LOW-TECHNOLOGY HIGH-EFFICIENCY RADIO-TECHNICAL SOLUTIONS FOR METEORS AND SATELLITE OBSERVATIONS

V. S. Vovk, O. V. Shulga, Y. S. Sybiryakova, M. O. Kaliuzhnyi, F. I. Bushuev, M.O. Kulichenko

Research institute "Mykolaiv astronomical observatory", Mykolaiv, Ukraine, vasylvovkastr@gmail.com

The Solar system is inhabited with large number of celestial bodies. Some of them are well studied, such as planets and vast majority of big asteroids and comets. There is one group of objects which has received little attention. That is meteoroids and related to them meteors. Nowadays enough low-technology high-efficiency radio-technical solutions are appeared which allow to observe meteors round-the-clock At RI "MAO" three methodologies for meteor observation are developed: singlestation method using FM-receiver, correlation method using FMreceiver and Internet resources, and single-station method using low-cost SDR-receiver. Also SDR-receivers are well suitable for observation active artificial Earth's satellites on solar-synchronous orbits by measuring Doppler shift of the frequency of the signals they radiate. Two weeks of regular observational data were obtained for satellite 27844 (CUTE-1). The standard deviation of (O-C) of the satellite radial velocity is 4 m/s.