

Name: Natalie Hinkel
Email: natalie.hinkel@gmail.com
Institution: San Francisco State University
Title: TERMS and Conditions of Transiting Exoplanets
Type: Poster
Session: Characterizing Transiting Planets
Abstract: Photometric follow-up of planets discovered by the radial velocity technique have yielded known transiting extra-solar planets, especially for those with the brightest host stars (e.g., HD 209458b). The only limitation to photometric precision is determined by the chosen telescope/instrument and small uncertainties in the timing of the transit. We have conducted follow-up observations of numerous known exoplanets, such as HD 37605 and HD 6434, using the updated Transit Ephemeris Refinement and Monitoring Survey (TERMS) pipeline. We have calculated the transit ephemerides via optimal observing windows and are able to fully characterize the planetary system and possible transit. While the field of exoplanets has expanded to include characterization, these are typically limited to shorter period orbits. Our program extends characterization to a much more diverse range of planetary orbits both in terms of longer periods and higher eccentricities. TERMS is complimentary to both Kepler and TESS with respect to both brightness of the host star and orbital period range to which we are sensitive. In the case of a null detection, our photometry is used to place constraints on orbital and astrophysical parameters of the planet.