
Standard photometry of ground-based observations for Kepler RR Lyrae variable stars

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Abstract

Time series observations for the 41 RR Lyrae in Kepler's fields were carried out in 2010 to 2013 using a number of meter class (or smaller) telescopes. These telescopes include the 1-m and 41-cm telescopes of Lulin Observatory (LOT and SLT respectively, Taiwan), the 81-cm telescope of Tenagra-II Observatory (TNG, Arizona, USA), the 1-m telescope at the Mt. Lemmon Optical Astronomy Observatory (LOAO, Arizona, USA), the 1.8-m and 15-cm telescopes at the Bohyunsan Optical Astronomy Observatory (BOAO, Korea), and the 61-cm telescope at the Sobaeksan Optical Astronomy Observatory (SOAO, Korea). All of these telescopes were equipped with commercial available CCD imagers, and the observations were done in standard BVRI filters. Photometric calibration of the RR Lyrae light curves was done with standard stars listed in Landolt standard stars (Landolt 2009). Observations of selected Landolt standard stars (centered on SA 107-456 & SA 110-232) in Johnson-Kron-Cousins BVRI filters, spanning three distinct airmasses, were done with the 81-cm Tenagra II telescope on 25 June 2011. Raw imaging data were reduced with IRAF in the same manner as in the case of the RR Lyrae, and astrometric calibrated with astrometry.net Lang et al. 2010. We will show the standard photometric results and new observing plan. And also I will include the Korea new planet search program KMTNet.

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