

# Data Selection

After a successful [search for data](#), and [browsing](#) to determine which observations are of interest, the next step is to select particular data products for download. Since JWST provides many files per observation, it is especially important to carefully choose the products that are most relevant for your science goals.

On this page...

- [File Selector](#)
  - [Filtering](#)
  - [Calibration Reference Files](#)
- [Data Retrieval](#)
- [For Further Reading...](#)

## File Selector

The Portal **Download Manager** window provides mechanisms to select which files will be packaged for download. Careful file selection is especially important for JWST Observations because so many science and supplemental files (often hundreds, or even thousands) may be related to one another. Use the file browser tree in the **'Files'** panel (at right, in the image below) to select files, or directories of files, using the checkboxes. See the [Download Basket](#) article in the [Portal Guide](#) for details.

The screenshot shows the JWST Portal Download Manager interface. The window is titled "Download Manager" and has two tabs: "Download Basket" and "Download History". Below the tabs are buttons for "Remove Selected" and "Remove All". A status bar indicates "Displaying 95 of 1188 Total Files" and "0.00 MB Selected / 51200 MB Max". The interface is divided into two main panels. The left panel, titled "Filters", contains three sections: "Recommended Products" (5 of 5), "Product Category" (AUXILIARY: 0 of 1028, SCIENCE: 72 of 72, PREVIEW: 0 of 65, INFO: 23 of 23), and "Extension" (fits: 72 of 1100, jpg: 0 of 65, json: 15 of 15). The right panel, titled "Files", shows a tree view of the file structure. The path is "Mission > Observation > File". The tree shows a folder "JWST" with 95 files, and a sub-folder "jw02736-o007\_s01370\_nirspec\_f170lp-g235m" with 5 files. Below this, a list of files is shown with checkboxes and file icons. The files include "jw02736-o007\_20220712t161855\_spec3\_001\_asn.json", "jw02736-o007\_s01370\_nirspec\_f170lp-g235m\_cal.fits", "jw02736-o007\_s01370\_nirspec\_f170lp-g235m\_crf.fits", "jw02736-o007\_s01370\_nirspec\_f170lp-g235m\_s2d.fits", "jw02736-o007\_s01370\_nirspec\_f170lp-g235m\_x1d.fits", and several folders for "jw02736007001\_02101\_00001\_nrs1", "jw02736007001\_02101\_00001\_nrs2", "jw02736007001\_02101\_00002\_nrs1", "jw02736007001\_02101\_00002\_nrs2", "jw02736007001\_02101\_00003\_nrs1", "jw02736007001\_02101\_00003\_nrs2", "jw02736007001\_03101\_00001\_nrs1", and "jw02736007001\_03101\_00001\_nrs2".

The file navigation panel in the Portal **Download Manager** window. Check boxes in the **Filters** panel (*left*) to select which product types, categories, file extensions, etc. to display in the **Files** panel (*right*). Select individual files or directories of files in the **Files** panel by checking the adjacent boxes.

## Filtering

It is common with JWST queries to find very large numbers of files that are related to even a single Observation. The **Filters** panel provides a way to hide many categories of files that may not be of scientific interest, such as auxiliary products (which include guide star data), preview images, and the like (see [Supplemental Products](#) for details of non-science data products). Filtering makes the process of excluding unwanted files vastly more efficient.



### Use care when filtering

The default setting for the *Recommended Products* filter is that only [Minimum Recommended Products](#) (usually Level-3) are displayed. This has the effect of hiding all lower-level products, including the contributing L-2b (fully calibrated per detector) files which may be useful for scientific analysis. See [Science Data Products](#) to learn more about JWST product levels. It also has the effect of suppressing the ability to select static calibration reference files (see below).



### Removing Files from the Basket

If the number of files is so large as to make file selection confusing, you may elect to first filter for files of no interest (for example, guide-star products), select them, and remove them entirely from the download basket by clicking the **Remove Selected** button in the upper left of the window. Then resume filtering for files of interest.



Remove Selected

## Calibration Reference Files

Click the **Retrieve References** button to retrieve the static [calibration reference files](#) that were used to create your selected science products. This action will bring up a file selector sub-menu to select files to add to your basket. For the step-by-step guide for reference product retrieval, see the MAST [Portal Guide](#) chapter on retrieving [Calibration Reference Files](#).



Retrieve References



You must **unchecked** the *MRP* filter check box **and** select at least one calibrated product for the Retrieve References to be active. Note that after you add reference files to the Basket (in the sub-panel), you must then select them in the **Download Manager** to be included in the download bundle.

## Data Retrieval

After selecting all files of interest, they may be downloaded via one of the available methods. Click either the **Download** button or the **Batch Retrieval** button



Download



Batch Retrieval

; see the [Data Retrieval](#) article, or the [Retrieving Data](#) chapter of the [Portal Guide](#).

## For Further Reading...

- The MAST [Portal Guide](#), especially the articles:
  - [Download Basket](#)
  - [Retrieval Methods](#)
  - [Calibration Reference Files](#)
- [Data Retrieval](#)