Results of meteor observations by multi-technique registrations

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Simultaneous multi-technique observations of meteors make it possible to compare estimates of meteoroid characteristics obtained from different observational data, to refine models and methods. Multi technique (optical and acoustical) meteor observations continued in Institute astronomy RAS and Institute of Dynamics of Geospheres RAS. As a result of optical observations from several points (from 2012) were obtained several thousand meteor registration, for which various parameters were determined. Acoustic observations are carried out from three points. The analysis of infrasound registrations and their comparison with optical observations made it possible to identify several dozens of acoustic signals corresponding to optical registrations (from several points).

Comparisons of meteor characteristics for which simultaneous observations (acoustic and optical) show a significant spread of values of masses and energies estimations (up to two orders of magnitude or more). Possible explanations may include large uncertainty of all used approximations, still not perfect photometry and other reasons. This problem needs further investigation and data accumulation.