**LENSING IN THE KEPLER FIELD**

Rosanne Di Stefano
Smithsonian Institution/Smithsonian Astrophysical Observatory
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Lensing events occur regularly in the Kepler field. The Kepler mission therefore provides a unique and scientifically important opportunity to monitor lensing light curves. The unprecedented photometric sensitivity combined with 30-minute cadence over a period of months can be utilized to accomplish important goals These include (1) high-precision verification of the form of the lensing light curve predicted by general relativity, and (2) high-precision tests for a variety of system parameters, including lens mass and multiplicity, source multiplicity, parallax, and source size. Detectable lensing is most likely to be caused by nearby high-proper-motion masses,i.e., mesolenses. The Einstein rings of nearby masses are large enough that astrometric effects, as well as photometric variations may be detectable. A large set of high-proper-motion stars is already likely to be observed by Kepler during the coming year. We propose to analyze Kepler data from all of these. In addition, we propose that a new set of high-proper-motion stars be observed during cycle 2. The newly selected stars are those with the highest probability of producing an event. In order to conduct the analysis we propose, we will develop tools that allow the community of scientists who will use Kepler data to check for evidence of lensing events in the entire data set.