

the JWST user documentation is under development; current versions are preliminary and subject to revision.

... / JWST Exposure Time Calculator, ETC

# JWST ETC Quick Start Guide

Last Updated May 26, 2017

ETC  
Expo  
Time  
Calcu

The JWST [Exposure Time Calculator \(ETC\)](#) can be started quickly with these easy steps.

## Introduction

The JWST [Exposure Time Calculator \(ETC\)](#) allows you to define [sources](#), place them in [scenes](#), and use the scenes in [calculations](#). Sources may be used in multiple scenes, and scenes may be used by multiple calculations, which will be automatically recalculated to reflect any changes made. Reasonable default values are provided for all fields. [Workbooks](#) for users who are logged-in using [MyST accounts](#) are automatically saved and will be available in your workbook list upon return. Workbooks created as anonymous user are not persistent and will not be available upon login the next time.

The recommended workflow is "copy and modify": create a default object (source, scene, or calculation), then modify it, then copy it and modify it further. Calculation results can be overplotted for easy comparison.

## On this page

- [Introduction](#)
- [Getting Started](#)
- [Related links](#)
- [References](#)

## JWST Exposure Time Calculator

JWST ETC Quick Start Guide  
[JWST Exposure Time Calculator Overview](#)  
[JWST ETC Calculations Page Overview](#)  
[JWST ETC Scenes and Sources Page Overview](#)  
[JWST ETC Outputs Overview](#)  
[JWST ETC Creating a New Calculation](#)  
[JWST ETC Defining a New Scene](#)  
[JWST ETC Defining a New Source](#)  
[JWST ETC Sharing Workbooks](#)  
[JWST ETC Using the Sample Workbooks](#)  
[JWST ETC Source Spectral Energy Distributions](#)  
[JWST ETC User Supplied Spectra](#)

## Getting Started

Get your own copy of the pre-populated [Sample Workbooks](#) to play with, or get started from a new workbook:

On the "Scenes and Sources" tab:

1. [Create one or more sources](#). A default scene with one default source is already available when a new workbook is created. The default source is a point source with flat continuum spectrum. For each source, you may specify the [continuum](#), normalization, redshift, extinction, emission lines, and shape. *Be sure to click "Save" before moving to a different source.*
  - click on a row to select a source for editing
  - check one or more "Plot" checkboxes to see the source spectra
  - to [upload your own spectrum](#), select the "Upload Spectra" tab to upload one or more spectra. When you return to the "[Scenes and Sources](#)", your uploaded spectra will appear in a dropdown menu in the "Continuum" tab under the "Source editor".
2. [Create one or more scenes](#). Add one or more sources to the scene: for each source, specify its offset from the center (and orientation, for extended sources). *Be sure to click "Save" before moving to a different source.*

- click on a row to select a scene for editing
- this will automatically update the scene sketch below

[JWST ETC Batch Expansions](#)  
[JWST ETC Strategies](#)

On the "Calculations" tab:

1. [Create a calculation](#) by clicking one of the instrument buttons and selecting one of the modes. For each calculation, you may specify the scene, the background, the instrument configuration and exposure parameters, and the extraction strategy parameters.
    - click on a row to select a calculation for editing and to see its images & reports
    - check one or more "Plot" checkboxes to see its plots
  2. Investigate the "Edit" menu for copy and delete options, and the "Expand" menu for [systematic explorations of parameter space](#).
- 

## Related links

[JWST Exposure Time Calculator, ETC](#)

[JWST Exposure Time Calculator Overview](#)

[JWST ETC Defining a New Source](#)

[JWST ETC Defining a New Scene](#)

[JWST ETC Calculations Page Overview](#)

## References

go to the on-line [JWST Exposure Time Calculator Tool](#)

Pontoppidan, K. M., Pickering, T. E., Laidler, V. G. et al., 2016, *Proc. SPIE 9910*, Observatory Operations: Strategies, Processes, and Systems VI, 991016 ,

"Pandeia: a multi-mission exposure time calculator for JWST and WFIRST"