ROTATIONAL PERIOD OF 1511 DALERA

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Photometric observations of the asteroid 1511 Dalera were made on three nights in 2015 February and March. Analysis of the data has allowed to draw a lightcurve with a synodic period P = 3.880 ± 0.001 h with amplitude A = 0.18 mag.

The main-belt asteroid 1511 Dalera was selected from the "Potential Lightcurve Targets" web site (Warner, 2015) and observed on three nights: 2015 Feb 27, Mar 6, and Mar 10. Observations were carried out from Franceschini Observatory in Rome (Italy), using a 9.25 in. Schmidt-Cassegrain *f*/6.2 equipped with an ATIK 314L CCD camera. The exposures were unfiltered. All images were calibrated with dark and flat-field frames. Differential photometry and period analysis was done using *MPO Canopus* (Warner, 2012).

The derived synodic period was *P* = 3.880 ± 0.001 h (Fig.1) with an amplitude of *A* = 0.18 mag.

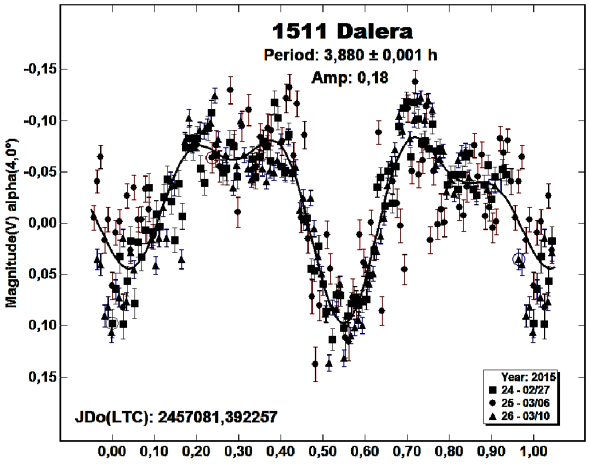

Figure 1.The lightcurve of 1511 Dalera with a period of 3.880 ± 0.001 h and amplitude of 0.18 mag.

References

Warner, B.D. (2012). MPO Software, Canopus version 10.4.1.9. Bdw Publishing. *http://minorplanetobserver.com/*

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DISPATCHES FROM THE TROJAN CAMP – JOVIAN TROJAN L5 ASTERIODS OBSERVED FROM CS3: 2014 OCTOBER – 2015 JANUARY

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Rotational periods were determined for 35 members of the Jovian L5 Trojan group. Data were obtained by the Center for Solar System Studies from 2014 October to 2015 January.

During this calendar quarter, the Center for Solar System Studies (CS3, MPC U81) focused on studying Jovian Trojan asteroids. The Jovian Trojan asteroids are found in orbits librating around the stable L4 and L5 Lagrange points of Jupiter's orbit. They are believed to have formed further from the Sun than main belt asteroids and their composition and collisional history appears to be different. In a study of small Jovian Trojans, we show they could incorporate bulk ice and resemble the nuclei of short-period comets (French *et al* 2015). A recent study (Fernandez *et al* 2009) found there were fewer Trojans in the L4 and L5 swarms as previously calculated because the average albedo for smaller Trojans was found to be brighter resulting in an overestimation of the population of smaller Trojans. As yet, the rotation properties of Trojan asteroids are poorly known relative to those of main-belt asteroids, due to the lower albedo and greater distance of the Trojans. During this calendar quarter, the L5 (Trojan Camp) region was well placed for observing. Here we report lightcurve data for 35 Trojans. Most are in the 30 – 50 km diameter size range.

All images were made with a 0.4-m or a 0.35-m SCT using an FLI-1001E, a SBIG STL-1001E, or a SBIG ST-9e CCD camera. Images were unbinned with no filter and had master flats and darks applied to the science frames prior to measurement. Measurements were made using *MPO Canopus*, which employs differential aperture photometry to produce the raw data. Period analysis was done using *MPO Canopus*, which incorporates the Fourier analysis algorithm (FALC) developed by Harris (Harris *et al*., 1989). Night-to-night calibration of the data (generally < ±0.05 mag) was done using field stars converted to approximate Cousins V magnitudes based on 2MASS J-K colors (Warner 2007). The Comp Star Selector feature in *MPO Canopus* was used to limit the comparison stars to near solar color. The results are summarized in Table 1. Diameters (Dia) are from the WISE/NEOWISE database (Grav 2012).

884 Priamus. Priamus has been well observed over the years. We observed it (French *et al* 2011b) finding a period of 6.8605 h. Mottola observed it twice (Mottola *et al* 2011) finding periods of 6.866 h and 6.894 h. Shevchenko (Shevchenko *et al* 2011) found a period of 6.815 h. We observed Priamus again to attempt to get