

***K2* Campaign 2 Proposed Targets**

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We propose 26 target stars for K2 long cadence photometry in Campaign 2. These 26 stars are the brightest GKM stars in the Campaign 1 field, and indeed we have been monitoring their RVs for the past 10-20 years at the Keck and Lick Observatories. **These stars have been selected as the best stars for RV and other ground-based follow-up, should they have transiting planet candidates.** They are bright, and hence nearby, chromospherically quiet GKM stars with no visible companions within $2''$. Their proximity makes these stars vital for a wide variety of observational approaches, including high spatial resolution imaging, IR dust detection, ALMA mm wavelength mapping that resolves 1 AU, GAIA astrometry, and much more, including future direct imaging of planets. All of these targets will also be TESS targets, as all have $V < 11$, implying that K2 and TESS will later provide a long time baseline for any transiting planets and TTVs. The RV legacy for all of these stars makes the possible detection of transiting planets more compelling as we can detect the non-transiting planets.

Three of these stars have a known planet. HIP 79431 (Apps et al. 2010) and HD 141937 (Udry et al. 2002) have long-period giant planets. Wasp-17 is a transiting, inflated hot Jupiter (Anderson et al. 2010; Triaud et al. 2010). Investigating HIP 79431 and HD 141937 for the possibility of additional, *transiting* planets will inform us about the architectures of these systems, and refining the radius of Wasp-17 b will elucidate the mechanism that inflates hot Jupiters.

Additionally, the young stars in this proposal are spotted, and their photometric variability will determine their rotation periods, constraining the angular momentum evolution of young stars. The young stars proposed here were on the renowned FEPS legacy program (Carpenter et al. 2009), and Spitzer has measured the infrared excess diagnostic of their transitional disks.

REFERENCES

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