Las Cumbres Observatory Global Telescope Network

KITP Teacher's Conference
February 26, 2011

Rachel J Ross

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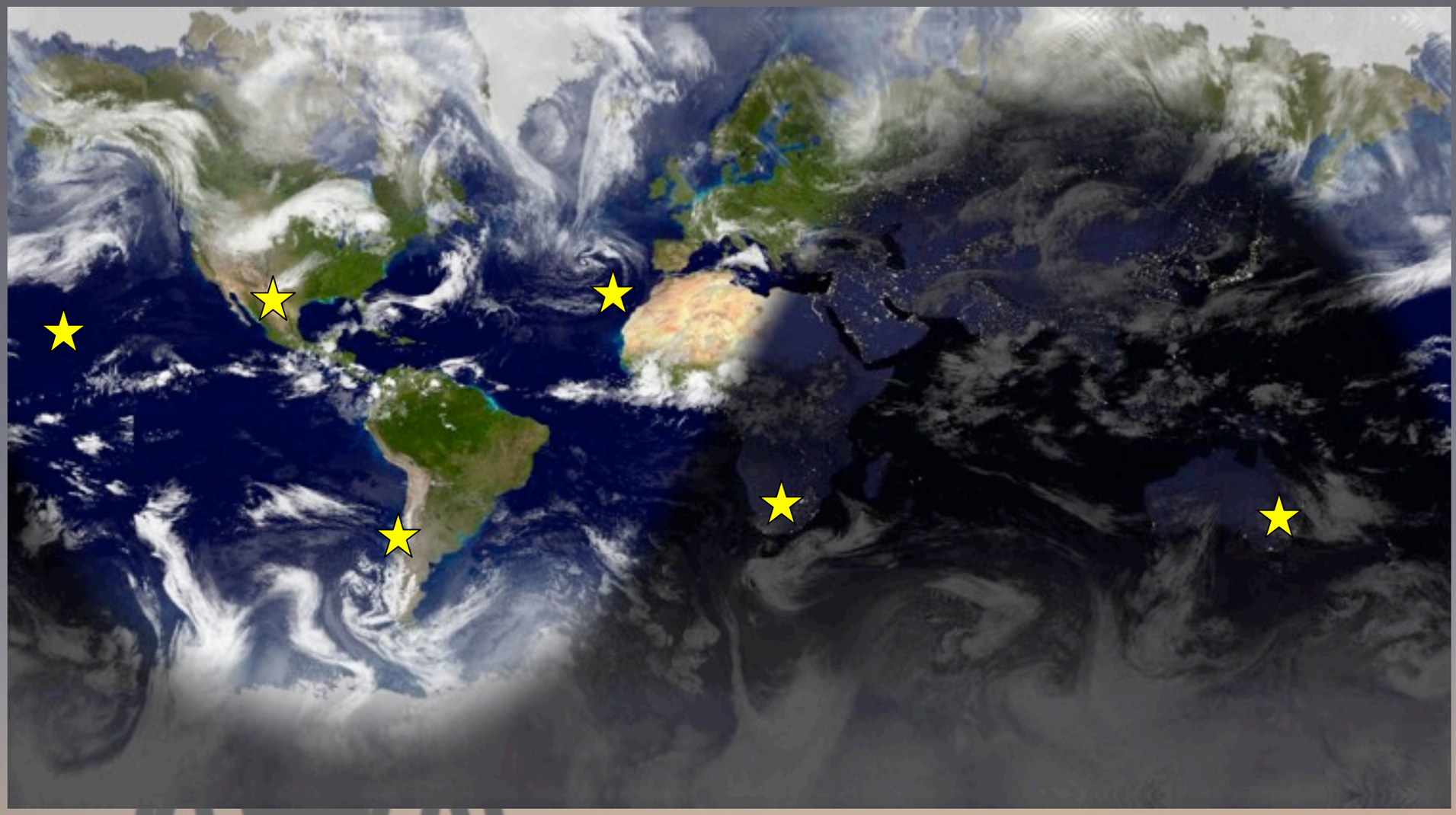
Along with a cutting-edge science program, there will be a large educational component that will be open to anyone who wishes to participate.

The Telescope Network



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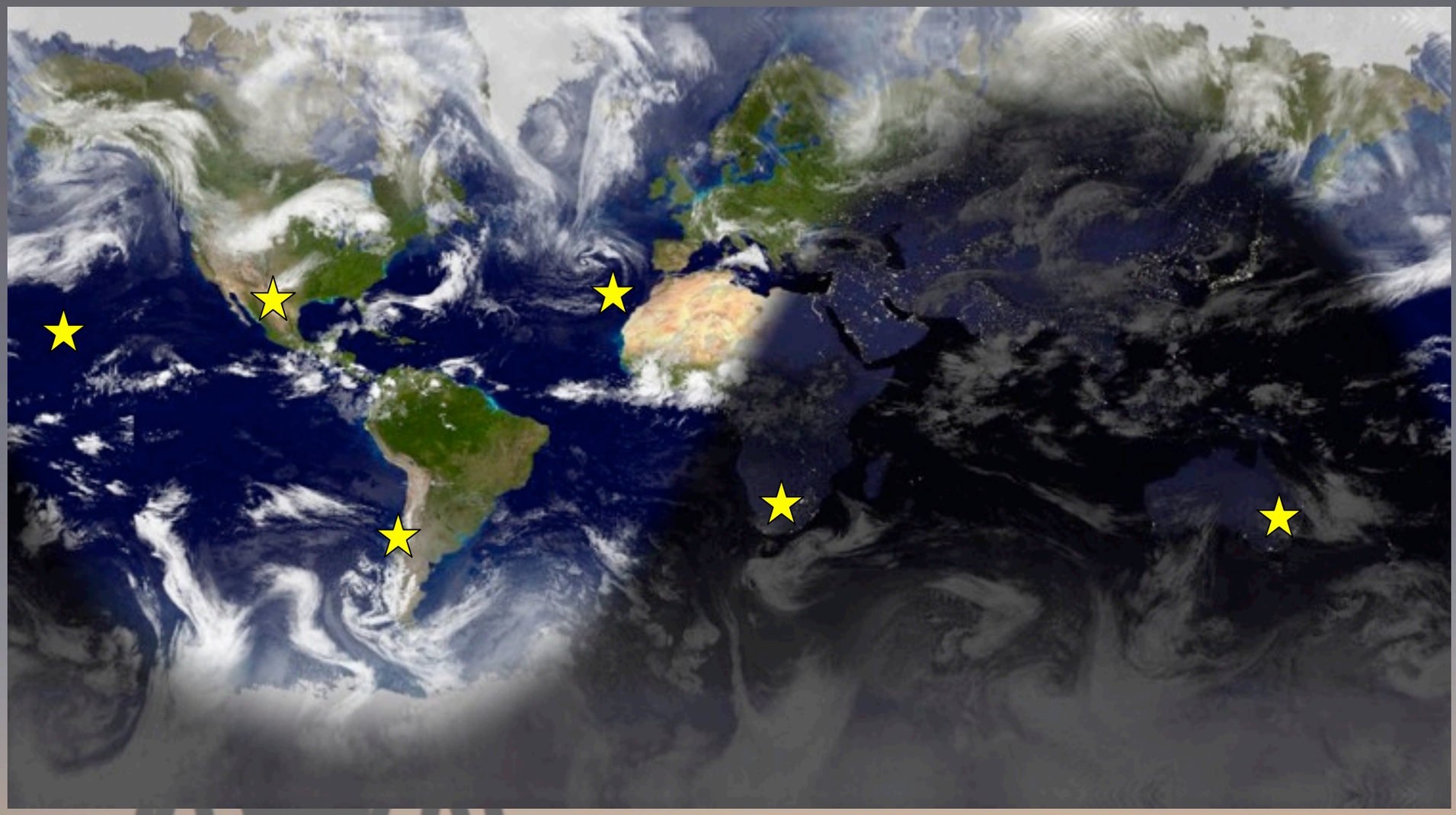


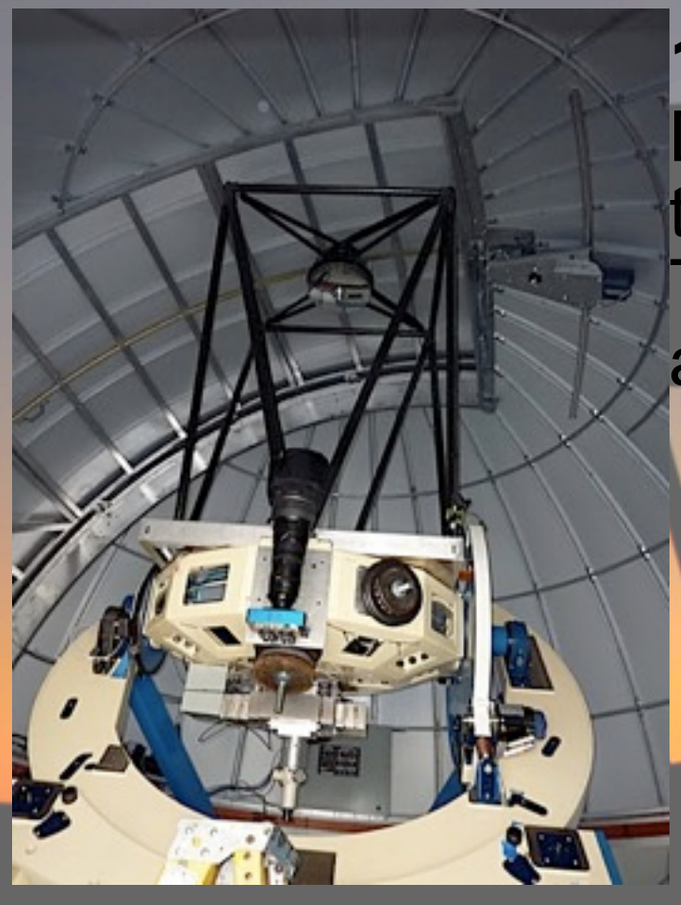
- Haleakala, SSO, CTIO, SAAO, OT, McDonald
- China and Western Australia possibilities.
- Capability of 24/7 all-sky observations.

The Telescopes

The Telescopes

2.0m Telescopes:
FTN and FTS: in operation since 2005 with several upgrades since.

0.4m Telescopes:
Designed, constructed, and tested in Santa Barbara.
Two to four at each site for a total of about 24.



1.0m Telescopes:
Designed, constructed, and tested in Santa Barbara.
Two or three at each site for a total of about 18.

Instrumentation and more:
High-quality instrumentation including CCDs, high-speed cameras, and spectrographs.
At each site will also be a weather station, all-sky cameras, and webcams.

LCOGT Education

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  - Research projects, resources, forums, activities, and more including observing with the telescopes.

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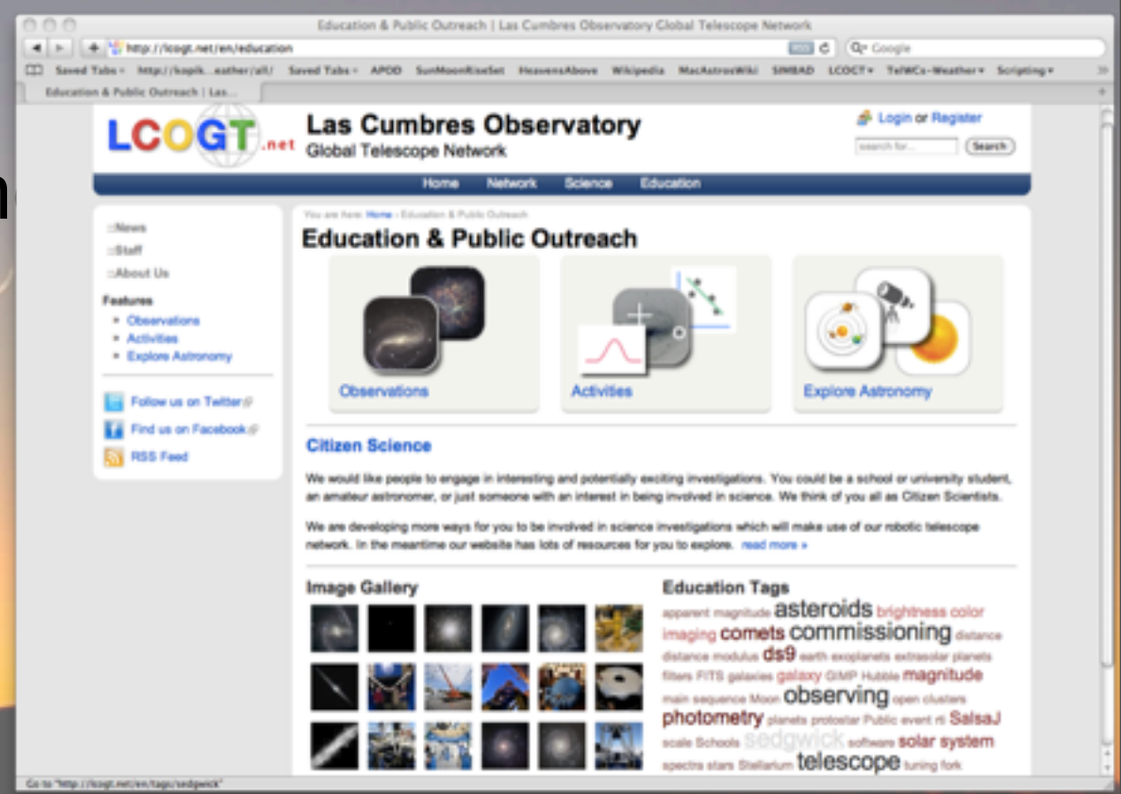
- Currently:
  - No observing time, but will becom available as more telescopes are added to the network.
  - Public accessible archive with several years of data.
  - Information and resources.



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- Will be done completely online!

Sample Past Research Projects

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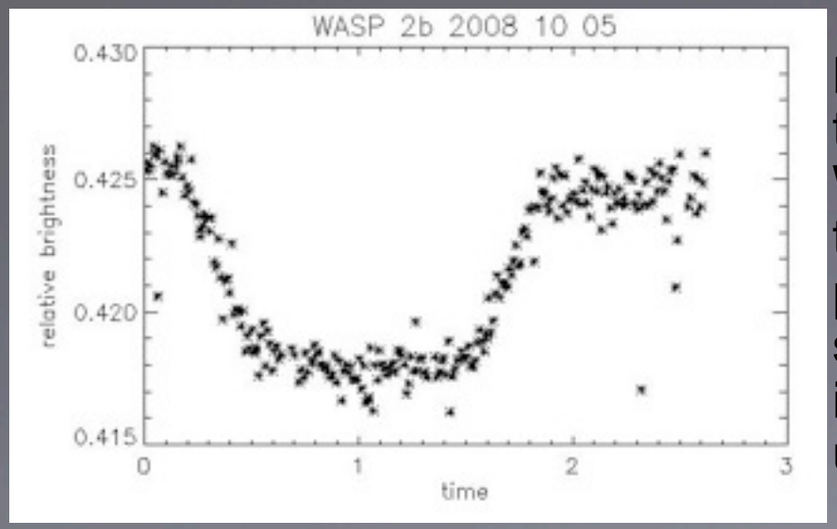
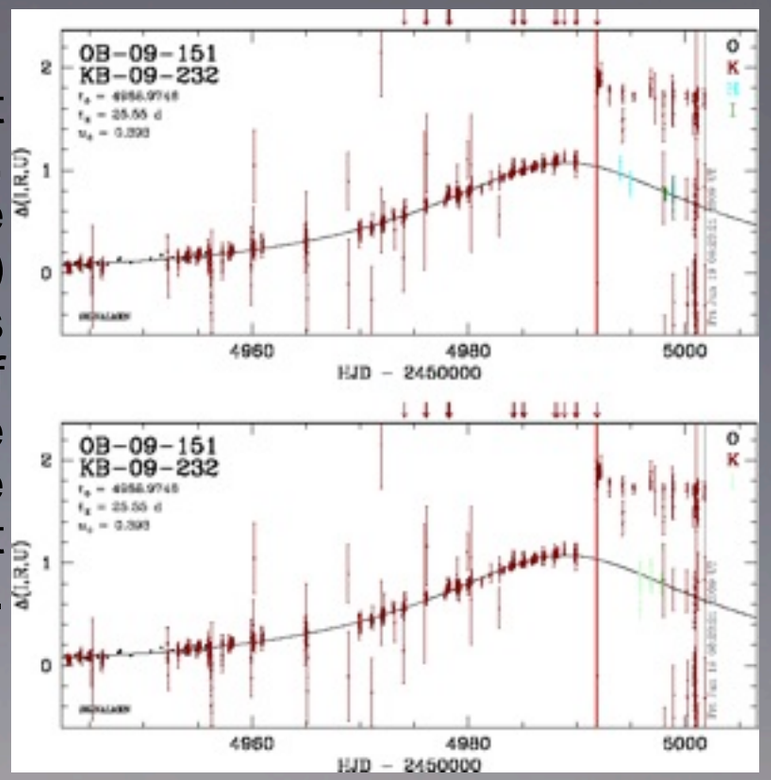
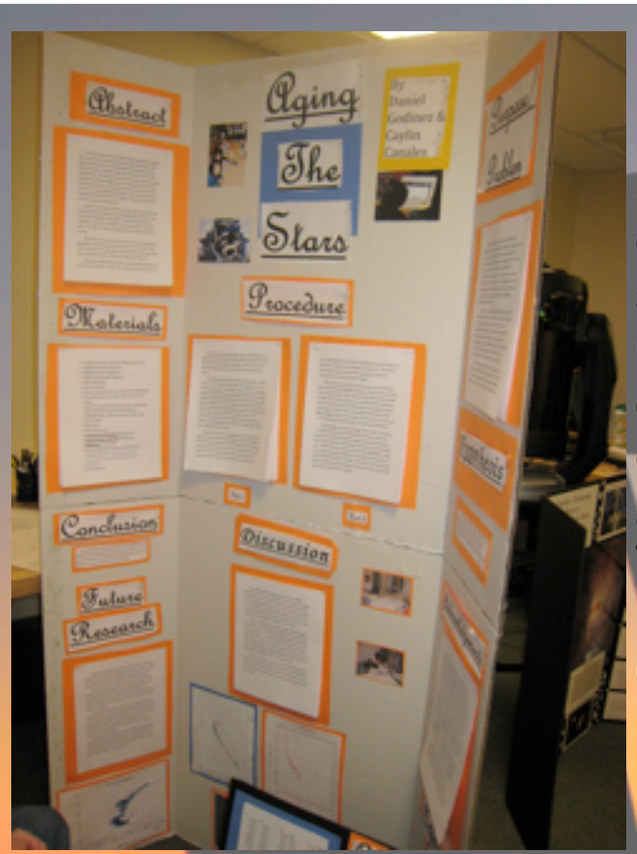


Light curve of transiting planet Wasp 2b. Data taken and processed by a student in Hawai'i in October 2008 using FTN.

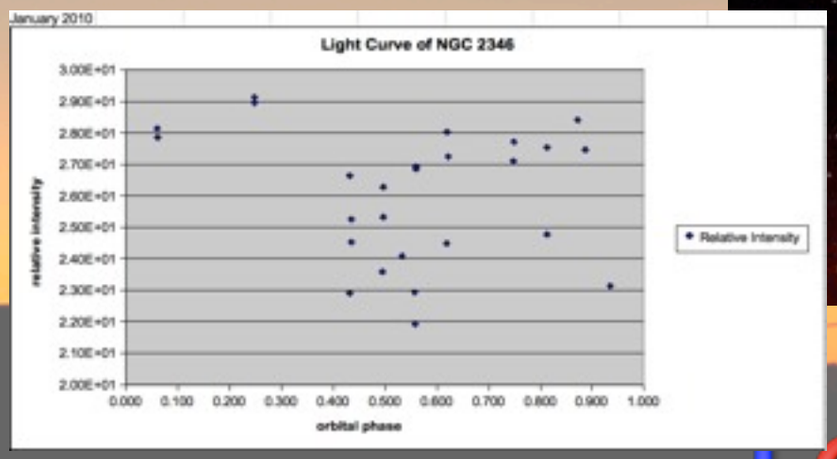
Microlensing event of KB-09-232, observations (blue and dark green) building on previous data by a group of four students in the UK to give a more complete light curve.





Science fair project done by two eighth students from Goleta, CA. They observed an open cluster with FTN, created an HR digram, and aged the cluster. This project won fourth place in the 2010 California State Science Fair.

NGC 2346 and light curve of central while dwarf using FTN by a student in Hawai'i in January, 2010



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- Time-domain astronomy including:
  - extrasolar planets, supernovae, GRBs, KBOs and NEOs, variable stars, open clusters, and others.
- Capability of 24/7 observing + quick response times = long period observing and fast appearing objects
- Science collaborations are mutually beneficial and create a wide variety of resources and data.

More information:

More information:

Website: http://lcogt.net

(Sign up for our monthly newsletter!)

Facebook and Twitter

Rachel Ross: rross@lcogt.net

★ for those coming on tomorrow's tour:★

We will be using the Hotel Shuttles leaving at 8 and 8:30am, expect ~30 mins to arrive

Or you are welcome to drive yourselves and carpool!