

Name: Roi Alonso
Email: ras@iac.es
Institution: Instituto de Astrofísica de Canarias
Title: A GTC view of the candidate disintegrating exoplanet KIC12557548
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Abstract: -----

R. Alonso, F. Murgas, H. Parviainen, C. Allende-Prieto, A. Cabrera-Lavers, H.J. Deeg, E. Pallé

Instituto de Astrofísica de Canarias, Tenerife, Spain
Departamento de Astrofísica de la Universidad de La Laguna, Tenerife, Spain

The exciting object KIC12557548b exhibits periodic transits that change significantly their depths from less than 0.1% until 1.2%, in what seems a non-predictable pattern. After having discussed, and strongly disfavored several scenarios that might reproduce the light curve, Rappaport et al. (2012) point to an evaporation of a Mercury-size object as the most plausible explanation for this short period (15h) object.

This unique object is faint for Kepler standards ($V=16.2$): the precision in the 1-min cadence data (Q13-Q16) of ~ 3500 ppm makes challenging the detailed study of the shape of individual transits. Most of the light curve (Q1-Q12) was sampled with the 30-min cadence, achieving a precision of about 900 ppm per data point.

We have conducted ground-based observations of several transits of KIC12557548b using the 4.2m William Herschel Telescope (WHT) and the 10.4m Gran Telescopio Canarias (GTC), both located at the observatory Roque de los Muchachos in La Palma (Spain), in summer 2012 and 2013. The light curves obtained with GTC/OSIRIS and low resolution gratings allow us to reach 300 ppm in a 4-min sampled curve, thus revealing the detailed shape, small scale structures, and color information of individual transits of KIC12557548b. We will present these results and discuss the main implications of our observations.