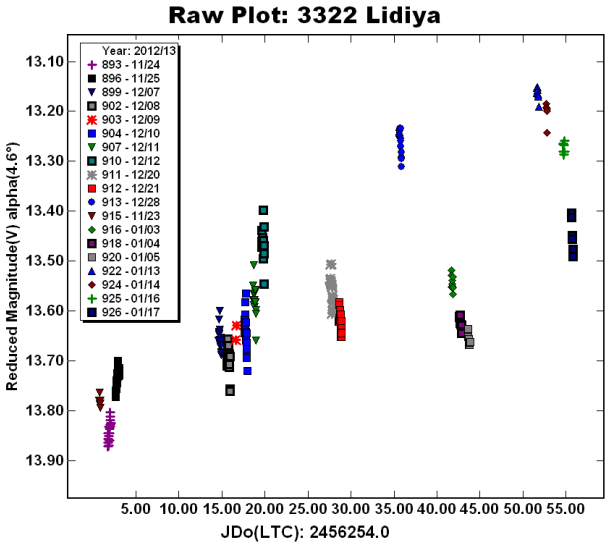

Figure 4: Reduced V-magnitude of 3322 Lidiya from Nov 2012 through Jan 2013.

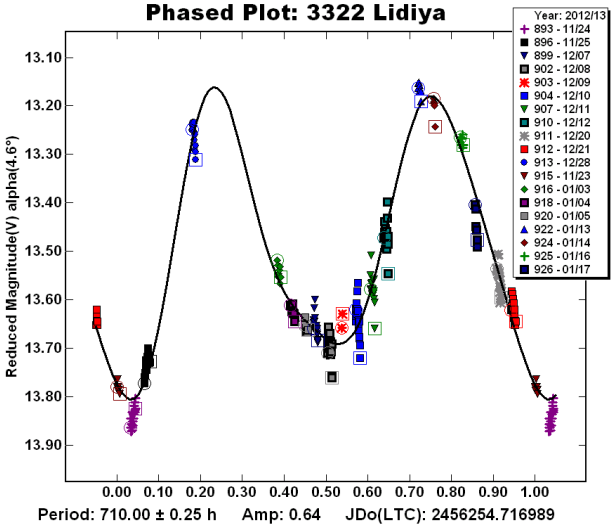

Figure 5: Lightcurve of 3322 Lidiya, phased to P= 710 h.

ROTATIONAL PERIOD FOR 1658 INNES, (10597) 1996 TR10, AND 30017 SHAUNDATTA

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Photometric observations of three main-belt asteroid were made over seven nights during 2014 April-June: 1658 Innes, (10597) 1996 TR10, and 30017 Shaundatta.

CCD photometric observations for three main-belt asteroids were collected from Balzaretto Observatory (A81) in Rome (Italy) on seven nights from 2014 April 9 to June 5. Images were obtained using a 0.20-m Schmidt-Cassegrain (SCT) reduced to *f*/5.5 equipped with an SBIG ST7-XME CCD camera. Observations at Carpione Observatory (K49) near Florence (Italy), were made using a 0.25-m *f*/10 SCT and SBIG ST9-XE CCD camera. Differential photometry and period analysis were done using *MPO Canopus* (Warner, 2013). All unfiltered images were calibrated with dark and flat-field frames. The asteroid magnitude was reduced to R-band using near-solar color index comparison stars that were selected using the Comp Star Selector feature in *MPO Canopus*.

1658 Innes. This main-belt asteroid was selected from the "Potential Lightcurve Targets" web site (Warner, 2014) and observed on three nights over a time span of 19 days. The derived synodic period was P = 3.191 ± 0.001 h with an amplitude of A = 0.22 ± 0.03 mag.

(10597) 1996 TR10. This main-belt asteroid was selected from the "Potential Lightcurve Targets" web site (Warner, 2014) and observed on three nights over a time span of 12 days. The derived synodic period was P = 6.60 ± 0.01 h with an amplitude of A = 0.32 ± 0.03 mag.

30017 Shaundatta. This main-belt asteroid was accidentally found in the field-of-view during a photometric session dedicated to another asteroid and was observed for only one night. However, enough data were obtained to cover the rotational period for more than two times. There are no entries in the Asteroid Lightcurve Database (LCDB; Warner *et al.*, 2009) for 30017 Shaundatta. The derived synodic period was P = 2.6 ± 0.1 h with an amplitude of A = 0.23 ± 0.03 mag.

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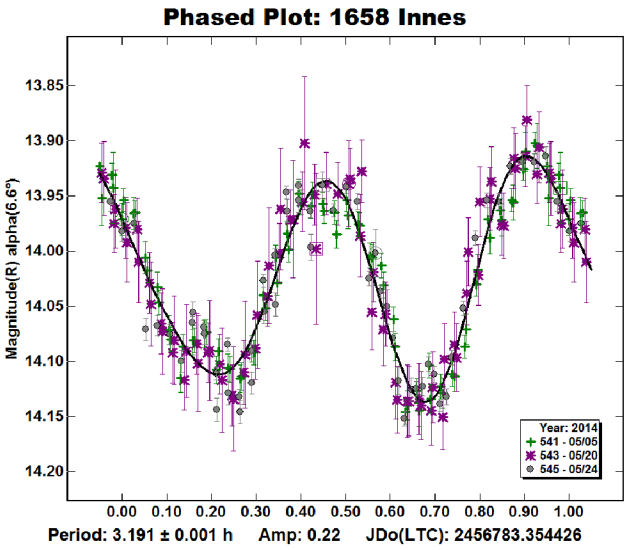

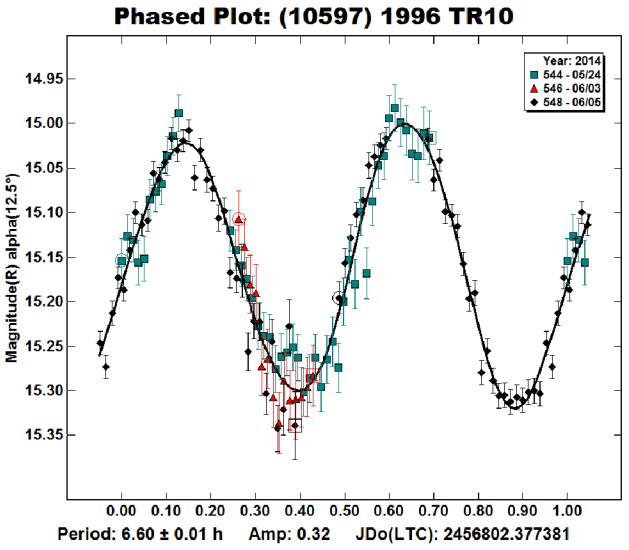

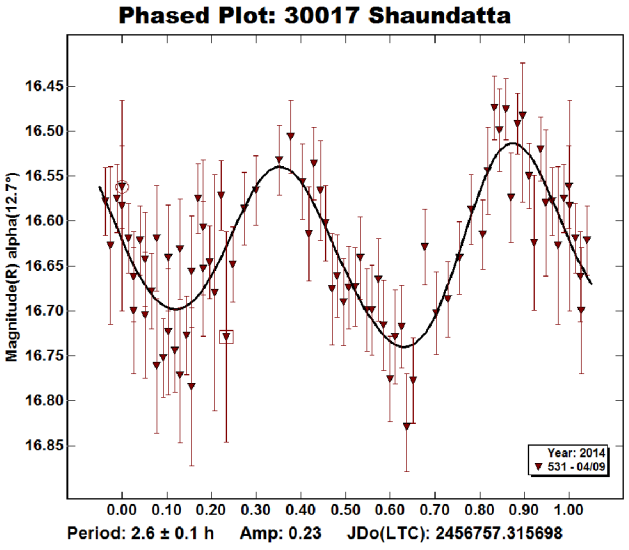

A COMPREHENSIVE PHOTOMETRIC INVESTIGATION OF 185 EUNIKE

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We have reevaluated our previous photometric data sets of 185 Eunike for oppositions in the years 2010, 2011, and 2012, respectively, and have obtained new observations in 2014 Jan. - May. For each of these four years we draw period spectra which show deep minima only near 21.8 hours and the double period near 43.6 hours, and plot lightcurves phased to near 21.8 and 43.6 hours, respectively. For observation sets in each of the four years we find the available parts of the lightcurves phased to 43.6 hours and separated by 1/2 cycle to be identical within errors of observations, and conclude that the double period is ruled out. For the new observations in the year 2014 we find best fit to a lightcurve phased to 21.812 ± 0.001 hours with amplitude 0.08 ± 0.01 magnitudes. The absolute magnitude and the opposition parameter are H = 7.45 ± 0.01, G = 0.11 ± 0.02. The V-R color index was determined to be 0.36 ± 0.03. Both the color index and G value are compatible with a low albedo asteroid. The diameter is estimated to be D = 175 ± 33 km. The lightcurve inversion analysis shows a preliminary sidereal period/pole solution at Ps = 21.80634 ± 0.00012 h and (λ = 136°, β = 4°), (λ = 314°, β = -18°), with an error estimation of ± 30 degrees.

Debehogne et al. (1978) published a period of 10.83 hours based on rather sparse data. No further photometric observations were made for many years. In 2005 February – March two lightcurves were acquired by Behrend (2005) with no period estimation. In 2010 April - May dense data sets were by Ruthroff (2010), who suggested a period of 11.20 hours, and by Behrend (2010), who suggested a period of 21.807 hours. Ruthroff (2011) reevaluated