NEW SOFTWARE AND HARDWARE PLATFORM FOR METEOR RADAR OBSERVATION IN KAZAN (RUSSIA).
S. Kalabanov¹, D. Korotishkin¹, R. Ishmuratov², F. Valiullin¹, O. Sherstykov¹, ¹Kazan Federal University (Russia, 420008, Kazan, 16A Kremlevskaya st., office.1404, e-mail: kazan sergei@mail.ru), ²Kazan Power Engineering University (Russia, 420066, Kazan, 51 Krasnoselskay st., e-mail: rash-i@mail.ru).

Introduction: The Kazan Meteor Radar (KMR) is a new generation system deployed on the scientific research area of Kazan Federal University, Tatarstan, Russia (55 N) in March 2015. KMR transmits 15kW power in pulse and uses single antenna all sky configuration for transmission and five-antennas for reception of meteor radioechos (Fig.1). The new design increases the sensitivity of the radar enabling the detection of about 30000 of particles per day.

Initial surveys show that KMR observes a very strong contribution of the North Hemisphere source enabling primary on-line analysis software of meteor detection and position determination parameters.

The off-line analysis software developed in Kazan University is able to determine the radiant coordinates of meteor showers using the raw data [1].

Finally, it will be shown the radiant coordinates of meteor showers detected throughout the years of 2017-2019 (Fig.2).

Figure 1. Transmitter & Receiver and Antenna’s configuration.

Figure 2. Distribution of meteor showers in 2017-2019.

References: