comparatively bright magnitude, and a reported period being both relatively short and uncertain. In this last regard, this Eunomia-family asteroid had been measured in 1997 for about 4 hours on two nights (Angeli et al. 2001), providing a period of 5.4 h with a reliability code (Harris et al. 1999) of 1.

Observations were made using a 0.3-m Meade LX-200R f/10 working with a 0.63 focal reducer. The CCD imager was a QSI 516wsg NABG with a 1536 x 1024 array of 9-micron pixels. Exposures were 120 s working at –20C, unguided, and unfiltered at 2x2 binning, yielding an image scale of 1.9 arcseconds per pixel. All images were dark and flat field corrected. The images were measured using *MPO Canopus* (Bdw Publishing) version 10.1.0.7 with a differential photometry technique. The data were light-time corrected. Period analysis was also done with *Canopus*, which incorporates the Fourier analysis algorithm developed by Harris et al. (1989).

From more than 850 data points obtained during six sessions (three of them longer than 6 h), covering a phase angle from 10.6º to 3.1º, a period of 5.6489 ± 0.0003 h was determined along with a lightcurve peak-to-peak amplitude of 0.70 ± 0.09 mag. Data points from a seventh short "bad" session were not included.

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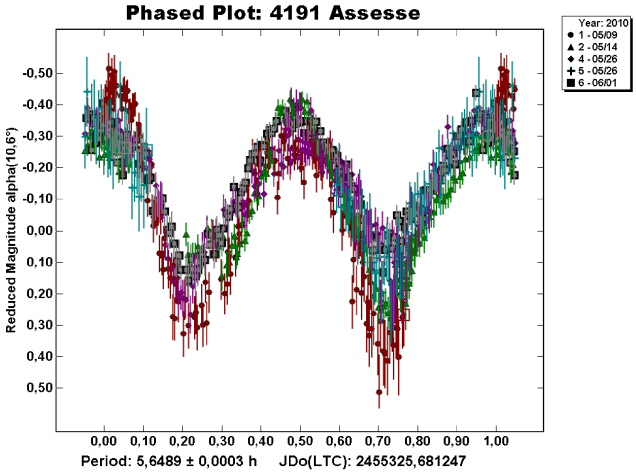

LIGHTCURVE ANALYSIS OF 188 MENIPPE

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CCD observations of the main-belt asteroid 188 Menippe at the Palmer Divide and Hunters Hill Observatories found a synodic rotation rate of 11.98 ± 0.02 h and lightcurve amplitude of 0.28 ± 0.02 mag.

CCD photometric observations were made of the main-belt asteroid, 188 Menippe, in 2010 February. Those at the Palmer Divide Observatory were made using a 0.35-m Schmidt-Cassegrain Telescope (SCT) working at f/9.1 coupled with an FLI-1001E. The resulting scale was ~1.2 arcsec/pixel. Exposures were 240 s using an R filter. Hunters Hill Observatory used a 0.35-m SCT with SBIG ST-8E. Exposures were 240 s using a clear filter. Darks and bias frames were created and merged in *MPO Canopus*. Night-to-night linking of the PDO data was accomplished using 2MASS J-K to BVRI conversions (see Warner, 2007, and references therein). Period analysis on the combined data set was also done in *MPO Canopus* using the algorithm developed by Harris (Harris et al., 1989).

The initial observations were made at PDO on 2010 February 2, 3, and 5. At this point, a period of almost exactly 12 hours was a strong possibility, meaning it would be nearly impossible for a single station or several at about the same longitude to find the period of the asteroid. A request for supporting observations was made to Hunters Hill Observatory (HHO), which is located about 135° west of PDO. Observations from HHO were made on February 9 and 16 while additional observations were made at PDO on February 10 and 11. The two sessions provided by HHO, the one on Feb 16 covering more than six hours, filled in the missing parts of the lightcurve and confirmed a final period of 11.98 ± 0.02 h. The amplitude of the lightcurve is 0.28 ± 0.02 mag. Our period agrees with the 11.974 h found by Barucci et al. (1994). On 2010 February 9, the mid-date of the observations, the phase angle (α) was 5.4° while the Phase Angle Bisector longitude and latitude were, respectively, 145° and -14°.

The "Reduced Magnitude" in the plot uses R magnitudes that are corrected to unity distance using –5 * log (Rr), with R and r being, respectively, the Sun-asteroid and Earth-asteroid distances in AU. The magnitudes were normalized to the phase angle of the earliest session (α = 6.4°) using G = 0.15.

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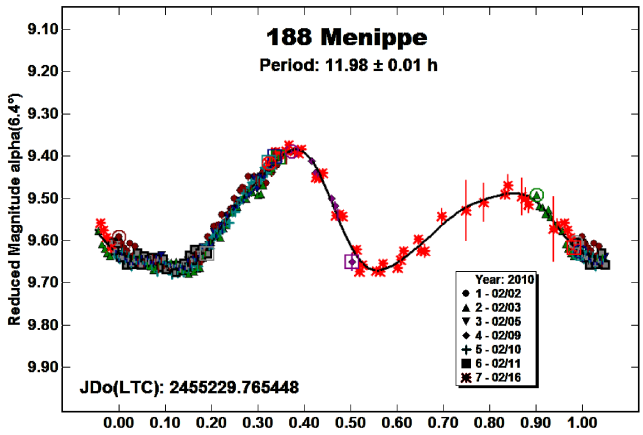
joint project of the University of Massachusetts and the Infrared Processing and Analysis Center/California Institute of Technology, funded by NASA and NSF.



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ROTATION PERIOD DETERMINATION FOR 310 MARGARITA

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A synodic rotation period of 12.069 ± 0.001 h and amplitude 0.15 ± 0.02 mag. have been found for 310 Margarita.

The two authors began observing 310 Margarita independently. When they learned of each other's work on the CALL Website (2010) they agreed to combine their observations and prepare a collaborative paper. The observations by Pilcher were made at the Organ Mesa Observatory with a 35 cm Meade LS200 GPS S-C, SBIG STL1001-E CCD, unguided, clear filter, 60 s exposures, differential photometry only. Those by Oey were made at the Kingsgrove Observatory with a 25 cm S-C telescope with a SBIG ST9XE CCD operating at f10 unfiltered. Image measurement and data analysis are with *MPO Canopus*. In the lightcurve the large number of data points acquired for each target have been binned into sets of 3 with a maximum time difference of 5 minutes between plotted points.

Harris et al. (2009) list no previous observations. The first sessions suggested a period near 12.07 hours, slightly greater than Earth commensurable, for which the portion of the lightcurve observable from a single location will circulate very slowly to the left. This makes it especially valuable to make observations from two locations at widely different longitudes. Those parts of the lightcurve not visible within a several day interval from one location may be sampled from the other. Observations on 25 nights 2010 Mar. 9 – May 31 show a period 12.069 ± 0.001 hours, amplitude 0.15 ± 0.02 magnitudes. Over this interval observations at either single site would be compatible also with a period twice as great, likely with 4 maxima and minima per cycle, but with a considerable portion of the lightcurve unsampled. Combining the observations provides full phase coverage for an assumed 24.141 hour period. It should be noted that in the lightcurve phased to 12.069 hours the minimum near phase 0.1 is 0.04 magnitude lower May 30-31 near phase angle 20.4 degrees than on several previous nights at much smaller phase angles. These May 30 and 31 observations are the only ones showing this particular minimum in the 24.141 hour lightcurve, the two halves of which otherwise look nearly identical. We favor a 12.069 hour rotation period in which the greater depth of the minimum observed May 30 and 31 is a consequence of amplitude being greater at larger phase angles due to enhanced shadowing effects. Therefore we reject the 24.141 hour period with quadrimodal lightcurve and shape almost but not entirely symmetric over a 180 degree rotation.

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