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Studies of physical parameters of kilometer sized NEA by the RTT-150 telescope.

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The program of experimental studies as full as possible sample of kilometer sized NEAs are carrying out with the 1.5m Russian-Turkish telescope RTT150. The results of polarimetric and photometric observations in V bandpass of 32 NEAs (23 objects with diameter larger than 1 km and 9 of them only a few hundred meters in diameter) with high proper motion in period of theirs close approaches performed at RTT150 between the August 2014 and June 2018 are presented (regular observations had begun only in the spring 2018). The estimation of albedo and diameters of asteroids were made by means of polarimetric and photometric data. Due to that sources were observed at large phase angles from 40 to 100 degrees for different asteroids the measured linear polarization degree makes it possible to differentiate the taxonomy classes of observed sources even using single shot as well. The highest polarization 27.1% was found for 164201 on phase angle $\sim$75°. Taking into account the high inclination of the object ($\sim$35°), the 164201 have a possibility to be a cometary nuclei. All objects smaller 1 km were eliminated from analysis and remaining 23 NEAs were separated on two groups according to obtained albedo: 0.10<MODERATE (55%)< 0.35, LOW (40%)<0.10. For each group the probability density function of NEA perihelion was built as a fraction of asteroid number inside of given interval of perihelion parameter (Δq=0.3). It seems to be that there is increasing of moderate albedo NEAs with perihelion parameter. However, it may be due to incompleteness of sample. In addition to polarimetric determination, the spectral class of NEA 333888 was estimated as Sq using the low resolution spectra (R$\sim$600, covered whole visual range from 4000Å to 9000Å) obtained with RTT150 facilities. Complex observations in frame of project will be continued. To avoid the loss of darker kilometer sized NEAs the object observational list will be broadened with 416 more NEAs which meet the conditions: q<0.6, 18.0^m<H<19.5^m. To estimate photometric slope G, and shape of the project NEAs the additional long-term photometric observation in V-band will be performed at phase angle of 10° – 60° on T100 (100 cm) and T60 (60 cm) telescopes of the TUG Observatory.

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