

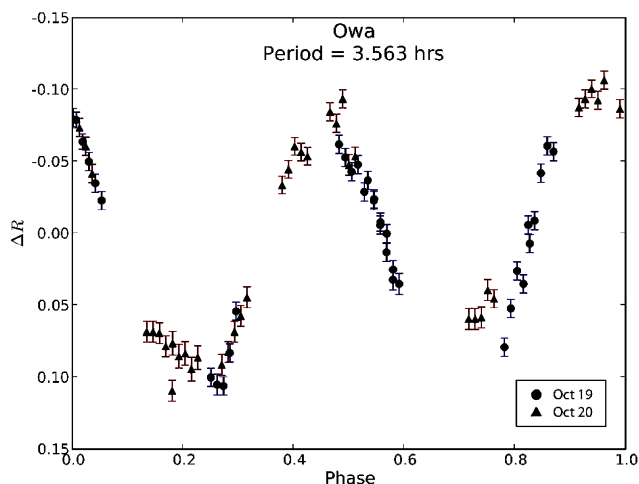


Figure 3. The composite lightcurve of 2648 Owa.

ASTEROID LIGHTCURVE OBSERVATIONS

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Asteroid period and amplitude results obtained at the Montgomery College Observatory in Rockville, Maryland, are presented.

Montgomery College is a 2-year community college in Montgomery County, Maryland. It has an observatory at the Rockville campus that houses a Meade 40-cm f/10 LX200 GPS Schmidt-Cassegrain Telescope (SCT) and a Meade 25-cm f/6.3 LX200 SCT. An SBIG STL-1001E CCD was used with the 40-cm telescope and an SBIG ST-9XE CCD was used with the 25-cm. All images were unfiltered and were reduced with dark frames and sky flats.

The asteroids observed were chosen from the Collaborative Asteroid Lightcurve Link (CALL) home page that is maintained by Brian Warner (2008). Image analysis was accomplished using differential aperture photometry with *MPO Canopus*. Period

analysis was also done in *Canopus*, which implements the algorithm developed by Alan Harris (Harris et al. 1989). Differential magnitudes were calculated using reference stars from the USNO-A 2.0 UCAC2 catalogs. Results are summarized in the table below, and the lightcurve plots are presented at the end of the paper. The data and curves are presented without additional comment except where circumstances warrant. Column 3 gives the range of dates of observations and column 4 gives the number of nights on which observations were undertaken.

2126 Gerasimovich. Observations of this asteroid were made on four nights, over a three-week period. Initial analysis resulted in a curve with a single peak at around 11.5 h. Later analysis showed that a double-peaked curve with a period of 22.951 h fitted the data equally as well, and so this result is presented here.

4340 Dence. This asteroid was very frustrating to analyze. Observations were made on eight nights over a four-week interval. However, the scatter in the data was relatively large in comparison to the amplitude of variations. The best result that could be achieved was a period of 15.473 h, with two unequal peaks. Due to the scatter in the data, this result is somewhat uncertain.

14659 Gegoriana. This asteroid was also very frustrating to analyze. Observations were made on five nights over a six-week period, but no simple lightcurve was obtained. A noisy, four-peak curve with a period of 6.936 h was the most reasonable solution to the data and so is reproduced here. However, this result is very uncertain. More observations would be very useful at the next opposition.

(16959) 1998 QE 17. Only three nights of observations, over a three-week interval were possible for this asteroid due to the closure of the campus observatory for maintenance. The data could not be fitted to a simple, two-peaked graph. The most reasonable result is the 5.316 h period presented here, which contained four peaks.

Acknowledgments

I would like to thank Brian Warner for all of his work with the program *MPO Canopus*.

References

- Harris, A. W., et al. (1989). "Photoelectric Observations of Asteroids 3, 24, 60, 261, and 863." *Icarus* **77**, 171-186.
- Warner, B.D., Collaborative Asteroid Lightcurve Link web site. <http://www.minorplanetobserver.com/astlc/default.htm>

#	Name	Date Range	Sess	Per (h)	Error (h)	Amp (mag)	Error (mag)
2126	Gerasimovich	2007 Oct 14 - Nov 03	4	22.951	0.005	0.25	0.03
3333	Schaber	2007 Aug 16 - Oct 04	7	10.971	0.002	0.65	0.03
4340	Dence	2008 May 11 - Jun 10	8	15.473	0.005	0.2	0.05
(7526)	1993 AA	2007 Sep 30 - Nov 03	5	7.109	0.001	0.3	0.02
8441	Lapponica	2008 Feb 17 - Apr 13	4	3.275	0.001	0.9	0.02
13474	V'yus	2007 Sep 02 - Sep 30	4	6.587	0.001	1.05	0.02
13860	Neely	2008 May 11 - Jun 03	6	9.791	0.002	0.45	0.04
14659	Gegoriana	2008 Feb 03 - Mar 13	5	9.636	0.001	0.55	0.05
15271	1991 DE	2008 Mar 10 - Apr 13	4	6.908	0.001	0.9	0.02
(16959)	1998 QE17	2007 Dec 08 - Dec 20	3	6.316	0.005	0.45	0.02
(18641)	1998 EG10	2007 Oct 14 - Oct 21	2	5.68	0.01	0.75	0.05
(46436)	2002 LH5	2007 Jul 22 - Aug 16	3	3.8836	0.0005	0.65	0.02

