

The lightcurves of 2003 UB 313

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Transneptunian object (TNO) – 2003 UB313 – is the largest object found outside the orbit of Neptune. Its size (diameter \sim 3000km) has been estimated to be larger than that of Pluto (diameter=2320km) The orbit of 2003 UB313 is characterized by high eccentricity($e=0.44$) and high inclination ($i=44$ deg) indicating very interesting orbital evolutionary history. It surely will occupy an important place in the study of solar system formation. For this reason we have used the one-meter telescope (LOT) at Lulin to perform time series R-band photometric measurements with unprecedented cadence (\sim 5min). These observation were carried out between Sept 6 and Sept 8, 2005, soon after the announce of the discovery of 2003 UB313. This data set of lightcurves provide useful information on the rotational state, shape and surface structures if combined with photometric measurements in other wavelengths.