

Asteroseismic Investigation of Known Planet Hosts in the Kepler Field

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In addition to its great potential for characterizing extra-solar planetary systems the Kepler mission is providing unique data on stellar oscillations. A key aspect of Kepler asteroseismology is the application to solar-like oscillations of main-sequence stars. As an example we here consider an initial analysis of data for three stars in the Kepler field for which planetary transits were known from ground-based observations. For one of these, HAT-P-7, we obtain a detailed frequency spectrum and hence strong constraints on the stellar properties. The remaining two stars show definite evidence for solar-like oscillations, yielding a preliminary estimate of their mean densities.

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