

ABOUT THE MECHANISM OF ABLATION AND BULK DENSITY OF RADAR-TELEVISION METEORS. N. A. Konovalova, M. Narziev, Institute of Astrophysics, Tajik Academy of Sciences, Bukhoro Str. 22, Dushanbe 734042, Tajikistan, e-mail: nakonovalova@mail.ru

Earlier in the HisAO observatory of the Institute of Astrophysics Tajik Academy of sciences as a result of the 2-years cycle (1978 – 1980) of combined double-station observations of the meteor showers alpha-Capricornids, delta-Aquarids, Geminids Quadrantids, Perseids and Orionids 57 meteors have been received. On the base of combined observations for each meteor the light curve in abs. magnitude, the heights of begin, maximum and end of the meteor trajectory, the velocity, zenith distance of the meteor radiant, photometrical masses and other parameters of meteors have been obtained [1-3].

The observed light curves of 57 faint radar-television meteors (brighter than absolute magnitude +4) within the framework of the single body theory and the theory of meteoroid quasi-continuous fragmentation were studied. Was showed that the shape of observed light curve would best match the theoretical one for the case of a quasi-continuous fragmentation model.

As a result for meteoroids alpha-Capricornids, delta-Aquarids, Geminids, Quadrantids, Perseids, Orionids and sporadic the bulk densities ($1.8 - 6.3 \text{ g/cm}^3$) and initial fragment mass ($10^{-7} - 10^{-5} \text{ g}$) was obtained. Among the investigated meteoroids the greatest density is received for Geminids and delta-Aquarids, and the least – for Orionids. Comparing the resulting values of bulk densities of faint meteors with the bulk densities of bright meteors {4,5} we

came to the conclusion that a small meteoroids ($m < 1\text{g}$) are more homogeneous than large and the bulk densities came nearer to mineralogical densities.

References: [1] Babadzhanov P.B. et al. (1985) *Kometi i meteori*, 37, 28-33. [2] Narziev M. (2003), *Docl. AN RT* 46, 5-11.[3] Narziev M. and Malishev I. (2006), *Bull. In-ta astrophys.AN RT* 85, 35-45. [4] Ceplecha Z. et al. (1993) *Astron. and Astrophys.*, 279, 615. [5] Babadzhanov P.B. and Kokhirova G.I. (2006) *Docl. AN RT* 49, 493-500.