

AstroDAbis User Feedback

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I. Introduction

The following contains a set of notes specific to the use of the AstroDAbis project, as recorded after reading through the user documentation, creating some sample jobs, and using the service with existing tools (VO Webpy tool, TOPCAT and the TAP web-form). It should be noted that prior to testing the tool, we had no detailed knowledge of the project, with most of our understanding deriving from the documentation pages, but had sufficient knowledge in TAP, VOTable, ADQL and querying astronomical datasets.

The main goals of the AstroDAbis project are to address the fact that whilst astronomers have many methods and tools for storing datasets and providing access to them, what has been missing is a way of sharing knowledge and discoveries regarding these data in an easy and intuitive manner. Throughout this report we assess how these goals have been addressed and accomplished by the AstroDAbis project, through a sample use that would mimic the likely use of the tool by an astronomer.

II. Use-Cases

After consulting the main user documentation which describes what the service provides for a novice user (<http://code.google.com/p/astrodabis/wiki/UserDocumentation>), we followed the step-by-step notes on the *Single-object annotation* documentation page, through which we uploaded a VOTable containing a list of primary keys for a number of objects in the [Two Micron All Sky Survey \(2MASS\)](#) catalogue and tagged them using the *New Import* form. In addition, once uploaded we were able to query the AstroDAbis database using the associated TAP service to find the rows that we had tagged, as well as other tagged rows created by other users. Following a similar recipe we also carried out another single-object annotation use case this time uploading two lists of red stars found in UKIDSS DR7 using the sourceID as the primary key.

In addition to the simple annotation use, we followed the second tutorial on *Two-object annotation* (<http://code.google.com/p/astrodabis/wiki/JoinAnnotation>) through which we created an association

tagged with a value for a few rows taken from the 2MASS and UKIDSS DR6 catalogues. Again we carried out an additional use case, this time uploading a list of associations between UKIDSS DR7 and SDSS DR5.

III. Initial Assessment

Through these simple steps, it was clear that with only basic knowledge of the VOTable format and querying TAP services, astronomers could easily upload a dataset from one or more catalogues with rows that they have identified with a common tag, which they could then use for purposes such as sharing or re-using while avoiding the high cost of re-calculating a cross match between two catalogues. All these actions were made easy through the novel functionality provided by the AstroDAbis service. One of the single-object annotation lists uploaded contained some 100,000 sources, the system coped well with this and subsequent queries of the tagged entries were quick.

IV. User-interface Notes

Overall the project has an intuitive and user friendly interface, which allows users to easily navigate to the desired functionality, without necessarily requiring a read up of the user documentation pages in order to understand how to use it. If possible it would be helpful to provide more detailed error reporting as when we deliberately tried to upload a single column VOTable as a two-object annotation list the only feedback was “Status: FAILED”.

V. Notes on Documentation and Examples on project pages

As users without detailed knowledge of the project motivation and background both are clearly documented and explained. The step-by-step documentation on the sample use of AstroDAbis is very clear and intuitive, with good use of images to help the user along the process. Overall it is quite complete and provides all the necessary details and information needed to understand the project and use it. In addition to a description of how the service could be used, what was also quite helpful was the high-level description of how the service will operate after certain actions, as well as how the data is structured and stored in the database.

As well as the tag itself tagged objects can also be assigned a “value”. We felt that the purpose and use of the value attribute could have been described in more detail. For example in the two-object

annotation use case we assume that value could be for instance the distance between the object's two recorded positions. It might also be useful if the meaning of the value could also be recorded in the database so that other users can find out what it refers to and make use of it.

VI. Other notes on use

We encountered a few other issues in using the service but believe these are more related to the access tools rather than the service itself. In querying the AstroDAbis database via TOPCAT it seems the queries are case-sensitive yet those through the TAP web form are not. Similarly querying the `adb_services` table from TOPCAT gives an error but again works from the web form.

A particular feature that was a useful addition is the use of “*latest tags*” and “*latest jobs*”, which add to the goal of the project, allowing astronomers to share discoveries and annotations in general, through a 'news feed' type of functionality.

VII. Notes on use with WFAU VO Web.py tool

In addition to querying the AstroDAbis database through the provided TAP service (via TOPCAT or the web form), we also experimented with the use of AstroDAbis and specifically the queries described in the example documentation pages, with a VO web-based tool developed by WFAU. The service was accessible through the Registry, the metadata were easily accessible identically to other catalogues, and the queries were executed smoothly, returning the intended results as described in the documentation. Overall it highlighted how AstroDAbis can fit in with existing services and tools and it is important for the community that it is accessible through TAP allowing easy integration for developers and use by astronomers.

VIII. Notes on use with TAP Factory

A final note worth mentioning is that we also experimented through utilizing the service with an ongoing project (*TAP Factory*) which allows combining multiple TAP services into one view, which also highlighted other interesting ways in which the project can be used in the community.