

## THE POSSIBILITY OF GALACTIC METEORS OBSERVATIONS BY SCATTERING SIGNALS OF FM BROADCAST STATIONS

A.P. Slivinsky<sup>1,2</sup>, F.I. Bushuev<sup>1</sup>, N.A. Kalyuzhny<sup>1,2</sup>, A.V. Shulga<sup>1</sup>

<sup>1</sup> *Research Institute Nikolaev Astronomical Observatory, Nikolaev, Ukraine*

<sup>2</sup> *Ukrainian Radio Technical Institute, Nikolaev, Ukraine*

**Abstract.** The spectrum of signals of a broadcast FM-transmitter on the output of a receiver frequency demodulator was analyzed in the RI NAO. The FM-transmitter locates in Kielce (Poland). Its power is 120 kWt, its frequency is 88.2 MHz. The previously developed method of recovering the analogue of amplitude-time characteristics (ATC) of FM-transmitter's signal is used to identify the signals reflected from the trails of meteoroids. At the same time the spectra of the ATC analog signals reflected from underdense and overdense ionized trails of meteoroids have unique features. Velocities of meteors can be estimated using restored the ATC analog. In some cases, meteors are supposedly belonged to galactic meteors when their velocity estimations have abnormally large values. Preliminary estimations of statistics of the observed phenomenon were obtained.

**Keywords:** meteors, revealing, FM-transmitters, signals, scattering.