mag. The lightcurve has a typical bimodal shape with both minimums being nearly equal.

6329 Hikonejyo is a main-belt asteroid discovered by A. Sugie at Dynic Astronomical Observatory (JPL, 2012). It has been known as 1992 EU1 and 1982 HC1. It has an orbital period of ~ 3.36 years. 6329 Hikonejyo was observed on 5 nights between 2012 Mar 16-29 for a total of 622 images. Exposures were 180 seconds each. The synodic period was determined to be 6.064 ± 0.001 h with an amplitude of 0.23 ± 0.10 mag. The lightcurve has a typical bimodal shape with the equally deep minimums but one maximum is about 0.05 magnitudes less than the other and appears to have flat top.

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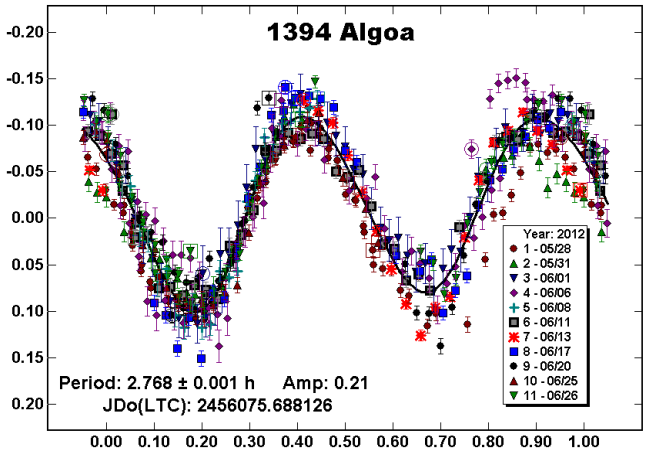

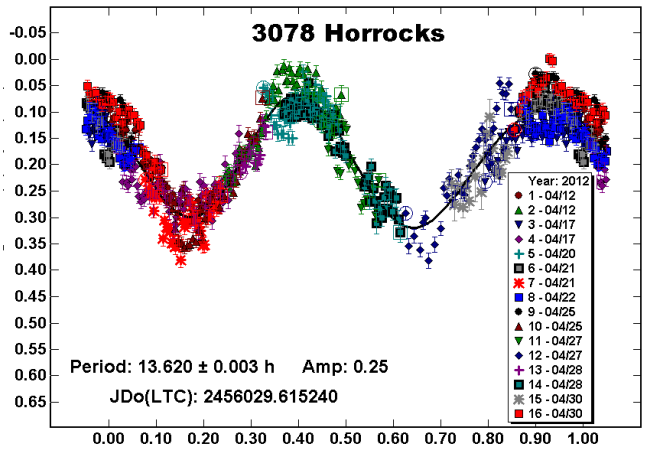

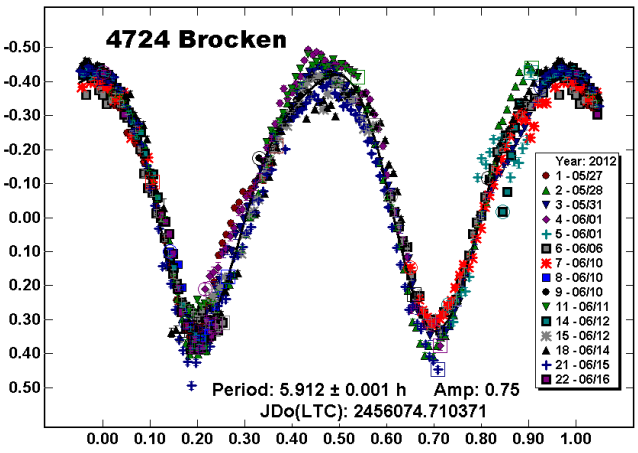

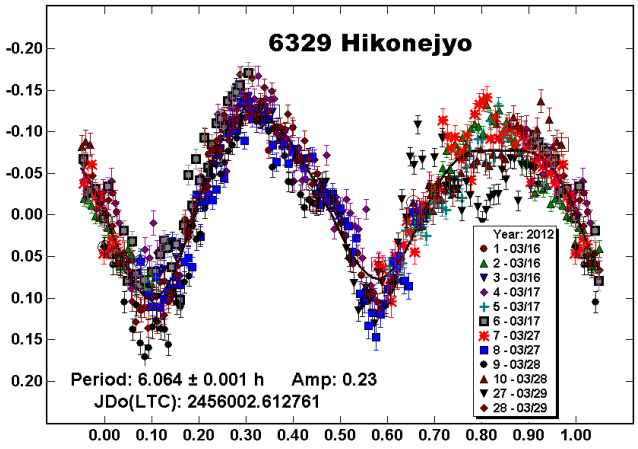

ASTEROID LIGHTCURVE ANALYSIS AT THE OAKLEY OBSERVATORIES: 2012 MAY – JUNE

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Photometric data for 20 asteroids were collected over 12 nights of observing during 2012 May and June at the Oakley Southern Sky Observatories. The asteroids were: 252 Clementina, 481 Emita, 627 Charis, 1108 Demeter, 1121 Natascha, 1315 Bronislawa, 1481 Tubingia, 1844 Susilva, 2602 Moore, 2660 Wasserman, 2826 Ahti, 3159 Prokof'ev, 3306 Byron, 3493 Stepanov, 3795 Nigel, 5256 Farquhar, (6212) 1993 MS1, (19793) 2000 RX42, (24689) 1990 OH1, and (26722) 2001 HK7.

Twenty asteroids were observed from the Oakley Southern Sky Observatory in New South Wales, Australia, on the nights of 2012 May 10, 14-21, June 16, and 19-20. Six of these asteroids were also observed from the Oakley Observatory in Terre Haute, Indiana, on the nights of June 16 and 19. Through analyzing the data, we were able to find lightcurves for ten asteroids. Of the ten lightcurves found, eight were for asteroids that had no previously published period. The period of one of the remaining asteroids

agrees with the previously published period within experimental uncertainty while the other is inconsistent with the previously published period.

The asteroids were selected based upon their position in the sky an hour after sunset. Then, asteroids with no previously published period were given higher priority than those asteroids that already have a published period. Finally, asteroids with uncertain periods were given priority in hopes that their previously published period could be improved. Both of the telescopes used were f/8.1 0.5-meter Ritchey-Chretien optical tube assemblies mounted on Paramount ME mounts. The cameras were Santa Barbara Instrument Group STL-1001E CCD cameras with a clear filter. The image scale was 1.2 arcseconds per pixel with varied exposure times between 20 and 210 seconds. Calibration of the images was done using master twilight flats, darks, and bias frames. All calibration frames were created using *CCDSoft,* which was also used to process the images. *MPO Canopus* was used to measure the images.

We have the first reported observations of the period of the following asteroids: 1121 Natascha, 3159 Prokof'ev, 3306 Byron, 3493 Stepanov, 3795 Nigel, (6212) 1993 MS1, (19793) 2000 RX42, (26722) 2001 HK7.

252 Clementina. Our result is consistent with a period of 10.8612 ± 0.0003 h found by Behrend (2009).

1315 Bronislawa. Our result is not within formal uncertainty with the period of 9.565 ± 0.006 h found by Ditteon (2011). However, our data can be fit to the period of 9.565 h found earlier, just with a greater RMS value for the fit.

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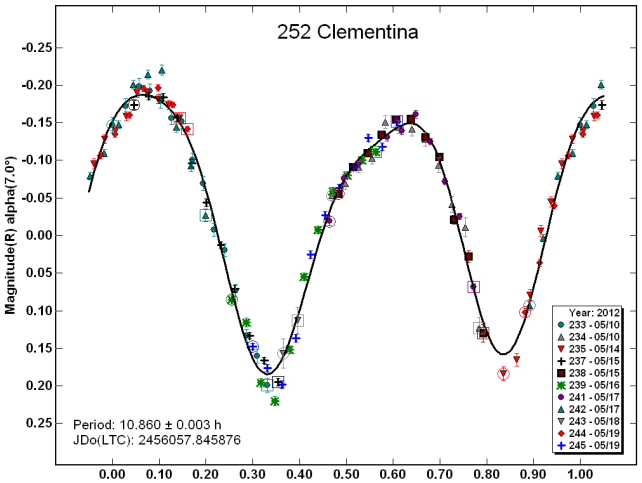
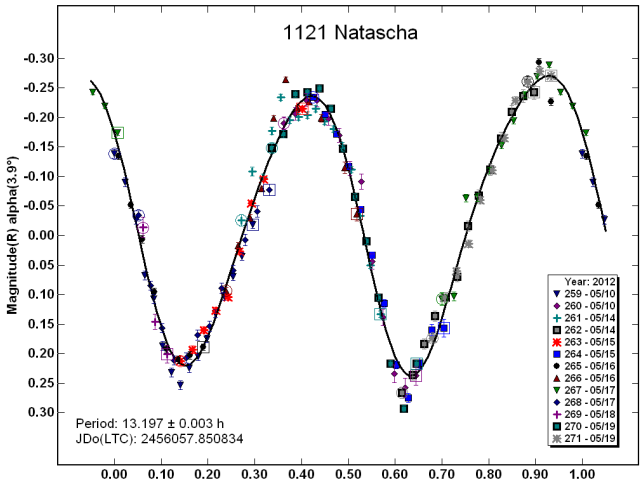
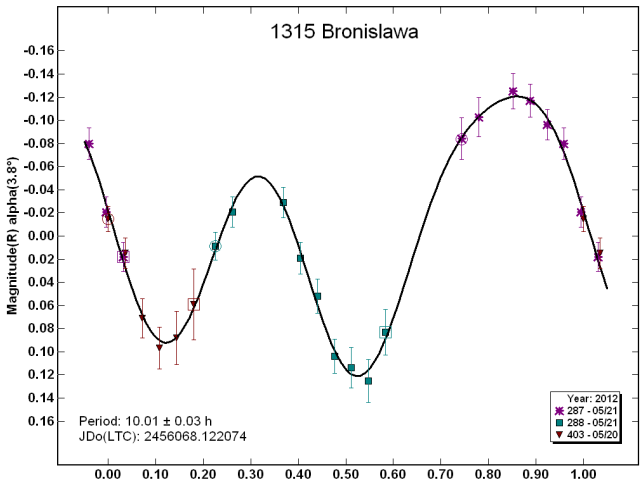
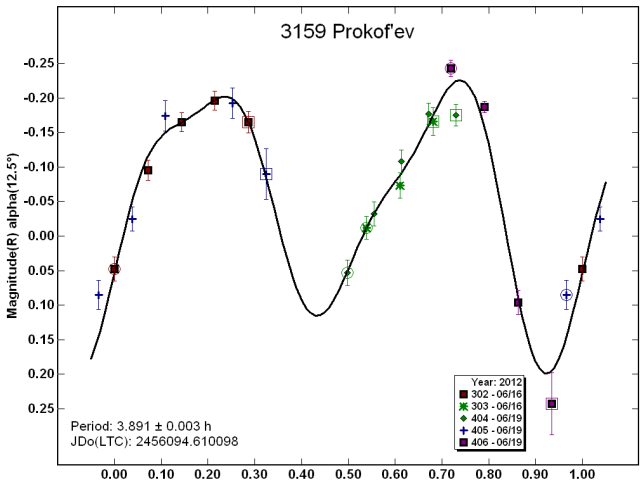


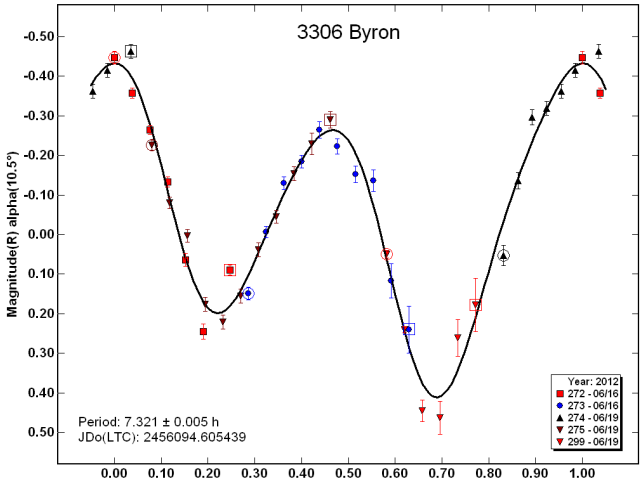


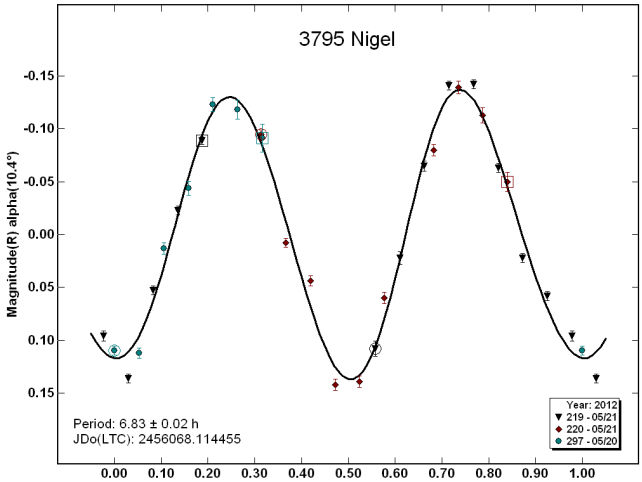


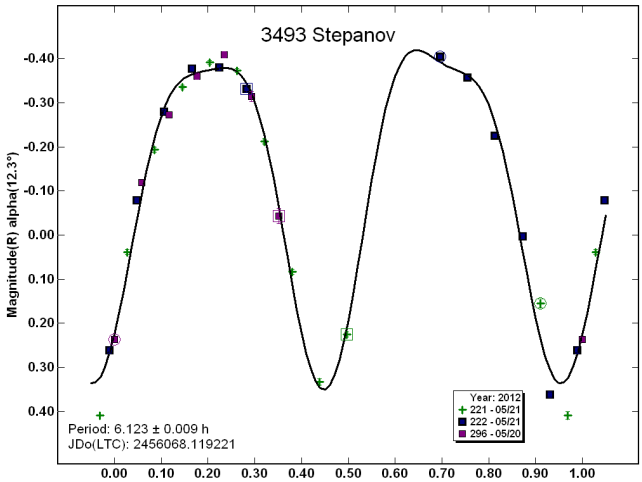


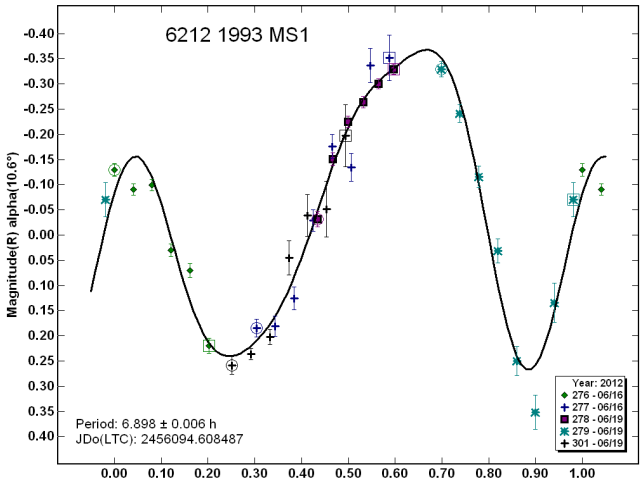
Number	Name	Dates mm/dd 2012	Points	Period (h)	P.E. (h)	Amp (mag)	A.E. (mag)
252	Clementina	5/10, 14-17, 19	118	10.860	0.003	0.37	0.03
481	Emita	5/10, 14-19	28			0.09	0.06
627	Charis	6/16, 19-20	47			0.46	0.07
1108	Demeter	5/10, 14-19	158			0.07	0.03
1121	Natascha	5/10, 14-19	153	13.197	0.003	0.51	0.03
1315	Bronislawa	5/20-21	23	10.01	0.03	0.24	0.02
1481	Tubingia	5/10, 14-19	147			0.41	0.03
1844	Susilva	6/16, 19-20	25			0.47	0.09
2602	Moore	5/20-21	22			0.30	0.04
2660	Wasserman	5/20-21	27			0.07	0.06
2826	Ahti	5/10, 14-19	119			0.08	0.02
3159	Prokof'ev	6/16, 19	22	3.891	0.003	0.42	0.04
3306	Byron	6/16, 19	41	7.321	0.005	0.84	0.05
3493	Stepanov	5/20-21	29	6.123	0.009	0.77	0.04
3795	Nigel	5/20-21	30	6.83	0.02	0.27	0.02
5256	Farquhar	5/10, 14-19	157			0.04	0.03
6212	1993 MS1	6/16, 19	35	6.898	0.006	0.63	0.04
19793	2000 RX42	6/16, 19-20	29	3.102	0.002	0.38	0.04
24689	1990 OH1	5/20-21	31			0.38	0.05
26722	2001 HK7	5/10, 14-19	143	20.252	0.007	0.53	0.01

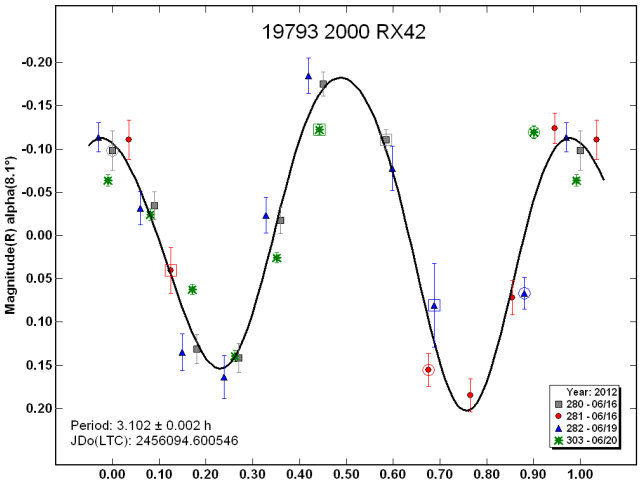
Table I. Observation circumstances and results.

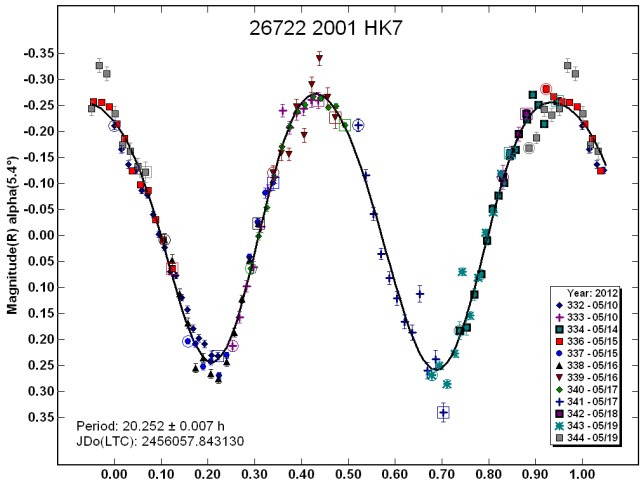












LIGHTCURVE FOR 6376 SCHAMP

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CCD photometric observations of the main-belt asteroid 6376 Schamp were obtained from three observatories in July 2012. A synodic period of 6.613 ± 0.001 h with an amplitude of 0.16 ± 0.02 was found.

6376 Schamp was selected as a target of the Photometric Survey for Asynchronous Binary Asteroids (Pravec 2012). No previous periods are reported in the Lightcurve Database (Warner 2012).

Stephens obtained observations from July 21 to 26 were using a 0.4-m or 0.35-m telescope at the CS3 with a SBIG ST-1001e CCD camera. Pollock obtained the July 29 observations using the 32-inch (0.8-m) telescope at the ASU Dark Sky Observatory with a Apogee Alta 47 CCD camera. The July 30 observations were obtained by Pollock using a 0.41-m Skynet PROMPT telescope at Cerro Tololo Inter-American Observatory with an Apogee Alta U47 CCD camera. The average phase angle over the short observing run was 10.5 degrees.

Period analysis was done using *Canopus*, which incorporates the Fourier analysis algorithm (FALC) developed by Harris (Harris et al., 1989). For purposes of the Binary Asteroid survey, they determined the period to be 6.6093 ± 0.0003 h. We concluded that the 33 rotations combined with the amplitude uncertainty was insufficient to state the period at that level of precision, so report our period as 6.613 ± 0.001 h.

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