Изв. Крымской Астрофиз. Обс. 103, № 4, 262-262 (2007)

ИЗВЕСТИЯ КРЫМСКОЙ АСТРОФИЗИЧЕСКОЙ ОБСЕРВАТОРИИ

УДК 523.44 Polarimetry and photometry of the asteroid 4 Vesta

F.P. Velichko

Institute of Astronomy, Kharkiv Karazin National University, Ukraine

Polarimetric and photometric observations of the asteroid 4 Vesta were carried out with the 0.7-m reflector of Institute of Astronomy of Kharkiv Karazin University from December 1998 to May 1999. Data were taken in VR standard spectral bands with a single-channel photometer-polarimeter that operated on the modulation principle with a rapidly rotating polaroid.

The observations of the asteroids were obtained in the range of phase angle from 2.5 to 25.3 degs. We composite the phase dependence of linear polarization of Vesta in V-band. Parameters of the phase dependence are the following: Pmin = -0.67%, ALPHA(min) = 7.7 deg, ALPHA(inv) = 22.6 deg and h = 0.050. Geometric albedo of the asteroid equals to pv(h) = 0.35, pv(Pmin) = 0.2.

Amplitudes of light curve in V and R bands are 0.11 mag and 0.15 mag, respectively. At the large phase angle the light curve in R band shows small peculiarity near a maximum whereas in V band it has not one.