

This Summer I worked with 3 other UROPs, Katie French, Dora Gao, and Christina Jaworsky, to take data on different KBOs, Asteroids, and transiting exoplanets. I was responsible for the exoplanets, which meant I got to play with the 24inch! Matt Lockhart showed me the basics of using the 24inch, and after I had some misadventures on my own almost running the telescope into the computer, not flipping the now named “idiot switches” to run the motor, and taking data using the wrong star field, I learned enough to take good transit data.

There were around 15 extrasolar planets that were good candidates at Wallace this summer. The best turned out to be Tres-1, Tres-3, HAT-P-7b, WASP3b, and HD189733 due to their star field and transit depth. The project really took off on the July 30<sup>th</sup> when Katie French and I monopolized Wallace to observe 3 different transits: HD189733 on one of the 14 inch telescopes, Tres-4 on the 16 inch, and HAT-P-7b on the 24 inch. With the help of Elizabeth Adam’s, I was able to get one and a half good light curves for the night.

As well as taking exoplanet transit data, I wrote a new manual for operating the 24inch and collected and organized finder charts to help with future observing. I also tried to take data on a few appulses, but each was below the horizon or got clouded over. In fall I will be help to coauthor a paper using the observations our group took on Makemake. The paper will focus on the accuracy of performing astrometry of a KBO on a small telescope.

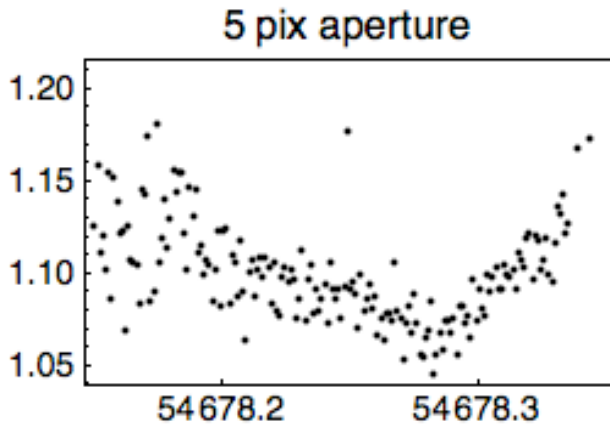


Figure 1: HD189733 light curve for July 30<sup>th</sup>. The data was taken on pier 4 in the shed at Wallace.

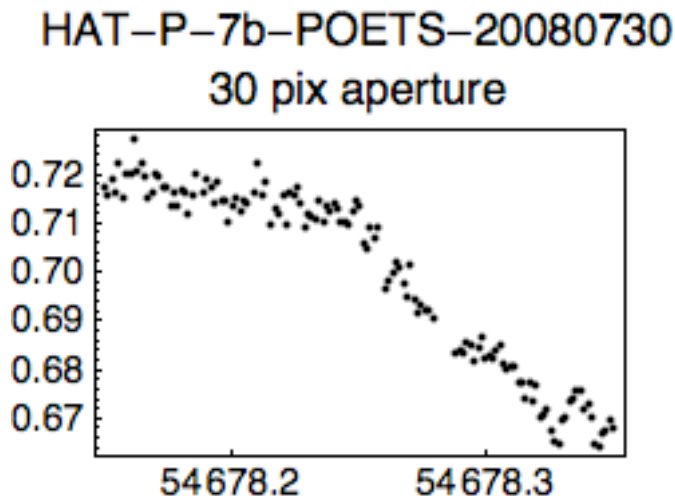


Figure 2: HAT-P-7b light curve for July 30<sup>th</sup> found using the 24inch at Wallace. Unfortunately the sky clouded over before the transit finished.