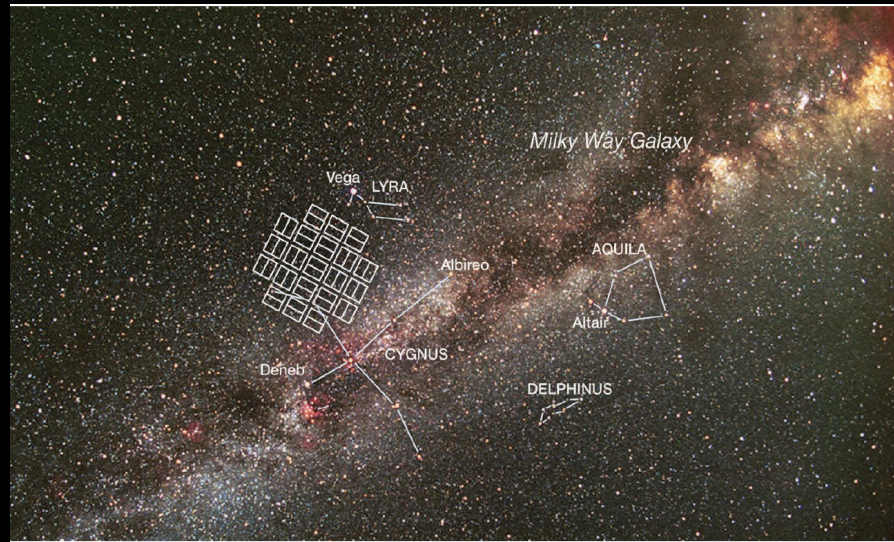
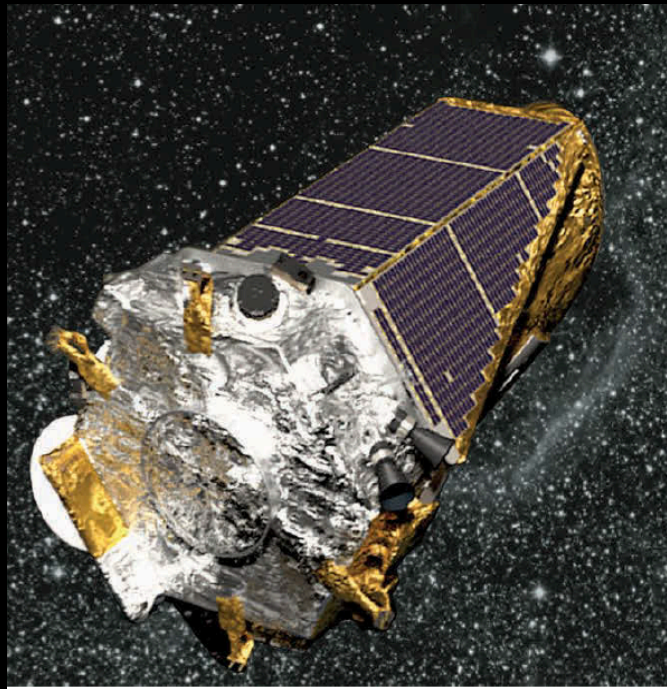


# Overview of Current and Forthcoming Kepler Search Capabilities and Data Products

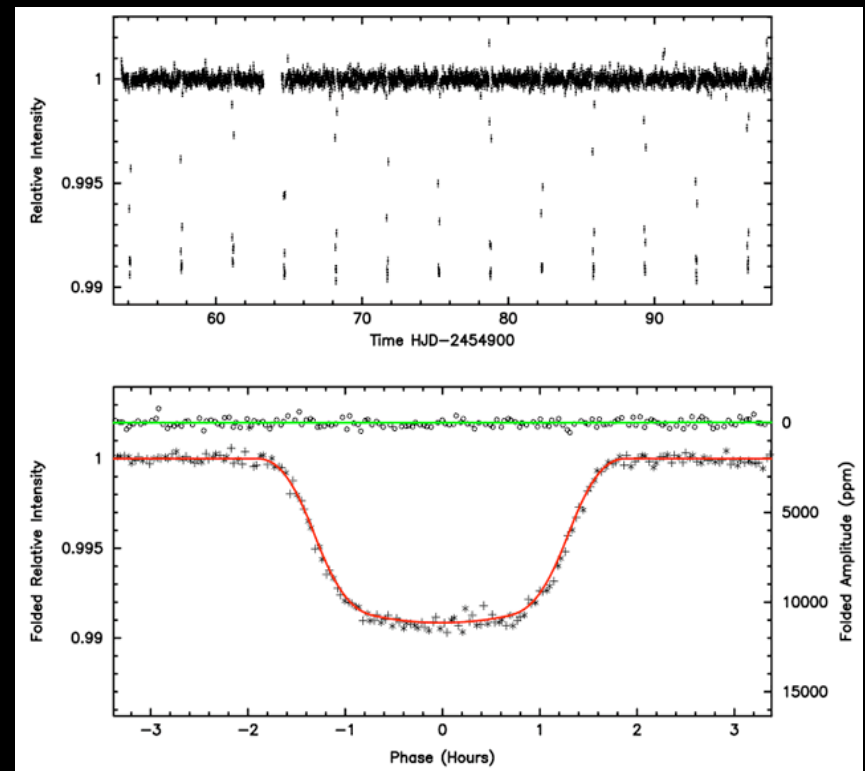


- Current Search Options
  - New GALEX Fluxes
  - Variability Statistics

# The Kepler Mission



- 4-years of operations (now standing by with 2 reaction wheels).
- Nearly-continuous coverage in ~3 month intervals (“Quarters”).
- Broad-band optical filter (400-900 nm).
- Relative photometric precision of a few 10’s ppm.



# The Kepler Mission

- Brief overview of older data retrieval methods at end of presentation.
- Start with some specific examples of Kepler use in the Portal.
- Quick update on new UV fluxes coming soon.
- New data MAST will provide soon: variability statistics.
- Maximize time for open discussion.

# Discovery Portal – A Kepler Perspective

Start Page MAST: 19:09:53.618 +48:46:32.56 r=1.0d MAST: 19:09:53.618 +48:46:32.56 r=1.0d MAST: 19:09:53.618 +48:46:32.56 r=1.0d AstroView

Displaying 2626 of 2887 Total Rows Equatorial Coord 19:09:53.618 ++48:46:32.56 J2000 Footprints: All

**Filters**

Clear Filters Edit Facets... Help...

All  Checked  Unchecked

Filter All Record Fields

**Product Type**

Order Values by Count

Image (0 of 261)

Lightcurve (2626 of 2626)

**Mission**

Order Values by Count

GALEX (0 of 28)

HST (0 of 222)

Kepler (2626 of 2626)

KeplerFFI (0 of 5)

SWIFT (0 of 6)

**Instrument**

Order Values by Count

GALEX (0 of 28)

Kepler (0 of 5)

KEPLER (2626 of 2626)

UVOT (0 of 6)

WFC3/IR (0 of 216)

WFC3/UVIS (0 of 6)

**Filters**

Order Values by Count

F139M (0 of 2)

F555W (0 of 3)

F775W (0 of 3)

FUV (0 of 10)

G141 (0 of 214)

NUV (0 of 18)

UVM2 (0 of 2)

UVW1 (0 of 3)

UVW2 (0 of 1)

**Waveband**

Order Values by Count

INFRARED (0 of 216)

OPTICAL (0 of 10)

UV (0 of 34)

**Principal Investigator**

Order Values by Count

| Actions | Preview | Target Name   | Instrument | Filters | Waveband | Observation ID   |
|---------|---------|---------------|------------|---------|----------|------------------|
| 1       |         | kplr011129153 | KEPLER     |         |          | kplr011129153_ic |
| 2       |         | kplr011129134 | KEPLER     |         |          | kplr011129134_ic |
| 3       |         | kplr011129191 | KEPLER     |         |          | kplr011129191_ic |
| 4       |         | kplr011129171 | KEPLER     |         |          | kplr011129171_ic |
| 5       |         | kplr011129145 | KEPLER     |         |          | kplr011129145_ic |
| 6       |         | kplr011129112 | KEPLER     |         |          | kplr011129112_ic |
|         |         | kplr011129198 | KEPLER     |         |          | kplr011129198_ic |
| R       |         | knlr011182611 | KFPI FR    |         |          | knlr011182611_ic |

**AstroView**

25 FPS (0-27)

19:10:34.111 +48:39:55.875 RA DEC

19:09:53.618 +48:46:32.560 hhmms/deg

Kepler

GALEX

Swift

Previews are for the latest Quarter for each star.



# Discovery Portal – A Kepler Perspective

Select Collection: All MAST Observations (CAOMDBTEST) Search: kepler 16 r=0.001d

5 Total Rows

Kepler-16 Footprints: All

| Actions | Preview      | Target Name       | Instrument | Filters | Waveband | Observation ID                         |
|---------|--------------|-------------------|------------|---------|----------|--|
| [Icons] | [Image]      |                   | Kepler     |         |          | 56                                     |
| [Icons] | [Lightcurve] | kplr012644769     | Kepler     | Kepler  | OPTICAL  | kplr012644769_lc_Q11111111111111111110 |
| [Icons] | [Lightcurve] | kplr012644769     | Kepler     | Kepler  | OPTICAL  | kplr012644769_sc_Q001000000033333320   |
| [Icons] | [Image]      | KEPLER_08000_0010 | GALEX      | NUV     | UV       | 2566455990002122752                    |
| [Icons] | [Image]      | AIS_9_1_3         | GALEX      | NUV     | UV       | 63712324_8057158656                    |

Filters: Product Type (image: 3 of 3, Lightcurve: 2 of 2), Mission (GALEX: 2 of 2, Kepler: 2 of 2, KeplerFFI: 1 of 1), Instrument (GALEX: 2 of 2, Kepler: 3 of 3), Waveband (OPTICAL: 2 of 2, UV: 2 of 2), Project (AIS: 1 of 1, DIS: 1 of 1)

AstroView: 25 FPS (0-51), RA DEC: 18.33.365 +51:29:39.617, 18.175 +51:45:26.759


























































Short and Long Cadence as separate rows. Avoids crowding search results.

Number of datasets (lightcurves) per Quarter encapsulated in ObsID.

# Discovery Portal – A Kepler Perspective

Start Page VO: kepler 16 r=0.001d

60 Total Rows NAME Kepler-16 match

| Actions   | Short Name       | Type  | Title   | Waveband          | Records Found | FITS Images |
|---|------------------|---|---|-------------------|---------------|-------------|
|       | Spitzer Level 1  |    | Spitzer Level 1 / Basic Calibrated Data         | Infrared          | 392           | 392         |
|       | WISE All-Sky L1B |    | WISE All-Sky 4-band Single-Exposure Images      | Infrared          | 180           | 180         |
|       | ADS              |    | Astrophysics Data System                        | Radio, Millim...  | 66            | 0           |
|       | KTC              |    | Kepler Data Search                              | Visible           | 38            | 0           |
|       | DSS ESO          |    | Digitized Sky Survey                            |                   | 16            | 8           |
|       | 2MASS QL         |    | 2MASS All-Sky Quicklook Image Service           | Infrared          | 12            | 6           |
|       | 2MASS ASKY AT    |    | 2MASS All-Sky Atlas Image Service               | Infrared          | 12            | 6           |
|       | SuperCOSMOS [1]  |    | SuperCOSMOS Science Archive (SSA)               | Optical           | 12            | 0           |
|       | IRTS             |    | The Infrared Telescope in Space Data Atlas      | Infrared          | 11            | 11          |
|       | ROSAT SIA        |    | SIA Service for ROSAT Archive                   | X-ray             | 8             | 8           |
|       | CADC             |    | CADC Image Search                               | Millimeter, In... | 5             | 5           |
|       | CADC/CFHT        |    | CADC/CFHT Image Search                          | Infrared, Opt...  | 5             | 5           |
|   | HEAVENS @ ISDC   |  | Mining the HEAVENS with the Virtual Observatory | X-ray, Gamm...    | 5             | 0           |
|   | ISSA             |  | The IRAS Sky Survey Atlas                       | Infrared          | 4             | 4           |
|   | GALEX            |  | Galaxy Evolution Explorer                       | UV                | 4             | 2           |
|   | HEAVENS @ ISDC   |  | Mining the HEAVENS with the Virtual Observatory | X-ray, Gamm...    | 4             | 4           |
|   | WISE All-Sky L3A |  | WISE All-Sky 4-band Atlas Coadded Images        | Infrared          | 4             | 4           |
|   | GALEX            |  | Galaxy Evolution Explorer                       | UV                | 3             | 0           |
|   | SuperCOSMOS [2]  |  | SuperCOSMOS Science Archive (SSA)               | Optical           | 3             | 0           |

Filters AstroView













Cross-Search with VO allows users to discover complementary data at other wavelengths: radio, IR, high energy, that they may not be aware of.

# Discovery Portal – A Kepler Perspective

Start Page | circumbinary.txt | CDS Crossmatch [WISE]

6 Total Rows

Footprints: All

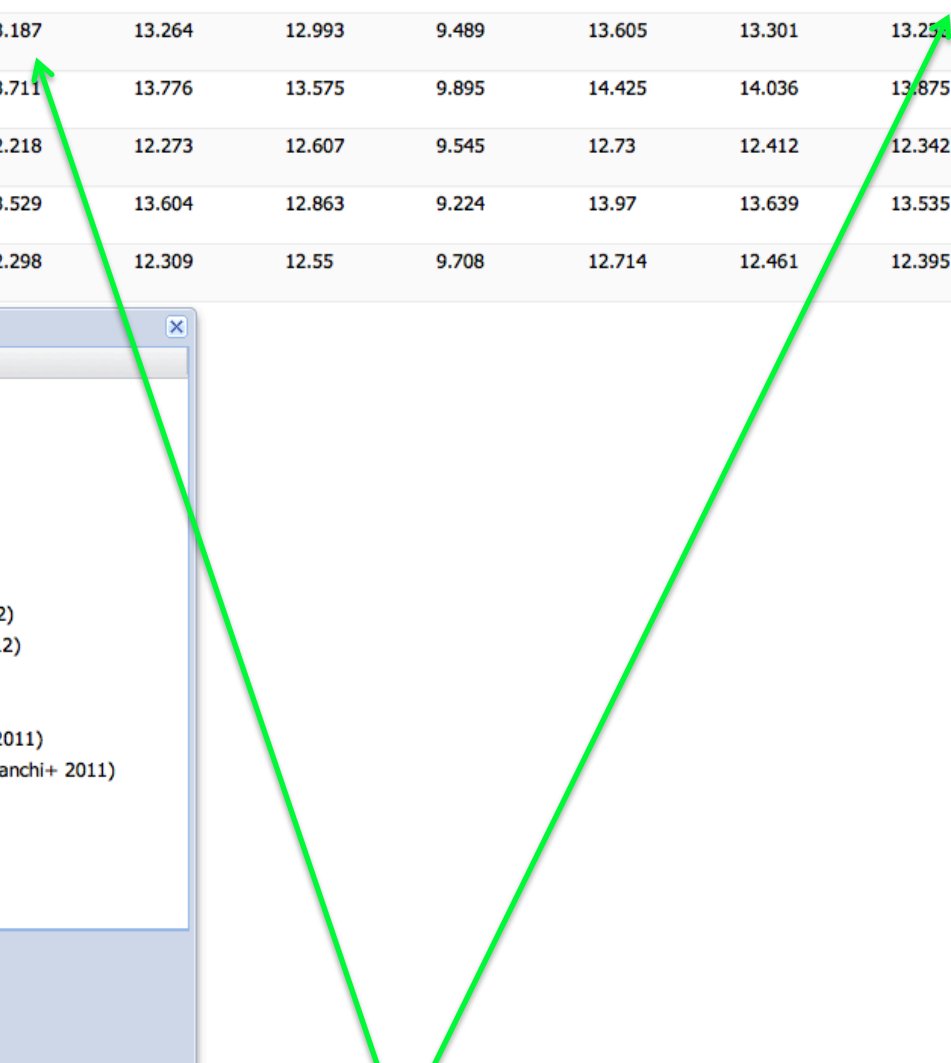
|   | Actions   | angDist  | ID        | RA         | DEC      | JNAME          | W1mag  | W2mag  | W3mag  | W4mag | Jmag   | Hmag   | Kmag   |
|---|---|----------|-----------|------------|----------|----------------|--------|--------|--------|-------|--------|--------|--------|
| 1 |   | 0.482503 | Kepler 16 | 289.07571  | 51.75744 | J191618.18+... | 8.877  | 8.93   | 8.847  | 8.909 | 9.815  | 9.137  | 8.996  |
| 2 |   | 0.184712 | Kepler 34 | 296.43582  | 44.64156 | J194544.58+... | 13.187 | 13.264 | 12.993 | 9.489 | 13.605 | 13.301 | 13.254 |
| 3 |   | 0.439832 | Kepler 35 | 294.49698  | 46.68976 | J193759.27+... | 13.711 | 13.776 | 13.575 | 9.895 | 14.425 | 14.036 | 13.875 |
| 4 |   | 0.191354 | Kepler 38 | 286.83036  | 42.2792  | J190719.26+... | 12.218 | 12.273 | 12.607 | 9.545 | 12.73  | 12.412 | 12.342 |
| 5 |   | 0.068216 | Kepler 47 | 295.29792  | 46.92047 | J194111.49+... | 13.529 | 13.604 | 12.863 | 9.224 | 13.97  | 13.639 | 13.535 |
| 6 |   | 0.089479 | Kepler 64 | 298.215101 | 39.9551  | J195251.62+... | 12.298 | 12.309 | 12.55  | 9.708 | 12.714 | 12.461 | 12.395 |

**Cross-Match (Select catalog from list below)**

| Catalog       | Description  |
|---------------|--|
| MAST          | Mikulski Archive For Space Telescopes  |
| CAOM          | Combined Observations across all MAST Missions                                 |
| CDS           | Strasbourg astronomical Data Center  |
| SIMBAD        | SIMBAD Astronomical Database   |
| 2MASS         | 2MASS All-Sky Catalog of Point Sources (Cutri+ 2003)                           |
| 2MASS6X       | 2MASS 6X Point Source Working Database / Catalog (Cutri+ 2006)                 |
| CFHTLS Deep   | The CFHTLS Deep Survey, fields D1--D4: (T0007 release) (Hudelot+ 2012)         |
| CFHTLS Wide   | The CFHTLS Wide Survey, fields W1--W4: (T0007 release) (Hudelot+ 2012)         |
| CMC14         | Carlsberg Meridian Catalog 14 (CMC14) (CMC, 2006)                              |
| DENIS         | The DENIS database, 3rd release (DENIS Consortium, 2005)                       |
| GALEX GR5 AIS | GALEX-DR5 (GR5) sources from AIS (All-sky Imaging Survey) (Bianchi+ 2011)      |
| GALEX GR5 MIS | GALEX-DR5 (GR5) sources from MIS (Medium-depth Imaging Survey) (Bianchi+ 2011) |
| GLIMPSE       | GLIMPSE Source Catalog (I + II + 3D) (IPAC 2008)                               |
| GSC 2.2       | The GSC 2.2 Catalogue (STScI, 2001)  |
| GSC 2.3       | The Guide Star Catalog, Version 2.3.2 (GSC2.3) (STScI, 2006)                   |
| GSC ACT       | The HST Guide Star Catalog, Version GSC-ACT (Lasker+ 1996-99)                  |
| IRSE MCPS     | IRSE Magellanic Clouds Point Source Catalog (Kato+ 2007)                       |

Catalog: None Selected  
Radius ("): 3

Cross-Match Cancel



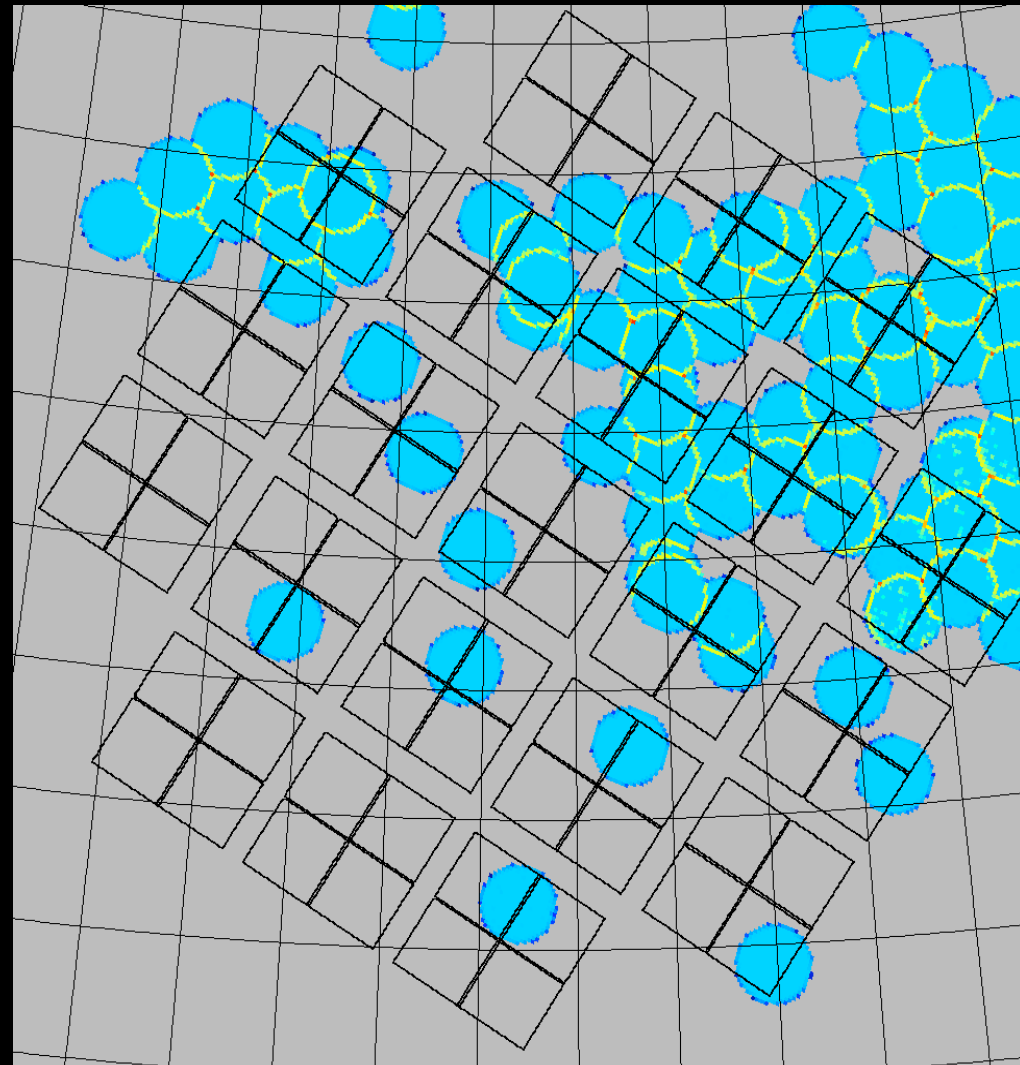
Cross-Match tool with MAST and CDS data allows for quick table creation. Here I cross-matched Kepler circumbinary planets with WISE to get J,H,K and 4-filter WISE fluxes in seconds.



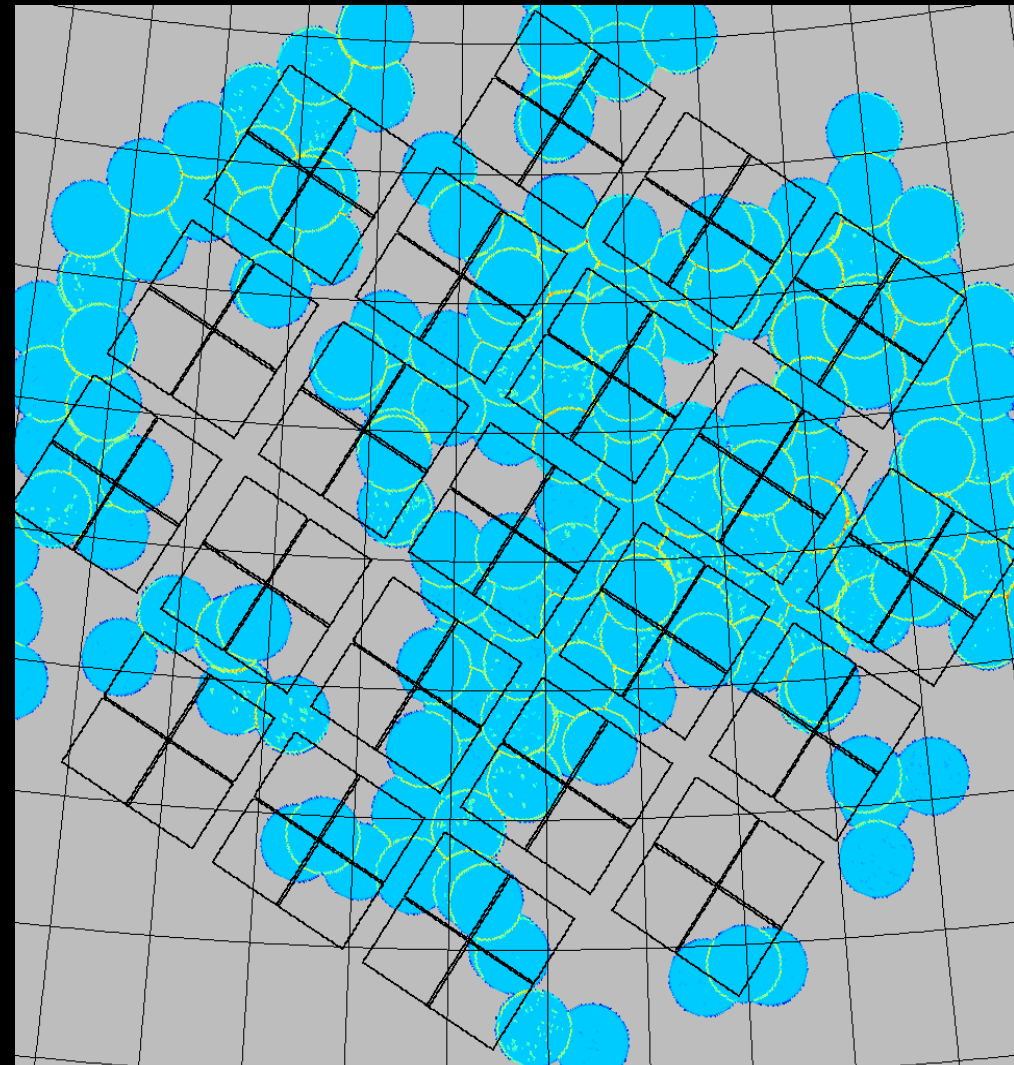




# Incoming Data – GALEX Fluxes From GCAT



GR6



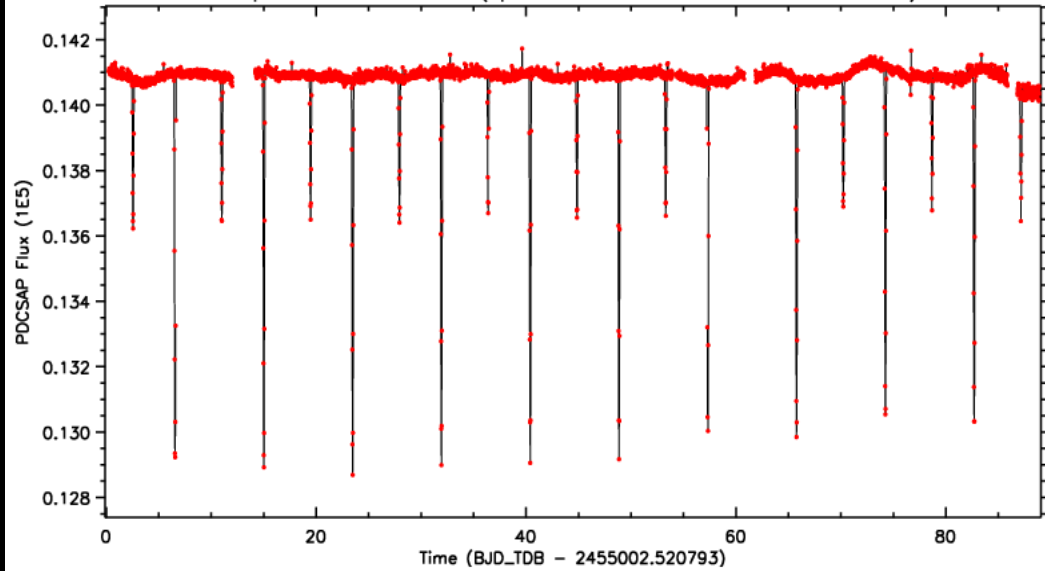
GR7

New GALEX GCAT will be made available as a table in CasJobs, and in the Target table, replacing the current FUV and NUV fluxes previously cross-matched by MAST using GR6.

# Incoming Data – Variability Stats

kplr001026032-2009259160929\_llc

Kepler 1026032 Q2 LC (kplr001026032-2009259160929\_llc.fits)



| PREV             | STATS     | NEXT       |
|------------------|-----------|------------|
| KEPLER_ID        | QUARTER   | CADENCE    |
| 1026032          | 2         | LC         |
| KOI?             | EB?       | Red Giant? |
| NO               | YES       | NO         |
| PARAMETER        | VALUE     | PERCENTILE |
| RVAR_10          | 3.299296  | 80         |
| RVAR_30          | 3.408074  | 80         |
| MDV              | 0.247050  | 75         |
| NZC_0            | 1043.     | 40         |
| NZC_10           | 89.       | 30         |
| SIGMA_OVER_MU_%  | 0.850057  | 95         |
| SKEWNESS         | -7.018317 | 0          |
| KURTOSIS         | 54.059169 | 95         |
| CON_STAT         | 1.016314  | 80         |
| ETA              | 0.119165  | 20         |
| STETSON_J / 1000 | 22.622047 | 85         |
| STETSON_K        | 0.339319  | 0          |
| N_3SIGMA_SEGS    | 18.       | 100        |

| DATASET COMPARISON (same star, diff. dataset, current dataset in red) |  |  |  |
|---|--|--|--|
| Plots vs. Quarter   | Dataset, Q, SC/LC, Value   | Plots vs. Quarter                                | Dataset, Q, SC/LC, Value   |
| <b>RVAR_10 (Machine Readable)</b>                                     | 2009166043257 1 LC 4.579782<br><b>2009259160929 2 LC 3.299296</b><br>2009350155506 3 LC 9.989560<br>2010078095331 4 LC 6.497979<br>2010174085026 5 LC 3.348231<br>2010265121752 6 LC 11.410952<br>2010355172524 7 LC 4.462838<br>2011073133259 8 LC 3.730595<br>2011177032512 9 LC 2.492428<br>2011271113734 10 LC 8.368671<br>2012004120508 11 LC 11.773169<br>2012088054726 12 LC 3.395379<br>2012179063303 13 LC 7.364810<br>2012277125453 14 LC 4.907012<br>2013011073258 15 LC 5.885661<br>2013098041711 16 LC 2.092779 | <b>RVAR_30 (Machine Readable)</b>                | 2009166043257 1 LC 5.318046<br><b>2009259160929 2 LC 3.408074</b><br>2009350155506 3 LC 4.426360<br>2010078095331 4 LC 3.077090<br>2010174085026 5 LC 3.907382<br>2010265121752 6 LC 6.015182<br>2010355172524 7 LC 4.464388<br>2011073133259 8 LC 4.700363<br>2011177032512 9 LC 2.668798<br>2011271113734 10 LC 4.241288<br>2012004120508 11 LC 9.049296<br>2012088054726 12 LC 3.866732<br>2012179063303 13 LC 3.226936<br>2012277125453 14 LC 3.348525<br>2013011073258 15 LC 6.003737<br>2013098041711 16 LC 3.499448 |
| <b>MDV (Machine Readable)</b>   | 2009166043257 1 LC 0.288047<br><b>2009259160929 2 LC 0.247050</b><br>2009350155506 3 LC 0.208350<br>2010078095331 4 LC 0.207651<br>2010174085026 5 LC 0.246006<br>2010265121752 6 LC 0.264860<br>2010355172524 7 LC 0.274427<br>2011073133259 8 LC 0.221463<br>2011177032512 9 LC 0.189889<br>2011271113734 10 LC 0.259716<br>2012004120508 11 LC 0.439425<br>2012088054726 12 LC 0.214306<br>2012179063303 13 LC 0.190044<br>2012277125453 14 LC 0.351814<br>2013011073258 15 LC 0.251668<br>2013098041711 16 LC 0.279234   | <b>NZC_0 (Machine Readable)</b>                  | 2009166043257 1 LC 125.<br><b>2009259160929 2 LC 1043.</b><br>2009350155506 3 LC 973.<br>2010078095331 4 LC 724.<br>2010174085026 5 LC 531.<br>2010265121752 6 LC 878.<br>2010355172524 7 LC 750.<br>2011073133259 8 LC 529.<br>2011177032512 9 LC 1204.<br>2011271113734 10 LC 927.<br>2012004120508 11 LC 553.<br>2012088054726 12 LC 741.<br>2012179063303 13 LC 875.<br>2012277125453 14 LC 293.<br>2013011073258 15 LC 832.<br>2013098041711 16 LC 536.   |
| <b>NZC_10 (Machine Readable)</b>                                      | 2009166043257 1 LC 13.<br><b>2009259160929 2 LC 89.</b><br>2009350155506 3 LC 67.<br>2010078095331 4 LC 67.<br>2010174085026 5 LC 56.<br>2010265121752 6 LC 73.<br>2010355172524 7 LC 70.<br>2011073133259 8 LC 44.<br>2011177032512 9 LC 108.<br>2011271113734 10 LC 72.<br>2012004120508 11 LC 61.<br>2012088054726 12 LC 70.<br>2012179063303 13 LC 66.<br>2012277125453 14 LC 53.<br>2013011073258 15 LC 70.<br>2013098041711 16 LC 54.  | <b>(SIGMA / MU) (percent) (Machine Readable)</b> | 2009166043257 1 LC 0.867956<br><b>2009259160929 2 LC 0.850057</b><br>2009350155506 3 LC 0.952804<br>2010078095331 4 LC 0.905103<br>2010174085026 5 LC 0.849184<br>2010265121752 6 LC 0.843387<br>2010355172524 7 LC 0.958372<br>2011073133259 8 LC 0.905838<br>2011177032512 9 LC 0.847362<br>2011271113734 10 LC 0.819732<br>2012004120508 11 LC 0.990155<br>2012088054726 12 LC 0.881602<br>2012179063303 13 LC 0.858505<br>2012277125453 14 LC 0.898428<br>2013011073258 15 LC 0.979086<br>2013098041711 16 LC 0.857207 |

- Added as a table to CasJobs, in Preview pages. Treat as a MAST HLSP.
- Can empirically select subpopulations via clustering.
- Can study changes through time.

# Progress on Past MUG Comments

*“Matching of the photometric light curves between monthly and/or quarter periods for all sources would provide a high return to both the community and science, if done sooner than later. It would be beneficial if the Kepler team, who has the expertise to enable this to be accomplished, could work in a timely fashion with the MAST Team to enable this now.”*

- This is an active area of research by experts in the field; one group is exploring use of Bayesian analysis on statistical entropy criteria, testing their results by injecting simulated variability and analyzing recovery of the signals.
- A “moderate” effort by MAST would do more harm than good. Many users would be dissuaded to think about the problem and rely on the MAST stitching.
- Many science users don’t even like using the Kepler team’s PDC lightcurves; power users re-extract their own lightcurves from the raw Kepler photometry in the Target Pixel Files.
- This is also the suggestion by members of the Kepler SOC, and a suite of python routines have been created to assist users in detrending, extracting, and even stitching.

Our response was that the problem was much too challenging to be done correctly (and robustly) at this time. One avenue for medium-term investigation is to consider making the python tools from M. Still et al. available through MAST in some capacity, and remains a possibility to explore.

# The Future

- What to add as Kepler transitions to a legacy mission? Which communities are underserved currently? How will people want to use Kepler data 5, 10, 20 years from now? Which data will they want (and will we have the tools for them to use it)?
- Lessons learned applied to K2 and TESS? Knowledge gained can and should be applied to K2 (if it happens) and TESS going forward. Development of tools and services for Kepler likely to be relevant to future missions.
- Improving data linkage and connectivity with Exoplanet Archive? “Two-body” problem where NExSci has all the transit data, MAST has the actual data and star information. Any improvement in linking the two is beneficial!
- Enhance existing webtools and/or add new ones? Catalog and preview plotter (R. Thompson), integration of Pyke (M. Still)? NExSci precedence for offering analysis tools along with data (not just a data repository).
- *What are some of the important topics to discuss from your perspective? Kepler legacy? Data usage? How do you want to use or browse Kepler data for your research? What do you think other astronomers will want from the Kepler mission moving forward?*



# Supplemental Slides – Please Review

# "Classic" MAST Search Forms

[http://archive.stsci.edu/kepler/data\\_search/search.php](http://archive.stsci.edu/kepler/data_search/search.php)

[http://archive.stsci.edu/kepler/kepler\\_fov/search.php](http://archive.stsci.edu/kepler/kepler_fov/search.php)

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## Kepler Target Search

[Archive Status](#) [Help Field Descriptions](#)

(See [Explanations](#) for more information)

[Standard Form](#) [File Upload Form](#)

Search Reset Clear Form

**Target Name** **Resolver** **Radius (arcmin)**  
Right Ascension Declination Equinox  
Kepler\_ID Data Availability Flag Teff  
Catalogs Seasons on CCDs Min. Distance from Edge (px)  
Color/Mag 1 Value 1 Color/Mag 2 Value 2 Condition flag  
User-specified field 1 Field Descriptions User-specified field 2 Field Descriptions  
User-specified field 3 Field Descriptions User-specified field 4 Field Descriptions

**Output Columns** **Sort By:** **Output Coords:** **Output Format** **Make Rows Distinct** **Maximum Records:** **Records per Page:**

Search Reset Clear Form

Target Search: Info on stars in Kepler field-of-view, even if they were not observed. Fluxes in various filters, stellar properties, proper motions.

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## Kepler Data Search & Retrieval

[Archive Status](#) [Help Field Descriptions](#)

[Standard Form](#) [File Upload Form](#)

Search Reset Clear Form

**Target Name** **Resolver** **Radius (arcmin)**  
Right Ascension Declination Equinox  
Kepler ID Investigation ID 2Mass ID  
KEP Mag Target Type Release Date  
Teff Log\_G Quarter  
Condition Flag

**User-specified field 1** **Field Descriptions** **User-specified field 2** **Field Descriptions**  
**User-specified field 3** **Field Descriptions** **User-specified field 4** **Field Descriptions**

**Output Columns** **Sort By:** **Output Coords:** **Output Format** **Make Rows Distinct** **Maximum Records:** **Records per Page:**

Search Reset Clear Form

Data Search: Info on Kepler observed lightcurves: cadence type, start/end times, CDPD values, crowding/contamination.

# Kepler CasJobs: SQL Access To Tables



MAST Query / CasJobs



Home Help GOHelp Tools Query History MyDB Import Groups Output Profile Admin Logout scfleming

Context Table (optional) Task Name  
kepler MyTable My Query

Samples Recent Clear Line 8, Col 23 [1 s] Query complete! Syntax Plan Quick Submit

```
select distinct sci_kepler_id as kepler_id from science
where
sci_archive_class = 'CSC'
and
sci_data_quarter >= 12
and
sci_crowdsap >=0.95
order by sci_kepler_id
```

624 row(s)

| kepler_id |
|-----------|
| 1161345   |
| 1294756   |
| 1435467   |
| 1871056   |
| 2162635   |
| 2167444   |
| 2306756   |
| 2309719   |
| 2439660   |
| 2444412   |
| 2571238   |
| 2573108   |
| 2692377   |
| 2693092   |
| 2694337   |
| 2707479   |
| 2708156   |
| 2837475   |
| 2854698   |
| 2859567   |
| 3102384   |
| 3109550   |
| 3128793   |
| 3217264   |

Plot Save As HTML

Query Results Both

Contact MAST  
CASJobs is made possible by the Sloan Digital Sky Survey Collaboration  
\$Name: v3\_5\_16 \$, \$Revision: 1.70 \$, Last modified: Wednesday, September 17, 2008 at 4:35:22 PM

<http://mastweb.stsci.edu/kplr-casjobs/>

Users can conduct powerful SQL queries to search for data or targets without having to download large amounts of Kepler FITS files.

In the example on the left, I selected all Kepler IDs observed in Short Cadence mode on or after Quarter 12 with a crowding values  $> 0.95$ . This effectively downselects from hundreds of thousands of targets to 624 in a matter of seconds.

All user queries are stored in CasJobs for later use/retrieval. This includes the SQL command used to generate your output table, so you can re-use scripts in the future.

There is a built-in SQL implementation of cross-matching that allows you to cross-match targets based on RA, DEC between tables, including your own tables that you can upload into CasJobs.

# WGET and Pre-Packaged Tarballs

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Kepler Data Search

Kepler Latest News

- 11/04/13 - The confirmed planets tables, and condition flags have been updated. Eleven confirmed planets were added from two multi-planet systems (i.e., Kepler-89 and Kepler-90).

Kepler Objects of Interest (KOI) table, the confirmed and condition flags have all been updated. Several objects were added and several KOI dispositions and flags were updated.

Kepler Objects of Interest (KOI) table, the confirmed and the condition flags have all been updated again. "Not Dispositioned" flags have now been reassigned.

cdpp\_quarter16 ASCII file listing targets observed in Kepler-90 added to the ftp area.

Kepler Objects of Interest (KOI) table, the confirmed and the condition flags have all been updated. Most of the 300 added KOIs are classified as "False Positives" and only 25 are still listed as "Not Dispositioned".

MAST project has updated the dispositions in the Kepler KOI table. 24 of the "Not Dispositioned" targets are now classified as planetary candidates or false positives. The table has also been updated accordingly.

Release Notes 22 (pdf) describing the release of Kepler-90 data is now available.

Lightcurves of Quarter 16, Quarter 12 and RedGiant data - All data is now available for online data. [Tarfiles](#) and [wget scripts](#) have been created or updated.

News

August 08, 2013:  
Kepler Team Soliciting Community Input for Alternate Science Investigations for the Kepler Spacecraft

July 28, 2013:  
Kepler Quarter 16 data now available online

July 01, 2013:  
Kepler KOI tarfiles replaced

July 01, 2013:  
MAST post on AstroBetter Blog Site

June 10, 2013:  
New Kepler KOI tarfiles

RSS 2.0

Missions

- Hubble
- Hubble Legacy Archive
- HSTonline
- DSS
- JWST
- KEPLER
- SwiftUVOT
- XMM-OM
- BEFS (ORFEUS)
- Copernicus
- EPOCH

<http://archive.stsci.edu/kepler/publiclightcurves.html>

Users can generate custom wget scripts following simple instructions under "Search & Retrieval" -> "Download Lightcurves".

Create set of wget commands in a text file, make it executable and run from Linux/Mac terminal.

No restrictions on number of files or size limits.

Users can also download pre-packaged tar archives for all lightcurve files from a given Quarter, or sets comprised of KOI's, red giants, or eclipsing binaries.