Name: Fergal Mullally

Email: fergal.mullally@nasa.gov

Institution: SETI/Nasa Ames

Title: Automatic False Positive Identification of KOIs

Type: Poster

Session: Exoplanet Statistics, False Positives, and Completeness Corrections

Abstract: We present an automated technique for detecting false-positive Kepler Objects of Interest (KOIs) using

difference image analysis and centroids. This work builds on the tools and techniques developed by

Bryson et al. (2013) and used by the project to vet KOIs.

KOIs identified by the Science Office are contaminated with large numbers of background eclipsing binaries masquerading as shallow transits. These false positives were identified through an intensive and time-consuming manual process for quarters 1-12 and earlier. Automating this process decreases the time and human effort required to produce a well-vetted candidate list for ground based follow-up. In this poster we present our technique and show that our results agree with the human vetters for up to 98% of targets.