The new Science Portal and the Programmatic Interfaces of the ESO Science Archive

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The ESO Science Portal is an Angular web application talking to ElateSearch, based on Lucene, via an in-house developed Apache plugin. Graphically, it consists of a top bar, always on, with the most common controls and options, and 3 views:
- the sky view (Aladin, COS), in the centre,
- the tabular view, at the bottom,
- the aggregation view, on the left.
Each of the views can be hidden or expanded to full screen using the arrow buttons.

Some package footnotes of data products interacting the specified zone around M83 are displayed in the sky view, superimposed to the DSS colour HST, the tabular component has various controls, e.g. to get to the dataset details, or to display the preview of the data of interest shown are the resulting on sky preview of an image (in the sky view, right of centre), and the mouse-hover preview.

Aggregation view expanded to full-screen to inspect a single graphic
- it shows the multidimensional query space in terms of up to seventeen one-dimensional dimensions. They include physical parameters like connected and superimposed ratio, etc. alongside more traditional ones like programme ID or instrumental setup. Users can easily interact with very fast or this graph to add or remove search constraints and to tune queries in an iterative fashion.

Any change of the user’s inputs triggers a new query, which results in a new computation, and returning all the components for a very dynamical user experience.

In the top bar, where the application can be used to create a bookmark representing the entire state. That URL can be saved or passed along to colleagues. The button brings you to the ESO Community Forum, our new social platform (see here below).

The direct database and Virtual Observatory access

The Science Portal presents a tutorials classic portal view, currently also based on the provided site.
What do you need to perform complex queries, or access other kinds of data?
- Do you need to perform complex queries, e.g.
  - queries involving logical operators (AND, OR, NOT, AND
  - queries involving different tables, maybe using superseded template queries?
    A. The easy data access, add database access, brows, search.
    B. The data access via the TAR plugin.
    C. The data access via the SSA plugin.
- Do you need access to programmatic data, raw data, edited data, or even to the scientific catalogues underlying the data?
  A. Use TAP, you have access to all those data, even the big, even profit for the observed data, you can see in the catalogues, i.e.: Hip, Jpg, in be an IPAC-VO and access directly.
- Do you need to access the ESO value-added catalogues using a specific tool?
  A. The provided option gives the various VO-added tools to access the science archive directly, for example:
    - SAMP
    - SAMP
- Do you need to script your pipeline queries to the ESO science archive?
  A. The twoolio plugin can be used to generate more complex, more or less automated, pipelines.
  B. A complete library comes with these pipelines, to script your pipelines.
- Are you a subscriber that wishes to perform some TAP queries?
  A. Are you a developer that wishes to programmatically interact with the ESO science archive?

The ESO Science Portal

http://archive.eso.org/