

CCD IMAGING PHOTOMETRY OF COMET 9P/TEMPEL 1

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Comet 9P/Tempel 1 was the target of the Deep Impact mission. Photometry of the comet before the impact was important for two purposes: (1) to derive the physical properties of the comet, and (2) to establish a reference for analysis of the observational features resulting from the impact.

We present results of our photometric monitoring campaign of the comet. The observations started on February 7, 2005, and lasted until August 11, 2005. Images of the comet were obtained in R- and B-filters, with a CCD camera attached to the Schmidt telescope of the National Astronomical Observatory, Rozhen. The calibration of the images is based on standard stars from the USNO-A V2.0 catalogue. We describe the instrumentation, the process of data reduction, and the derived photometric parameters. The results are presented in form of maps of the surface brightness of the comet, and curves of its total brightness against the heliocentric distance. We discuss possible correlations between variations of the integral brightness and morphological changes in the coma.