

Kepler2 Campaign 1 Proposed Targets

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We propose 25 target stars for K2 long cadence photometry in Campaign 1. These 25 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.

Six of these stars have a known planet detected with RVs: HD 95089 (Johnson et al. 2010), HD 96063 (Johnson et al. 2011), HD 99109 (Butler et al. 2006), HD 99492 (Marcy et al. 2005), HD 102195 (Ge et al. 2006), and HD 102329 (Johnson et al. 2011). Investigating these stars for the possibility of additional, *transiting* planets will inform us about the architectures of these systems. HD 102329 b has an orbital period of just four days, and so it has a relatively high probability of transiting its star. Three of these planet-hosting stars are sub-giants, giving us an opportunity to probe the evolution of planetary systems.

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