

## Lightcurve Survey of Vestoids in the Inner Asteroid Belt

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We have made the lightcurve observation of 13 vestoids ((1933) Tinchin, (2011) Veteraniya, (2508) Alupka, (3657) Ermolova, (3900) Knezevic, (4005) Dyagilev, (4383) Suruga, (4434) Nikulin, (4796) Lewis, (6331) 1992 FZ<sub>1</sub>, (8645) 1998 TN, (10285) Renemichelsen, and (10320) Reiland).

Lightcurves in the R-band of rotation periods were found for (1933) Tinchin, (2011) Veteraniya, (2508) Alupka, (3657) Ermolova, (3900) Knezevic, (4005) Dyagilev, (4383) Suruga, (4796) Lewis, (6331) 1992 FZ<sub>1</sub>, (8645) 1998 TN, and (10320) Reiland.

The distribution of rotational rates of 59 vestoids in the inner main belt, including 29 members of the Vesta family that are regarded as ejecta from the asteroid (4) Vesta, is inconsistent with the best-fit Maxwellian distribution.

This inconsistency may be due to the effect of thermal radiation Yarkovsky- O'Keefe-Radzievskii-Paddack (YORP) torques, and implies that the collision event that formed vestoids is sub-billion to several billion years in age.

Keywords: asteroid, vesta