Contrib. Astron. Obs. Skalnaté Pleso **43**, 458 – 458, (2014)

Determination of parameters of transit exoplanets, using data obtained at the small telescopes

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Received: August 15, 2013; Accepted: January 17, 2014

Abstract. We present the results of CCD-photometry data processing of some stars with transiting extrasolar planets. Observations were carried out using such small telescopes: a 38-cm Cassegrain telescope K-380 (CrAO, Ukraine), a 60-cm Zeiss-600 (Terskol, Russia), a Celestron-14$''$ (Lesniki & MAO NASU, Ukraine). The main physical and orbital parameters for specified exoplanetary systems were calculated by the Monte-Carlo method. Using obtained best-fit parameters the light curve modeling was simulated. Calculations and light curve simulation were realized using an IDL programming environment. A light curve analysis includes simulation of a transit curve shape using the analytic theory of the light curve and experimentally obtained data. A comparison of the results obtained in each of the above mentioned telescopes is presented.