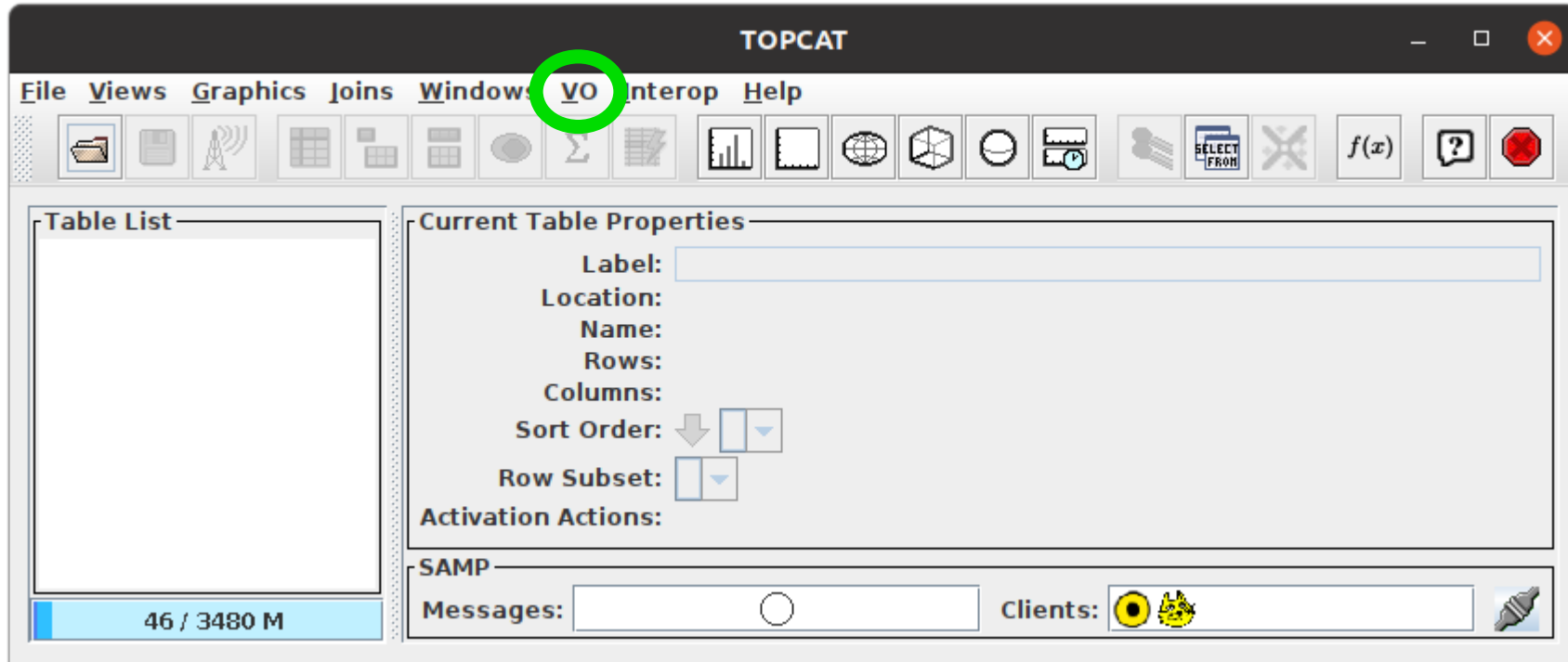


TP - Gaia Spectra

- Using TOPCAT to discover Gaia Spectra
- Python and GaiaXPy (jupyter notebook)

Using TOPCAT to discover Gaia Spectra

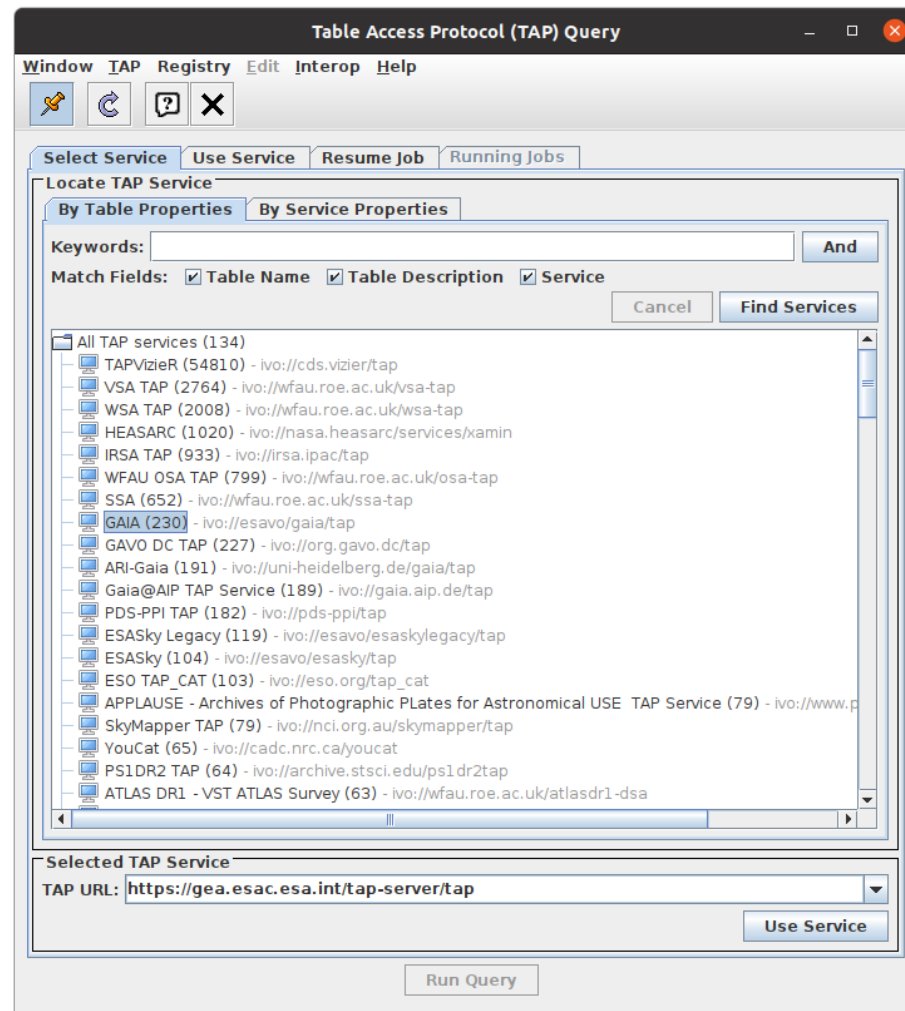
VO → TAP Query → GAIA



<https://www.star.bris.ac.uk/~mbt/topcat/>

Using TOPCAT to discover Gaia Spectra

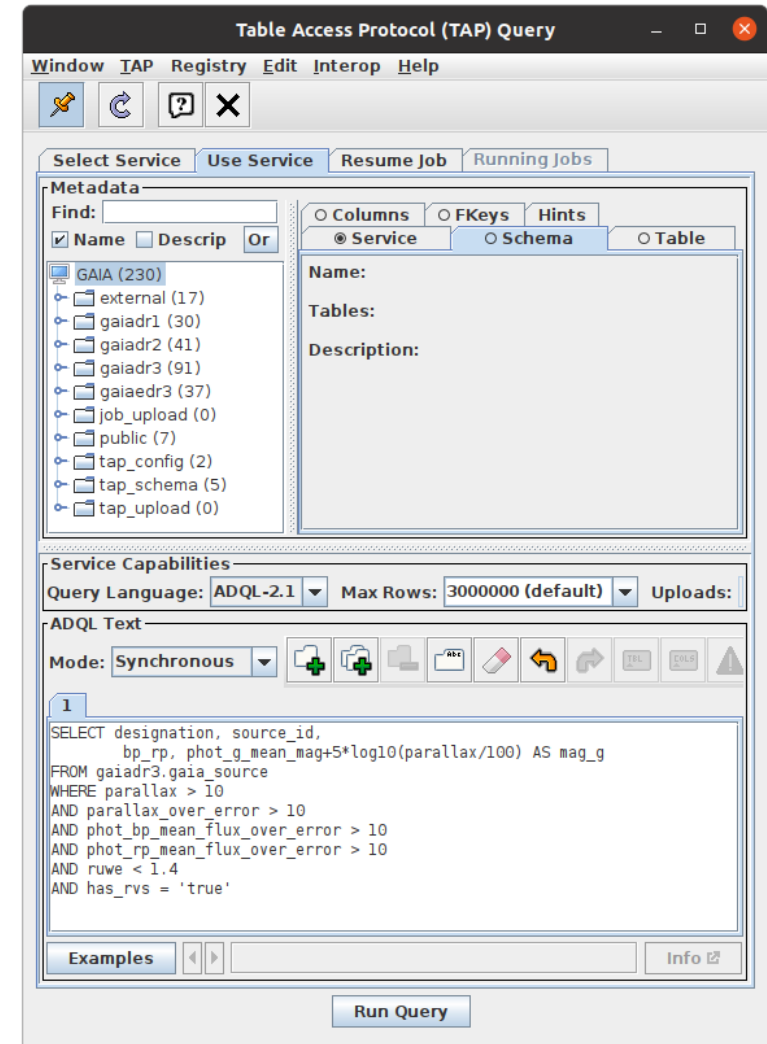
VO → TAP Query → GAIA



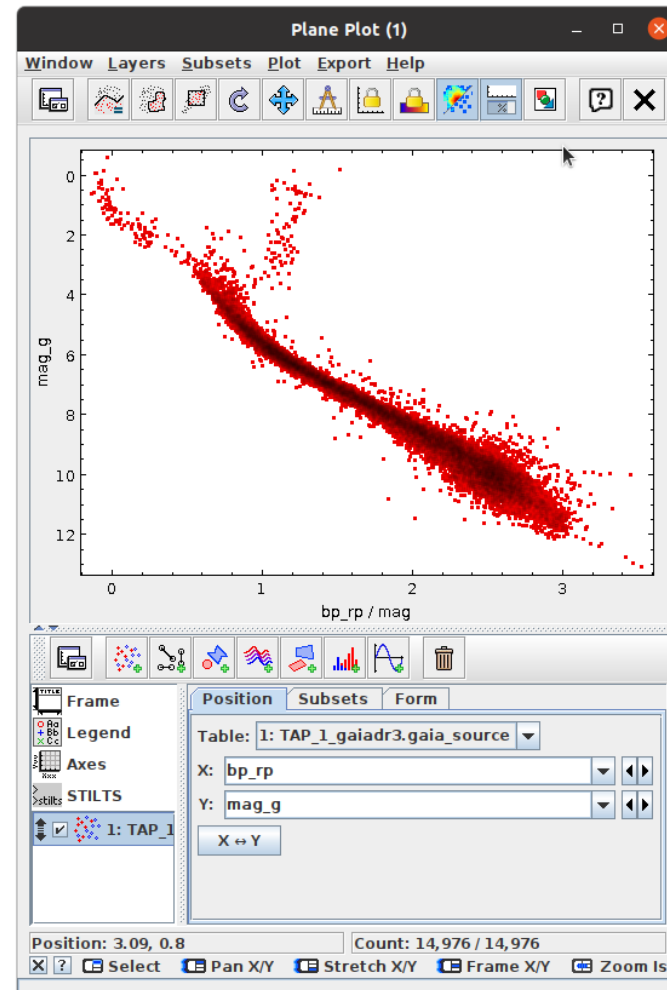
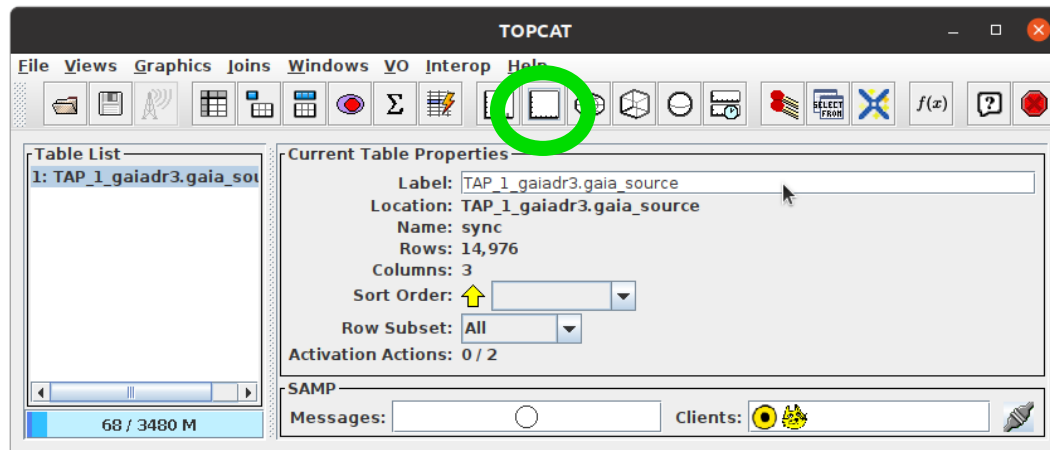
Using TOPCAT to discover Gaia Spectra

VO → TAP Query → GAIA

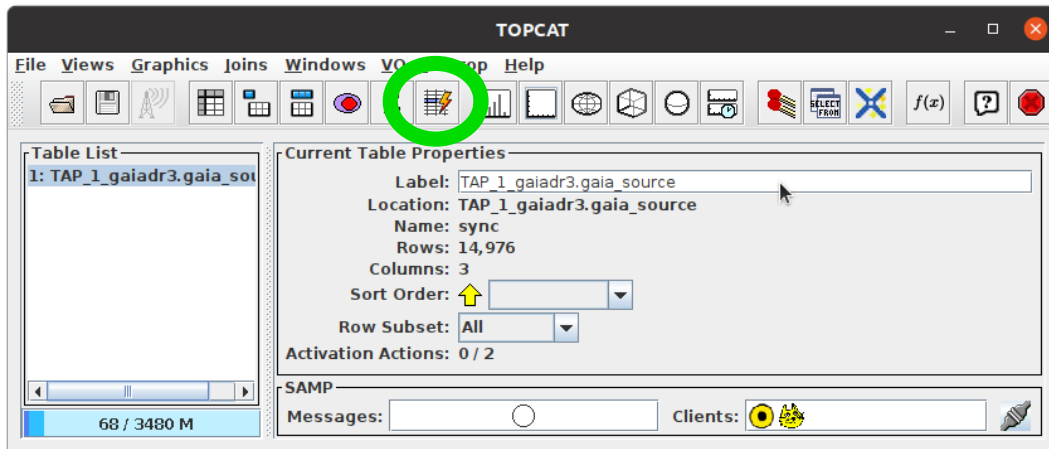
```
SELECT designation, source_id,  
       bp_rp,  
       phot_g_mean_mag+5*log10(parallax/100) AS mag_g  
FROM gaiadr3.gaia_source  
WHERE parallax > 10  
AND parallax_over_error > 10  
AND phot_bp_mean_flux_over_error > 10  
AND phot_rp_mean_flux_over_error > 10  
AND ruwe < 1.4  
AND has_rvs = 'true'
```



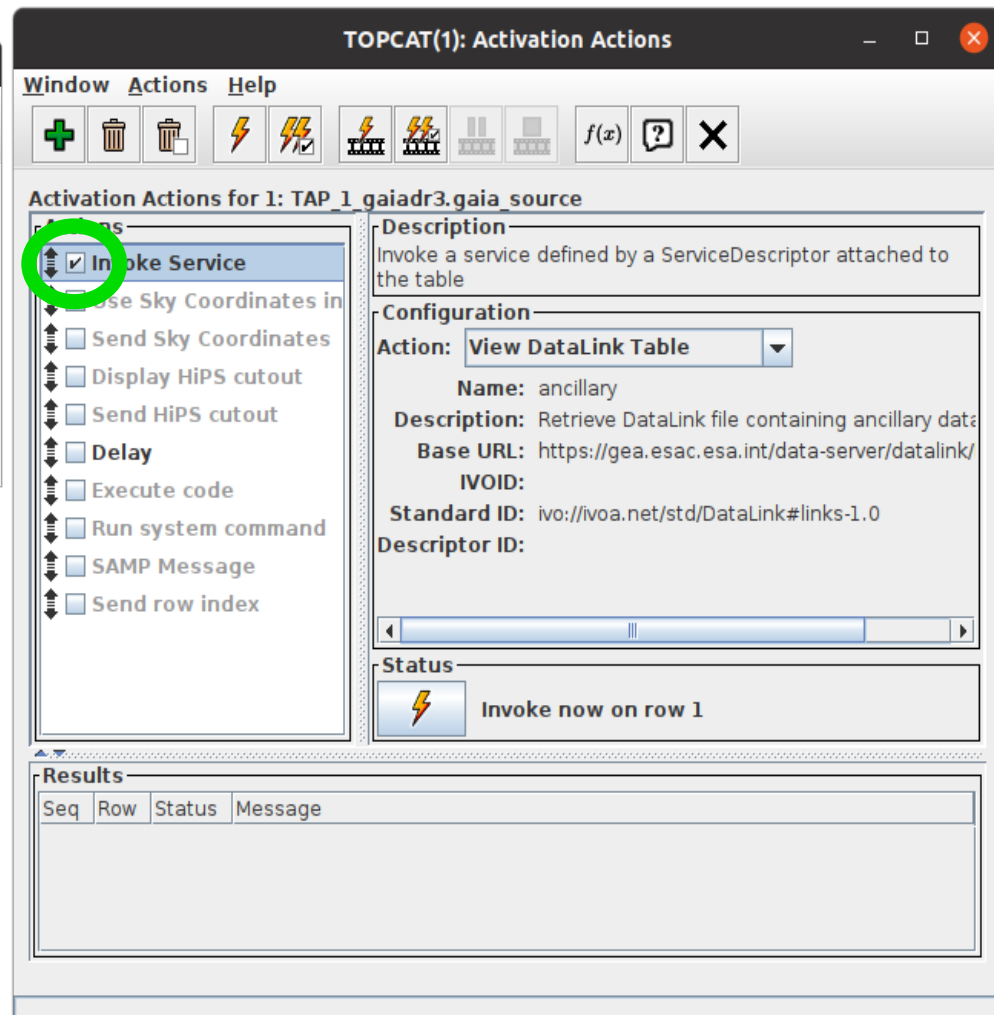
Using TOPCAT to discover Gaia Spectra



Using TOPCAT to discover Gaia Spectra



- checkbox for Invoke Service
- Service Action is View DataLink Table



Using TOPCAT to discover Gaia Spectra



TOPCAT(1): Invoke Service - View Datalink Table

DataLink Table

	semantics	description	content_type	content_length	ID
1	#this	MCMC MSC, source Gaia DR3 2...	application/x-votable+xml		Gaia DR3 227083607081
2	#this	XP mean sampled spectra, so...	application/x-votable+xml		Gaia DR3 227083607081
3	#this	XP mean continuous spectra, ...	application/x-votable+xml		Gaia DR3 227083607081
4	#this	RVS mean spectra, source Gai...	application/x-votable+xml		Gaia DR3 227083607081

Row Link Type
Fixed Access URL

Row Detail

Access URL: https://gea.esac.esa.int/data-server/data?ID=Gaia+DR3+2270836070814554752&RETRIEVAL_TYPE=XP

Content Type: application/x-votable+xml

Content Length:

Description: RVS mean spectra, source Gaia DR3 2270836070814554752

Semantics: #this

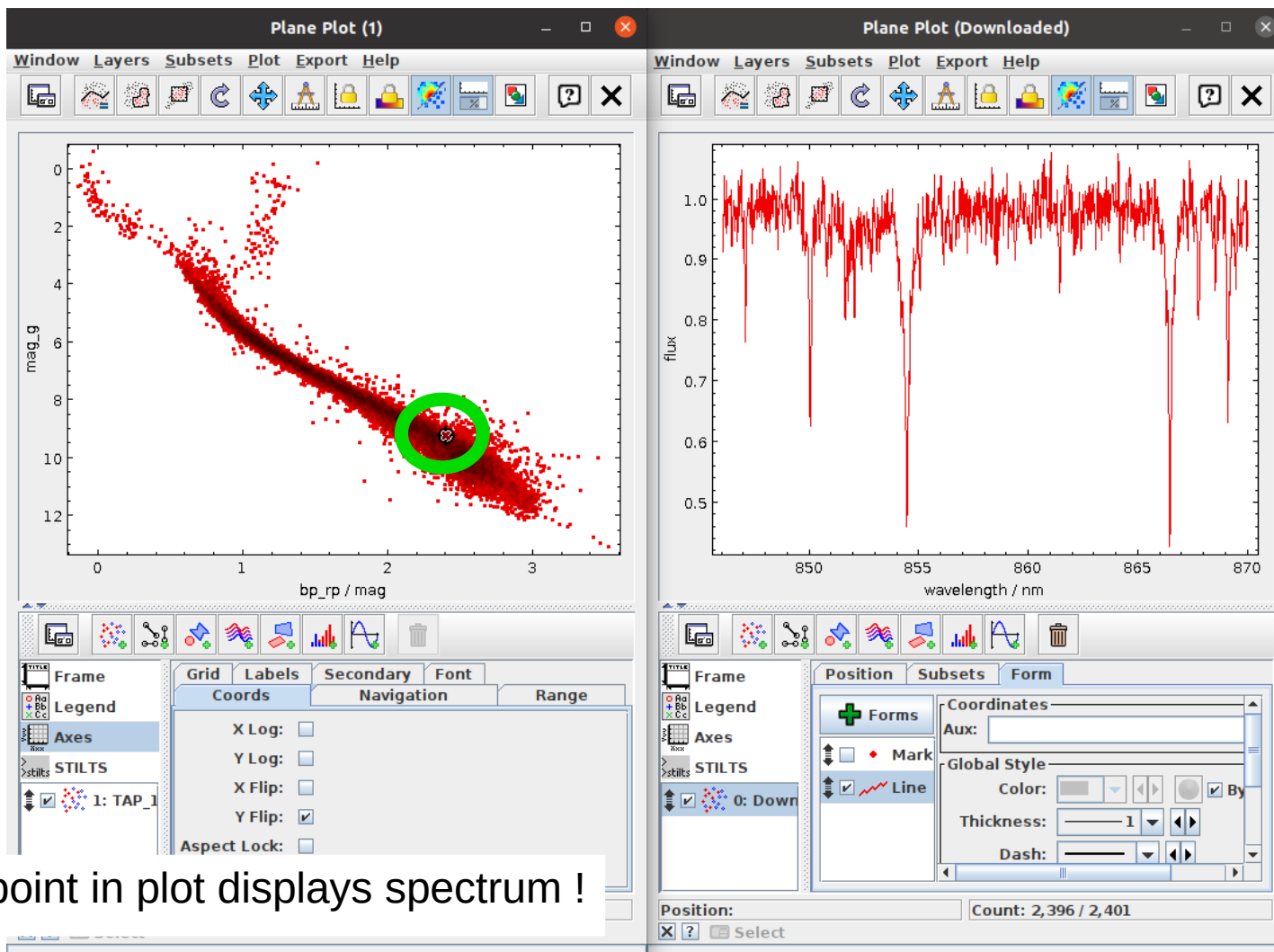
URL: https://gea.esac.esa.int/data-server/data?ID=Gaia+DR3+2270836070814554752&RETRIEVAL_TYPE=RVS

Type: TABLE ☐ Guess ☒ Action: Plot Table ☒ Auto-Invoke

Result:

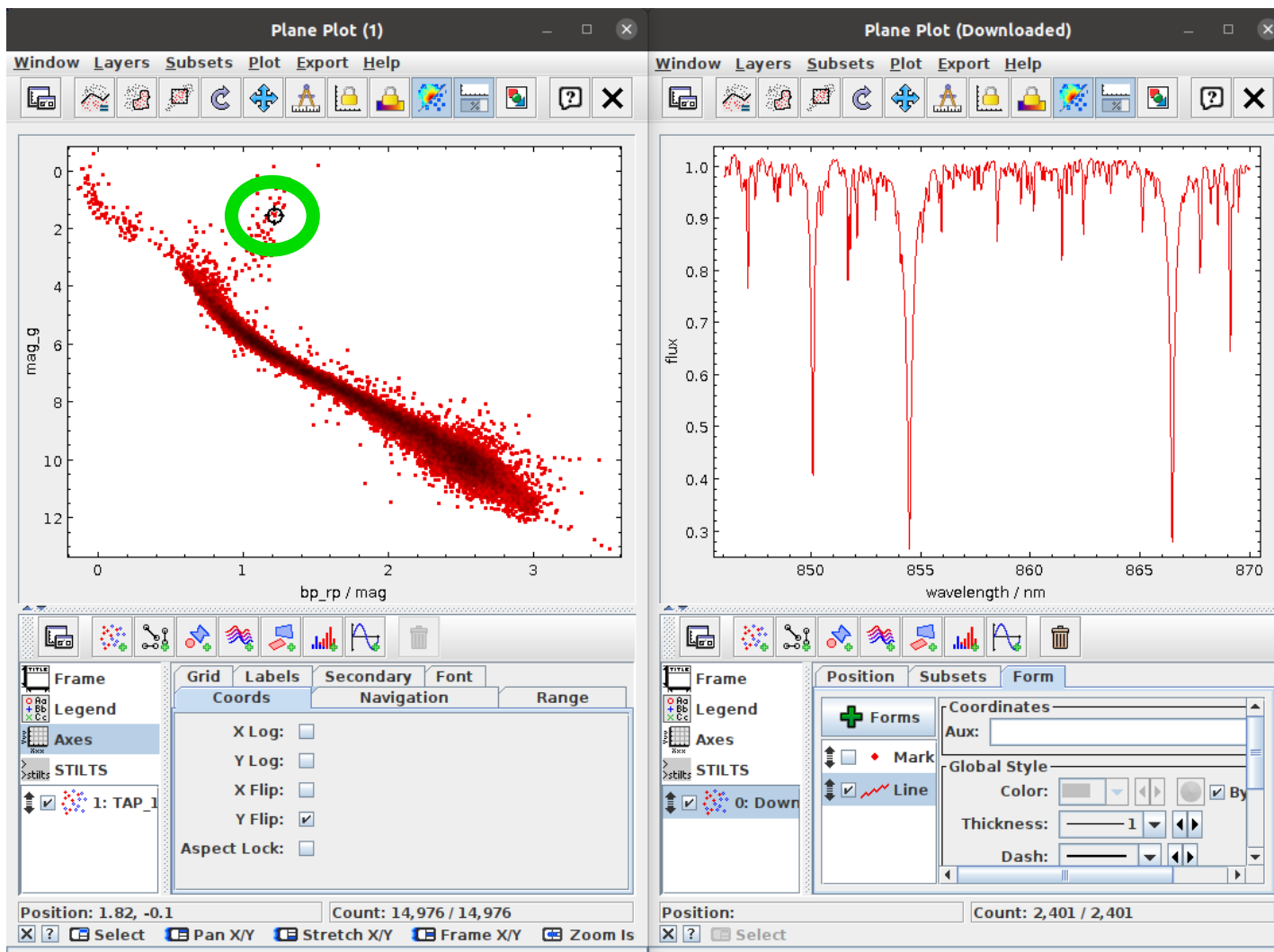
- Select RVS mean spectra
- Configure to Plot Table on DataLink load and Auto-Invoke

Using TOPCAT to discover Gaia Spectra

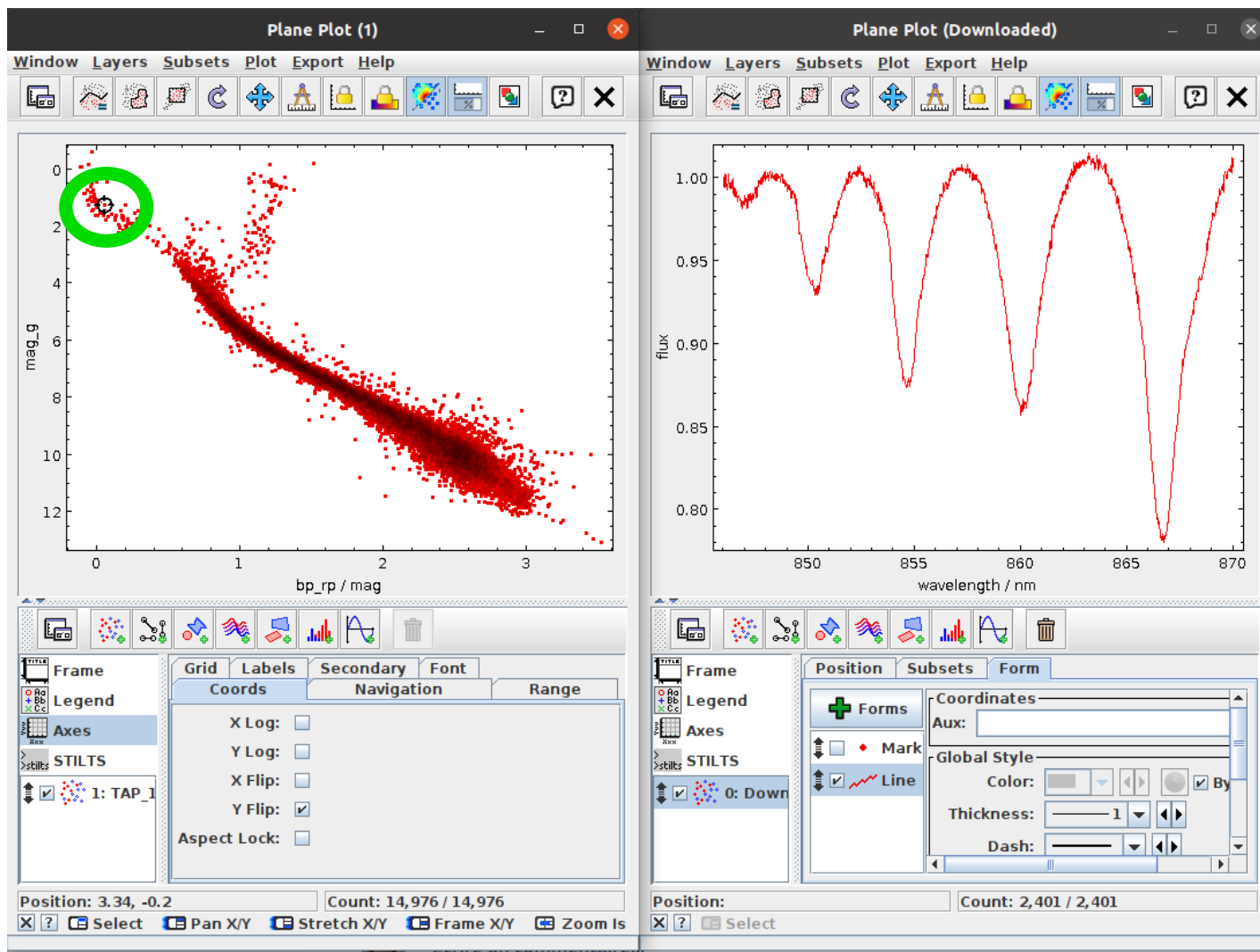


- clicking on point in plot displays spectrum !

Using TOPCAT to discover Gaia Spectra



Using TOPCAT to discover Gaia Spectra



TP - Gaia Spectra

- Using TOPCAT to discover Gaia Spectra
- **Python and GaiaXPy (jupyter notebook)**

The screenshot shows the ESA Gaia website interface. At the top, there's a navigation bar with links like 'SCIENCE MISSIONS', 'EUROPEAN SPACE AGENCY', and 'SCIENCE & TECHNOLOGY'. Below this is a header with the 'gaia' logo and the 'esa' logo. A secondary navigation bar contains links: 'Home', 'Data', 'Mission', 'People & Institutes', 'News & stories', 'Science Results', 'Resources', and 'Questions'. The 'Data' menu is expanded, showing a list of options: 'Data access', 'Data Release 3', 'Early Data Release 3', 'Data Release 2', 'Data Release 1', 'Data Release Schedule', 'Gaia Alerts', 'Gaia Auxiliary Data', and 'Gaia Tools'. The 'Data Release 3' option is further expanded, revealing a sub-menu with the following items: 'Gaia DR3 overview', 'Gaia DR3 content', 'Gaia DR3 papers', 'Gaia DR3 known issues', 'Gaia DR3 auxiliary data', 'Gaia DR3 software tools', 'Gaia DR3 events', and 'Gaia DR3 stories'. The 'Gaia DR3 software tools' item is highlighted, and its own sub-menu is displayed, containing: 'GaiaXPy', 'Bolometric Correction Tool', 'GSPPhot-metallicity calibration', 'GSPSpec metallicity/logg calibration', 'OA self-organising map tool', 'Extinction as function of I-b', 'Extinction coefficients in various passbands', 'Fitted dr3 photometric uncertainties tool', and 'NSS Tools'. The main content area features a large banner with the text 'SCIENCE WITH 1 BILLION OBJECTS IN THREE DIMENSIONS' and 'Welcome to ESA's website for the Gaia Scientific Community'. To the right, there's a section titled 'GAIA MISSION STATUS' with statistics: '3261 days in science operations', '119,988 GB of science data gathered', and '227,136,812,595 transits observed'. Below this are three buttons: 'Access Gaia help', 'Check Archive status', and 'Access Gaia data', each with an 'Archive' logo. The bottom of the page shows a 'Gaia Newsletter #25' announcement dated '1 June 2023'.

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https://www.cosmos.esa.int/web/gaia

150 %

SCIENCE MISSIONS EUROPEAN SPACE AGENCY SCIENCE & TECHNOLOGY SIGN IN

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Data access

Data Release 3

Early Data Release 3

Data Release 2

Data Release 1

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Gaia DR3 stories

GaiaXPy

Bolometric Correction Tool

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SCIENCE WITH 1 BILLION OBJECTS IN THREE DIMENSIONS

Welcome to ESA's website for the Gaia Scientific Community

Archive

GAIA MISSION STATUS

3261 days in science operations

119,988 GB of science data gathered

227,136,812,595 transits observed

Access Gaia help

Check Archive status

Access Gaia data

Gaia Newsletter #25

1 June 2023 Gaia Newsletter #25 is o

https://www.cosmos.esa.int/web/gaia/gaiaxpy