



**STScI** | SPACE TELESCOPE  
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

# User Documentation System & Help Desk

---

Ori Fox & Stacey Bright

*JWST Master Class*

November 2019



# JWST User Documentation System (JDox)

---

Ori Fox

JWST Master Class

November 2019



## JWST Documentation System (JDox) Contributors

---

Ori Fox (STScI) – lead

Stephanie LaMassa (STScI) – deputy

Shireen Gonzaga, Susan Rose (STScI) – technical editors

Jennifer Lotz (STScI) – previous lead, Dan Coe – previous deputy

S. Alberts, C. Alves de Oliveira, T. Beck, S. Birkmann, B. Blacker, W. Blair, T. Böeker, M. L. Boyer, G. Brammer, B. Brooks, R. Brown, H. Bushouse, A. Canipe, L. Chambers, C. Chen, D. Coe, M. Correnti, M. Cracraft, A. Deshpande, R. Diaz, R. Downes, N. Earl, H. Ferguson, P. Ferruit, J. Filippazzo, P. Forshay, O. Fox, J. Fraine, A. Fullerton, M. Garcia Marin, G. Giardino, K. Gilbert, J. Girard, K. Gordon, C. Gosmeyer, P. Goudfrooij, T. Greene, B. Hagan, J. Hargis, R. Hawkins, A. Henry, B. Hilbert, D. Hines, S. Holfeltz, B. Holler, J. Hunkeler, G. Kanarek, D. Karakla, S. Kassin, S. Kendrew, T. Keyes, A. Koekemoer, S. La Massa, D. Law, J. Lee, P-L Lim, J. Leisenring, J. Lotz, N. Lützgendorf, L. McCuen, S. Milam, A. Moro-Martin, K. Murray, J. Muzerolle, E. Nelan, B. Nickson, M. Oboryshko, S. Osborne, M. Pena-Guerrero, M. Perrin, K. Peterson, N. Pirzkal, K. Pontoppidan, C. Proffitt, E. Puga, L. Pueyo, S. Ravindranath, T. Rawle, N. Reid, M. Ressler, A. Riedel, G. Rieke, M. Rieke, J. Rigby, C. Ritchie, M. Robberto, J. Sahlmann, B. Sargent, E. Schlawin, R. Shaw, M. Sirianni, A. Sivaramakrishnan, G. Sloan, D. Soderblom, G. Sonneborn, J. Stansberry, K. Stevenson, L. Strolger, T. Temim, D. Thatte, L. Ubeda, J. Valenti, K. Volk, G. Wahlgren, B. Williams, C. Willmer, E. Wislowski, B. York



## The Philosophy Behind JDOx

---

- User-friendly, accurate web-based JWST documentation
- Every Page is Page One (EPPO) philosophy
- “Agile” process/infrastructure (easy to update)
- Searchable via Google and internally
- Heavily cross-linked across topics
- Integrated with software tools (ETC, APT)
- Ensure a happy and well-informed JWST community



## More Than Just Documentation

---

### ITSD/Editors/Developers

- Annual software testing and upgrades
- Streamlined Editorial review and publishing procedure
- Website design and template layouts
- Server maintenance
- Context Sensitive Help
- APT Engineering Documentation
- Movies
- PDF Printing

### Drive Science Discussions

- Data rate and volume policy
- Sensitivity calculations within the ETC
- Overheads and time charged
- Time Series Observation (TSO) allowed observation parameters
- Groups vs Integration tradeoffs



## More Than Just Documentation

---

### ITSD/Editors/Developers

- Annual software testing and upgrades
- Streamlined Editorial review and publishing procedure
- Website design and template layouts
- Server maintenance
- Context Sensitive Help
- APT Engineering Documentation
- Movies
- PDF Printing

### Drive Science Discussions

- Data rate and volume policy
- Sensitivity calculations within the ETC
- Overheads and time charged
- Time Series Observation (TSO) allowed observation parameters
- Groups vs Integration tradeoffs



# Navigation

Finding your way around 700 articles can be tricky!

- Lots of places to enter
- Lots of places to exit
- Lots of decisions to make along the way

We're here to make it easy for you

- We provide a map
- We provide directions

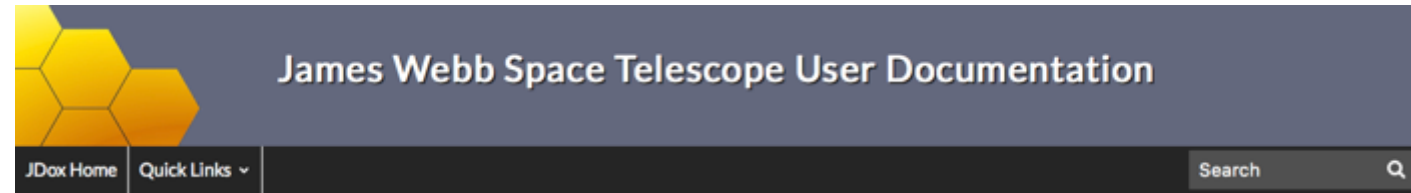




# Layout

General JDoc Page Layout Includes:

- Top Banner





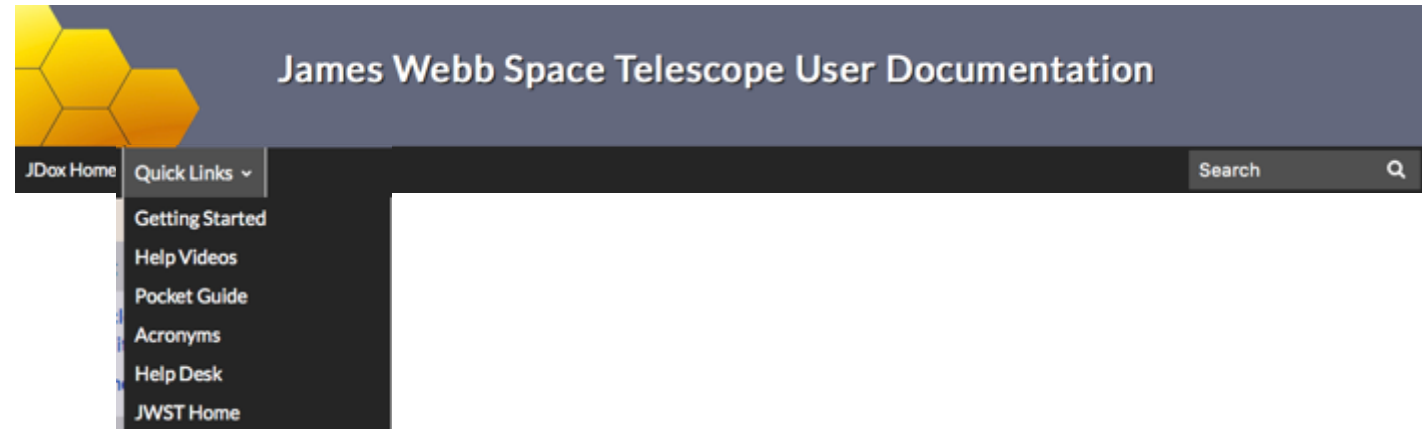


## General JDoc Page Layout Includes:

- Top Banner

## Quick Links:

- Getting Started
- Help Videos
- Pocket Guide
- Acronyms
- Help Desk
- JWST Home





## General JDoc Page Layout Includes:

- Top Banner
- Quick Links Pull Down

## Navigation Side Bar:

- “Master Site Map”
- Every article is listed
- Sorted by category
- Coherence
- “Chronological Order”
- Highlights your position in Page Tree

The screenshot displays the James Webb Space Telescope User Documentation website. At the top, there is a dark grey banner with the title "James Webb Space Telescope User Documentation" in white text. Below the banner is a navigation bar with "JDoc Home" and "Quick Links" (with a dropdown arrow) on the left, and a search box with the text "Search" and a magnifying glass icon on the right. The main content area is divided into a left sidebar and a main content pane. The sidebar is a vertical list of categories and sub-items, including:

- Proposing Opportunities**
  - > JWST Cycle 1 Proposal Opportunities
  - > JWST General Science Policies
- Proposal Preparation**
  - General Proposal Planning Workflow
  - Understanding Exposure Times
    - > Methods and Roadmaps
  - Example Science Programs
  - Recommended Observing Strategies
    - > JWST Duplication Checking
    - > Observatory Functionality
    - > Observatory Hardware
- Proposing Tools**
  - > JWST Exposure Time Calculator Overview
  - > JWST Astronomers Proposal Tool Overview
  - Observation Templates
  - ETC to APT Interface
  - Video Tutorials
  - > Other Tools
- Instruments**
  - > Mid Infrared Instrument
  - > Near Infrared Camera
  - > Near Infrared Imager and Slitless Spectrograph



# Layout

## General JDoX Page Layout Includes:

- Top Banner
- Quick Links Pull Down
- Navigation Side Bar

## Main Article:

- Breadcrumbs give location of article
- Title
- Blurb overview of article (also Google Search)
- Table of Contents
- Main Text

The screenshot displays the 'James Webb Space Telescope User Documentation' website. The top banner features the title and a search bar. A navigation sidebar on the left lists categories like 'Proposing Opportunities', 'Proposal Preparation', 'Proposing Tools', and 'Instruments'. The main content area shows the breadcrumb path 'Home / Mid Infrared Instrument / MIRI Observing Modes / MIRI Imaging' and the article title 'MIRI Imaging'. A table of contents box lists links for 'Basic performance', 'Imaging filters', 'Dithering performance', 'Subarrays', 'Imager exposure specifications', and 'References'. A warning box states 'Do not use the MIRI imaging mode for coronagraphic imaging.' The article text begins with 'The MIRI imager offers nine broadband filters covering wavelengths from 5.6 to 25.5 μm over an unobstructed 74" x 113" field of view...' and includes sections for 'Basic performance' and 'MIRI imaging sensitivity'.



# Layout

## General JDoX Page Layout Includes:

- Top Banner
- Quick Links Pull Down
- Navigation Side Bar

## Main Article:

- Breadcrumbs give location of article
- Title
- Blurb overview of article (also Google Search)
- Table of Contents
- Main Text
- References
- Latest Updates and publishing info

The screenshot displays the 'James Webb Space Telescope User Documentation' website. The top banner is dark grey with the title 'James Webb Space Telescope User Documentation' in white. Below the banner is a navigation bar with 'JDoX Home' and 'Quick Links' (with a dropdown arrow), and a search box on the right. The main content area is divided into a left sidebar and a right main column. The sidebar contains three sections: 'Proposing Opportunities' with links to 'JWST Cycle 1 Proposal Opportunities' and 'JWST General Science Policies'; 'Proposal Preparation' with links to 'General Proposal Planning Workflow', 'Understanding Exposure Times', 'Methods and Roadmaps', 'Example Science Programs', 'Recommended Observing Strategies', 'JWST Duplication Checking', 'Observatory Functionality', and 'Observatory Hardware'; 'Proposing Tools' with links to 'JWST Exposure Time Calculator Overview', 'JWST Astronomers Proposal Tool Overview', 'Observation Templates', 'ETC to APT Interface', 'Video Tutorials', and 'Other Tools'; and 'Instruments' with links to 'Mid Infrared Instrument', 'Near Infrared Camera', and 'Near Infrared Imager and Siltless Spectrograph'. The main column shows the breadcrumb trail 'Home / Mid Infrared Instrument / MIRI Observing Modes / MIRI Imaging', the article title 'MIRI Imaging', and a sub-section 'Imager exposure specifications'. Below this is a blurb: 'Main article: [MIRI Detector Readout Overview](#). See also: [Understanding Exposure Times](#)'. It then states 'MIRI imaging supports two different detector readout patterns:' followed by a numbered list: '1. **FAST** mode (default)' and '2. **SLOW** mode (only in full array)'. The 'References' section lists three articles: 'Bouchet, P. et al. 2015, PASP, 127, 612 The Mid-Infrared Instrument for the James Webb Space Telescope, III: MIRIM, The MIRI Imager Updated version', 'Ressler, M.E. et al. 2015, PASP, 127, 675 The Mid-Infrared Instrument for the James Webb Space Telescope, VIII: The MIRI Focal Plane System Updated version', and 'Rieke, G. et al. 2015, PASP, 127, 584 The Mid-Infrared Instrument for the James Webb Space Telescope, I: Introduction Updated version'. At the bottom, a table provides publication and update information.

Published	22 Dec 2016
Latest updates	<ul style="list-style-type: none"><li>• 09 Feb 2018 Removed column "Point source brightness limit (mJy)" from Table 1</li></ul>



## General JDOx Page Layout Includes:

- Top Banner
- Quick Links Pull Down
- Navigation Side Bar
- Main Article

## Footnote:

- Some important help links
- All contributors
- Copyright

• Observation Templates

• ETC to APT Interface

• Video Tutorials

› Other Tools

### Instruments

› Mid Infrared Instrument

› Near Infrared Camera

› Near Infrared Imager and Slitless Spectrograph

› Near Infrared Spectrograph

### Data

› Understanding Data Files

› Obtaining Data

› Data Processing and Calibration Files

› JWST Data Reduction Pipeline

### JDOx Project Scientist

Ori Fox

Jennifer Lotz (previous)

### JDOx Deputy Project Scientist

Stephanie La Massa

Dan Coe (previous)

Dave Soderblom (previous)

### JWST User Support Project Scientist

William Blair

### JDOx IT Technologist

Paul Mulgrew

### JDOx Content and Technical Editors

Shireen Gonzaga, Susan Rose

### JDOx NASA Reviewers

Susan Neff

Jane Rigby

George Sonneborn (previous)

### How to cite JDOx

#### To cite the JWST User Documentation Website:

In-text ref.: (JWST User Documentation, 2016-)

End reference: JWST User Documentation 2016- Baltimore, MD. Space Telescope Science Institute [access date in year month day], <https://jwst-docs.stsci.edu>

#### To cite a JDOx article in a journal paper:

In-text ref.: (STScI, 2016-)

End reference: Space Telescope Science Institute (STScI) 2016- Article Title, JWST User Documentation [Updated article update date in year month day] Baltimore, MD article URL

#### Example:

Space Telescope Science Institute (STScI) 2017- MIRI Coronagraphic Imaging, JWST User Documentation [Published 2017 December 22] Baltimore, MD, <https://jwst-docs.stsci.edu/mid-infrared-instrument/miri-observing-modes/miri-coronagraphic-imaging>



Space Telescope Science  
Institute

Help Desk  
JWST  
Website



esa



Copyright ©2019 All Rights Reserved.

[Report website problems](#)

The NASA James Webb Space Telescope, developed in partnership with ESA and CSA, is operated by AURA's Space Telescope Science Institute.

Powered by [Atlassian Confluence](#) and [Scroll Viewport](#).

STScI | SCIENCE INSTITUTE



# Instrument Specific Instructions


## Instrument Pages:

- Overview of instrument
- Various observing modes
- Instrumentation and Hardware
- Instrument specific instructions for operations (i.e., dithering, target acquisition, etc)
- Performance (i.e., bright limits, sensitivity, etc)
- APT Templates (i.e., how to fill out specific boxes within APT for each observing mode)
- Observing Strategies (how to optimize your observations in terms of SNR and minimize overheads)
- Example Science Programs (example programs explained from start to finish, with accompanying ETC workbooks and APT files to get you started)

Home / Mid Infrared Instrument

## Mid Infrared Instrument

The JWST Mid-Infrared Instrument (MIRI) provides imaging and spectroscopic observing modes from 4.9 to 28.8  $\mu\text{m}$ .



**On this page**

- [Observational capabilities](#)
- [Optical elements](#)
  - [Imager](#)
  - [Medium-resolution spectrometer \(MRS\)](#)
- [Sensitivity and performance](#)
- [Data calibration and analysis](#)
- [External MIRI links and documents](#)
  - [MIRI "Encyclopedia"](#)
  - [External MIRI websites](#)
  - [Lectures](#)
  - [Other documents](#)
- [Acknowledgements](#)
- [References](#)

The JWST Mid-Infrared Instrument (MIRI) provides imaging and spectroscopic observing modes from 4.9 to 28.8  $\mu\text{m}$  (Wright et al. 2015, Rieke et al. 2015). These wavelengths can be utilized for studies including, but not limited to: direct imaging of young warm exoplanets and spectroscopy of their atmospheres; identification and characterization of the first galaxies at redshifts  $z > 7$ ; and analysis of warm dust and molecular gas in young stars and proto-planetary disks.

To achieve these goals MIRI offers a very broad range of observing modes, including:

- [imaging](#)
- [low-resolution slitted and slitless spectroscopy](#)
- [medium-resolution integral field unit \(IFU\) spectroscopy](#)
- [coronagraphy](#)

**Proposing Opportunities**

- › [JWST Cycle 1 Proposal Opportunities](#)
- › [JWST General Science Policies](#)

**Proposal Preparation**

- [General Proposal Planning Workflow](#)
- [Understanding Exposure Times](#)
- › [Methods and Roadmaps](#)
- [Example Science Programs](#)
- [Recommended Observing Strategies](#)
- › [JWST Duplication Checking](#)
- › [Observatory Functionality](#)
- › [Observatory Hardware](#)

**Proposing Tools**

- › [JWST Exposure Time Calculator Overview](#)
- › [JWST Astronomers Proposal Tool Overview](#)
- [Observation Templates](#)
- [ETC to APT Interface](#)
- [Video Tutorials](#)
- › [Other Tools](#)

**Instruments**

- › [Mid Infrared Instrument](#)
  - › [Observing Modes](#)
  - › [Instrumentation](#)
  - › [Operations](#)
  - › [Predicted Performance](#)
  - › [APT Templates](#)
  - › [Observing Strategies](#)
  - › [Example Programs](#)



# Proposal Workflow

## General Proposal Planning Workflow:

- Accessibly from Quick Links, Sidebar
- No single way to write a proposal
- Aims to give a recommended workflow

## Become familiar:

- Call for Proposals and Policy (SMO)
- JWST Exposure Times
- Methods and Roadmaps
- Instrument specific pages
- Observing Strategies
- Example Science Programs

The screenshot displays the 'James Webb Space Telescope User Documentation' website. The page title is 'General Proposal Planning Workflow'. The left sidebar contains a navigation menu with categories: 'Proposing Opportunities', 'Proposal Preparation', 'Proposing Tools', and 'Instruments'. The 'Proposing Tools' section is expanded, showing links to 'JWST Exposure Time Calculator Overview', 'JWST Astronomers Proposal Tool Overview', 'Observation Templates', 'ETC to APT Interface', 'Video Tutorials', and 'Other Tools'. The main content area includes a search bar, a breadcrumb trail 'Home / General Proposal Planning Workflow', and a section titled 'On this page' with a bulleted list of key actions: 'Become familiar with JWST capabilities and terminology', 'Determine if your targets can be observed', 'Use the Exposure Time Calculator to determine observing parameters', and 'Prepare your proposal in the Astronomers' Proposal Tool'. Below this is a numbered list of six steps for becoming familiar with JWST capabilities and terminology. Step 5, 'Read the JWST Recommended Observing Strategies for your chosen instrument mode for advice on which observing parameters to pick to optimize your science program.', is highlighted with a red border.

James Webb Space Telescope User Documentation

JDoc Home Quick Links Search

Home / General Proposal Planning Workflow

## General Proposal Planning Workflow

A roadmap of general instructions for planning JWST observations. See method-specific roadmaps for more detailed information about individual observing modes.

**On this page**

- Become familiar with JWST capabilities and terminology
- Determine if your targets can be observed
- Use the Exposure Time Calculator to determine observing parameters
- Prepare your proposal in the Astronomers' Proposal Tool

The steps below suggest a general workflow, but depending on your science goals and background, the steps and order may vary.

### Become familiar with JWST capabilities and terminology

1. Be sure to read through the [Call for Proposals](#) and familiarize yourself with [JWST Science policies](#).
2. Learn about [MULTIACCUM detector readouts](#) to understand how to specify the exposure time for your JWST observation.
3. Identify instrument(s) and observing mode(s) you need to address your science goals. The [observing methods](#) articles summarize the observing methods offered by JWST, and compare and contrast the unique observing modes from each instrument that support these different types of observations. Mode-specific roadmaps are also available.
4. Familiarize yourself with the documentation for your chosen instrument mode, paying particular attention to:
  1. whether your chosen mode is multi-phase, e.g., the NIRSpec multi-object spectroscopy mode may require NIRCam pre-imaging to obtain high quality astrometry for your target list;
  2. whether operations such as [dithering](#), [target acquisition](#), [mosaicking](#), etc., are required, encouraged, or not permitted for that mode;
  3. whether you should consider using a subarray for your observations.
5. Read the [JWST Recommended Observing Strategies](#) for your chosen instrument mode for advice on which observing parameters to pick to optimize your science program.
6. Read through an [example science program](#) for your chosen instrument mode (if available) to see a complete overview of the proposal planning process, including how to construct an exposure time calculator (ETC) workbook and complete an Astronomers Proposal Tool (APT) observing template.



# Observing Strategies

---

Home / JWST Recommended Observing Strategies

## JWST Recommended Observing Strategies



These articles aim to help observers make informed choices, based on the latest test data, when preparing their programs.

The JWST offers a broad array of instruments and observing modes covering 0.6–28.5  $\mu\text{m}$ . Even though observers have to use pre-defined templates, there are a variety of ways in which an observer can plan for taking data. Specific aspects like detectors usage and planning for background corrections ought to be properly considered for obtaining good data quality. This page provides links to various instrument-specific articles that offer advice for observers for selecting observing parameters.

[MIRI Observing Strategies](#)

[NIRCam Observing Strategies](#)

[NIRISS Observing Strategies](#)

[NIRSpec Observing Strategies](#)





# Example Science Programs (ESPs)

## Example Science Programs:

- Example programs explained from start to finish, with accompanying ETC workbooks and APT files to get you started
- Full list on main page
- Workbooks and Files accessible in ETC and APT
- Full description of programs and how to put together your APT and ETC files within each instrument page (see following two slides)

Proposing Opportunities	
>	<a href="#">JWST Cycle 1 Proposal Opportunities</a>
>	<a href="#">JWST General Science Policies</a>
Proposal Preparation	
•	<a href="#">General Proposal Planning Workflow</a>
•	<a href="#">Understanding Exposure Times</a>
>	<a href="#">Methods and Roadmaps</a>
•	<a href="#">Example Science Programs</a>
•	<a href="#">Recommended Observing Strategies</a>
>	<a href="#">JWST Duplication Checking</a>
>	<a href="#">Observatory Functionality</a>
>	<a href="#">Observatory Hardware</a>
Proposing Tools	
>	<a href="#">JWST Exposure Time Calculator Overview</a>
>	<a href="#">JWST Astronomers Proposal Tool Overview</a>
•	<a href="#">Observation Templates</a>
•	<a href="#">ETC to APT Interface</a>
•	<a href="#">Video Tutorials</a>
>	<a href="#">Other Tools</a>

## Example Science Programs by Instrument

Program reference #	Prime Instrument(s) and Template(s)	Parallel Instrument and Template (if any)	Example Science Program Title (Links go to relevant articles.)
<b>MIRI</b>			
28	MIRI MRS	---	<a href="#">MIRI MRS Spectroscopy of a Late M Star</a>
<small>(See other MIRI examples in the Multi-instrument section.)</small>			
<b>NIRCam</b>			
22	NIRCam Imaging	MIRI Imaging	<a href="#">NIRCam Deep Field Imaging with MIRI Imaging Parallels</a>
29	NIRCam Time-Series	---	<a href="#">NIRCam Time-Series Imaging of HAT-P-18 b</a> <i>(Coming soon!)</i>
30	NIRCam Grism Time-Series	---	<a href="#">NIRCam Grism Time-Series Observations of GJ 436b</a> <i>(Coming soon!)</i>
37	NIRCam WFSS	---	<a href="#">NIRCam WFSS Deep Galaxy Observations</a> <i>(Coming soon!)</i>
<small>Page 6</small>			
<b>NIRISS</b>			
23	NIRISS AMI	---	<a href="#">NIRISS AMI Observations of Extrasolar Planets Around a Host Star</a>
31	NIRISS SOSS	---	<a href="#">NIRISS SOSS Time-Series Observations of HAT-P-1</a>
33	NIRISS WFSS	NIRCam Imaging	<a href="#">NIRISS WFSS with NIRCam Parallel Imaging of Galaxies in Lensing Clusters</a>
<b>NIRSpec</b>			
25	NIRSpec MOS	---	<a href="#">NIRSpec MOS Deep Extragalactic Survey</a> <i>(Coming soon!)</i>
32	NIRSpec BOTS	---	<a href="#">NIRSpec BOTS Observations of GJ 1214b</a> <i>(Coming soon!)</i>
34	NIRSpec IFU+FS	---	<a href="#">NIRSpec IFU and Fixed Slit Observations of Near Earth Asteroids -- Moving Target Example</a>
<b>Multi-Instrument</b>			
26	MIRI MRS, NIRSpec IFU	---	<a href="#">MIRI MRS and NIRSpec IFU Observations of Cassiopeia A</a>
27	MIRI Imaging, MIRI MRS, NIRSpec IFU	---	<a href="#">MIRI Imaging, MIRI MRS, and NIRSpec IFU Observations of SN1987A</a> <i>(Coming soon!)</i>
35	MIRI Coronagraphy, NIRCam Coronagraphy	---	<a href="#">MIRI and NIRCam Coronagraphy of the Beta Pictoris Debris Disk</a> <i>(Coming soon!)</i>



# Example Science Programs (ESPs)

APT File Edit Tools About HST Help JWST Help

New  
Open...  
Open Recent  
Retrieve from STScI  
JWST Demonstration Proposals  
JWST Example Science Proposals  
Close  
Close All  
Save  
Save As...  
Save All  
Revert  
Reveal on Desktop  
Import  
Export...  
JWST Scripting Console...  
Page Setup...  
Print

View in Aladin BOT Target Confirmation PDF Preview Submission Errors and Warnings

28 MIRI MRS Spectroscopy of a Late M Star

## Astronomer's Proposal Tools

Version 27.2

- Copyright 2002 – 2007 United States Government as represented by the Administrator of the National Aeronautics and Space Administration. All Rights Reserved.
- This software has made use of the Aladin Sky Atlas (<http://aladin.u-strasbg.fr/>) developed at the Centre de Données astronomiques de Strasbourg (CDS – <http://cdsweb.u-strasbg.fr/>)
- This software has made use of the SIMBAD database, operated at CDS, Strasbourg, France.
- This software has made use of the NASA/IPAC Extragalactic Database (NED) which is operated by the Jet Propulsion Laboratory, California Institute of Technology, under contract with the National Aeronautics and Space Administration.
- This software uses portions of the JSky library which is maintained by the European Southern Observatory.
- This product includes code licensed from RSA Data Security.
- This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

Copyright © 1999 The Apache Software Foundation. All rights reserved.

1. Redistributions of source code must retain the above copyright notice this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The end-user documentation included with the redistribution, if any, must include the following acknowledgment:  
"This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>)."

Alternately, this acknowledgment may appear in the software itself, if and wherever such third-party acknowledgments normally appear.

4. The names "Xalan" and "Apache Software Foundation" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact

Show: [ ]

No errors & warnings (Click for Details)

How to find in APT



# Example Science Program

## ▼ SOSS Time-Series Observations of HAT-P-1

- Step-by-Step ETC Guide for SOSS Time-Series Observations of HAT-P-1
- Step-by-Step PandExo Guide for SOSS Time-Series Observations of HAT-P-1
- Step-by-Step APT Guide for SOSS Time-Series Observations of HAT-P-1

**James Webb Space Telescope User Documentation**

JDox Home Quick Links ▾ Search 🔍

**Proposing Opportunities**

- JWST Cycle 1 Proposal Opportunities
- JWST General Science Policies

**Proposal Preparation**

- General Proposal Planning Workflow
- Understanding Exposure Times
- Methods and Roadmaps
- Example Science Programs
- Recommended Observing Strategies
- JWST Duplication Checking
- Observatory Functionality
- Observatory Hardware

**Proposing Tools**

- JWST Exposure Time Calculator Overview
- JWST Astronomers Proposal Tool Overview
- Observation Templates

Home / Near Infrared Imager and Slitless Spectrograph / NIRISS Example Programs / NIRISS SOSS Time-Series Observations of HAT-P-1

## NIRISS SOSS Time-Series Observations of HAT-P-1

**Example Science Program #31**

*See also: [Step-by-Step ETC Guide for NIRISS SOSS Time-Series Observations of HAT-P-1](#), [Step-by-Step PandExo Guide for NIRISS SOSS Time-Series Observations of HAT-P-1](#), [Step-by-Step APT Guide for NIRISS SOSS Time-Series Observations of HAT-P-1](#)*

This goal of this example program is to observe the exoplanet transit of HAT-P-1b, and is based on the [GTO program](#) "NIRISS Exploration of the Atmospheric diversity of Transiting exoplanets (NEAT)". NEAT is designed to study exoplanet atmospheric composition, energy budget, and dynamics.

### Step 1 - Determine the required wavelength coverage: near-infrared or mid-infrared

*Main articles: [NIRCam Grism Time Series](#), [NIRISS Single Object Slitless Spectroscopy](#), [NIRSpec Bright Object Time-Series Spectroscopy](#), [MIRI Low Resolution Spectroscopy](#)*

Five molecules of interest in exoplanet atmospheres (water, carbon monoxide, hydrogen cyanide, methane, and ammonia) are expected to show significant spectral features at near-infrared wavelengths — depending on atmospheric pressure and temperature. The signal-to-noise ratios (SNR) of the host stars is greatest at lower wavelengths, enabling better precision in the measurement of exoplanet atmospheres. We thus omit [MIRI Low Resolution Spectroscopy](#) from consideration, as well as [NIRCam Grism Time Series](#) since that only provides coverage between 2.4 - 5.0  $\mu\text{m}$ , at longer wavelengths than [NIRISS Single Object Slitless Spectroscopy](#) (SOSS) and [NIRSpec Bright Object](#)



# Proposal Workflow

## General Proposal Planning Workflow:

- Accessibly from Quick Links, Sidebar
- No single way to write a proposal
- Aims to give a recommended workflow

## Target Visibility:

- Duplication policy (don't write your proposal if you can't observe it!)
- Visibility checker (make sure your target it up!)
- Backgrounds are different in the IR!

---

### Determine if your targets can be observed

1. Check whether your target(s) is already planned to be observed. [Duplicate observations](#) are allowed only under certain circumstances.
2. If there is a specific window in which you need to observe your target, use the [Visibility Checker](#) to ensure that the target is visible by JWST during that window.
3. If you are planning to observe particularly faint targets, assess whether your observations will be [background limited](#). The [Backgrounds Tool](#) will be helpful for visualizing how the background changes over time and how significantly the target visibility is constrained by this.

---

### Use the Exposure Time Calculator to determine observing parameters

1. The [Exposure Time Calculator](#) (ETC) should be used to determine the appropriate exposure parameters (e.g., **READOUT PATTERN** and **NUMBER OF GROUPS, INTEGRATIONS, and EXPOSURES**) needed to achieve the desired signal-to-noise ratio for your target. [Video tutorials](#) and a [new user guide for the ETC](#) are available to help you get started with the ETC.
2. Define your source(s) and scene(s) in the ETC.
3. Select an instrument and observing mode in the ETC.
4. Select instrument parameters within the instrument configuration pane on the [ETC calculation page](#).
5. Run an [ETC calculation](#) on your defined scene.
6. Adjust the exposure time via the **NUMBER OF GROUPS, INTEGRATIONS, and/or EXPOSURES** until you obtain your desired signal-to-noise ratio (SNR):
  1. The instrument-specific observing strategies provide recommendations for how to split exposure time into **NUMBER OF GROUPS, INTEGRATIONS, and EXPOSURES**, based on *observing mode, science use case, avoiding saturation, and minimizing cosmic ray hits* on the detector.
  2. [ETC batch expansion](#) is an efficient way to determine the SNR for a range of possible values for a given exposure parameter.



# Proposal Workflow

## General Proposal Planning Workflow:

- Accessibly from Quick Links, Sidebar
- No single way to write a proposal
- Aims to give a recommended workflow

## ETC:

- Determine your exposure parameters
- You'll have a whole session on this

---

### Determine if your targets can be observed

1. Check whether your target(s) is already planned to be observed. [Duplicate observations](#) are allowed only under certain circumstances.
2. If there is a specific window in which you need to observe your target, use the [Visibility Checker](#) to ensure that the target is visible by JWST during that window.
3. If you are planning to observe particularly faint targets, assess whether your observations will be [background limited](#). The [Backgrounds Tool](#) will be helpful for visualizing how the background changes over time and how significantly the target visibility is constrained by this.

---

### Use the Exposure Time Calculator to determine observing parameters

1. The [Exposure Time Calculator](#) (ETC) should be used to determine the appropriate exposure parameters (e.g., **READOUT PATTERN** and **NUMBER OF GROUPS, INTEGRATIONS, and EXPOSURES**) needed to achieve the desired signal-to-noise ratio for your target. [Video tutorials](#) and a [new user guide for the ETC](#) are available to help you get started with the ETC.
2. Define your source(s) and scene(s) in the ETC.
3. Select an instrument and observing mode in the ETC.
4. Select instrument parameters within the instrument configuration pane on the [ETC calculation page](#).
5. Run an [ETC calculation](#) on your defined scene.
6. Adjust the exposure time via the **NUMBER OF GROUPS, INTEGRATIONS, and/or EXPOSURES** until you obtain your desired signal-to-noise ratio (SNR):
  1. The instrument-specific observing strategies provide recommendations for how to split exposure time into **NUMBER OF GROUPS, INTEGRATIONS, and EXPOSURES**, based on *observing mode, science use case, avoiding saturation, and minimizing cosmic ray hits* on the detector.
  2. [ETC batch expansion](#) is an efficient way to determine the SNR for a range of possible values for a given exposure parameter.



# Proposal Workflow

## General Proposal Planning Workflow:

- Accessibly from Quick Links, Sidebar
- No single way to write a proposal
- Aims to give a recommended workflow

## APT:

- Convert your ETC numbers into an APT file
- You'll have a whole session on this

## Prepare your proposal in the Astronomers' Proposal Tool

1. The Astronomers' Proposal Tool (APT) is used to set up your observing program and submit your proposal. [Training examples and video tutorials](#) are available to help you get started.
2. Fill out your [proposal information in APT](#), e.g., **Title, Abstract, Proposal Category, Science Keywords**, etc.
3. Enter your proposed [target\(s\)](#) (or **OFFSET** targets if required for your observing case). Note: for the special case of the NIRSpec multi-object spectroscopy mode, targets are not input directly, but are created by the [NIRSpec MSA Planning Tool \(MPT\)](#). If using this **OBSERVING MODE**, make sure to read the extensive MPT documentation.
4. Define your observing parameters in the [APT Observation Template\(s\)](#) relevant for your chosen instrument(s) and **OBSERVING MODE(s)**. Here you would enter the exposure specifications (i.e., **NUMBER OF GROUPS, INTEGRATIONS, and EXPOSURES**) that you determined via the ETC. If desired, add cross references to your relevant ETC workbook in the "ETC *wkbk. calc*" field (strongly recommended if your program requires a target acquisition).
5. Make sure to define any [special requirements](#) (e.g., timing constraints, moving target, background limited observation).
6. Run the [Visit Planner](#) to ensure your observations are schedulable, and resolve any errors.
7. Run [Smart Accounting](#) to determine whether overheads associated with your program can be minimized.
8. Complete and attach the PDF of your science justification to your APT template.
9. If APT reveals no errors with your observing program, [submit your proposal!](#)



# APT Observation Templates

## APT Observation Templates:

- Set of instructions for each instrument observing mode
- Defines each template variable
- Offers related links and advice for making decisions

The screenshot shows the APT Observation Templates website. On the left is a navigation sidebar with sections: Proposing Opportunities, Proposal Preparation, Proposing Tools, Instruments, and Data. The main content area has a header 'APT Observation Templates' and a sub-header 'JWST observations of a given target are planned in APT using observation templates for a given JWST instrument and observing mode.' Below this is a box titled 'On this page' containing a list of links: MIRI APT Templates, NIRCcam APT Templates, NIRSpec APT Templates, NIRISS APT Templates, and Creating Coordinated Science Parallel Observations. Further down, there is a paragraph explaining that observations are specified in the Astronomers Proposal Tool (APT) by selecting a target and an instrument observing mode. Below this are three sections: 'MIRI APT Templates' with four links, 'NIRCcam APT Templates' with five links, and 'NIRSpec APT Templates' with five links.

Home / APT Observation Templates

## APT Observation Templates

JWST observations of a given target are planned in APT using observation templates for a given JWST instrument and observing mode.

**On this page**

- [MIRI APT Templates](#)
- [NIRCcam APT Templates](#)
- [NIRSpec APT Templates](#)
- [NIRISS APT Templates](#)
- [Creating Coordinated Science Parallel Observations](#)

Observations are specified in the Astronomers Proposal Tool, APT, by selecting a target and an instrument observing mode. Each observing mode has a corresponding APT template that allows the user to specify parameters appropriate to that mode of operation. A JWST observing proposal is a set of observations specified by filling out one or more of these templates in APT. A proposal may call for multiple templates from any of the four JWST instruments, depending on the science goals of the program. Separate observations must be specified when using different JWST instruments or observing modes for a given target, except when used in coordinated science parallels.

### MIRI APT Templates

- [MIRI Imaging APT Template](#)
- [MIRI LRS APT Template](#)
- [MIRI MRS APT Template](#)
- [MIRI Coronagraphic Imaging APT Template](#)

### NIRCcam APT Templates

- [NIRCcam Imaging APT Template](#)
- [NIRCcam Coronagraphic Imaging APT Template](#)
- [NIRCcam Time-Series APT Template](#)
- [NIRCcam Grism Time-Series APT Template](#)
- [NIRCcam Wide Field Slitless Spectroscopy APT Template](#)

### NIRSpec APT Templates

- [NIRSpec Multi-Object Spectroscopy APT Template](#)
  - [MOS Roadmap](#)
  - [NIRSpec MSA Planning Tool, MPT](#)
- [NIRSpec IFU Spectroscopy APT Template](#)
- [NIRSpec Fixed Slit Spectroscopy APT Template](#)
  - [NIRSpec FS and IFU Mosaic APT Guide](#)
- [NIRSpec Bright Object Time-Series APT Template](#)



# APT Observation Templates

## APT Observation Templates:

- Set of instructions for each instrument observing mode
- Defines each template variable
- Offers related links and advice for making decisions

The screenshot shows a web page titled "MIRI Imaging APT Template". The page has a navigation menu on the left with categories: "Proposing Opportunities", "Proposal Preparation", "Proposing Tools", and "Instruments". The "Instruments" section is expanded to show "Mid Infrared Instrument", which includes "Observing Modes", "Instrumentation", "Operations", "Predicted Performance", and "APT Templates". The "APT Templates" sub-section is further expanded to show "Imaging APT Template".

The main content area of the page includes a breadcrumb trail: "Home / Mid Infrared Instrument / MIRI APT Templates / MIRI Imaging APT Template". Below this is the title "MIRI Imaging APT Template" and a small icon of the JWST. The text reads: "Instructions for filling out the [APT MIRI Imaging](#) template, including full field imaging, [subarray](#) imaging, and large imaging mosaics".

A box titled "On this page" contains a list of links: "Step-by-step APT instructions" (with sub-links for "Generic", "Imaging parameters - coordinated parallel" (with sub-links for "Subarray", "Dithers", "Filters", "Readout pattern", "Number of groups and integrations"), "Other tabs" (with sub-links for "Mosaic properties", "Special requirements", "Comments").

The main text explains that "Imaging is one of four observing modes available with the Mid-Infrared Instrument (MIRI). For standard imaging, the MIRI imager offers [nine broad-band filters](#) centered on wavelengths between 5.6 and 25.5  $\mu\text{m}$  over an unobstructed field-of-view of up to 74"  $\times$  113" and a detector plate scale of 0.11"/pixel. The MIRI standard imaging mode supports the use of detector [subarrays](#) for bright targets as well as a variety of [dither patterns](#), which may act to improve sampling at the shortest wavelengths, remove detector artifacts and cosmic ray hits, and facilitate self-calibration. The [APT mosaicking tool](#) can be used to design mosaic observations to image larger fields.

The text continues: "The observer will have control over four primary parameters for MIRI Imaging:" followed by a numbered list: 1. filter, 2. dithering pattern, 3. subarray, 4. detector read out mode and exposure time (via the number of groups, integrations, and exposures). It concludes: "Allowed values are documented and maintained in the [MIRI Imaging Template parameters](#), but described below."

At the bottom of the page, there is a section titled "Step-by-step APT instructions" with a sub-section for "Generic" parameters. The text states: "The following parameters are generic to all templates, and are not discussed in this article: [Observation Number](#), [Observation Label](#), [Observations Comments](#), [Target Name](#), [ETC Workbook Calculation ID](#), [Mosaic Properties](#), and [Special Requirements](#)."

The final section is titled "Imaging parameters - coordinated parallel".





# Context Sensitive Help in APT

The screenshot displays the Astronomer's Proposal Tools (APT) interface for editing a JWST Draft Proposal. The main window is titled "Observation 1 of JWST Draft Proposal (Unsaved)". A red oval highlights the left sidebar, which contains a tree view of the proposal structure: "JWST Draft Proposal (Unsaved)" > "Proposal Information" > "Targets" > "Observations" > "Observation Folder" > "Observation 1".

The main form area shows the configuration for "Observation 1". The fields are as follows:

- Number: 1
- Status: UNKNOWN
- Duplication:
- Label: (empty)
- Instrument: MIRI
- Template: MIRI Imaging
- Coordinated Parallel:
- Target: None Selected
- Visit Splitting: 5.0 Arcsec
- Splitting Distance: (empty)
- Number of Visits: 1
- Duration (secs): 0
- Science: (empty)
- Total Charged: 2476
- Data Volume: 45 MB

Below the form, there are tabs for "MIRI Imaging" (selected), "Mosaic Properties", "Special Requirements", and "Comments".

The "Subarray" section shows "None Selected".

The "Dithers" section contains a table with the following columns: #, Dither Type, Starting Point, Number of Points, Points, Starting Set, Number of Sets, Optimized For, Direction, Pattern Size. Below the table are buttons for "Add", "Duplicate", "Insert Above", and "Remove".

The "Filters" section contains a table with the following columns: #, Filter, Readout Pattern, Groups/Int, Integrations/Exp, Exposures/Dith, Dither, Total Dithers, Total Integrations, Total Exposure T..., ETC Wbk.Calc ID, ETC. Below the table are buttons for "Add", "Duplicate", "Insert Above", and "Remove".

At the bottom of the interface, there are buttons for "Edit Observation Folder", "New", and "Edit Observation Links". A status bar at the bottom right indicates "15 errors & warnings (Click for Details)".



## Video Tutorials

### Video Tutorials:

- Helps to visualize some of the more difficult techniques in APT and ETC
- You can visit the master list here:

<https://jwst-docs.stsci.edu/video-tutorials>

- Video help is linked directly into many articles where it is relevant. Look for the JWST Video icon:



#### Proposing Opportunities

- > [JWST Cycle 1 Proposal Opportunities](#)
- > [JWST General Science Policies](#)

#### Proposal Preparation

- [General Proposal Planning Workflow](#)
- [Understanding Exposure Times](#)
- > [Methods and Roadmaps](#)
- [Example Science Programs](#)
- [Recommended Observing Strategies](#)
- > [JWST Duplication Checking](#)
- > [Observatory Functionality](#)
- > [Observatory Hardware](#)

#### Proposing Tools

- > [JWST Exposure Time Calculator Overview](#)
- > [JWST Astronomers Proposal Tool Overview](#)
- [Observation Templates](#)
- [ETC to APT Interface](#)
- **[Video Tutorials](#)**
- > [Other Tools](#)

Home / Video Tutorials

## Video Tutorials



This article provides a complete tabular listing of all of the JWST video help and tutorials that are available on all topics. The JWST-specific videos are hosted on the [JWST Observer YouTube channel](#). Also, some generic legacy video help is provided in a separate table below. Links to many of these resources are also linked directly into JDox articles at the point of need.

#### On this page

- [YouTube Features](#)
- [Master list of available video help on JWST Observer Channel](#)
  - [JDox Overview](#)
  - [APT and Aladin Video help](#)
  - [ETC Video Help](#)
  - [NIRSpec Tools Video Help](#)
- [List of available Legacy video help \(hosted locally at STScI\)](#)
  - [Legacy APT and Aladin Video help \(produced for HST but with some application to JWST users\)](#)

*See also: [Exposure Time Calculator](#) and [JWST Astronomers Proposal Tool Overview](#)*

*See also: [The JWST Observer YouTube channel](#) (linked outside of JDox)*

⚠ Due to the dynamic development environment and the effort required to remake videos, you might see small differences between the displays in some help videos relative to the released versions of the tools. Most of the help being provided in the videos is general in nature and does not depend on the specific tool versions. If you detect any serious problems due to versions that would cause a video to be incorrect, please help us by contacting the [JWST Help Desk](#).

The Tables below include links to both videos that have been posted to the [JWST Observer YouTube channel](#) as well as existing video help (made for HST, but with relevance to JWST) that are still hosted locally at STScI. These Legacy Videos are listed in a separate Table toward the bottom of this page.

Video help is linked directly into many articles where it is relevant. Look for the JWST Video icon:





# Video Tutorials

## Master list of available video help on JWST Observer Channel

The following Table lists the video tutorial help being prepared in support of Cycle 1 of JWST along with short descriptions for each video. Links on the video titles in the first column will connect you to each video directly. (If a title is not linked, the video has not been posted yet--stay tuned!)

Note: The [JWST Observer YouTube channel](#) also hosts Webinars, recorded JWST Town Halls from AAS meetings, and other recordings not listed here. When you go to the JWST Observer channel, be sure to SUBSCRIBE to see updates.

JDOx Overview		
	Length	Description
<a href="#">JWST Documentation Overview</a>	7:00	This video provides a brief introduction to the JWST User Documentation System, including tips on navigation and searching.
APT and Aladin Video help		
	Length	Description
<a href="#">APT GUI Overview</a>	5:07	This video walks through the basics of the APT user interface and describes each of the tools within APT that are needed to prepare and submit JWST proposals.
<a href="#">APT Visit Planner</a>	8:50	This video provides examples of various tasks performed with the Visit Planner tool within APT, including the use of diagnostics to fix various problems you may encounter. It concludes with an example of running Smart Accounting to minimize overheads in your proposal.
<a href="#">Adding Special Requirements in APT</a>	5:45	This video provides examples of entering and editing Special Requirements in APT, including for both fixed and moving targets.
<a href="#">Specifying Mosaics in APT</a>	3:41	This video demonstrates the ways of defining and manipulating mosaics within APT. Advanced sections include adding and removing tiles from a mosaic as well as other special cases.
<a href="#">APT Errors and Warnings</a>	3:06	This video highlights the various ways you can get diagnostic information about errors and warnings in APT as you develop a proposal for submission.
<a href="#">APT Graphical Timeline</a>	6:21	This video describes the functionality of the graphical timeline tool within APT.
<a href="#">Aladin Overview in APT</a>	9:14	This video walks through the basic functionality of the Aladin visualization tool within the APT environment, and provides several examples of interactions between Aladin and APT itself.
<a href="#">Using Aladin and APT Visit Planner</a>	5:00	This video shows how Aladin and the Visit Planner in APT can be used together to help prepare your proposal.
ETC Video Help		

ETC Video Help		
	Length	Description
<a href="#">ETC Home Page Overview</a>	3:49	This video provides a good entry point for learning how to use the JWST Exposure Time Calculator (ETC). It presents the different options available on the home page for working in the ETC and provides guidance for obtaining additional information.
<a href="#">ETC General Overview</a>	5:51	This video is a walkthrough that briefly presents the capabilities and layout of the JWST Exposure Time Calculator (ETC).
<a href="#">ETC Workbooks</a>	4:36	This video discusses how to create a new ETC workbook, load existing example workbooks to use as starting point, and share ETC workbooks with other MyST users and collaborators.
<a href="#">ETC Scenes and Sources</a>	6:27	This video demonstrates how to create scenes, add sources, and modify sources as part of performing calculations in the ETC.
<a href="#">ETC Backgrounds</a>	3:15	This video describes the various ways to specify a background in the ETC.
<a href="#">Adding Emission Lines in the ETC</a>	2:52	This video describes the process of adding, updating, and removing emission lines to a source continuum in the ETC.
<a href="#">Uploading Spectra to the ETC</a>	3:40	This video describes how to upload user-supplied spectra to the ETC, including the proper file format to use.
<a href="#">ETC Batch Expansions</a>	4:50	This video describes how to use the batch expansion feature to quickly explore a range of instrument or exposure parameters in the ETC.
<a href="#">ETC IFU Strategies</a>	3:52	This video describes the two observing strategies for the MIRI MRS and NIRSpec IFU backgrounds and how to quickly fix errors when switching strategies in the ETC.
NIRSpec Tools Video Help		
	Length	Description
<a href="#">NIRSpec Observation Visualization Tool</a>	4:24	This video demonstrates use of the NOVt, which is used for planning NIRCам pre-imaging observations for NIRSpec MSA. The tool allows the user to visualize the NIRCам field of view with various dither patterns relative to the NIRSpec MSA footprint.

## List of available Legacy video help (hosted locally at STScI)

Here are the links and short descriptions for each video. URLs are encoded in the first column.

Legacy APT and Aladin Video help (produced for HST but with some application to JWST users).		
	Length	Description
<a href="#">The Differencing Tool</a>	5:30	This tutorial describes using the differencing tool in APT to compare two proposals. It was made for HST but has relevance to JWST users.
<a href="#">Using the Find feature</a>	3:30	This tutorial describes how to use the "Find" functionality in APT. It was made for HST but has relevance to JWST users.
<a href="#">How to retrieve minor body orbital elements from Horizons</a>	2:30	This tutorial demonstrates accessing orbital elements for known moving targets from within APT. It was made for HST but works exactly the same way for JWST.
<a href="#">How to use the MAST Portal from APT</a>	7:00	This tutorial demonstrates how to access and use the MAST Discovery Portal interface from APT. It was made for HST but works exactly the same way for JWST.
<a href="#">Using the Aladin Multiview Function</a>	1:30	This video demonstrates the multiview functionality of Aladin.
<a href="#">Making APT Target Confirmation Charts</a>	4:13	This video shows how to use APT to make target confirmation charts.

A full list of help videos.

Also JWST Observer YouTube channel:

<https://www.youtube.com/jwstobserver>



# Search and Targeted Search

## Refined Search:

- If you can't find a page on the topic you are looking for, you can use the search bar
- There are often a lot of returns, since search doesn't have any weighting
- To refine the search, all articles have tags that help sort by subject matter on the left hand sidebar (like Amazon!)
- You can also use Google

**Search**    
- Use advanced search syntax

REFINE YOUR RESULTS  
[Collapse All](#) [Expand All](#)

DATA PROCESSING  Calibration  
 Data Files  
 Mikulski Archive for Space Telescopes (Data Archive)  
 Pipeline  
 Software

HARDWARE  Detector  
 Filters  
 Grism  
 Mask  
 Optics  
 Readout Pattern  
 Subarray

INSTRUMENT  MIRI  
 NIRCam  
 NIRISS  
 NIRSpec

OBSERVATORY  Background  
 Coordinate System  
 Field of View  
 Fine Guidance Sensor  
 On Board Data Storage  
 Overhead  
 Spacecraft  
 Telescope

OBSERVING COOKBOOKS  Best Practices

JTI  JPP  JDAT  JSP  HOM  Pages

Showing 1-10 of 197 for MIRI Imaging

- MIRI Imaging**  
The **imaging** mode for JWST's MidInfrared Instrument (MIRI) offers nine broadband filter Observing Modes See also: **MIRI Imaging Template APT Guide For Imag...**  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI MRS Simultaneous Imaging**  
Simultaneous use of the JWST **MIRI imager** and the medium resolution spectrometer (MIRI) in the **imager** field will result in more accurate data cube constru...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Recommended Strategies**  
This page gives recommendations that, together with the **MIRI Generic Recommended Str...** observations. Note that these are prelaunch recommendations (as of November 20...  
JWST Observation Planning Apr 03, 2018
- MIRI Imaging TSOs**  
JWST **MIRI** currently has limited support for timeseries observations (TSOs) with the **ima...** has limited support for high precision **imaging** photometry in timeserie...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Mosaics**  
The **imaging** mode for JWST's MidInfrared Instrument (MIRI) offers a mosaicking option: mode Parent pages: **MIRI Operations** → **MIRI Mosaics** JWST mosaics...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Target Acquisition**  
Target acquisition (TA) is generally not required for **MIRI imaging** observations. For the s... desired. Target acquisition for **MIRI imaging** currently...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Dithering**  
The JWST **MIRI imaging** mode provides dither templates for both point and extended so... Recommended Strategies: Dithering, JWST Dithering Overview For most **MIRI imaging**s  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Template APT Guide**  
This page contains instructions for filling out the APT **MIRI imaging** template, including f... observing modes available with the MidInfrared Instrument (MIRI)...  
JWST Observation Planning Apr 03, 2018
- JWST Imaging**  
Several JWST instruments have **imaging** capabilities, covering different fields of view and

**Search**    
- Use advanced search syntax

REFINE YOUR RESULTS  
[Collapse All](#) [Expand All](#)

DATA PROCESSING  Calibration  
 Data Files  
 Mikulski Archive for Space Telescopes (Data Archive)  
 Pipeline  
 Software

HARDWARE  Detector  
 Filters  
 Grism  
 Mask  
 Optics  
 Readout Pattern  
 Subarray

INSTRUMENT  MIRI  
 NIRCam  
 NIRISS  
 NIRSpec

OBSERVATORY  Background  
 Coordinate System  
 Field of View  
 Fine Guidance Sensor  
 On Board Data Storage  
 Overhead  
 Spacecraft  
 Telescope

OBSERVING COOKBOOKS  Best Practices

JTI  JPP  JDAT  JSP  HOM  Pages  MIRI  Imaging

Showing 1-10 of 22 for MIRI Imaging

- JWST Imaging**  
Several JWST instruments have **imaging** capabilities, covering different fields of view ar... JWST TimeSeries Observations, JWST HighContrast **imaging** The avail...  
JWST Observation Planning Apr 03, 2018
- MIRI Imaging**  
The **imaging** mode for JWST's MidInfrared Instrument (MIRI) offers nine broadband fil... Observing Modes See also: **MIRI Imaging Template APT Guide For Imag...**  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI MRS Simultaneous Imaging**  
Simultaneous use of the JWST **MIRI imager** and the medium resolution spectrometer (MIRI) in the **imager** field will result in more accurate data cube constru...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Recommended Strategies**  
This page gives recommendations that, together with the **MIRI Generic Recommended !** observations. Note that these are prelaunch recommendations (as of November 20...  
JWST Observation Planning Apr 03, 2018
- MIRI Imaging TSOs**  
JWST **MIRI** currently has limited support for timeseries observations (TSOs) with the **im...** has limited support for high precision **imaging** photometry in timeserie...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Mosaics**  
The **imaging** mode for JWST's MidInfrared Instrument (MIRI) offers a mosaicking opti... mode Parent pages: **MIRI Operations** → **MIRI Mosaics** JWST mosaics...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Target Acquisition**  
Target acquisition (TA) is generally not required for **MIRI imaging** observations. For th... desired. Target acquisition for **MIRI imaging** currently...  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Dithering**  
The JWST **MIRI imaging** mode provides dither templates for both point and extended : Recommended Strategies: Dithering, JWST Dithering Overview For most **MIRI imagin**  
JWST Observatory and Instrumentation Apr 03, 2018
- MIRI Imaging Template APT Guide**  
This page contains instructions for filling out the APT **MIRI imaging** template, includi...



# JDox Summary

---

Progress: [jwst-docs.stsci.edu](http://jwst-docs.stsci.edu) is now live! (>700 articles published!)

Published:

- ✓ GTO Call for Proposals
- ✓ DD-ERS Call for Proposals
- ✓ Cycle 1 GO Call for Proposals (*updated info soon!*)

Content Includes:

- ✓ Instrument Documentation
- ✓ Pipeline Documentation
- ✓ Proposal Workflow
- ✓ Context Sensitive Help
- ✓ ETC, APT, Other Tools
- ✓ Context Sensitive Help
- ✓ Science Use Cases
- ✓ Observing Techniques and Strategies
- ✓ Instrument Best Practices
- ✓ Reduction Pipeline
- ✓ Instructional Help Videos

comments / feedback?  
JWST help desk user forum:  
[jwsthelphelp.stsci.edu](http://jwsthelphelp.stsci.edu)



# JWST Help Desk

---

Stacey Bright

JWST Master Class

November 2019



jwsthhelp.stsci.edu

Login

# Welcome to the James Webb Space Telescope Help Desk

Use MyST account



## Request a MyST Account

Please register to gain full access to the James Webb Space Telescope Help Desk. Without an account you may still search the knowledge base but you will not be able to submit requests or questions.



# JWST Help Desk

[jwsthelphelp.stsci.edu](http://jwsthelphelp.stsci.edu)

- Search for answers via JDOx integration and specially written articles unique to the Help Desk
- Links, news, and announcements updated frequently
- Ask a question to be answered by an STScI fulfiller

The screenshot shows the JWST Help Desk website. At the top, there is a navigation bar with the STScI logo, the text "JWST Help Desk", and links for "Knowledge", "My Open Tickets" (with a count of 18), and the user name "Stacey Bright". The main content area has a yellow background with a grid pattern and the heading "How can we help?". Below the heading is a search bar with the text "Search JWST Knowledge Base and Documentation System (JDOX)" and a search input field containing "How can we help?". Below the search bar are two main sections: "Knowledge Base" with a green icon and the text "Browse our Frequently Asked Questions, Release Notes, and Known Issues", and "Get Help" with a yellow icon and the text "Contact support to make a request, or report a problem". At the bottom, there are three columns of content: "Announcements" with a link "ETC 1.4 released!" and a date "9d ago"; "Helpful Links" with links to "James Webb Space Telescope" and "JWST User Documentation (JDOx)"; and "My Requests" with a link "Service Now sending duplicate emails" and details "INC0135754 • 2mo ago • Request".





# JWST Help Desk – Searching

## 1. Search:

- Returns both JDox and Knowledge Base articles



How can we help?

Search JWST Knowledge Base and Documentation System (JDOX)

How can we help?

**Knowledge Base**  
Browse our Frequently Asked Questions, Release Notes, and Known Issues

**Get Help**  
Contact support to make a request, or report a problem

**Announcements**

ETC 1.4 released!  
📅 9d ago

**Helpful Links**

[James Webb Space Telescope](#)

[JWST User Documentation \(JDox\)](#)

**My Requests**

Service Now sending duplicate emails  
INC0135754 • 2mo ago • Request



# JWST Help Desk – Searching

## 1. Search:

- Results show JDOx articles first

The screenshot shows the STScI JWST Help Desk interface. At the top, there is a navigation bar with the STScI logo and the text 'JWST Help Desk'. On the right side of the navigation bar, the word 'Knowledge' is partially visible. Below the navigation bar, there is a breadcrumb trail: 'Home > Search'. On the far right, there is a search input field containing the text 'APT MIRI'. A dropdown menu is open on the left side, showing a list of categories: 'All', 'Knowledge Base', 'Questions and Answers', 'Service Catalog', and 'JDOX Confluence'. The 'All' category is highlighted with a pink border. The main content area displays search results for 'APT MIRI'. The first two results are 'APT Instructions for MIRI and NIRSpec SN 1987A Observations', with the first one being a blue link. The third result is 'MIRI Imaging APT Template', with a blue link. The fourth result is 'MIRI MRS APT Template', with a blue link.



# JWST Help Desk – Searching

## 1. Search:

- Results show JDOx articles first
- Use sidebar tree to filter for Knowledge Base and other articles
  - Knowledge Base articles updated frequently and answer FAQ or provide helpful tips (whereas JDOx articles freeze, these are flexible)

The screenshot displays the STScI JWST Help Desk interface. At the top, the STScI logo and 'JWST Help Desk' are visible. A search bar contains the text 'APT MIRI'. Below the search bar, a breadcrumb trail shows 'Home > Search'. A sidebar navigation menu on the left lists categories: 'All', 'Knowledge Base' (highlighted with a red box), 'Questions and Answers', 'Service Catalog', and 'JDOX Confluence'. The main content area shows search results for 'APT MIRI'. The first result is 'APT - MIRI Questions', with a snippet: 'APT - MIRI Questions 1. Why do I get three visits instead of one when I do a MIRI MRS mo: software limitation in the way MRS mosaics are implemented. MIRI MRS Article: KB0010020 · Published: 2y ago'. The second result is 'APT - Release Notes', with a snippet: 'APT 27.1 contains the following change you should be aware of: Graphical Timeline tool timing (modeled on the HST Orbit Planner's time line). APT 26.1 contain Article: KB0011960 · Published: 22d ago'. A third section titled 'Read these recent Knowledge Base articles' contains a snippet: 'Many Knowledge Base articles have been written recently to address Frequently Asked ( and date. The full list of articles is also available at https://stsci.s Article: KB0010620 · Published: about a year ago'.



# JWST Help Desk – Getting help

## 2. Get Help:

- Ask a question

**How can we help?**

Search JWST Knowledge Base and Documentation System (JDOX)

How can we help?

**Knowledge Base**  
Browse our Frequently Asked Questions, Release Notes, and Known Issues

**Get Help**  
Contact support to make a request, or report a problem

**Announcements**  
ETC 1.4 released!  
9d ago

**Helpful Links**  
[James Webb Space Telescope](#)  
[JWST User Documentation \(JDOX\)](#)

**My Requests**  
Service Now sending duplicate emails  
INC0135754 • 2mo ago • Request



# JWST Help Desk – Getting help

## 2. Get Help:

- Ask a question
- Many cards in the catalog to choose from to expedite service
- Or if uncertain choose “General Support”

James Webb Help Desk

Categories

James Webb Help Desk 15

**APT Support**  
Request assistance with the Astronomer's  
View Details

**Constraints & Scheduling**  
Ask questions about schedulability and  
View Details

**ETC Support**  
Request assistance with the Exposure Time Calculator  
View Details

**JWST Science Policies**  
Request assistance for Science Policy Issues.  
View Details

**JWST SN Requests & Issues**  
Submit JWST Requests and Issues related to  
View Details

**MAST Services**  
Information about the MAST Archive  
View Details

**MIRI Support**  
Request assistance with the Mid-Infrared Instrument  
View Details

**NIRCam Support**  
Request assistance with the Near-Infrared Camera  
View Details

**NIRISS Support**  
Request assistance with the Near-Infrared Imager and  
View Details

**NIRSpec Support**  
Request assistance with the Near-Infrared  
View Details

**Office of Public Outreach**  
Contact the STScI Office of Public Outreach about  
View Details

**Pipeline Support**  
Request assistance with the JWST pipeline  
View Details

**Solar System Observing**  
Ask questions about proposal writing for solar  
View Details

**WebbPSF / JWST Telescope**  
Request assistance with the WebbPSF tool or the  
View Details

**JWST General Support**  
Request general JWST support for issues not covered  
View Details



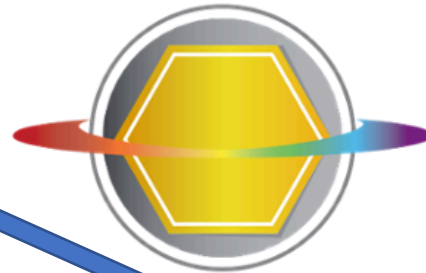
# JWST Help Desk – Getting help

## 2. Get Help:

- Card specific information/description
- Includes link to Known Issues, FAQ, videos, JDox

### ETC Support

Request assistance with the Exposure Time Calculator (ETC)



**The JWST ETC uses preliminary calibrations to estimate integration times and signal-to-noise ratio for common modes of observation.**

Typical requests include issues with:

- Problem reports
- Interpretation of results
- Advice in specifying inputs
- Help with user interface
- ETC/APT

Please include the workbook id and the affected calculation id(s), if any.

If reporting a problem, please include the date and time that the problem occurred, as well as the web browser, browser version, and operating system. This will assist us in investigating the problem.

Useful links:



- [ETC JDox Pages](#)
- [ETC Video Tutorials on YouTube](#)
- [ETC Known Issues](#)
- [ETC FAQs](#)

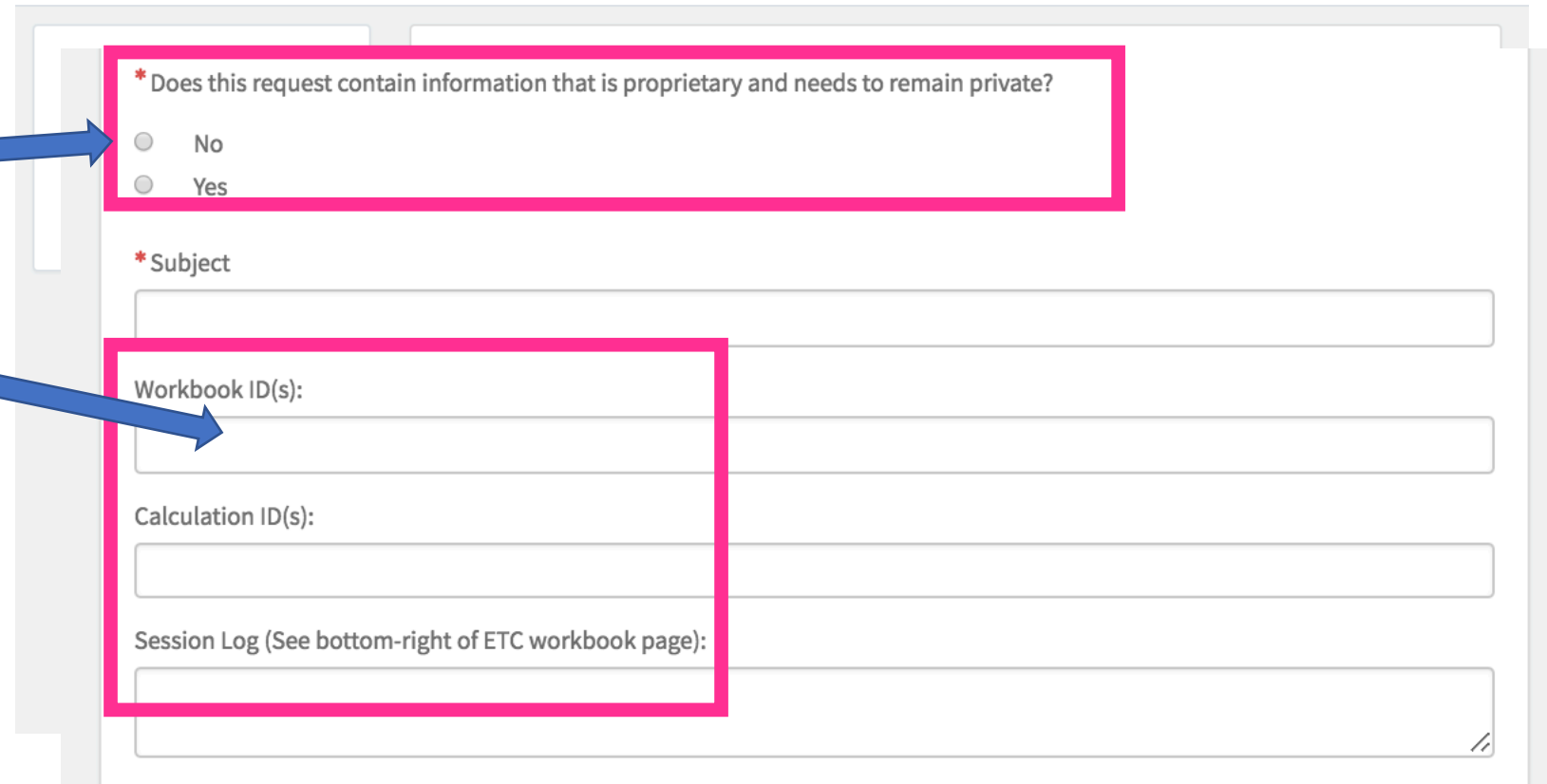
General questions and user feedback are also welcome.



## JWST Help Desk – Getting help

### 2. Get Help:

- General Information/Description
- Proprietary? 
- Catalog Specific Information
  - Workbook ID, draft APT proposal, etc.
  - Allows us to answer the question more quickly if we have this information 
  - Most important for APT and ETC questions



\* Does this request contain information that is proprietary and needs to remain private?

No  
 Yes

\* Subject

Workbook ID(s):

Calculation ID(s):

Session Log (See bottom-right of ETC workbook page):



# JWST Help Desk – Getting help

## 2. Get Help:

- General Information/Description
- Proprietary?
- Catalog Specific Information
  - Workbook ID, etc
- **Add collaborators**
- **Add attachments**

The screenshot shows a web form with the following elements:

- A text input field labeled "\*Description".
- A text input field labeled "Email addresses of others to be notified of updates to this record:" which is highlighted with a pink box. A blue arrow points from the "Add collaborators" list item to this field.
- A note below the second field: "Please provide a comma separated list of email addresses to be added to the watch list. These addresses will be e-mailed each time a new comment has been made to this record."
- A blue "Submit" button.
- An "Add attachments" button with a paperclip icon, highlighted with a pink box. A blue arrow points from the "Add attachments" list item to this button.

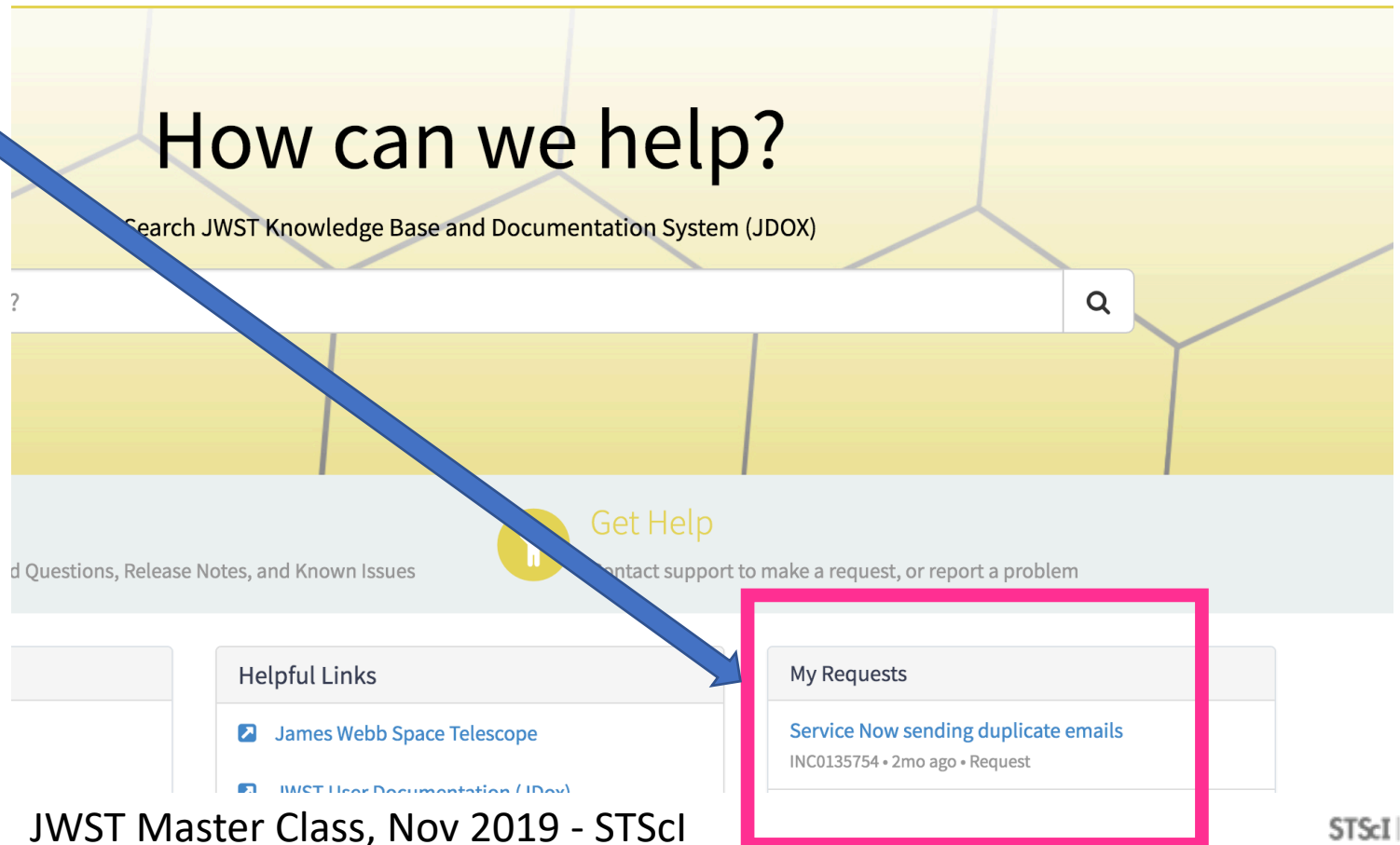
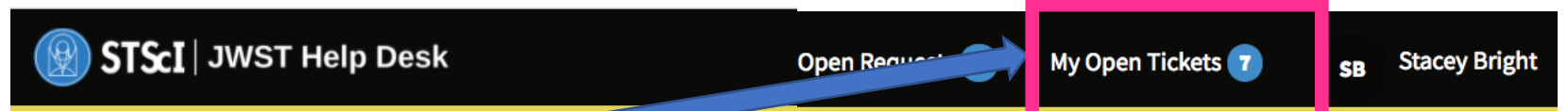




# JWST Help Desk – Answers

## 3. Answers:

- Viewable within Help Desk via “My Open Tickets” tab or home page
- Also sent via email





# JWST Help Desk – Answers



STScI | JWST Help Desk

Open Requests 2

My Open Tickets 7

SB Stacey Bright

## 3. Answers:

- Viewable within Help Desk via “My Open Tickets” tab or home page
- Also sent via email
- Answers shown in chat format



The screenshot shows a chat interface with a dark header bar. The chat history includes:

- A message from Jessica Hale-Lynch (JH) dated 10d: "Hello Stacey, In revieweing our previous changes to ServiceNow, we have realized that Closure Codes can be updated, similar to Subcategories, without the need for an RFC. So - I will be working on Dev and Test to get these in the correct place, and limited to the correct group. Once that is tested thoroughly, I will update you, and put these into place on Thursday evening, when I am doing other work with ServiceNow after hours. If this is acceptable, please let me know. Thanks, Jessie Lynch". This message is highlighted with a pink border.
- A message from Stacey Bright (SB) dated 2mo: "Can we please add two new closure codes 1. Solved (using JDoX article) 2. Solved (needs JDoX article)".
- A message from Stacey Bright (SB) dated 2mo: "INC0018602 Created".
- A "Start" button at the bottom.



# JWST Help Desk – Answers

Knowledge

My Open Requests 2

My Open Tickets 7

## 3. Answers:

- Viewable within HelpDesk via “My Open Tickets” tab or home page
- Also sent via email
- Answers shown in chat format
- Shows fulfiller when assigned
- Add collaborators after submitting
- Upload more attachments

The screenshot shows a ticket interface with several highlighted sections:

- Agent working on this Incident:** A blue box highlights the text "Agent working on this Incident: Jessica Hale-Lynch". A blue arrow points from the list item "Shows fulfiller when assigned" to this box.
- Add to Watchlist:** A blue box highlights the "Add to Watchlist" section, which includes a text input field for "Enter an email address to follow" and an "Add" button. A blue arrow points from the list item "Add collaborators after submitting" to this box.
- Attachments:** A blue box highlights the "Attachments" section, which includes a paperclip icon and the text "Drop files here". A blue arrow points from the list item "Upload more attachments" to this box.

Other visible text in the screenshot includes:

- Number: INC0018602
- State: Customer Scheduled
- Created: 2mo
- Updated: 3d
- Options: ^ Options
- Subject: Add JDoX Closure Codes
- Describe Enhancement: Can we please add two new closure codes 1. Solved (using JDoX article) 2. Solved (needs JDoX article)



# JWST Help Desk – Announcements

## 4. Announcements

- Posted news
- New releases, downtime, etc.
- Helpful during deadline periods

**How can we help?**  
Search JWST Knowledge Base and Documentation System (JDOX)

How can we help?

**Knowledge Base**  
Browse our Frequently Asked Questions, Release Notes, and Known Issues

**Get Help**  
Contact support to make a request, or report a problem

**Announcements**

- ETC 1.4 released!  
9d ago

**Helpful Links**

- James Webb Space Telescope
- JWST User Documentation (JDOX)

**My Requests**

- Service Now sending duplicate emails  
INC0135754 • 2mo ago • Request



# JWST Help Desk – Terms of Service

## Terms of Service

Outlines expectations for both the user and us, as fulfillers

- We aim for friendly service and to answer within 2 business days
  - We don't have dedicated staff for only help desk questions
  - Resolution may take longer if the question is complex
- When using you are considered a visitor to STScI and agree to abide by "Standards of Workplace Conduct"

The screenshot shows the JWST Help Desk interface. At the top, there's a navigation bar with 'STScI | JWST Help Desk' on the left and 'Knowledge', 'Service Portals', 'My Open Tickets 19', and 'My Open Requests 1' on the right. The main heading is 'How can we help?' with a search bar below it. Below the search bar are two buttons: 'Knowledge Base' (Browse our Frequently Asked Questions, Release Notes, and Known Issues) and 'Get Help' (Contact support to make a request, or report a problem). The page is divided into three columns: 'Announcements', 'Helpful Links', and 'My Requests'. The 'Announcements' column lists several items, with 'Help Desk Terms of Service' highlighted in a pink box and a blue arrow pointing to it. The 'Helpful Links' column lists 'James Webb Space Telescope', 'JWST User Documentation (JDox)', and 'Space Telescope Science Institute'. The 'My Requests' column lists several requests, including 'Create JWST Master Class Catalog', 'User, Nikole Lewis, cannot log in', 'Service Now sending duplicate emails', 'auto-reply for JWST questions via help@stsci.edu', and 'Google JWST Help Desk'. At the bottom of the 'My Requests' column, it says 'First 5 of 20' and 'View all'.



# JWST Help Desk – Terms of Service

## Terms of Service

Outlines expectations for both the user and us, as fulfillers

- You can provide feedback about the Help Desk by submitting using the “JWST General Card
- Feedback survey will be coming soon

STScI | JWST Help Desk Knowledge Service Portals My Open Tickets 19 My Open Requests 1

Home > Knowledge Base Search

Help Desk Terms of Service KB0012255

Authored by Tyler Desjardins • 1 View • Today

### Space Telescope Science Institute Help Desk Terms of Service

Welcome to the STScI Help Desks

Thank you for using the Help Desks at the Space Telescope Science Institute (STScI). The Help Desk ecosystem includes the following missions and projects:

- [Hubble Space Telescope \(HST\)](#)
- [James Webb Space Telescope \(JWST\)](#)
- [Barbara A. Mikulski Archive for Space Telescopes \(MAST\)](#)
- [STScI Office of Public Outreach \(OPO\)](#)

By contacting any of the Help Desks, you are agreeing to the terms described in this document. Please note that this document provides guidance for the use and service expectations for the Help Desks. *This document does not constitute a legally binding contract.*

#### Who can use the Help Desk?

Anyone may contact our public Help Desks. The HST, JWST, and MAST Help Desks are primarily intended for professional scientists to obtain assistance with the planning of observations, data retrieval, and analysis of

**Also in News**

- [Read these recent Knowledge Base articles](#)  
157 Views
- [JWST ERS Budget questions](#)  
118 Views
- [How do I get ready for JWST? Participate in our training events!](#)  
88 Views
- [APT 27.3 Released](#)  
33 Views
- [NIRSpec Observation Visualization Tool \(NOVT\) Update: Critical Bug Fix](#)  
25 Views

[View all 10 articles](#)

**KB Top Rated**

- [Do my NIRSpec IFU Observations need leakage calibration exposures?](#)  
★★★★★
- [Read these recent Knowledge Base articles](#)  
★★★★★
- [Time-lapse: James Webb Space Telescope Mirror Roll-over](#)

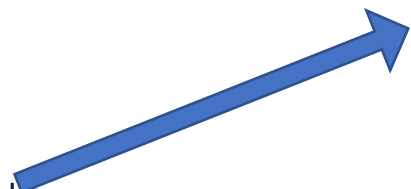


# JWST Help Desk – Special Workshop Support

## Workshop Support:

During your local workshop we will provide a 2-hour session where a Help Desk fulfiller will be on call to answer your questions:

- We will use the “Master Class” card to initiate one long chat that we will use to communicate during your 2-hour session



STScI | JWST Help Desk Open Requests 2 My Open Tickets 7 SB Stacey Bright

Jessica Hale-Lynch  
10d

Hello Stacey,

In revieweing our previous changes to ServiceNow, we have realized that Closure Codes can be updated, similar to Subcategories, without the need for an RFC. So - I will be working on Dev and Test to get these in the correct place, and limited to the correct group. Once that is tested thoroughly, I will update you, and put these into place on Thursday evening, when I am doing other work with ServiceNow after hours.

If this is acceptable, please let me know.

Thanks,  
Jessie Lynch

JH

Stacey Bright  
2mo

Can we please add two new closure codes

1. Solved (using JDoX article)
2. Solved (needs JDoX article)

SB

Stacey Bright  
2mo

INC0018602 Created

SB

Start



# JWST Help Desk – Special Workshop Support

## Workshop Support:

During your local workshop we will provide a 2-hour session where a Help Desk fulfiller will be on call to answer your questions:

- If participants have questions during the workshop they can submit questions as usual, by selecting the appropriate category (normal 2-business day turnaround)
- You can also submit a question to any category at any time throughout the workshop
- More details on Friday

James Webb Help Desk  
Your JWST gateway. Report issues and submit requests.

**Categories**  
James Webb Help Desk

- APT Support**  
Request assistance with the Astronomer's Proposal Tool (APT)
- Constraints & Schedulability**  
Ask questions about schedulability and observing with JWST
- Coronagraphy**  
Ask about NIRCam or MIRI coronagraphic imaging
- Data Analysis Tools for JWST**  
Request assistance with STScI-developed data analysis tools.
- ETC Support**  
Request assistance with the Exposure Time Calculator (ETC)
- JWST Master Class**  
Practice submitting a JWST Help Desk Ticket
- JWST Science Policies**  
Request assistance for Science Policy Issues.
- JWST SN Requests & Issues**  
Submit JWST Requests and Issues related to ServiceNow
- MIRI Support**  
Request assistance with the Mid-Infrared Instrument (MIRI)
- NIRCam Support**  
Request assistance with the Near-Infrared Camera (NIRCam)
- NIRISS Support**  
Request assistance with the Near-Infrared Imager and Slitless Spectrograph (NIRISS)
- NIRSpec Support**  
Request assistance with the Near-Infrared Spectrograph (NIRSpec)





## JWST Help Desk – Any Questions?

[jwsthelphelp.stsci.edu](http://jwsthelphelp.stsci.edu)

# Welcome to the James Webb Space Telescope Help Desk



### Request a MyST Account

Please register to gain full access to the James Webb Space Telescope Help Desk. Without an account you may still search the knowledge base but you will not be able to submit requests or questions.