

## Photometric investigation of the comet C/2009 P1 (Garradd) at pre-perihelion

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We present an analysis of the photometric observations of comet C/2009 P1 (Garradd). The comet was observed at the heliocentric distance of 1.7 au and the geocentric distance of 2.0 au. Observations were obtained with the 60-cm telescope Zeiss-600 (ICAMER, KB). Narrow-band filters were used for selecting the BC ( $\lambda 4450/67 \text{ \AA}$ ), GC ( $\lambda 5260/56 \text{ \AA}$ ), RC ( $\lambda 7128/58 \text{ \AA}$ ), continuum, and C<sub>2</sub> ( $\lambda 5141/118 \text{ \AA}$ ), CN ( $\lambda 3870/62 \text{ \AA}$ ), and C<sub>3</sub> ( $\lambda 4062/62 \text{ \AA}$ ) emissions. The production rate for dust particles and the spectral gradient of reflectivity of the dust in the blue and red continuum have been obtained from the photometric observations. The following quantities have been estimated: the column density of molecules and their production rates. According to our results, the physical parameters of comet C/2009 P1 (Garradd) are close to the average characteristics of typical dynamically new comets and Oort cloud comets.