Gaia Archive Quickstart

This document provides some information and links to get you started on working with the ESA Gaia Archive. The tutorials in the Gaia hands-on session at the Sagan Workshop 2022 are based on using the ESA archive.

Register as archive user

If you plan on regularly requesting data from the Gaia archive it is a good idea to register as an archive user. The registration is easy and quick (and free) and offers the following facilities:

- 20 GB of space to store query results
- the option to create and share your own tables ('user tables'),
- longer timeout for large or complex query jobs.

You can register here: https://www.cosmos.esa.int/web/gaia-users/register

Links to archive help pages and tutorials

Optional. If you want to prepare before the workshop, you can browse through the below pages to familiarise yourself with the Gaia archive.

- ESA Gaia archive: https://gea.esac.esa.int/archive/
- Entry page for help on using the archive and Gaia data documentation: https://www.cosmos.esa.int/web/gaia-users/archive
- Graphical user interface: https://www.cosmos.esa.int/web/gaia-users/archive/help
- Demos and tutorials (see menu on left): https://www.cosmos.esa.int/web/gaia-users/archive/help
- Cross-matching catalogues. This will be exercised during the workshop. https://www.cosmos.esa.int/web/gaia-users/archive/combine-with-other-data
- Access to multidimensional data (spectra, mcmc samples, light curves). This will be exercised during the workshop. https://www.cosmos.esa.int/web/gaia-users/archive/datalink-products

Gaia DR3 information

The following links provide access to information on the various aspects of Gaia DR3.

- Overview pages: https://www.cosmos.esa.int/web/gaia/data-release-3
● Links to papers documenting the release contents: https://www.cosmos.esa.int/web/gaia/dr3-papers
● Auxiliary data: https://www.cosmos.esa.int/web/gaia/dr3-auxiliary-data Some of this data is not available in the archive.
  ○ Note the Gaia DR3 extinction law (https://www.cosmos.esa.int/web/gaia/edr3-extinction-law)
  ○ and the exoplanet candidates list (https://www.cosmos.esa.int/web/gaia/exoplanets).

Executive summary and archive tables cheat sheet

You can find a very compact summary of the Gaia DR3 contents here. It contains an overview of the contents, a summary of all the papers describing the release, some useful links, and a table linking a certain data type you might be interested in to the Gaia DR3 archive table where you can find that data.