



**MAST
Users
Group
Meeting**

**January
14-15,
2016**

Kepler / K2 Interfaces

MAST "classic" web forms.

+ direct web access
(browser, ftp, wget/
curl, scripting)

Discovery Portal

CasJobs

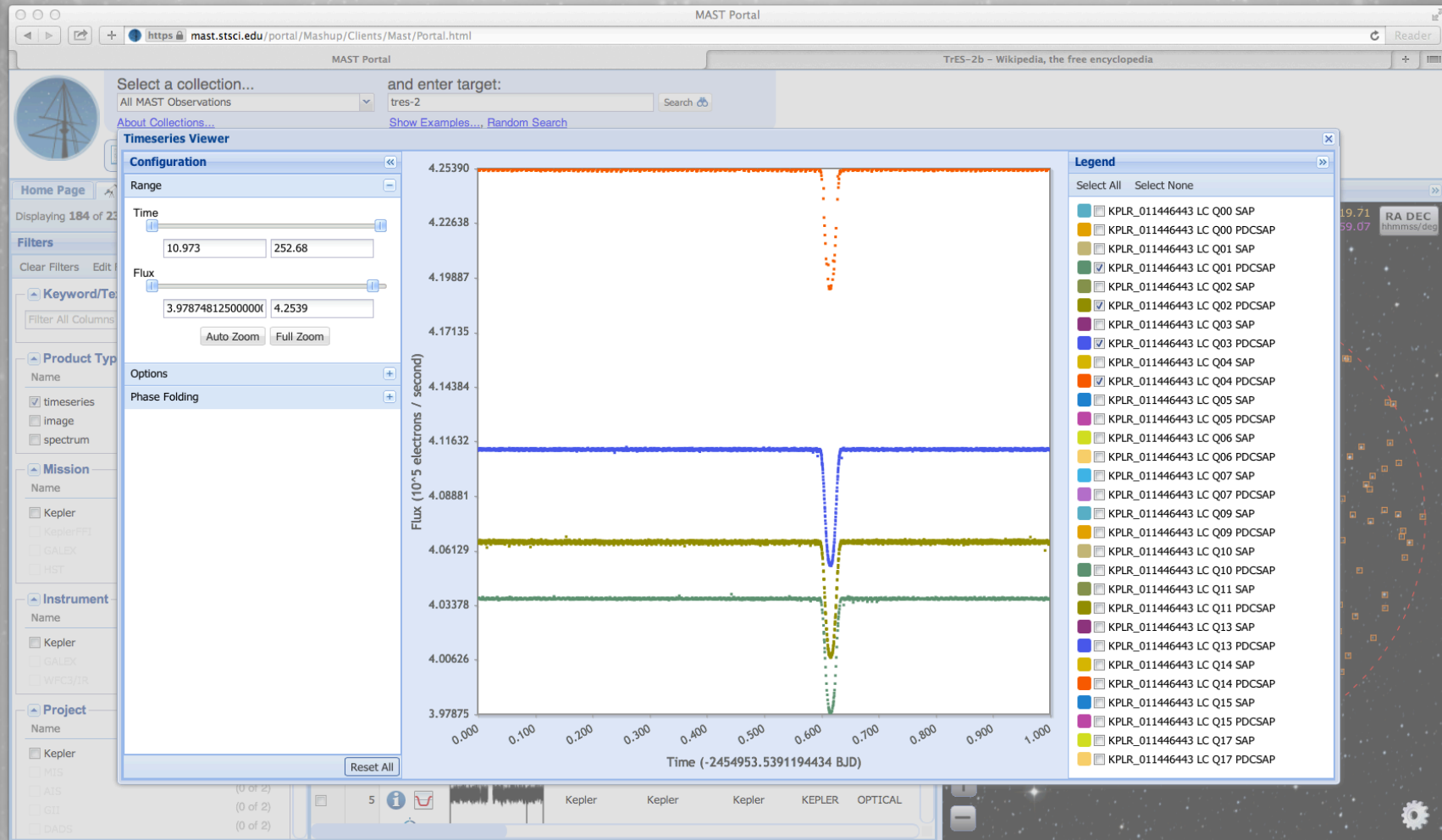
ktc_investigation_id	ktc_kepler_id	ktc_target_type	ktc_obsv_start_mjd	ktc_obsv_stop_mjd	ktc_obsv_start_time	ktc_obsv_stop_time	ktc_act_obsv_start_mjd	ktc_act_obsv_stop_mjd
STKS	2852961	SC	55213.5	55241.5	11/17/2010 12:00:00 PM	2/14/2010 12:00:00 PM	55216.80523308	55245.7392111
STKS	3329196	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	3459199	SC	55213.5	55241.5	1/17/2010 12:00:00 PM	2/14/2010 12:00:00 PM	55216.80523308	55245.7392111
STKS	3533464	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	3624222	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	4039966	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	4060545	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	4450844	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	4928202	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	5079951	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228
STKS	5394680	SC	55183.5	55211.5	12/18/2009 12:00:00 PM	1/15/2010 12:00:00 PM	55184.39754598	55216.0083228



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Kepler / K2 (Portal Updates)



Added light curve previewer for Kepler, K2, and K2 HLSP. Includes phase folding. All Quarters for a given target available as both PDCSAP and SAP series.



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Kepler / K2 (Portal Updates)

The screenshot displays the MAST Portal interface for the search of EPIC 201563164. The search results are displayed in a table with columns for Actions, Mission, Instrument, Project, Filters, and Waveband. The table shows four rows of observations, with the first three rows having preview thumbnails. The first row is for observation 23, the second for 24, and the fourth for 26. The third row (25) has no preview available. The filters on the left show that 87 of 87 K2 observations are selected, and 87 of 89 Kepler observations are selected. The AstroView window on the right shows a star field with a red dashed circle around the target star, with coordinates 11:49:24.665 +01:30:20.93 and 11:48:33.606 +01:28:59.32.

Actions	Mission	Instrument	Project	Filters	Waveband
	K2	Kepler	hlsp_k2sff	kepler	OPTICAL
	K2	Kepler	hlsp_k2va...	kepler	OPTICAL
	No Preview Available	Kepler	K2	kepler	OPTICAL
	K2	Kepler	hlsp_k2sff	kepler	OPTICAL

K2SFF and K2VARCAT added to Portal (first HLSP added), K2/EPIC IDs now resolvable.



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Kepler in 2015 (Penultimate Delivery)

- Kepler DR 25, SOC 9.3, delivered to MAST Oct. – Nov. 2015 (LC only).
- Kepler DR 24 (SC) – noisier than before, bug fixed in future delivery.
- SOC 9.3: (more) transit injections, completeness statistics, auto-vetting, false pos.
- *SOC 9.3 will be the final software version (with bug fixes / minor improvements).*
- Final version of Eclipsing Binary Catalog (from EB group, 2878 EBs).

Kepler in 2016 (Final Delivery)

- Final delivery of files in 2016, doc. and ancillary products through 2017.
- Includes pipeline source, completeness / vetting statistics, CFOP data, revised doc.
- Dozens of products, detailed schedule shared between MO, MAST, and NExSci.

K2 in 2015 (Mission Products)

- Campaigns 2-5, extracted light curves starting with Campaign 3.
- EPIC catalog continually updated with new Campaign fields (up through 13).
- Raw data from Campaign 0 released in prep. for Campaign 9.

K2 in 2015 (HLSP)

- K2SFF (Vanderburg) – Campaigns 0-4 (long cadence).
- K2VARCAT (Armstrong) – Campaigns 0-4, includes variability classification.

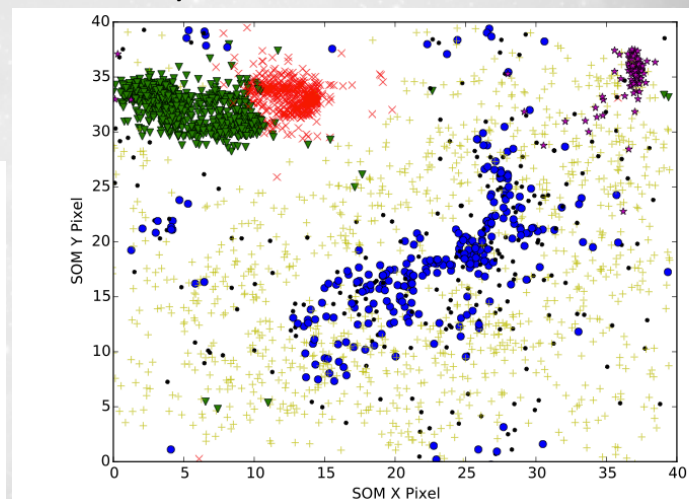
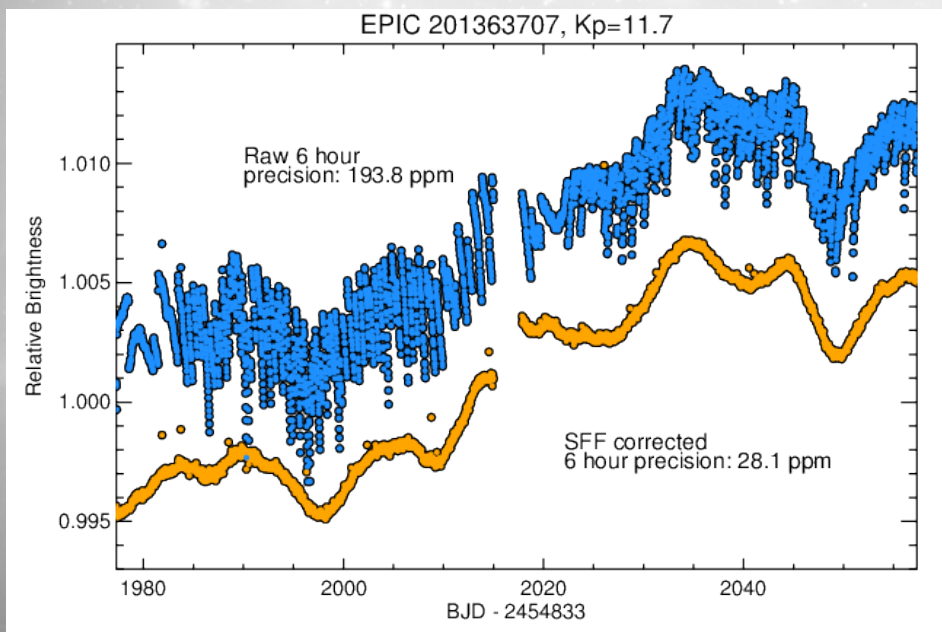


Figure 2. Known variables placed onto a SOM. Random jitter within each pixel has been added for clarity. Green triangles = 'EA' (detached eclipsing binaries), red crosses = 'EB' (semi-detached and contact eclipsing binaries), pink stars = 'RRab' (ab-type fundamental mode RR Lyraes), blue circles = 'DSCUT' (δ Scuti variables), black dots = 'GDOR' (γ Dor variables) and yellow pluses = 'OTHPER' (other periodic and quasi-periodic objects). See Section 3.5 for more detail on these variability classes.

K2 in 2016

- Campaigns 0-2: Extracted light curves.
- Campaign 9 (microlensing field).
- Campaign 11 (first campaign with revisited targets).
- More HLSP (KSWAGS from Krista Smith, Open Clusters from Ann Marie Cody).
- Expect asteroseismology from Dennis Stello, exoplanets from Susan Thompson.



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