

Observations of Polarization and Brightness Variations with the Rotations for Asteroids 216 Kleopatra and 532 Herculina.

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We present the results of photo-polarimetric observations at the same time for 216 Kleopatra (M-type) and 532 Herculina (S-type) performed from 6th to 9th Nov.1999 and 6th to 11th Jan.2000,respectively,at the Dodaira Astronomical Observatory,Japan. The observed degree of polarization is about 1.00%(at a phase angle of 8.5-9.0 deg) for Kleopatra and about 0.57% (at a phase angle of 12.2-12.9 deg).For S-type asteroids it is known that the polarization in the negative branch tends to increase with the wavelength.We have found that the M-type Kleopatra shows the increase of polarization slightly with the wavelength of 400-850nm.From the time variation of polarization detected here,it has been suggested that Kleopatra has two regions of different polarization on its surface.

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