

ROTATION PERIOD DETERMINATIONS FOR 26 PROSERPINA, 31 EUPHROSYNE, AND 681 GORGO

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Synodic rotation periods and amplitudes have been found for 26 Proserpina 13.109 ± 0.001 hours, 0.20 ± 0.01 mag. and 31 Euphrosyne 5.5293 ± 0.0001 hours, 0.10 ± 0.01 mag. Both results for these low numbered objects are consistent with previous findings. A new result for 681 Gorgo is a period of 6.4606 ± 0.0001 hours, amplitude 0.42 ± 0.02 mag.

Observations to produce these determinations have been made at the Organ Mesa Observatory with a 35.4 cm Meade LX200 GPS S-C and SBIG STL 1001-E CCD. Photometric measurement and lightcurve construction are with *MPO Canopus* software. All exposures are 60 second exposure time, unguided, R filter for the bright objects 26 Proserpina and 31 Euphrosyne and clear filter for much fainter 681 Gorgo. To reduce the number of points on the lightcurves and make them easier to read data points have been binned in sets of 3 with maximum time difference 5 minutes.

26 Proserpina. Warner et al. (2013) state a period of 13.110 hours based on several independent and consistent determinations. New observations were obtained on six nights 2013 Mar. 10 - Apr. 30 to contribute to a lightcurve inversion model. These provide a good fit to a lightcurve phased to 13.109 ± 0.001 hours with amplitude 0.20 ± 0.01 magnitudes. This is fully consistent with previous determinations.

31 Euphrosyne. Warner et al. (2013) state a period of 5.530 hours based on several independent and consistent determinations. New observations were obtained on four nights 2013 Jan. 28 - Apr. 17 to contribute to a lightcurve inversion model. These provide a good fit to a lightcurve phased to 5.5293 ± 0.0001 hours, amplitude 0.10 ± 0.01 magnitudes. This is fully consistent with previous determinations.

681 Gorgo. Warner et al. (2013) list no previous period determinations. Observations on 4 nights 2013 Apr. 11 - May 7 provide a good fit to a lightcurve with period 6.4606 ± 0.0001 hours, amplitude 0.42 ± 0.02 magnitudes.

References

Warner, B.D., Harris, A.W., and Pravec, P., "Asteroid Lightcurve Data Files, Revised 2013 March 1."

<http://www.minorplanet.info/lightcurvedatabase.html>

