Asteroid Photometry with Small-aperture Telescopes

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Photometry is an important way to obtain physical properties of asteroids. The aim of this project is to test the feasibility of asteroid photometry with small-aperture telescopes. Several asteroids with magnitudes between 13 and 17 were observed by four telescopes at two different sites. Synodic rotation period of these asteroids were obtained through calibrations, differential photometry, light-time correction and lightcurve analysis. The results show that photometric observations of asteroids brighter than 18 magnitudes are acceptable with current equipments and method. This project proves the feasibility of asteroid photometry with small-aperture telescopes and provides a new method of joint observations by multiple small-aperture telescopes for asteroid photometry studies in China.

Awards Won: