

Monitoring the closest stars in K2 field 4 and 5

Wei-Chun Jao

Georgia State University

We propose to observe 12 closest stars in Kepler 2 field 4 and 5. These stars are F8 – M3.5 dwarfs and a white dwarf, a sample that in microcosm mimics the population of the solar neighborhood. Although the odds of detecting a transit among only 12 targets is small, the variability data are valuable for astrophysical studies of the nearest stars and an investment in the future, should non-transiting planets eventually be discovered around these stars. We can also set-up a complementary long-term variability monitoring program in conjunction to Kepler's short-term data and will gather a full picture of the stars' variability and flaring events, which are important to habitability of planets.