



Amateur Radio Observations of Meteors in Japan: History over a Quarter Century

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Ham radio meteor observations, transmitting quasi-continuous VHF wave of frequency of ~53 MHz and receiving meteor trail scatters at homes or schools, have been carried out continuously since 1996, for over a quarter century in Japan.

The possibility of using Ham radio (amateur radio) station as a transmitter to observe radio meteor echoes stably and continuously to study various meteor streams and showers was discussed at a meeting held at the MU radar (Middle and Upper Atmosphere Radar) site, Shigarki, Shiga, Japan, in December 1995, attended by both amateur radio experimenters and amateur meteor researchers, as well as atmospheric radar scientists. Following this meeting, an observation test was carried out in April 1996. Continuous wave (CW) of 53.750 MHz was transmitted from Sabae, Fukui Prefecture by Kimio Maegawa (JA9BOH; 1949-2021), and forward scatter echoes were received at the MU radar site and several other sites in Japan. This experiment for 24 hours was very successful, and Kimio Maegawa started to send continuous beacon transmit at 53.750MHz from National Institute of Technology, Fukui College Amateur Radio Club (JA9YDB) since August 1996 [1], that continued by 2018. This beacon was followed by the beacon transmit at 53.755MHz by the Fukui Prefectural Amateur Meteor Radio Observation Research Society, JH9YYA, after 2017.

The beacon transmission of 53.750 MHz wave was stable and used for meteor studies by many amateur researchers. It is also utilized for education and research in the universities, such as Kochi University of Technology, the University of Tokyo, Tokushima University, etc.

This paper will briefly report activities of ham radio meteor observation in Japan over 25 years, that have been achieved by the beacon transmission by Kimio Maegawa, who passed away with regret in February 2021.

References

- [1] K. Maegawa, "A New Forward-Scatter Observation Method Using a Ham-Band Beacon", WGN, Journal of the International Meteor Organization, vol. 27, no. 1, 1999, pp. 64-72.