Hunting for planets with KELT, K2, and the Peter van de Kamp Observatory

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Planets can be detected from Swarthmore!
Venus transiting the Sun, 2004
Planet-hunting with the KELT survey

Initial light curves from the small KELT survey telescope in New Mexico
Step 2: Follow-up

Photo credit: David Cohen
Swarthmore’s Peter van de Kamp Observatory 24-inch telescope
KC11C043952, UTC 2014-08-26
Swarthmore 0.6m, z' filter, 45s observations

- rel_flux_T1 (normalized) (bin size = 3)
- Total comp counts, scaled x10 (arbitrarily scaled and shifted)
- Negative airmass (arbitrary scaling) (arbitrarily scaled and shifted)
- Saturation indicator (arbitrarily scaled and shifted)

Barycentric Julian Date (TDB) - 2456895 (mid-exposure)
Two of the 10 brightest stars hosting transiting planets have been discovered by KELT.
NASA’s *Kepler* mission - launched March 2009
K2 - an extended, two-reaction-wheel mission for Kepler
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This will be the first time Kepler has looked at nearby young stars... and the data will be public in a few months.
This summer:

Continue to observe KELT targets to search for planets.

Work with public Kepler mission K2 data to look for young stars hosting planets, and to measure stellar masses.