

Number	Name	Period (h)	Unc	Amp	Unc	DateStart	DateEnd	Span	#Sess	Cov%
305	Gordonia	12.89	0.01	0.17	0.03	02/05/05	03/06/05	32	3	80
316	Goberta	8.605	0.01	0.20	0.05	11/25/05	12/20/05	26	5	100
329	Svea	22.6	0.01	0.10	0.03	03/08/05	05/08/05	61	12	100
608	Adolfine	8.37	0.03	0.25	0.05	10/30/06	11/10/06	11	4	100
707	Steina	414	10	1.00	0.15	08/15/06	10/09/06	55	(1) 23	35
710	Gertud	10.02	0.03	0.35	0.04	06/06/06	06/21/06	16	6	100
1187	Afra	14.09	0.02	0.40	0.02	10/29/06	11/02/06	4	3	90
1216	Askania	6.536	0.003	0.30	0.03	07/23/06	08/02/06	10	3	100
1325	Inanda	141.6	0.2	0.4/0.8	--	10/20/03	11/21/03	32	15	75
1462	Zamenhoff	10.4	0.1	0.35	0.04	04/29/06	05/01/06	3	3	80
1559	Kustaanheimo	4.286	0.003	0.25	0.05	02/12/05	03/05/05	24	4	100
1671	Chaika	3.774	0.003	0.18	0.03	12/07/05	12/19/05	13	4	100
1999	Hirayama	15.63	0.01	0.45	0.04	01/12/06	03/04/06	53	6	100
2075	Martinez	4.755	0.002	0.30	0.1	02/07/05	03/03/05	27	6	100
2094	Magnitka	6.11	0.02	0.80	0.08	01/25/06	01/27/06	3	3	90
2444	Lederle	17.85	0.02	0.45	0.05	12/23/05	01/06/06	14	5	90
3156	Ellington	8.33	0.01	0.10	0.02	03/07/06	04/17/06	41	7	100
4264	Karljosephine	98.2	1.5	0.45	0.15	09/21/04	11/06/04	46	(2) 23	85
7895	Kaseda	5.093	0.003	0.10	0.02	01/28/06	02/06/06	9	3	100

Note (1) includes 16 sessions by Menke, 8 by Higgins

(2) includes 13 sessions by Menke, 10 by Cooney, Gross, and Terrell

LIGHTCURVE ANALYSIS OF ASTEROIDS 3036 KRAT, 3285 RUTH WOLFE, AND 5448 SIEBOLD

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Main-belt asteroids 3036 Krat, 3285 Ruth Wolfe, and 5448 Siebold were observed by the authors. 3036 Krat, observed at Lowell Observatory in 2007 December, was found to have a period of 9.61 ± 0.01 h. For the other two asteroids, both observed at the Truman Observatory in 2007, we found 3285 Ruth Wolfe to have a period of 3.919 ± 0.001 h and 5448 Siebold was determined to have a period of 2.929 ± 0.001 h.

Truman Observatory is located in Kirksville, Missouri, in a rural setting about 1.5 miles from the campus of Truman State University. Observations reported here were obtained with the Observatory's 14-inch Meade LX-200GPS telescope with an attached f/6.3 focal reducer. Truman State University is a member of the National Undergraduate Research Observatory (NURO), a consortium of colleges and universities that shares time on the 31-inch telescope at Lowell Observatory in Flagstaff, Arizona. This telescope is equipped with a 2048x2048 pixel Loral CCD camera. All of the data were analyzed using MPO Canopus (Bdw Publishing) which employs differential aperture photometry. The period analysis was performed within Canopus, using the Fourier analysis algorithm developed by Harris (1989).

3036 Krat. No previous photometry on this asteroid has been published. Photometric measurements of 3036 Krat were obtained at Lowell Observatory over two nights, 2007 December 18 and 20. The asteroid remained at magnitude 14.8 and phase angle 8.4 deg during the observing period. A total of 820 unfiltered images were acquired. The synodic period was determined to be 9.61 ± 0.01 h;

the amplitude is 0.38 ± 0.03 mag.

3285 Ruth Wolfe. Warner (2003) initially published a rotational period for 3285 Ruth Wolfe of 6.72 hours but later revised that period to 3.94 hours (Warner 2005). This asteroid was observed at the Truman Observatory over two nights, 2007 October 30 and November 5. A total of 292 unfiltered CCD images were taken with an SBIG ST-402ME CCD camera. During this time the asteroid was near magnitude 14.6, with a phase angle of 10.9 deg on October 30, and 11.5 deg on November 5. Our analysis gives a best-fit synodic period of 3.919 ± 0.001 h and an amplitude of 0.20 ± 0.05 mag. This period and the overall shape of the light curve are consistent with Warner's 2005 measurements.

5448 Siebold. Photometric measurements of the main-belt asteroid 5448 Siebold were obtained on the nights of 2007 March 12 and 19 with an SBIG ST-7XME CCD camera at the Truman Observatory. During this time the asteroid was near magnitude 15, while its phase angle varied from 14 deg on March 12 to 18 deg on March 19. A total of 127 CCD images were acquired with a Bessell V filter. Analysis of the data revealed a bimodal lightcurve with a best-fit synodic period of 2.929 ± 0.001 h and an amplitude of 0.33 ± 0.02 mag.

Acknowledgements

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CCD PHOTOMETRY OF THREE SHORT-PERIOD ASTEROIDS FROM THE UNIVERSIDAD DE MONTERREY OBSERVATORY

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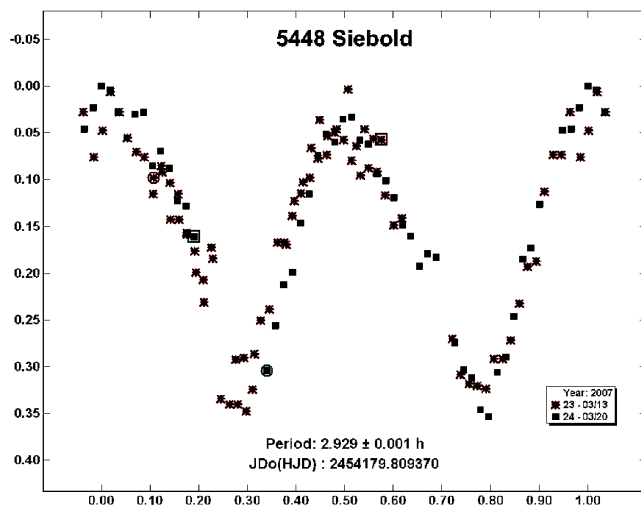
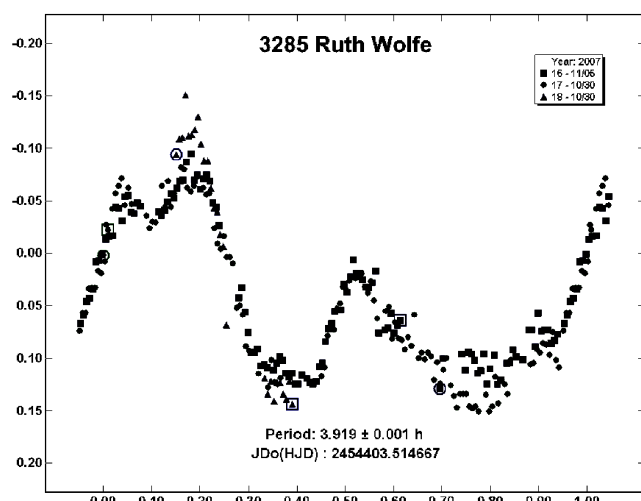
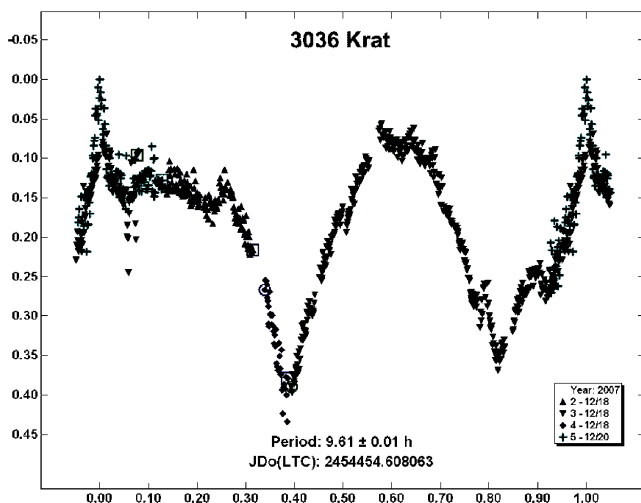
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CCD photometry of three asteroids was obtained at the Universidad de Monterrey Observatory during 2007 April and 2008 March. These asteroids were observed on only one or two nights, but complete lightcurves were obtained due to relatively short rotation periods. The resulting synodic rotation periods and amplitudes are as follows: 811 Nauheima, 4.011 ± 0.006 h, 0.11 ± 0.03 mag; 3787 Aivazovskij, 2.97 ± 0.01 h, 0.18 ± 0.02 mag; and 5474 Gingasen, 3.628 ± 0.005 h, 0.16 ± 0.03 mag.

The observations reported here were made with the Meade 36-cm LX200GPS telescope of the Universidad de Monterrey Observatory (MPC 720). The telescope is permanently mounted in a 6-foot fiberglass automated dome and is operated from a nearby warm room. The CDD used to gather the 811 Nauheima data was an SBIG ST-9E with a $512 \times 512 \times 20 \mu\text{m}$ chip, which yielded an image scale of $\sim 1.7''/\text{pixel}$ and a field-of-view of $\sim 14.6' \times 14.6'$ using an f/6.3 focal reducer. The CCD used to gather the 3783 Aivazovskij and 5474 Gingasen data was an SBIG STL-1301E with a $1280 \times 1024 \times 16 \mu\text{m}$ chip. The field-of-view in this case was $\sim 21.1' \times 16.9'$ with an image scale of nearly $1''/\text{pixel}$.

The targets were selected from the list of asteroid photometry opportunities published by Brian Warner on his Collaborative Asteroid Lightcurve Link (CALL) website (Warner 2008). These asteroids were observed only during one or two nights, but the data for each asteroid suggested that they had short rotation periods. Weather and other considerations prevented additional observations. However, the available lightcurves were complete and had enough overlap to derive rotation periods. In all cases the images were obtained unfiltered, guided, and standard dark-current and flat-field corrections were applied. The 811 Nauheima exposures were 4 min, unbinned, and with a detector temperature of -10°C . The 3783 Aivazovskij and 5474 Gingasen had exposures of 2 min, were binned 2×2 , and the detector temperature varied between -15°C and -20°C on each session, depending on the ambient temperature. Image measurements and period analysis were performed using *MPO Canopus* (Warner 2008).

811 Nauheima This asteroid was observed on two consecutive nights in 2007 April. Initial analysis of the data suggested a rotation period of about 4 h but, since the resulting lightcurve did not exhibit a standard bimodal behavior and had a small amplitude, the results were labeled as suspect and in need of further observations. This was not possible during the 2007 apparition. The data were reanalyzed in early 2008 using *MPO Canopus* software, and the initial result seemed to stand, thus it is presented here, it being a synodic period of 4.011 ± 0.006 h and an amplitude 0.11 ± 0.03 mag. This asteroid is of particular interest because it belongs to the Koronis family. Recently Slivan *et al.*