

***K2* Campaign 3 Proposed Targets**

L. M. Weiss & G. W. Marcy

We propose 15 target stars for K2 long cadence photometry in Campaign 3. These 15 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 at least one known planet: HD 210277 (Marcy et al. 1999), HIP 109388 (GJ 849 Butler et al. 2006), and GJ 876 (Marcy et al. 1998; Delfosse et al. 1998; Rivera et al. 2010). GJ 876 has four planets, none of which are known to transit. The discovery of transits for any of the existing planets, or as yet undetected companions, would reveal the radius of the planet and refine its orbital period. In addition, two stars (HD 211038 and HD 215152) have RV planet candidates that might be transiting planets or have transiting companions.

REFERENCES

- Butler, R. P., et al. 2006, ApJ, 646, 505
- Delfosse, X., Forveille, T., Mayor, M., Perrier, C., Naef, D., & Queloz, D. 1998, A&A, 338, L67
- Marcy, G. W., Butler, R. P., Vogt, S. S., Fischer, D., & Lissauer, J. J. 1998, ApJ, 505, L147

Marcy, G. W., Butler, R. P., Vogt, S. S., Fischer, D., & Liu, M. C. 1999, *ApJ*, 520, 239

Rivera, E. J., Laughlin, G., Butler, R. P., Vogt, S. S., Haghighipour, N., & Meschiari, S. 2010, *ApJ*, 719, 890