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Title: Validation by Asteroseismology for KOI-69
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Abstract: I present a study of KOI 69.01, a 1.5 R_{Earth} planet around one of the brightest Kepler exoplanet host stars. The wealth of short cadence data for KOI 69 enable an asteroseismic characterization of the star, making it one of the smallest stars for which such a measurement is possible. The stellar density inferred from asteroseismology matches the density independently inferred from the exquisite Kepler transit light curve, lending credence to the planetary interpretation of the signal. The transit depth and stellar radius are determined with such precision that they render KOI 69.01 the best-measured planet outside of the solar system: its radius is known to within 120 km. The brightness of the host star KOI 69 also made it an ideal target for a new observing mode with the Spitzer Space Telescope, which gathered a wealth of 10 transits of the planet.