

Lightcurve observations for V-type asteroids. I.

Sunao Hasegawa[1]; Seidai Miyasaka[2]; Hiroyuki Mito[3]; Daisuke Kuroda[4]; Machiko Mori[5]; Setsuko Nishihara[1]; Tomohiko Sekiguchi[6]; Yuki Sarugaku[7]; Masateru Ishiguro[8]; Tomohiko Ozawa[9]

[1] ISAS/JAXA; [2] Tokyo Metropolitan Government; [3] Kiso Observatory, univ Tokyo; [4] SOKENDAI; [5] Mathematical and Physical Sci., JWU; [6] NAOJ; [7] Earth & Planetary Sci., The Univ. of Tokyo; [8] UH; [9] Misato Obs.

From lightcurve observations for asteroids we can obtain information of rotational rate and delta magnitude of asteroids. Rotational rate and delta magnitude are basic information of asteroids.

McCord et al. (1970) showed that the visible spectrum of asteroid 4 Vesta and the surface of Vesta has a composition similar to differentiated meteorites such as howardites, eucrites, and diogenites (HED) meteorites. Many asteroids with Vesta-like visible spectra which are usually called 'V-type asteroids' were found near Vesta orbit which was positioned between Vesta and the 3:1 mean motion resonance and ν_6 secular resonance with Jupiter (Binzel and Xu 1993). The fact has suggested that most V-type asteroids are ejected fragments from Vesta and one of sources of HED meteorites are Vesta.

About 80 V-type asteroids are confirmed by spectroscopic method (Tholen 1984, Xu et al. 1995, Bus and Binzel 2002, Lazzaro et al. 2004). But the rotation properties of V-type asteroids are not enough studied. For search of distribution of rotation rates for chips of asteroid 4 Vesta, lightcurve observations of seventeen V-type asteroids were performed from 2003 fall.

In this meeting, we will show the lightcurve distribution of V-type asteroids and discuss the origin and formation age of V-type asteroids.