

ROTATION PERIOD OF 584 SEMIRAMIS

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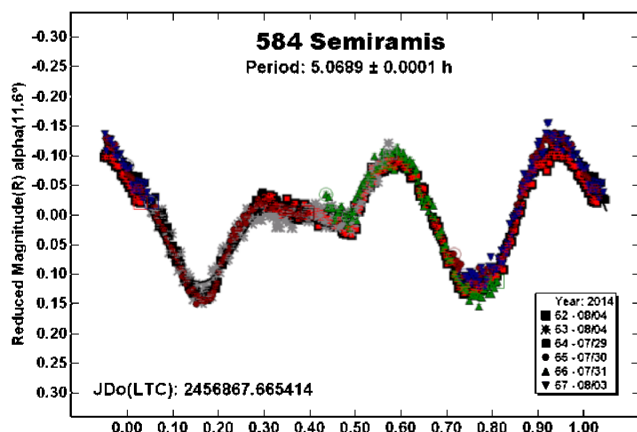
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Photometric observations of main-belt asteroid 584 Semiramis were made at the Mark Evans Observatory (MPC W04) between 2014 July 29 and August 4. The measured period of 5.0689 ± 0.0001 is in good agreement with previous values.

A survey of the literature reveals that several period determinations have been made of 584 Semiramis, but the amount of data points used in the lightcurves has been sparse. These lightcurves were used to determine the pole positions of this asteroid. A journal search indicates that the most recent pole determination, by Michalowski (1996), still had a sizable uncertainty. Adding data from an additional phase angle should help to reduce this uncertainty.

All observations were taken at the Mark Evans Observatory using a Celestron CGE Pro 1100 Schmidt-Cassegrain telescope with a 0.28-m aperture. The CCD camera used to capture the images was a Quantum Scientific Imaging model 583C camera. All images were taken at -10°C , binned 2x2, and had 45 second exposures. In addition, the images were unfiltered and unguided. All images were taken between the nights of July 29 and August 4; however, not all the data from each night were used due to losing sufficiently bright solar comparison stars for accurate photometry. The images were corrected using darks and flats, and subsequently analyzed using *MPO Canopus*.

Period analysis was completed using the Fourier feature on *MPO Canopus*, which calculated a period of 5.0689 ± 0.0001 h when using a fit of four orders. The period compares well with previous reported values: 5.068 h (Weidenschilling *et al.*, 1987), 5.069 h (Weidenschilling *et al.*, 1990), 5.0689 h (Drummond *et al.*, 1991), 5.0683 h (Harris *et al.*, 1992), and 5.0689 h (Michalowski, 1993). The extensive coverage of this asteroid at lower phase angles than most previous papers should help further constrain the pole position during future studies.



References

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**ASTEROID LIGHTCURVE ANALYSIS AT
ISAAC AZNAR OBSERVATORY
ARAS DE LOS OLMOS, VALENCIA SPAIN**

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The Isaac Aznar Observatory conducts astrometric and photometric studies of asteroids. This paper contains the photometric results of four asteroids obtained from 2014 April to August. These asteroids were selected from the Collaborative Asteroid Lightcurve Link (CALL) web site: 1088 Mitaka, 2956 Yeomans, 3894 Williamcooke, and (4555) 1974QL.

The observations reported here were all obtained using a 0.35-m $f/10$ Schmidt-Cassegrain telescope and SBIG STL-1001E CCD camera. All images were unfiltered, dark and flat field corrected, and had an image scale of 1.45 arc seconds per pixel. Differential photometry measurements were made in *MPO Canopus* (BdW Publishing). The asteroid lightcurve database (LCDB; Warner *et al.*, 2009) contains previously reported results for 1088 Mitaka and (4555) 1987QL, but those results are from few years ago. So the results we offer in this paper could be an update for LCDB database because they are slightly different.

1088 Mitaka is a main-belt asteroid of 16.2 km size. This asteroid of 0.15 albedo was discovered by Okuro Oikawa in 1927 and since then has been well analyzed, including a shape model derived from lightcurve inversion. The LCDB and DAMIT (Database of Asteroid Models from Inversion Techniques; Durich, 2014) offers a wealth of information about this minor planet.