

LIGHTCURVE ANALYSIS OF 7233 MAJELLA

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7233 Majella was observed over eight nights in May 2008. The synodic period was determined as 3.812 ± 0.004 h. The peak-to-peak amplitude was ~ 0.5 mag.

Minor planet 7233 Majella was discovered by the European Southern Observatory, by G. DE Sanctis, on 1986 March 7 and was named after a national park in Abruzzo, Italy (JPL 2008). At the time of the author's observations, the online list of potential lightcurve targets (Warner *et al.* 2008) showed no data available on the rotational period of this asteroid.

Bagnall Beach Observatory is located on the east coast of Australia. Photometric data were collected by the author on six nights over an interval of eight days, from 2008 May 4-12, using a 0.28m SCT / ST9E CCD with 60-second exposures at 1.29 arc seconds/pixel image scale. The images were measured and analyzed using *MPO Canopus* (Warner 2006), which incorporates the Fourier analysis algorithm (FALC) developed by Harris (1989). Owing to the density of background stars, extensive use was also made of the StarBGone technique within *MPO Canopus* to eliminate the interference caused by faint stars close to the path of the target.

The accompanying plot shows data from all six nights from which a period of 3.812 ± 0.004 h was calculated assuming a bimodal curve. The full period was covered on every night of observations. These initial observations of 7233 Majella suggest it is a fast rotator.

Acknowledgements

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References

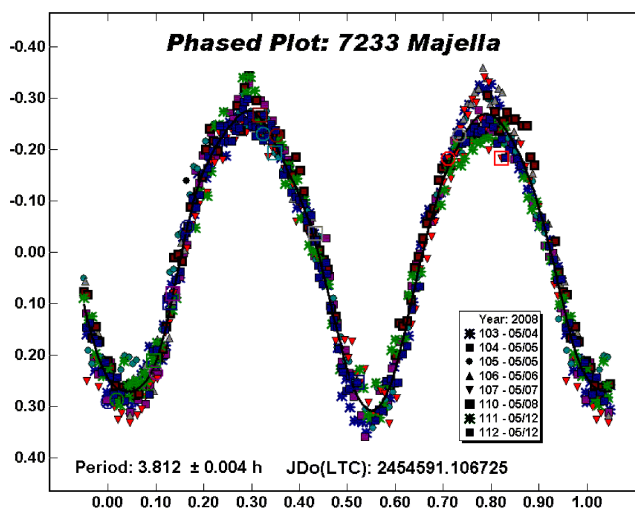
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ASTERIOD LIGHTCURVE ANALYSIS OF SUSPECTED BINARY ASTEROIDS

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Photometric observations undertaken by collaborating observatories in the BINAST group have uncovered strong evidence of asynchronous binary nature of minor planet 5474 Gingasen and the synchronous binary nature of minor planet 7369 Gavrillin.

Hunters Hill Observatory is equipped with a 0.35-m telescope as described in Higgins (2005). All observations for this paper were made using a clear filter with guided exposure times of 240 s. *MaxIm DL/CCD*, driven by *ACP4*, was used for telescope and camera control whilst calibration and image measurements were undertaken by *MPO Canopus* version 9.