

Downloading and preparing ArTÉMiS data for reduction with the IDL pipeline

1) Connect to the ESO User portal with your Username and password

<https://www.eso.org/userportal/>

2) Open the APEX Data Products query form:

<http://archive.eso.org/wdb/wdb/eso/apex/form>

3) Look for your data with the relevant criteria. Select “ARTEMIS350-BEAR1” in the field “Instrument-Backend”, and any other criteria (by date, project ID, target, coordinates...) in order to find the data you are looking for. Note that the data files will contain, both, 350 and 450 microns, even if you select ARTEMIS350 or ARTEMIS450 as instrument.

Also note that, if you search by target name, you may need to select “OBJECT as specified by the observer” instead of “SIMBAD name” to find the relevant scans.

4) The results (if any) are displayed in a table with one scan per line. Select the data products that you want to download in the left-most column “Mark raw”, then click on “Request marked datasets” (here we assume that you have the right to access the data, either as the PI of that project, or because the data is public).

5) A page “Submit request” opens; leave the default settings unchanged (“Instant Download”, and “Only selected files”). Process by clicking “Submit”.

6) The result of your request then appears on a new page, once the archive has finished preparing the files. This page shows the list of files in a table. Then, to download the data to your computer, you have two options:

- 6a) if you have requested a small number of files, you can right-click on the name of each file, and select “Save link as...” (or similar, depending on your browser) to download and store each file where you want.

- 6b) if you request a large number of files, it is much better to use the UNIX/Linux shell script provided in the same page: click on the link “downloadRequest?????script.sh” shown above the table, to save the script on your computer. Then, in a terminal window, go to the directory where you have saved the script, and execute it:

```
sh downloadRequest?????script.sh
```

You will be prompted for a password: enter your ESO User portal password.

7) Uncompress the files with gunzip:

```
gunzip APEXBOL*.gz
```

8) The file names do not contain the scan number, which is needed by the reduction pipeline in order to find the files. To rename the files as required, you have to run a dedicated script: “arc2orig.sh”. It is available here:

<ftp://ftp.eso.org/web/sci/activities/apexsv/labocasv/arc2orig.sh>

To generate a script that will run “arc2orig.sh” on all files, you can for example make use of awk:

```
ls -1 APEXBOL*.fits | awk '{print "sh arc2orig.sh ",$1}' > do_convert  
sh do_convert
```

The execution of “do_convert” prints “Input error” several times (twice per input file), but this is not an issue, just ignore these messages.

9) Now the FITS files have been renamed to their original names. The names follow this format:

APEX-XXXXX-YYYY-MM-DD-PPPPPPPP.fits

where:

- XXXXX is the scan number
- YYYY-MM-DD is the observation date
- PPPPPPPP is the project ID

These files can now be used as input by the data reduction pipeline.