# The SIMPLE Archive

# http://simple-bd-archive.org/

## A collaboratively-curated database and website of low mass stars, brown dwarfs, and exoplanets


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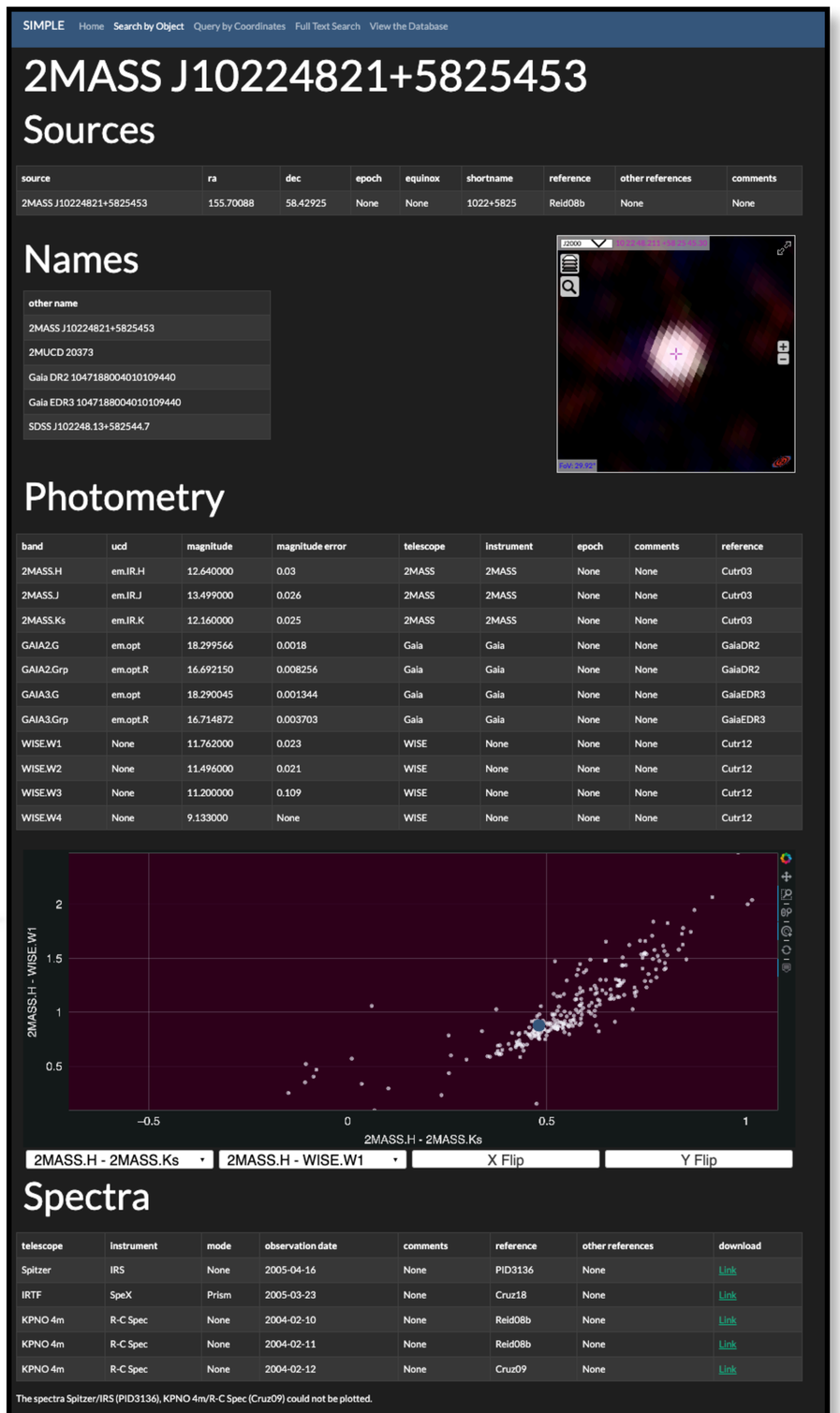
**The SIMPLE Archive project — the Substellar and IMaged PLanet Explorer Archive of Complex Objects — is an endeavor to create a collaboratively maintained database of low-mass stars, brown dwarfs, and directly-imaged planetary mass objects using GitHub, Python, and SQL.**




## Holdings

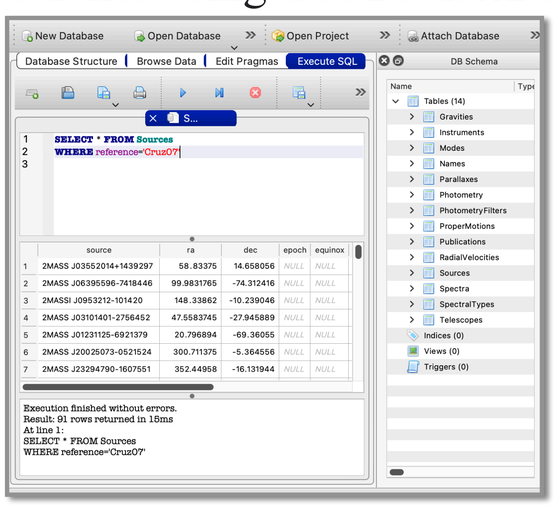
The SIMPLE Archive currently contains **over 3,000 sources**, including directly imaged planets and UCDs with spectral types M7 and later.

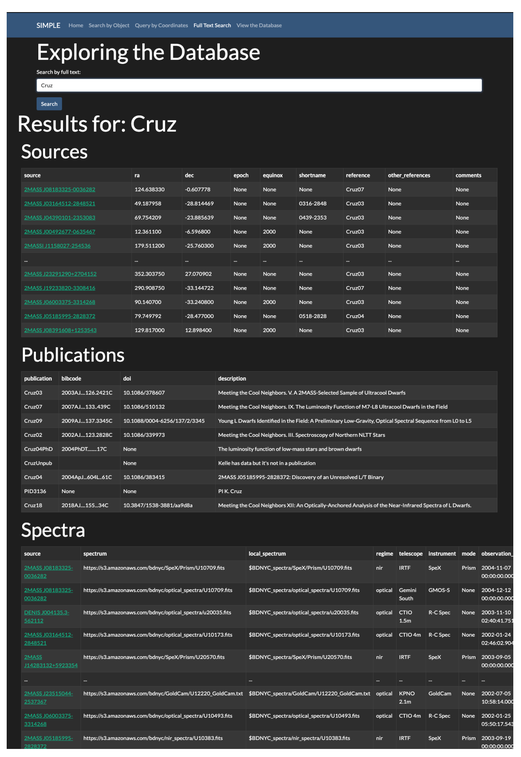
For these 3,000 sources, it contains:

- 11,638 **photometry** measurements
- 4,897 **proper motion** measurements
- 2,628 **parallax** measurements
- 1,404 **spectra**

## Explore and Search

- **Website:** search by object name, coordinates, or full text.
- **Python:** SQL searches using `astrodbkit2`.
- **DBBrowser**: Browse data using a GUI and/or SQL.

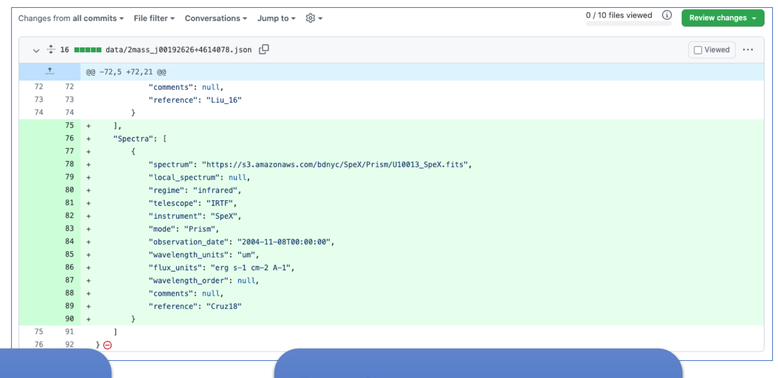


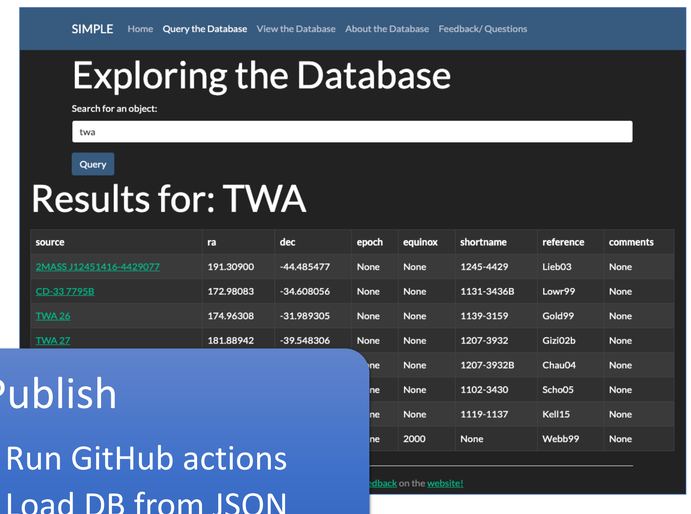




## Contribute

The vision for SIMPLE is that anyone can contribute data using a typical GitHub workflow. The chart below illustrates the workflow from inserting new data to a local database instance via Python, review of database modifications in GitHub, and then publishing them to the website. Please join the **#simple-db-dev** channel in the Astropy Slack workspace for data contribution and development discussion.

```python
# Add source
sources_data = [{'ra': 209.301675, 'dec': 14.477722,
                 'source': '2MASS J13571237+1428398',
                 'reference': 'Schm10',
                 'shortname': '1357+1428'}]
db.Sources.insert().execute(sources_data)

# Additional names
names_data = [{'source': '2MASS J13571237+1428398',
               'other_name': 'SDSS J135712.40+142839.8'},
              {'source': '2MASS J13571237+1428398',
               'other_name': '2MASS J13571237+1428398'},
              ]
db.Names.insert().execute(names_data)

# Add Photometry
phot_data = [{'source': '2MASS J13571237+1428398',
              'band': 'WISE_W1',
              'magnitude': 13.348,
              'magnitude_error': 0.025,
              'telescope': 'WISE',
              'reference': 'Cutr12'
              },
             {...},
             {...},
             {...}]
db.Photometry.insert().execute(phot_data)

# Checking object
_ = db.inventory('2MASS J13571237+1428398', pret

# Save single object
db.save_json('2MASS J13571237+1428398', 'data')

# Save entire database to directory 'data'
db.save_database('data')
```




**Develop**
- Work on local instance
- Export to JSON
- Commit to branch

**Review**
- Issue pull request
- Run validation tests
- Merge changes

**Publish**
- Run GitHub actions
- Load DB from JSON
- Deploy to website

GitHub SIMPLE-AstroDB/SIMPLE-db/
SIMPLE-AstroDB/SIMPLE-web/

**#simple-db-dev** on astropy.slack.com/
http://joinslack.astropy.org/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