



# **TAP-Autocomplete**

A Javascript Autocomplete Library for TAP services

Stelios Voutsinas  
Institute for Astronomy,  
Edinburgh University  
April 2018



ASTERICS Forum 2018/04/15

## TAP-Autocomplete *Introduction*



- Javascript library for TAP/ADQL based Web Interfaces

Job name:

Query examples

```
1 SELECT TOP 10 * from gaiadr1.gaia_source as gs where gs.  
astrometric_delta_g  
astrometric_excess_noise  
astrometric_excess_noise_sig  
astrometric_n_bad_obs_ac  
astrometric_n_bad_obs_al  
astrometric_n_good_obs_ac  
astrometric_n_good_obs_al  
astrometric_n_obs_ac  
astrometric_n_obs_al
```

Ctrl+Space for query autocompletion

[Reset Form](#) [Submit Query](#)



## **TAP-Autocomplete** *Overview*



- Provide keyword suggestion list & syntax highlighting
- Syntax Highlighting based on a library by Gregory Mantelet (CDS), adql.js
- Triggers on Ctrl + Space (Configurable)
- Attaches to an HTML TextArea or Textfield element





## TAP-Autocomplete *Overview*



- Different Modes of operation
- Main usage queries TAP\_SCHEMA to generate context-specific list of keywords
  - e.g. `SELECT .. FROM Schema_name.` (Ctrl + space)  
returns list of tables that belong to schema\_name
- Depends on Web service to do the TAP requests
- Google Web Toolkit for ESAC/GAIA use case
- VOSI option for loading full metadata on startup (no AJAX requests)





# TAP-Autocomplete Implementations

ESAC GAIA Archive - <https://gea.esac.esa.int/archive/>

The screenshot shows the ESAC GAIA Archive search interface. At the top, there are navigation links: HOME, SEARCH, STATISTICS, VISUALIZATION, HELP, DOCUMENTATION. Below this is a search bar with a 'Job name:' field and a 'Query examples' section. A dropdown menu is open, showing suggestions for the query 'SELECT TOP 10 \* from gaiaedr1.gaia\_source as gs where gs.astrometric\_db12 >'. The suggestions include: astrometric\_excess\_noise, astrometric\_excess\_noise\_sig, astrometric\_n\_bad\_obs\_ac, astrometric\_n\_bad\_obs\_al, astrometric\_n\_good\_obs\_ac, astrometric\_n\_good\_obs\_al, astrometric\_n\_obs\_ac, astrometric\_n\_obs\_al, and astrometric\_primary\_flag. Below the search bar is a table with columns: Status, Job, Creation date, Num. rows, and Size. The table is currently empty with the message 'No results found'. At the bottom, there are options for 'Download format: VOTable', 'Apply jobs filter', 'Filter this session', 'Select all jobs', and 'Delete selected jobs'.



WFAU OSA Archive - <http://osa.roe.ac.uk>

The screenshot shows the WFAU OSA Archive 'Freeform Query' interface. It features a sidebar with navigation links: OSA Home, Help, Archive Information, Data access, Schema browser, Known Issues, Documents, Gallery, and Contact us. The main content area has a 'Freeform Query' section with instructions: 'This form allows you to submit a query to the OSA using either ADQL or native SQL. See the (ADQL form notes and tips) page for help in using the ADQL form and the (ADQL or Native SQL?) page to help you decide which language to use. Start by selecting from the list of available databases and then send your query. Use the metadata link to find names and info on available tables and columns.' Below this is a 'Please note' section: 'If no database is selected, you will be able to query ATLASDR3 only, which is selected by default. To query the latest VPHAS3 version (VPHASDR3), import it using the Database(s) button.' The interface includes a query input field with a dropdown menu for database selection. The dropdown is open, showing suggestions for the query 'SELECT TOP 1000 \* from ATLASDR3.atlasSou'. The suggestions include: atlasSource, atlasSourceLightHours, atlasSourceDR3PhotoObj, atlasSourceDR3PhotoObjAll, atlasSourceDR7PhotoObj, atlasSourceDR7PhotoObjAll, atlasSourceDR8PhotoObj, atlasSourceDR8PhotoObjAll, atlasSourceDR9PhotoObj, and atlasSourceDR9PhotoObjAll. There are buttons for 'Database(s)', 'Send Query', and 'Clear Query'. At the bottom, there are links for 'Home', 'Overview', 'Schema', 'Access', 'Login', 'Cookbook', 'Listing', 'RawSQL', 'Links', and 'Contact'. The footer includes the OSA logo and text: 'WFAU, Institute for Astronomy 2013, University of Edinburgh (IA) (ROE)'.

Stelios Voutsinas  
Institute for Astronomy,  
Edinburgh University  
April 2018



ASTERICS Forum 2018/04/15



## TAP-Autocomplete *Future Goals*



- Re-usability out of the box
- Remove dependency on service to run the TAP requests
  - All the querying/processing happens in the client
  - Use VOTable.js for TAP sync query? (<https://github.com/aschaaff/votable.js>)
  - Javascript cross domain request limitations
  - CORS (Cross-origin resource sharing)?
- Extend documentation
  - Clearer Examples/Docs & Class structures
- Improved Context-Awareness





## TAP-Autocomplete *Links*



- Code available at: <https://github.com/stvoutsin/tap-autocomplete>
- Examples available at:
  - <https://gea.esac.esa.int/archive/> (Latest Version)
  - [http://osa.roe.ac.uk/#dbaccess\\_SQL\\_form\\_div](http://osa.roe.ac.uk/#dbaccess_SQL_form_div)





## TAP-Autocomplete



Demo

Stelios Voutsinas  
Institute for Astronomy,  
Edinburgh University  
April 2018



ASTERICS Forum 2018/04/15