145651.6

Template

Subarray	Obtain Verification Image?
FULL	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	11.1		F560W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	65	4	8	1	2	1459.671	145651.7

Special Requirements

Background Limited. Background no more than 10th percentile above minimum

Group Observations 10, 11, 12, Non-interruptible

Observation

Proposal 3786, Observation 12: MIRI imaging

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	0529-3401	RA: 05 29 14.3225 (82.3096771d) Dec: -34 01 8.62 (-34.01906d) Equinox: J2000	Proper Motion RA: -3.2977358568901506E-5 sec of time/yr Proper Motion Dec: -0.03252499996051483 arcsec/yr Parallax: 0.004266" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

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	4						LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1500W	FASTR1	10	1	1	Dither 1	4	4	111.002	145651.8
2	F1800W	FASTR1	10	1	1	Dither 1	4	4	111.002	145651.9
3	F2100W	FASTR1	12	1	1	Dither 1	4	4	133.202	145651.10

Special Requirements

Group Observations 10, 11, 12, Non-interruptible

Observation

Proposal 3786, Observation 13: NIRSPEC

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Fixed Slit Spectroscopy

Diagnostics

(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	0611-6931	RA: 06 11 31.7660 (92.8823583d) Dec: -69 31 0.59 (-69.51683d) Equinox: J2000	Proper Motion RA: 0.0043059769322796974 sec of time/yr Proper Motion Dec: 0.100407 arcsec/yr Parallax: 0.006986" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	WATA	SUB2048	F110W	NRSRAPID	3	1	1	3.628	145652.1

Template

Slit	Subarray
S200A1	FULL

Dithers

#	Primary Dither Positions	Sub-Pixel Pattern
1	2	NONE

Spectral Elements

#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Exp	#	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395M/F290LP	S200A1	NRSIRS2RAPID	10	1	1	NONE	2	2	320.956	145652.2
2	G235M/F170LP	S200A1	NRSIRS2RAPID	12	1	2	NONE	2	2	379.311	145652.3
3	G140M/F100LP	S200A1	NRSIRS2RAPID	20	1	3	NONE	2	2	612.733	145652.4

Special Requirements	Group Observations 13, 14, 15, Non-interruptible

Observation

Proposal 3786, Observation 14: MIRI LRS

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI LRS (Obs 14)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 14:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	0611-6931	RA: 06 11 31.7660 (92.8823583d) Dec: -69 31 0.59 (-69.51683d) Equinox: J2000	Proper Motion RA: 0.0043059769322796974 sec of time/yr Proper Motion Dec: 0.100407 arcsec/yr Parallax: 0.006986" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	4	1	1	11.1	145652.6

Template

Subarray	Obtain Verification Image?
FULL	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	11.1		F560W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	50	2	4	1	2	560.558	145652.7

Special Requirements

Group Observations 13, 14, 15, Non-interruptible

Observation

Proposal 3786, Observation 15: MIRI imaging

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	0611-6931	RA: 06 11 31.7660 (92.8823583d) Dec: -69 31 0.59 (-69.51683d) Equinox: J2000	Proper Motion RA: 0.0043059769322796974 sec of time/yr Proper Motion Dec: 0.100407 arcsec/yr Parallax: 0.006986" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

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	4						LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1500W	FASTR1	10	1	1	Dither 1	4	4	111.002	145652.8
2	F1800W	FASTR1	10	1	1	Dither 1	4	4	111.002	145652.9
3	F2100W	FASTR1	10	1	1	Dither 1	4	4	111.002	145652.10

Special Requirements

Group Observations 13, 14, 15, Non-interruptible

Observation

Proposal 3786, Observation 25: NIRSPEC

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Fixed Slit Spectroscopy

Diagnostics

(Visit 25:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(9)	1814-7354	RA: 18 14 17.6040 (273.5733500d) Dec: -73 55 2.60 (-73.91739d) Equinox: J2000	Proper Motion RA: -0.015390294595545197 sec of time/yr Proper Motion Dec: -0.17815100000007078 arcsec/yr Parallax: 0.015548" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	WATA	SUB32	F110W	NRSRAPIDD6	3	1	1	0.26	145657.1

Template

Slit	Subarray
S200A1	FULL

Dithers

#	Primary Dither Positions	Sub-Pixel Pattern
1	2	NONE

Spectral Elements

#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Exp	#	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395M/F290LP	S200A1	NRSIRS2RAPID	10	1	1	NONE	2	2	320.956	145657.2
2	G235M/F170LP	S200A1	NRSIRS2RAPID	12	1	2	NONE	2	2	379.311	145657.3
3	G140M/F100LP	S200A1	NRSIRS2RAPID	10	1	3	NONE	2	2	320.956	145657.4

Special Requirements	Group Observations 25, 26, 27, Non-interruptible

Observation

Proposal 3786, Observation 26: MIRI LRS

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI LRS (Obs 26)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 26:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(9)	1814-7354	RA: 18 14 17.6040 (273.5733500d) Dec: -73 55 2.60 (-73.91739d) Equinox: J2000	Proper Motion RA: -0.015390294595545197 sec of time/yr Proper Motion Dec: -0.17815100000007078 arcsec/yr Parallax: 0.015548" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	4	1	1	11.1	145657.6

Template

Subarray	Obtain Verification Image?
FULL	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	11.1		F560W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	50	2	4	1	2	560.558	145657.7

Special Requirements

Group Observations 25, 26, 27, Non-interruptible

Observation

Proposal 3786, Observation 27: MIRI imaging

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 27:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(9)	1814-7354	RA: 18 14 17.6040 (273.5733500d) Dec: -73 55 2.60 (-73.91739d) Equinox: J2000	Proper Motion RA: -0.015390294595545197 sec of time/yr Proper Motion Dec: -0.17815100000007078 arcsec/yr Parallax: 0.015548" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

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	4						LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1500W	FASTR1	10	1	1	Dither 1	4	4	111.002	145657.8
2	F1800W	FASTR1	10	1	1	Dither 1	4	4	111.002	145657.9
3	F2100W	FASTR1	10	1	1	Dither 1	4	4	111.002	145657.10

Special Requirements

Group Observations 25, 26, 27, Non-interruptible

Observation

Proposal 3786, Observation 28: NIRSPEC

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Fixed Slit Spectroscopy

Diagnostics

(Visit 28:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(10)	2329+407	RA: 23 31 36.0228 (352.9000950d) Dec: +41 01 29.16 (41.02477d) Equinox: J2000	Proper Motion RA: 0.023365845923717102 sec of time/yr Proper Motion Dec: -0.09842199999638979 arcsec/yr Parallax: 0.028021" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	WATA	SUB32	F110W	NRSRAPID	3	1	1	0.08	145658.1

Template

Slit	Subarray
S200A1	FULL

Dithers

#	Primary Dither Positions	Sub-Pixel Pattern
1	2	NONE

Spectral Elements

#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Exp	#	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395M/F290LP	S200A1	NRSIRS2RAPID	10	1	1	NONE	2	2	320.956	145658.2
2	G235M/F170LP	S200A1	NRSIRS2RAPID	10	1	2	NONE	2	2	320.956	145658.3
3	G140M/F100LP	S200A1	NRSIRS2RAPID	7	1	3	NONE	2	2	233.422	145658.4

Special Requirements	Group Observations 28, 29, 30, Non-interruptible

Observation

Proposal 3786, Observation 29: MIRI LRS

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI LRS (Obs 29)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 29:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(10)	2329+407	RA: 23 31 36.0228 (352.9000950d) Dec: +41 01 29.16 (41.02477d) Equinox: J2000	Proper Motion RA: 0.023365845923717102 sec of time/yr Proper Motion Dec: -0.09842199999638979 arcsec/yr Parallax: 0.028021" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	4	1	1	11.1	145658.6

Template

Subarray	Obtain Verification Image?
FULL	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	11.1		F560W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	50	2	4	1	2	560.558	145658.7

Special Requirements

Group Observations 28, 29, 30, Non-interruptible

Observation

Proposal 3786, Observation 30: MIRI imaging

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 30:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(10)	2329+407	RA: 23 31 36.0228 (352.9000950d) Dec: +41 01 29.16 (41.02477d) Equinox: J2000	Proper Motion RA: 0.023365845923717102 sec of time/yr Proper Motion Dec: -0.09842199999638979 arcsec/yr Parallax: 0.028021" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

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	4						LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1500W	FASTR1	10	1	1	Dither 1	4	4	111.002	145658.8
2	F1800W	FASTR1	10	1	1	Dither 1	4	4	111.002	145658.9
3	F2100W	FASTR1	10	1	1	Dither 1	4	4	111.002	145658.10

Special Requirements

Group Observations 28, 29, 30, Non-interruptible

Observation

Proposal 3786, Observation 31: NIRSPEC

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec Fixed Slit Spectroscopy

Diagnostics

(Visit 31:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(11)	0420-731	RA: 04 19 37.8444 (64.9076850d) Dec: -73 03 44.29 (-73.06230d) Equinox: J2000	Proper Motion RA: 0.004983324074091198 sec of time/yr Proper Motion Dec: 0.014002 arcsec/yr Parallax: 0.011800" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	WATA	SUB32	F110W	NRSRAPIDD6	3	1	1	0.26	145659.1

Template

Slit	Subarray
S200A1	FULL

Dithers

#	Primary Dither Positions	Sub-Pixel Pattern
1	2	NONE

Spectral Elements

#	Grating/Filter	Slit	Readout Pattern	Groups/Int	Integrations/Exp	#	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395M/F290LP	S200A1	NRSIRS2RAPID	15	1	1	NONE	2	2	466.844	145659.2
2	G235M/F170LP	S200A1	NRSIRS2RAPID	17	1	2	NONE	2	2	525.2	145659.3
3	G140M/F100LP	S200A1	NRSIRS2RAPID	10	1	3	NONE	2	2	320.956	145659.4

Special Requirements	Group Observations 31, 32, 33, Non-interruptible

Observation

Proposal 3786, Observation 32: MIRI LRS

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI LRS (Obs 32)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 32:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(11)	0420-731	RA: 04 19 37.8444 (64.9076850d) Dec: -73 03 44.29 (-73.06230d) Equinox: J2000	Proper Motion RA: 0.004983324074091198 sec of time/yr Proper Motion Dec: 0.014002 arcsec/yr Parallax: 0.011800" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	4	1	1	11.1	145659.6

Template

Subarray	Obtain Verification Image?
FULL	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	11.1		F560W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	70	2	4	1	2	782.561	145659.7

Special Requirements

Group Observations 31, 32, 33, Non-interruptible

Observation

Proposal 3786, Observation 33: MIRI imaging

Thu May 11 04:03:12 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 33:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(11)	0420-731	RA: 04 19 37.8444 (64.9076850d) Dec: -73 03 44.29 (-73.06230d) Equinox: J2000	Proper Motion RA: 0.004983324074091198 sec of time/yr Proper Motion Dec: 0.014002 arcsec/yr Parallax: 0.011800" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[White dwarfs]
Extended=NO

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	4						LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1500W	FASTR1	10	1	1	Dither 1	4	4	111.002	145659.8
2	F1800W	FASTR1	10	1	1	Dither 1	4	4	111.002	145659.9
3	F2100W	FASTR1	10	1	1	Dither 1	4	4	111.002	145659.10

Special Requirements

Group Observations 31, 32, 33, Non-interruptible