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A Planet Search among Kepler Asteroseismic Giant Stars
Poster
Exoplanet Statistics, False Positives, and Completeness Corrections
Authors: Marie Hrudkova, Artie Hatzes, Raine Karjalainen, Holger
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Planet searches around intermediate mass K giant stars can provide important
clues on the dependence of planet formation on stellar mass. To date only 53 exoplanets ( $6 \%$ of the total) have been discovered around giant stars.
Unfortunately, the mass determination of giant stars relied on evolutionary tracks which are model dependent. Planets around K giants could improve our knowledge of planet formation among stars more massive than the Sun if we could derive accurate stellar masses. The Kepler Space Mission has been monitoring over 13,000 red giant stars for asteroseismic studies. This represents a unique sample since asteroseismic analyses gives us not only the stellar masses, but also the stellar age and internal structure of the star. We can, for the first time, probe the evolution of planetary systems. We have started a program to monitor 95 giant stars from the Kepler field to search for planets using high-resolution spectrographs on four different telescopes, including the 2.7-m Harlan J. Smith Telescope, 2.5-m Nordic Optical Telescope, 2-m Alfred Jensch telescope and $1.2-\mathrm{m}$ Mercator telescope. Here we present a current status of the project and our first results.

