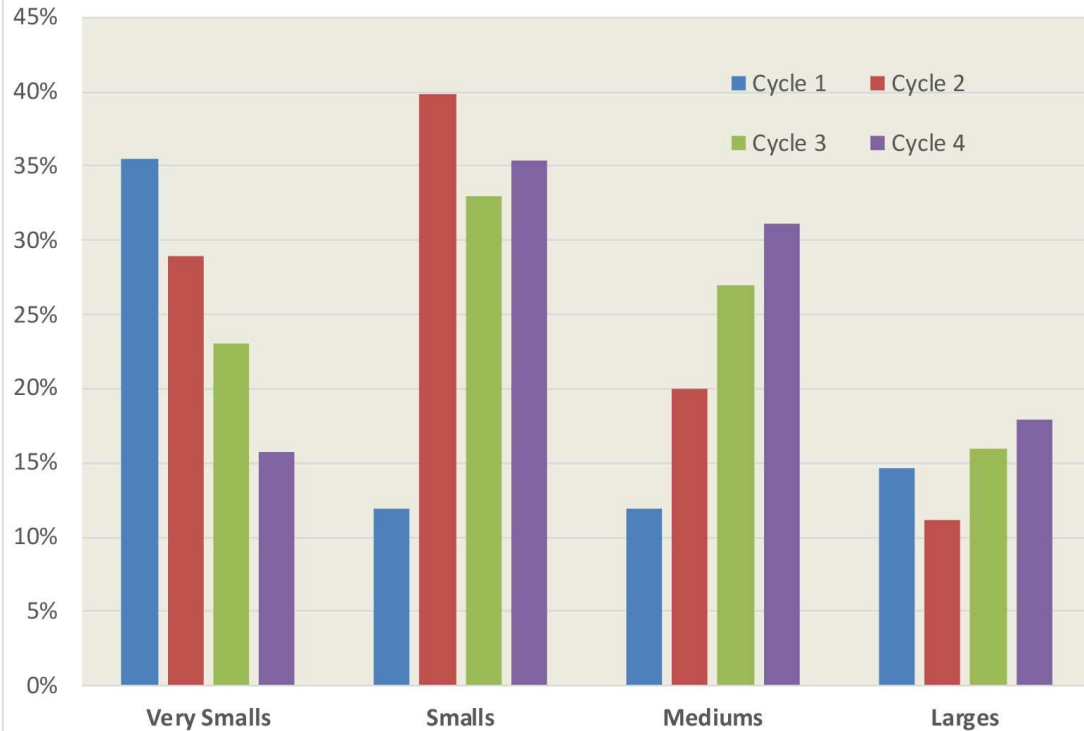


JWST Cycle 5: Changes to Proposals & Implications for Future Cycles

...

EURECA 9/19/25
Jackie Champagne & Callum Donnan

JWST Cycle 4 - Total Proposals

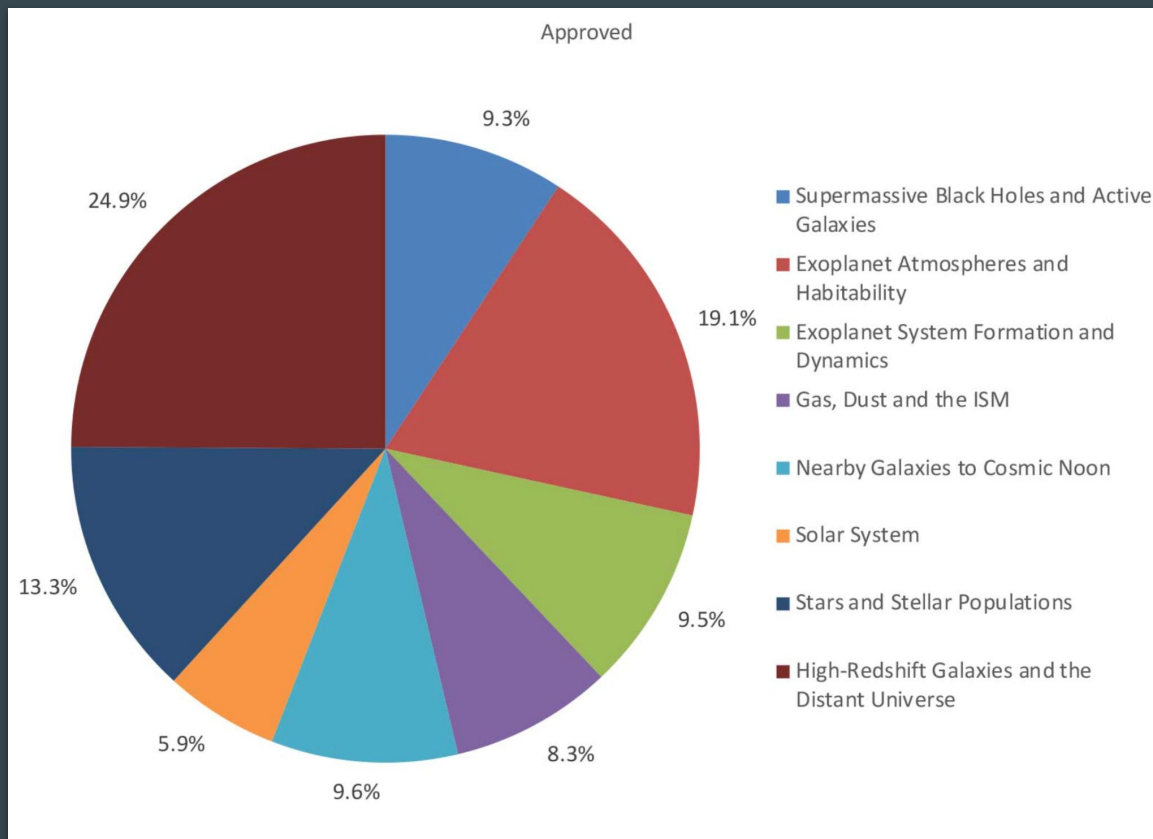


Records were broken in Cycles 2 and 3 with 1,601 and 1,931 proposals respectively... Cycle 4 had 2,377 proposals submitted!!

More relative allocation to medium proposals compared to past years, while large allocations stayed about the same

[JWST Cycle 4 TAC Results | STScI](#)

JWST Cycle 4 - Science Category Breakdown



Quick info for JWST Cycle 5

- Deadline for all proposals: October 15, 2025 at 5pm Pacific
- Available joint proposals: ALMA, Chandra, HST, NASA, Keck, NOIRLab, NRAO, TESS, and/or XMM-Newton (double jeopardy)
- Expected allocations: ~1300 hours for Very Small, ~2800 for Small, ~2500 for Medium and ~1400 for Large/Treasury Programs (8000 total, down from 8500 in Cycle 4)
- Still dual-anonymous, careful not to reproduce too much text from previous accepted proposals as this technically violates DA
- **No changes** to 12-month exclusive access period, though this is under discussion

<https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-5/jwst-new-and-important-features#gsc.tab=0>

Proposal Science Categories: “Galactic” and “Extragalactic”

- Solar System
- Exoplanet Atmospheres and Habitability
- Planetary System Formation & Dynamics
- Stars & Stellar Populations (Milky Way)
- Gas, Dust & The ISM (resolved studies)

—

- Nearby Galaxies to Cosmic Noon ($z < 3$)
- High-Redshift Galaxies & The Distant Universe ($z > 3$)
- Supermassive Black Holes & Active Galaxies (all redshifts)

- **Solar System** (no change) – Studies of objects within the Solar System, including planets and their moons and rings, minor bodies, and the zodiacal dust.
- **Exoplanet Atmospheres and Habitability** – Studies of individual exoplanets, focusing on their atmosphere and/or surface properties. Studies may include host stars and isolated planetary-mass objects to better understand exoplanet atmospheres and habitability more generally.
- **Planetary System Formation and Dynamics** – Studies of exoplanetary systems including more than one exoplanet (e.g. comparative studies of more than one exoplanet orbiting the same host star) and isolated planetary-mass objects; protoplanetary, debris, and white dwarf disks.
- **Stars and Stellar Populations** – Studies of individual protostars, stars, and/or stellar remnants and clusters of these objects, focusing on the objects themselves.
- **Gas and Dust** – Studies of resolved gas and dust in the ISM and star formation in the Milky Way and nearby galaxies. Studies focusing on gas and dust diagnostics to understand host stars should be submitted to Stars and Stellar Populations. Those focusing on larger scale structure should be submitted to Gas and Dust.
- **High-Redshift Galaxies and the Distant Universe** – Studies of galaxies at redshifts beyond the peak of star formation through the end of the epoch of cosmic reionization to the early universe, including the first galaxies.
- **Nearby Galaxies to Cosmic Noon** – Studies of galaxy kinematics, star formation, ionized gases (including H II), etc. in nearby galaxies up to the peak of star formation at redshifts of $z \sim 2-3$.
- **Supermassive Black Holes** (no change) – Studies of supermassive black holes at the centers of galaxies, including understanding the impact of the black hole on the host galaxy's properties.

Proposal Size Delineations - Same as Cycle 4

Size Category	Cycles 1-3	Cycle 4
Very Small	≤ 15	≤ 20
Small	> 15 and ≤ 25	> 20 and ≤ 50
Medium	> 25 and ≤ 75	> 50 and ≤ 130
Large	> 75	> 130

Time Allocation Committee (TAC) Breakdown:

- Very Small & Archival are reviewed asynchronously by External Panelists (5)
- Small & Medium are reviewed by Discussion Panelists
- Large, Treasury & Archival Treasury are reviewed by the Executive Committee, which is now split into Galactic and Extragalactic committees
- Expert Reviewers are called in to review a subset of the above proposals

<https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-5/jwst-proposal-categories#gsc.tab=0>

Changes to Proposal Format

- *Science Justification*, *Technical Justification*, and all figures must be contained in 4-6 pages (small→large)
- with +1 page for *Special Requirements*, *Justify Coordinated Parallels*, *Justify Duplications* and *Justify Coordinated Observations with Other Facilities*
- All must be in 12pt font within the TeX template, references do not count towards pgs
- These apply to all future DDT proposals as well
- Reuse of previously-accepted proposal text and/or multiple in-cycle submissions now subject to disqualification (e.g. submitting the same observations with slightly different science to two panels)
- There is now an official AI policy (eg ChatGPT): **Following NASA policy, any material contained in the proposal that is derived from Generative Artificial Intelligence (GAI) technology must be described and cited.**

Major Updates to the APT

- Minimum keywords=3, max=10
From Cycle 4:
- **IMPORTANT:** *Observing Description* is no longer visible to TAC, only STScI, so you can't cheat and put extra text that didn't fit in Technical Justification in there
- New scientific categories and program size categories, multi-observatory flag
- NIRCam Grism Time Series Template available for SW and LW channels
- NIRCam Target Acquisitions updated for dithering and new hot pixels
- Optional target acquisition for MIRI slitless LRS
- Test scheduling now goes out to 5 years for multi-cycle proposals
- Reference star background observations are no longer proprietary
- Improvements to ICRS Coordinates and Fixed Target Resolver
- Proper motion must now be specified or listed as negligible for targets that need very accurate coordinates

https://stsci.service-now.com/jwst?id=kb_article&sysparm_article=KB0011960

Major Updates to the ETC

- Reduced count rate in MIRI imaging, coronagraphic imaging, and medium-resolution spectroscopy (mostly relevant for Channel 4)
- Improved user load handling (affected slow load times close to deadline)
- Updates to NIRCам, NIRISS and MIRI reference data
- New NIRSpec PSFs generated with STPSF
- Default values updated to match pipelines
- MIRI imaging can now use coronagraphic filters
- Share workbooks with collaborators with comma-separated emails
- **MIRI WFSS mode now available for calculations**

https://stsci.service-now.com/jwst?id=kb_article_view&sys_kb_id=8aac93c0470f2650a0d74e65d36d435d

Other Major Updates

- Long-Term Monitoring Special Initiative – encouraging proposers to provide later-epoch obs or new multi-epoch obs up to 5 cycles for variability studies
- Roman Preparatory Science Special Initiative – special box if JWST observations are critical to Roman science, EAP must be 0
- MIRI Wide Field Slitless Spectroscopy mode now available as prime
- NIRCам imaging may now be a coordinated parallel when NIRSpec IFU is the prime instrument

<https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-5/jwst-special-initiatives#gsc.tab=0>

More Information

[Call for Proposals](#)

Release Notes for the [ETC](#) & [APT](#)

[Example workbooks](#)

[Previously accepted proposal abstracts](#)

[Install APT & Download Tex Template](#)

[Cycle 4 TAC Report](#)

[High-Level Guide to Cycle 4 Changes](#) (major updates last year)

Discussion from Cycle 4

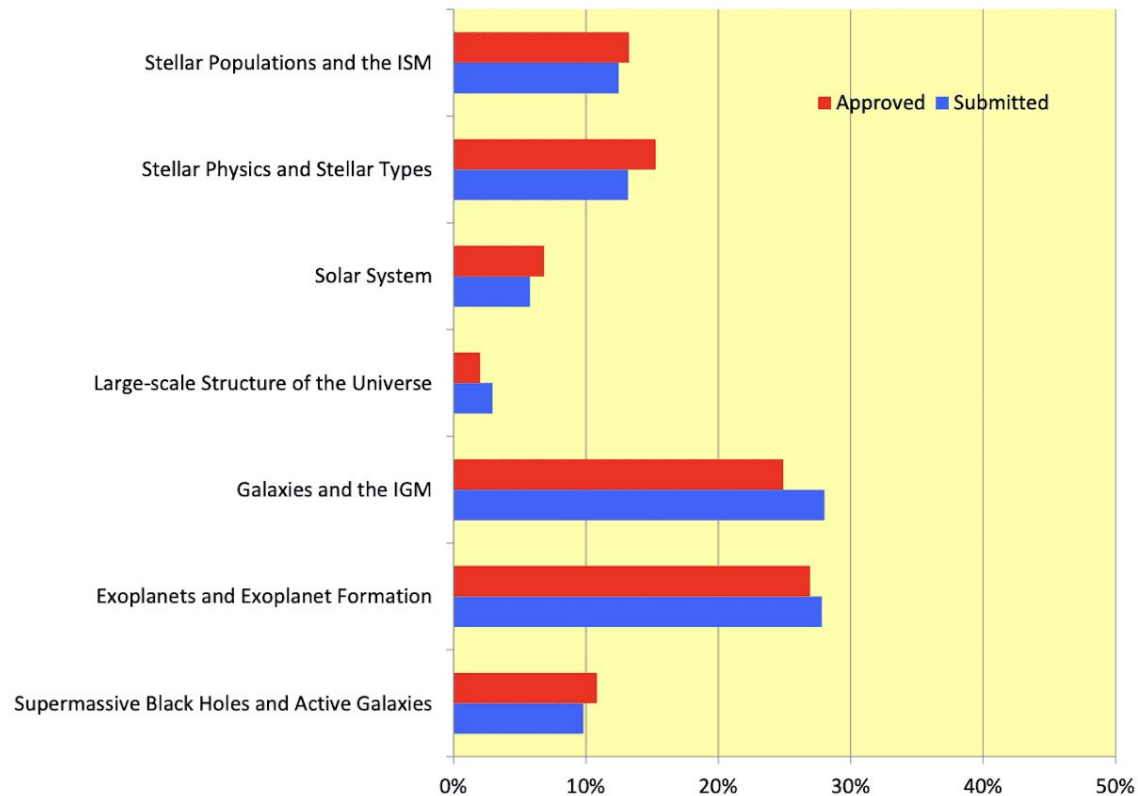
- Will the changes to the proposal format influence (decrease) the total number of submissions, since old proposals cannot simply be resubmitted? → *It did not decrease submissions.*
- Will the new science categories (esp. extragalactic changes) change the allocation percentages to nearby vs. distant proposals? → *High-redshift galaxies received 24% of the time compared to 9% for nearby galaxies.*
- Will the executive committee split between galactic/extragalactic improve the quality/content of proposal reviews? → *It might have helped, but the SMBH panel is still all redshifts so topics like LRDs remain in limbo.*
- Will the updated capabilities of e.g., NIRSpec IFU and declining use of MIRI influence the content of proposals or allocations towards specific science goals? → *Instrument allocations remained stable.*

Discussion

- Plans to use MIRI WFSS?
- What are the next big extragalactic survey designs?
- Take advantage of MIRI MRS while sensitivity is still good?
- Narrowband/medium band imaging with NIRCам?
- Plans to take advantage of special initiatives?



Science Category Distribution for Proposals



A Brief Runthrough of the Cycle 5 APT: MIRI/LRS and NIRSpec/MSA

MIRI/LRS

[Low resolution spectroscopy](#) is one of four observing templates available with the the [Mid-Infrared Instrument \(MIRI\)](#). MIRI's low resolution spectrometer (LRS) offers both slit and slitless spectroscopy from 5 to 14 μm using a [double prism](#) mounted in the MIRI [filter wheel](#), and is designed to provide a spectral resolving power of $R = 40$ at 5 μm , and $R = 160$ at 10 μm for compact sources ($<2''$). The slitless LRS mode is dedicated to time-series observations of time variable systems, such as eclipsing binaries or transiting exoplanets — APT parameters for slitless LRS are optimized for this type of observation. However, there may be science cases other than time-series where the slitless mode may be useful.

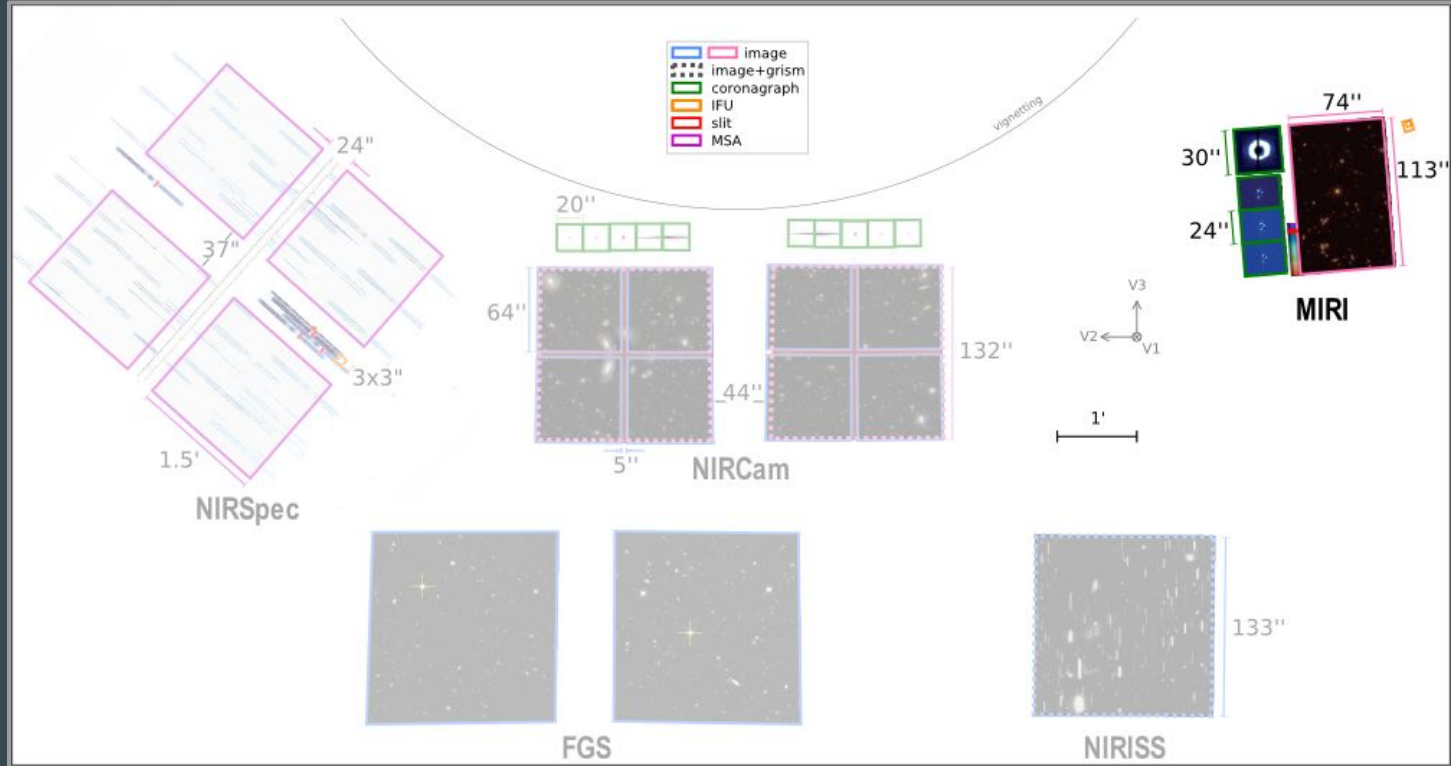
The APT template requires information on the following aspects of the observation:

1. Target acquisition
2. Subarray (which controls whether the observation will be slitless or with slit)
3. Dither or mapping pattern
4. Detector read mode and exposure settings
5. Mosaic settings
6. Pointing verification image settings and parameters

Allowed values are documented and maintained in [MIRI LRS Template parameters](#) (an article in the [JWST Proposal Parameters documentation](#)), but are also described below with Step-by-step APT instructions.

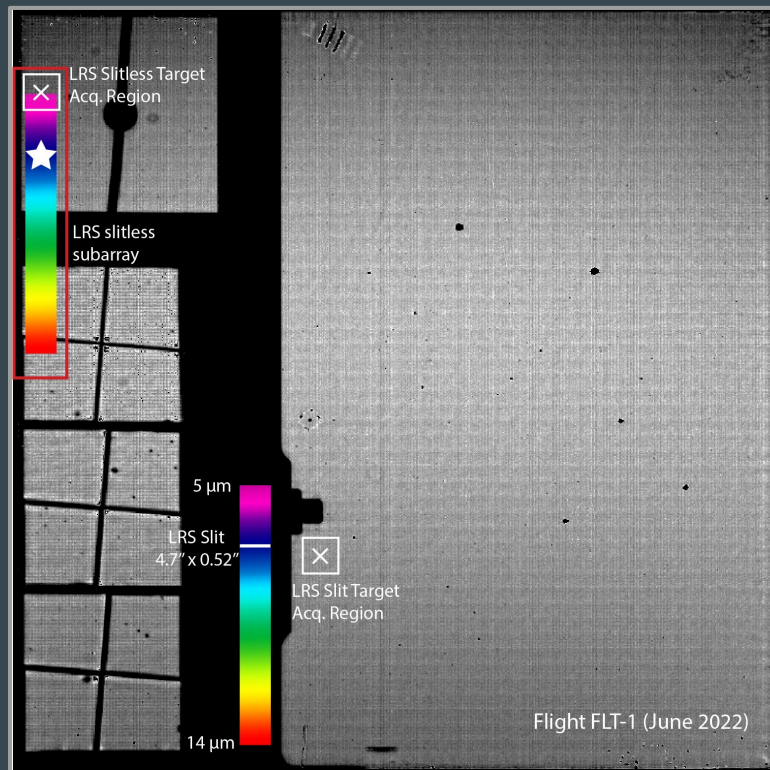
<https://jwst-docs.stsci.edu/jwst-mid-infrared-instrument/miri-apt-templates/miri-lrs-apt-template>

MIRI/LRS



<https://jwst-docs.stsci.edu/jwst-mid-infrared-instrument/miri-instrumentation/miri-optics-and-focal-plane>

MIRI/LRS



<https://jwst-docs.stsci.edu/jwst-mid-infrared-instrument/miri-observing-modes/miri-low-resolution-spectroscopy>

MIRI/LRS

Table 1. Comparison between LRS slit and slitless modes

SLIT	SLITLESS
Not available for time series observations	time series observation setting is mandatory
FULL array only	SLITLESSPRISM subarray only
Better sensitivity, fainter saturation limit	Worse sensitivity, brighter saturation limit
Exposures limited to 10,000 s	Allows > 10,000 s exposures
Dithering mandatory	No dithering allowed
No spectral foldover below ~4.5 μm	Affected by spectral foldover <4.5 μm
Sensitive to pointing uncertainty, drift	No slit losses
Time Series Observations special requirement not permitted	Time Series Observation special requirement is mandatory
Target acquisition recommended	Target acquisition recommended
Pointing verification image recommended	Pointing verification image recommended

<https://jwst-docs.stsci.edu/jwst-mid-infrared-instrument/miri-observing-modes/miri-low-resolution-spectroscopy>

MIRI/LRS



<https://jwst-docs.stsci.edu/jwst-mid-infrared-instrument/miri-operations/miri-target-acquisition/miri-lrs-slit-target-acquisition>

MIRI/LRS

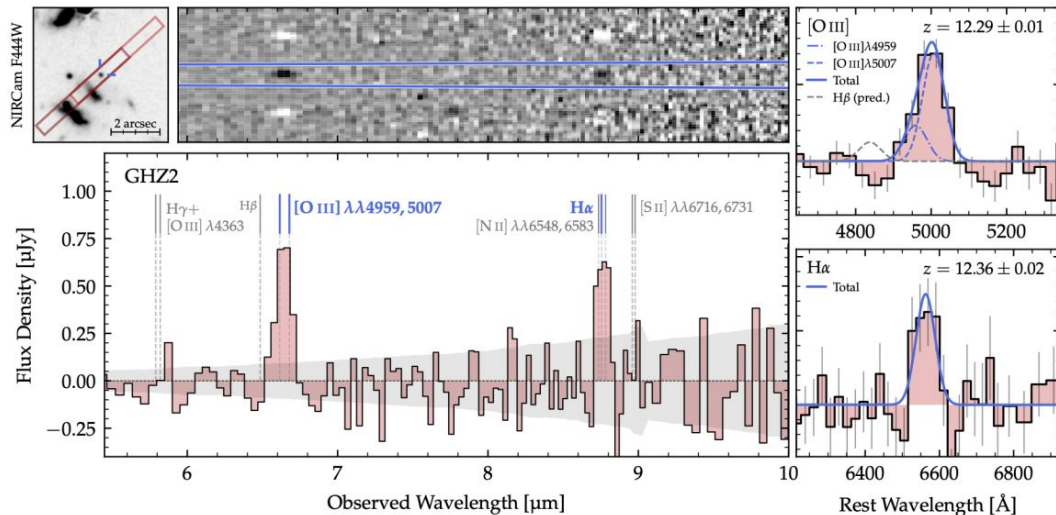


Figure 1: JWST/MIRI spectrum of GHZ2 at $z = 12.3$. **Top left:** NIRCам F444W cutout image ($5'' \times 5''$) centered at the position of GHZ2, with the MIRI/LRS slit illustrated with the red rectangle (at the two different dither positions). The combined 2D spectrum and the used aperture for the 1D extraction are also plotted (see details in the Section Methods). **Bottom left:** 1D extracted spectrum at the position of GHZ2 across the most sensitive wavelength range, $\lambda_{\text{obs}} \approx 5.7 - 10 \mu\text{m}$ and the associated 1σ uncertainty (gray region). The redshifted wavelengths of typically bright rest-frame optical emission lines are indicated with the vertical lines, with the blue text highlighting the robust detections. **Right:** Zoom-in on the $> 5\sigma$ detected spectral features identified as the $[\text{O III}]\lambda\lambda 4959, 5007\text{\AA}$ doublet (*top*) and the $\text{H}\alpha$ emission line (*bottom*) along with the best-fit Gaussian functions and the implied redshifts. In the top panel, the predicted $\text{H}\beta$ line from the $\text{H}\alpha$ detection assuming a dust-free environment is also indicated.

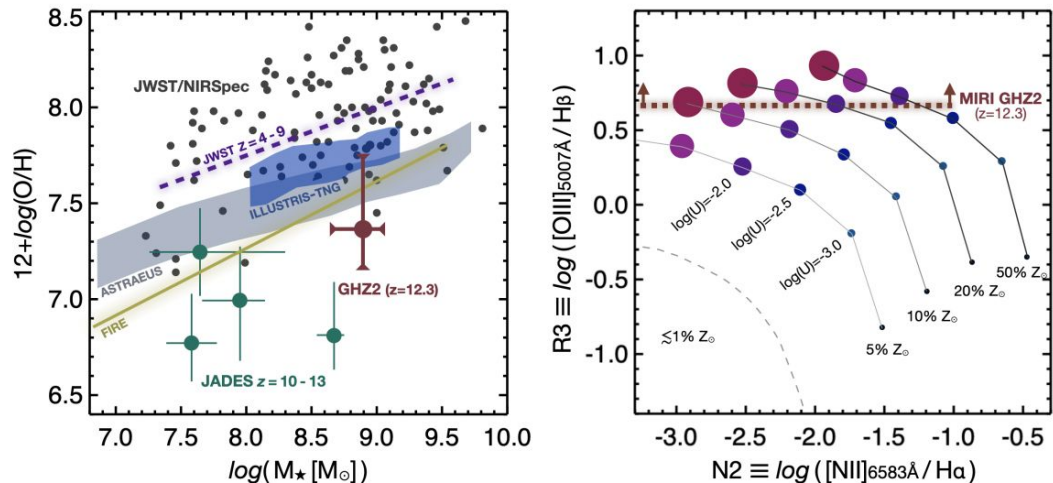
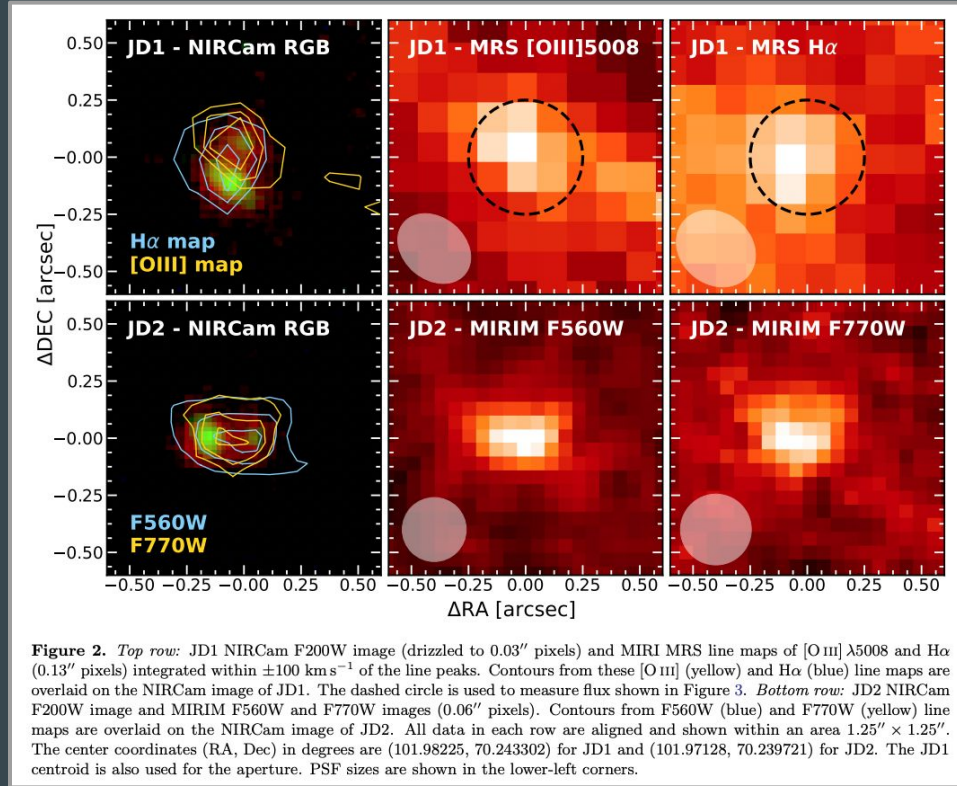


Figure 2: **The stellar mass-metallicity relation and the ionization diagnostic diagram.** **Left:** Position of GHZ2 in the stellar mass-metallicity plane in comparison to lower redshift galaxies at $z \approx 4 - 9$ (black dots for individual galaxies and purple line for best-fit relationship³⁰) and with the $z = 10 - 13$ galaxies from the JADES survey¹⁷ (green points; metallicity estimated from SED fitting). All the $z > 10$ galaxies, including GHZ2, are off from the lower-redshift relationship³⁰, suggesting an evolution towards lower metallicity values at earlier epochs (by around ~ 0.5 dex). The predictions from the FIRE³¹ (golden line) and ASTRAEUS³² (gray region) simulations at $z \sim 10$ show a broad agreement with the current constraints, while the ILLUSTRIS-TNG³³ simulations (blue region) predict slightly higher metallicities, although still consistent within the error bars. Despite the early epochs, none of these galaxies show pristine (close-to-zero) metallicities, implying a rapid metal enrichment in the early Universe. **Right:** The $[\text{NII}]/\text{H}\alpha$ vs $[\text{OIII}]/\text{H}\beta$ diagram along with the predictions from a stellar photoionization model²² assuming four different metallicities and six ionization parameters in steps of 0.5dex (models with $Z \lesssim 0.01 Z_\odot$ would lie below the dashed line). The observational constraints on the R3 value (formally an upper limit) implies high ionizing conditions, with $\log(U) > -2.0$.

MIRI/LRS MIRI/MRS



MIRI/LRS MIRI/MRS

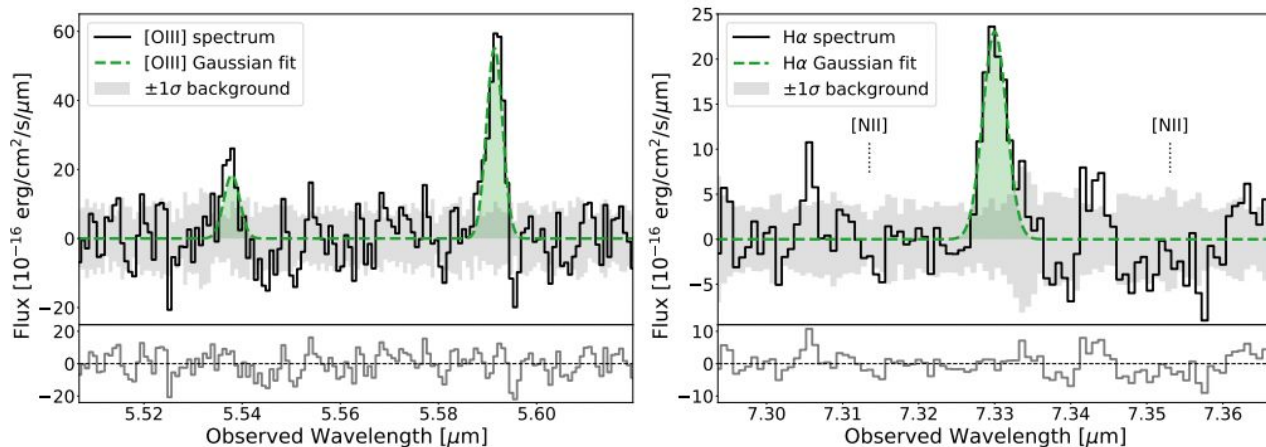
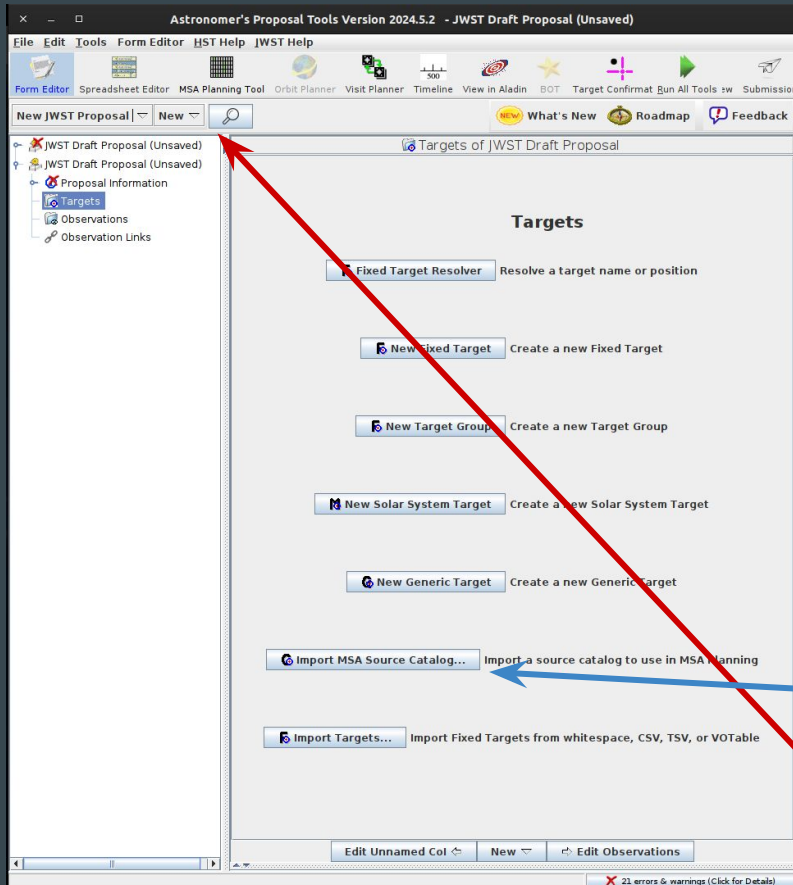


Figure 3. MIRI MRS spectra of [O III] $\lambda 4960, \lambda 5008$ and H α observed at $z = 10.165$. *Left:* [O III] $\lambda 5008$ and [O III] $\lambda 4960$ spectra in black measured within the circular aperture shown in Figure 2. Uncertainties are shown in shaded gray. A single Gaussian (green) is well fit to the [O III] $\lambda 5008$ line; that same fit is shown for the [O III] $\lambda 4960$ line after reducing the flux by a factor of 2.98. Fit residuals are shown in the bottom plot. *Right:* H α spectrum fit to a single Gaussian. Vertical dashed lines show the wavelengths of the weaker undetected lines [N II] $\lambda 6550, \lambda 6585$ that are well separated in wavelength and thus do not contribute to H α $\lambda 6563$.

NIRSpec/MSA – the source catalog



At minimum, the source catalog must include RA and Dec. Everything else (ID, magnitude, stellarity, etc.) is helpful but not required. The MPT will prioritize objects in the order they appear in the catalog.

Weights are helpful if you really want some particular object(s) on the MSA, but note that weighting your must-have objects as 10 will not guarantee a shutter gets opened on them so be excessive. The maximum recommended weight is 10^9 , so really, I promise. Be excessive.

Targets > Import MSA Source Catalog (make sure you're in the Form Editor)

Or if you're on the Targets page, the New button in the upper left corner also works

NIRSpec/MSA – the source catalog

MSA Source Importer

File to Import:

Catalog Name:

File Format:

Here is some of the content of the selected file:

ID	RA	Dec	Weight	Primary
1	53.01022256193542	-27.867809620908968	100.0	1
2	53.01532150804949	-27.86464395293899	1.0	0
3	53.01653501186932	-27.881943715620057	1.0	0
4	53.02171333926927	-27.88351005117235	1.0	0
5	53.02312045244276	-27.85722055207001	1.0	0

ID RA DEC Weight Ignore

If your catalog has a commented header, the APT will try to match your column names to the names it recognizes. If it doesn't, fill in the column names with the drop down menu. If you "Ignore" a column, it won't even be loaded into the APT.

NIRSpec/MSA – the source catalog

The screenshot displays the NIRSpec/MSA software interface. The main window shows a 'New JWST Proposal' form with fields for 'Number' (1), 'Name in the Proposal' (example_msa_cat), and 'Name for the Archive'. Below these fields is a table of candidate sets. The 'example_msa_cat (535 sources)' table is visible, showing columns for ID, RA, DEC, R50, FWHM, and Size. A red arrow points to the 'New Candidate Set...' button. A 'New Candidate Set' dialog box is open, showing a list of filters to be applied to the candidate set. The dialog includes a 'Name' field (Primary) and a 'Make Candidate Set' button. A list of filters is shown at the bottom of the dialog, including 'New ID Filter', 'New Coordinates Filter', 'New R50 Filter', 'New FWHM Filter', 'New Size Filter', 'New Redshift Filter', 'New Reference Star Filter', 'New Stellarity Filter', 'New Weight Filter', 'New Area Filter', 'New Ellipticity Filter', 'New Theta Filter', 'New Magnitude Filter', 'New Magnitude Error Filter', and 'New Number Column Filter'.

File Edit Tools Form Editor JST Help JWST Help

Form Editor Spreadsheet Editor MSA Planning Tool Orbit Planner Visit Planner Timeline View in Aladin BOT Target Confirmation PDF Preview Submission

New JWST Proposal | Import MSA Source Catalog... | What's New | Roadmap | Feedback

JWST Draft Proposal (Unsaved) | 1 example_msa_cat of JWST Draft Proposal

Number: 1

Name in the Proposal: example_msa_cat

Name for the Archive:

Candidate Sets | Comments

example_msa_cat (535 sources)

Astrometric Accuracy (mas): 15

Reference Position: RA: 03 32 26.5828

Pre-Image Availability: Is already obtained

ID	RA	DEC	R50	FWHM	Size
446/03 32 40.8554	-27 50 26.55	0	0	0	
308/03 32 29.9925	-27 52 6.08	0	0	0	
26/03 32 8.5923	-27 53 40.93	0	0	0	
508/03 32 46.7877	-27 46 50.43	0	0	0	
159/03 32 18.2334	-27 48 23.56	0	0	0	
16/03 32 6.9045	-27 54 11.62	0	0	0	
178/03 32 19.6524	-27 50 39.53	0	0	0	
472/03 32 42.8893	-27 48 38.53	0	0	0	
301/03 32 29.4420	-27 48 37.45	0	0	0	
356/03 32 24.4442	-27 48 3.86	0	0	0	
322/03 32 31.2438	-27 53 59.11	0	0	0	
246/03 32 24.0790	-27 54 19.35	0	0	0	
102/03 32 15.2880	-27 48 49.01	0	0	0	
273/03 32 26.5828	-27 50 20.90	0	0	0	
197/03 32 20.8288	-27 51 32.97	0	0	0	
146/03 32 17.5330	-27 51 35.43	0	0	0	
233/03 32 23.4218	-27 54 10.08	0	0	0	
76/03 32 13.8172	-27 53 11.38	0	0	0	

New Candidate Set...

Delete

Send to Aladin

New Candidate Set

This candidate set will be a sub-set of the sources in example_msa_cat (078 sources)

Name: Primary

New ID Filter

New Coordinates Filter

New R50 Filter

New FWHM Filter

New Size Filter

New Redshift Filter

New Reference Star Filter

New Stellarity Filter

New Weight Filter

New Area Filter

New Ellipticity Filter

New Theta Filter

New Magnitude Filter

New Magnitude Error Filter

New Number Column Filter

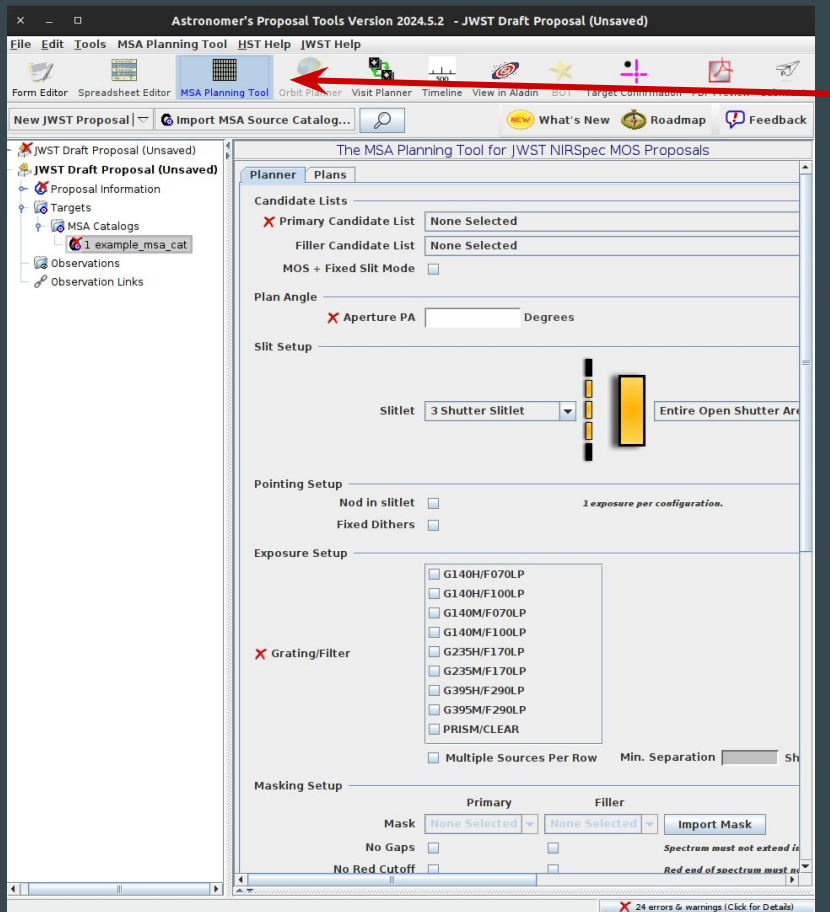
MSA Catalogs | New | Edit Observations

24 errors & warnings (Click for Details)

New Candidate Set lets you filter your parent catalog (helpful for testing different configurations, defining primary and filler target lists, etc.)

Astrometric Accuracy and Pre-Image Availability are required

NIRSpec/MSA – the MPT



The MSA Planning Tool (MPT; navigate to it in the top toolbar) is both your best friend and your worst enemy

Primary Candidate List = drives the pointings

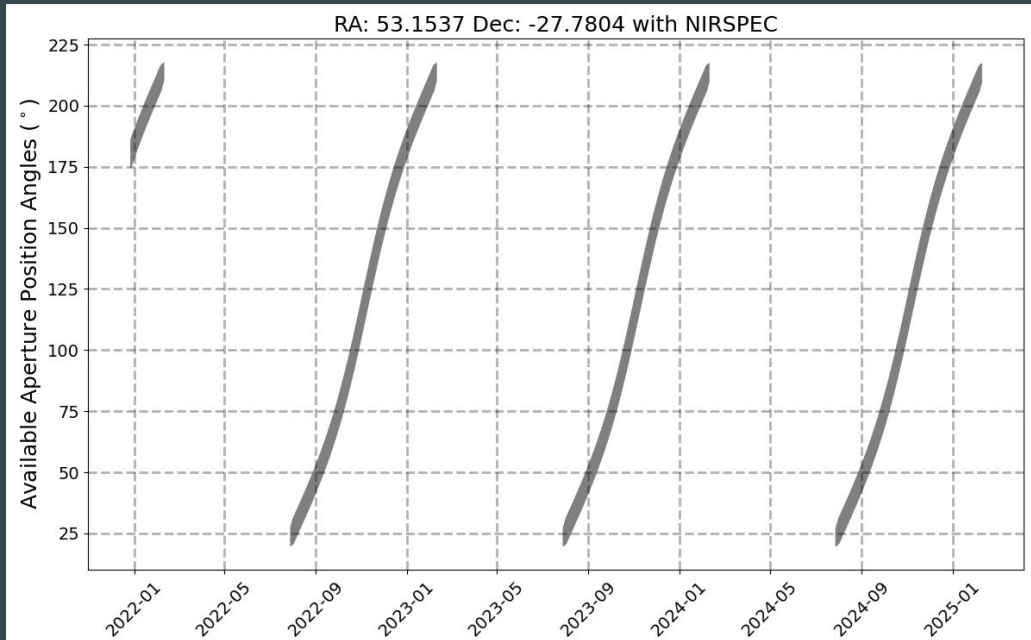
Filler Candidate List = the MPT will check if any shutters can be opened on these targets after the pointings are set by the Primary Candidate List but these are just bonus objects and don't set the pointings

Aperture PA = a large reason of why the MPT is your worst enemy. You cannot search for solutions over multiple PAs. Which is great when your program is actually being observed and a PA has been assigned, less great when you're trying to figure out what you can do for a proposal.

NIRSpec/MSA – the JWST GTVT

The APT won't even let you try a PA that's genuinely impossible, but the JWST General Target Visibility Tool may be helpful if you don't want to have to guess what *is* possible: https://github.com/spacetelescope/jwst_gtvv

```
jwst_gtvv --ra=03:32:36.89 --dec=-27:46:49.33 --instrument nirspec
```



NIRSpec/MSA – back to the MPT

The MSA Planning Tool for JWST NIRSpec MOS Proposals

Slit Setup

Slitlet: 3 Shutter Slitlet Entire Open Shutter Area Source Centering Constraint

Pointing Setup

Nod in slitlet ☒ 3 exposures per configuration.
Fixed Dithers ☐

Exposure Setup

☒ Grating/Filter

- ☐ G140H/F070LP
- ☐ G140H/F100LP
- ☐ G140M/F070LP
- ☐ G140M/F100LP
- ☐ G235H/F170LP
- ☐ G235M/F170LP
- ☐ G395H/F290LP
- ☐ G395M/F290LP
- ☐ PRISM/CLEAR

☐ Multiple Sources Per Row Min. Separation Shutters

Masking Setup

Mask: None Selected None Selected Import Mask

No Gaps ☐ ☐ *Spectrum must not extend into or through the detector gap*

No Red Cutoff ☐ ☐ *Red end of spectrum must not extend beyond the right edge of the NRS2 detector*

No Blue Cutoff ☐ ☐ *Blue end of spectrum must not extend beyond the left edge of the NRS1 detector*

Available Shutters: 183829 183829

Export Mask Export Mask

Wavelength Range Setup

	Primary	Filler	
Wavelength Range 1	<input type="checkbox"/>	<input type="checkbox"/>	Defined in catalog as startwave1 to endwave1
Wavelength Range 2	<input type="checkbox"/>	<input type="checkbox"/>	Defined in catalog as startwave2 to endwave2
Wavelength Range 3	<input type="checkbox"/>	<input type="checkbox"/>	Defined in catalog as startwave3 to endwave3

3 Shutter Slitlet is pretty standard and you probably want to nod in the slitlet

Choose your disperser and filter combination
<https://jwst-docs.stsci.edu/jwst-near-infrared-spectrograph/nirspec-instrumentation/nirspec-dispersers-and-filters#gsc.tab=0>

You can apply various masks if you want to make sure the entire spectrum ends up on the detector (n.b. higher resolution = more pixels, prism and medium resolution grating spectra can fit all on one detector in a limited number of shutters, high resolution cannot and the detector gap is unavoidable)

This restricts the available shutters and the APT gives you an MSA Target Info file with information about where a spectrum has been cut off, so perhaps better to check wavelength coverage manually for the sources you care the most about.

NIRSpec/MSA – the MPT

Search Grid

Search Area Dimensions:

Center RA: 03 32 28.0653 Dec: -27 48 16.94

Width 813.9028086596575 Arcseconds

Height 871.1679287167675 Arcseconds

Search Step Size 5 Arcseconds. 29205 pointings will be tested.

Parameters

☒ Use Weights

Use sum of target weights for quality assessment.

☐ Enable Monte-Carlo

☐ Allow the opening of shutters containing multiple sources

☐ Allow sources in areas affected by stuck open shutters

Number of configurations 1

Enter N*1 for N target sets.

If 'Number of configurations' is empty, tool will continue until all primary candidates are planned, or no more can be added to the plan.

Plan

Plan Name Some Plan

Generate Plan

1 configuration per target set and 3 exposures per configuration.

Set your parameters for how you want the MPT to search. It's parallelized but huge numbers of pointings will still take forever to check.

NIRSpec/MSA – the MPT

The MSA Planning Tool for JWST NIRSpec MOS Proposals

Planner Plans

Plan Selection

#	Plan	# Configs	# Exposures	# Primary Sources	# Secondary Sources	Plan APA	Plan Catalog	Export	Replan
1	Weighted example (0... 1	3	18	0		50.0000 Degrees	example_msa_cat	Export	R...

Select multiple plans to review them in combination.

Create Observation Update Observation 1 Import Plan(s) Describe Plan(s) Delete Plan(s)

Pointings

#	Plan number	Name	RA	Dec	RA (HMS)	Dec (DMS)	APA	Grating/ Filter	Target set size	Total weight	Show	Send to Aladin	Export Config
1	1	clein1	53.1282355	-27.8144523	03 32 30.77652	-27 48 52.028	49.9910	G395M/F290LP	18	1503	Sh...	Se...	Export
2	1	clein2	53.1281082	-27.8145468	03 32 30.74597	-27 48 52.368	49.9911	G395M/F290LP	18	1503	Sh...	Se...	Export
3	1	clein3	53.1283628	-27.8143578	03 32 30.80706	-27 48 51.688	49.9910	G395M/F290LP	18	1503	Sh...	Se...	Export

There is a separate tab for plans that the MPT has found. Once you have one you're satisfied with, you can "Create Observation" and choose your readout pattern, etc.

NIRSpec/MSA – creating the observation

Example (Obs 1) of JWST Draft Proposal

Number: 1 Status: UNKNOWN Duplication

Label: Example

Prime Instrument: NIRSPEC

Template: NIRSpec MultiObject Spectroscopy

Coordinated Parallel: ☒ NIRSpec MOS-MIRI Imaging

Target: 1 example_msa_cat

Visit Splitting: Splitting Distance: 40.0 Arcsec Number of Visits: 1

NIRSpec MultiObject Spectroscopy Duration (secs): 0 Science: 5740 Total Charged

MIRI Imaging Duration (secs): 0

Data Volume: 338 MB

☒ NIRSpec MultiObject Spectroscopy ☒ MIRI Imaging Special Requirements Comments

TA Method: MSATA

Target Acquisition Parameters

NirSpec Target Acquisitions using the MSA are designed for each visit.

Science Parameters

This observation was created from plan: Example Replan in MPT

Primary Candidate List: example_msa_cat (535 sources)

Filler Candidate List: None Selected

Planned: 50.0 Degrees Assigned: Degrees Status: Planning

Aperture PA: Science Aperture: MSA Center

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Autocal	ETC Wkbk Calc ID	ETC
1	G395M/F290LP	NRSIRS2			NONE		

☒ Exposure Specification

Add Duplicate Insert Above Remove

#	MSA Configuration	Exposure Specif...	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Nod Pattern	Total Integrations	Total Exposure Time	Edit Config
1	c1	1 (G395M/F290LP)	03 32 29.18365 -2... 49.9941				3 Shutter Slitlet	1	0.0	Edit

Edit Observation Folder New Edit Visit 1:1

68 errors & warnings (click for details)

Coordinated parallels possible with NIRSpec MOS prime and NIRCам or MIRI imaging parallel. NIRSpec MOS cannot be the parallel observing mode (either coordinated or pure parallel).

NRSIRS2 is the readout pattern I most commonly see used and the IRS² readouts (NRSIRS2 or NRSIRS2RAPID) are recommended in general. NRSIRS2 reads out four frames per group, RAPID reads out one frame per group and is a much higher data volume. You choose the number of groups per integration and the total number of integrations.