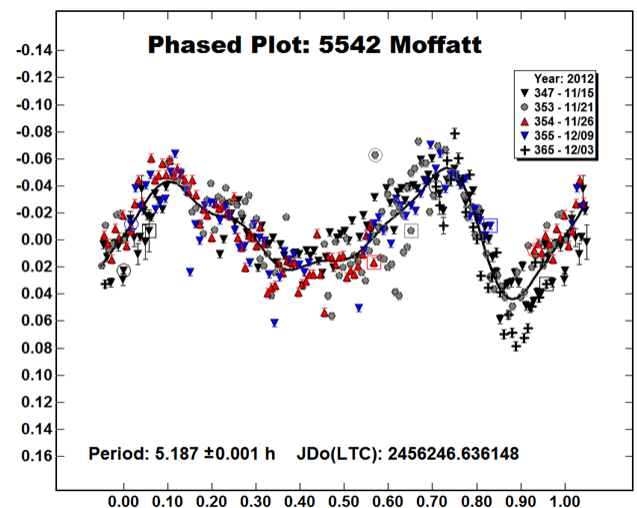
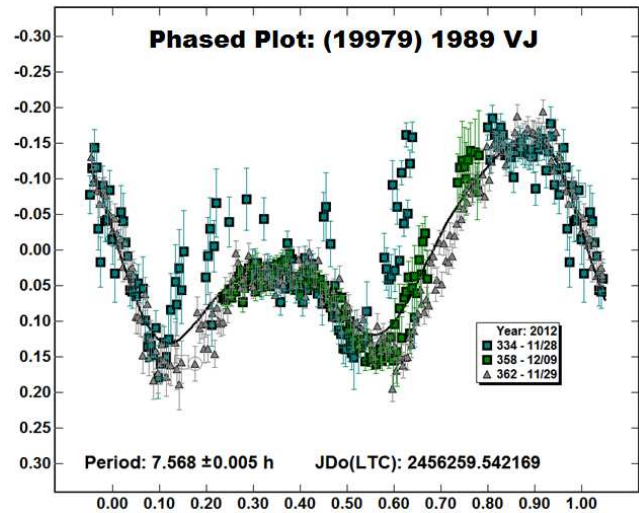
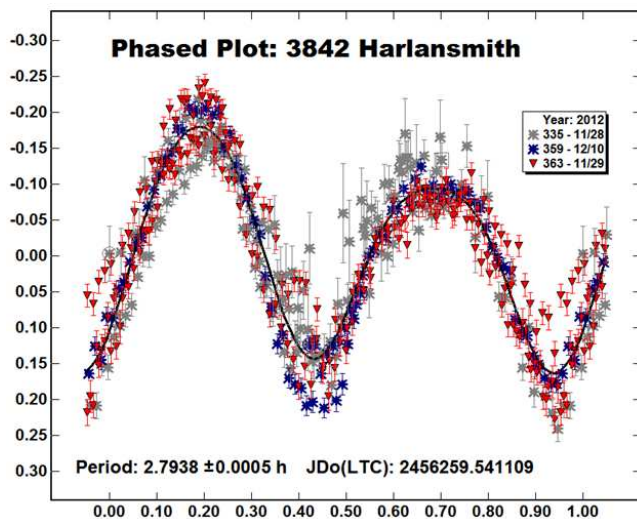
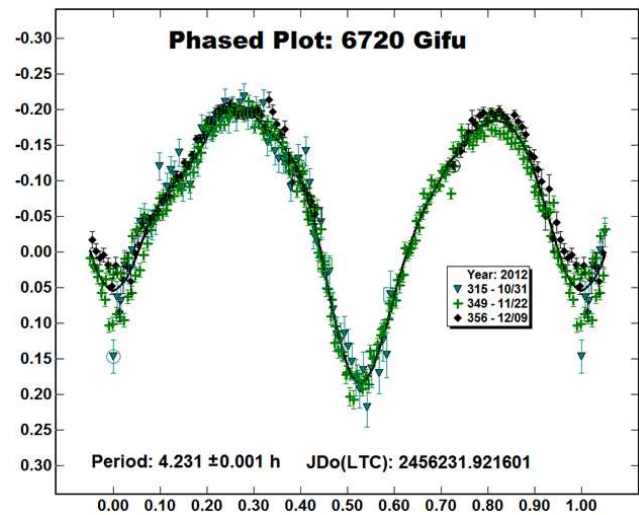
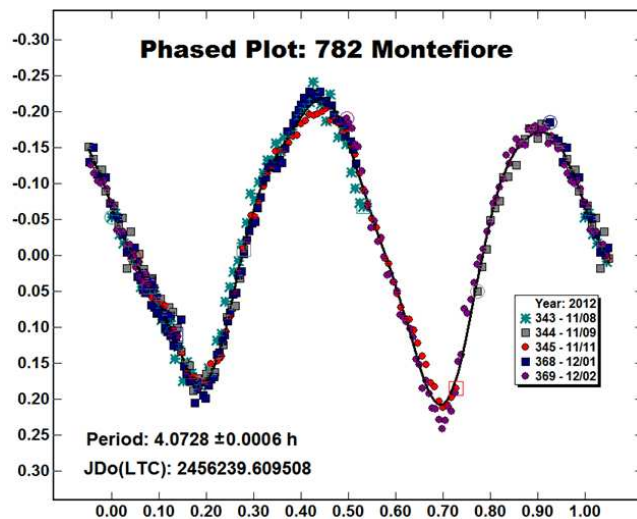




LIGHTCURVES FOR 366 VINCENTINA, 592 BATHSEBA, AND 1554 YUGOSLAVIA FROM BELGRADE ASTRONOMICAL OBSERVATORY

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Lightcurves for the asteroids 366 Vincentina, 592 Bathseba, and 1554 Yugoslavia were obtained from 2012 May to October at the Belgrade Astronomical Observatory using differential aperture photometry. The results found for the synodic periods and amplitudes are reported.

CCD photometric observations of 366 Vincentina, 592 Bathseba, and 1554 Yugoslavia were carried out using a 0.4 m $f/10$ Schmidt-Cassegrain telescope with an SBIG ST-10XME CCD camera operating at 2x2 binning with a 0.69 arcsec/pixel resolution. Exposures were unguided. The usual exposure times were fairly short (between 20 and 45 seconds depending on target brightness)

due to telescope tracking problems. Bessel R and V photometric filters were used only in the case of three sessions of 366 Vincentina. All photometric measurements using differential photometry technique and period analysis were done in *MPO Canopus*. Only the instrumental magnitudes were used. The observing targets were selected from the list of asteroid photometry opportunities on the Collaborative Asteroid Lightcurve Link website (CALL, Warner, 2012).

366 Vincentina. Robinson (2002) reported an unreliable period ($U=1$) of 15.5 ± 0.1 h for this main-belt asteroid (MBA). In order to determine a secure value for the period, photometric observations were made on seven nights between 2012 September 11 and October 23. The data analysis produced a bimodal lightcurve with a period of 12.7365 ± 0.0005 h and an amplitude of 0.06 ± 0.01 mag. The newly obtained period result based on full rotational phase coverage differs significantly from that previously found by Robinson.

592 Bathseba. Clark and Joyce (2003) published a period of 6.571 ± 0.008 h for this MBA based on less than full rotational phase coverage. This result has an uncertainty flag $U=2$ on the CALL website (Warner, 2012). In order to test the reliability of the previously determined period, observations were made on eight nights from 2012 May 1-28. Analysis of the 1268 data points, which covered the complete lightcurve, found a secure synodic period of 7.7456 ± 0.0004 h with an amplitude of 0.23 ± 0.02 mag. It is interesting to note that Pierre Antonini (Behrend, 2012) also conducted new observations of this asteroid and found a period of value of 7.7464 h, which is fully consistent with the results presented here.

1554 Yugoslavia. This main-belt minor planet was discovered at the Belgrade Observatory on 1940 September 6 by M. B. Protitch. A secure period of 3.8879 ± 0.0003 h ($U=3$) was previously found by Higgins (2008). New photometric data were collected at the Belgrade Observatory over three nights from 2012 August 28 until September 9 resulting in 501 data points. The synodic period of 3.8876 ± 0.0001 h that was found is consistent with the value determined by Higgins. The amplitude of the 2012 lightcurve is 0.77 ± 0.03 mag.

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