

## Trial of the meteor radio echo's observation at multiple point and high time precision

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We adopted the technique of the meteor echo observation (HRO, 28MHz and 54MHz) that the radio wave of the amateur was used for, and tried to observe personally and analyze the physical process in the upper atmosphere of about 100km or so. The content is to observe the simultaneous meteor echo in several points at high time precision and to obtain the orbit parameters of the meteor (position, direction and speed) from the difference of the observation time. We conducted three campaign observations during the periods of the Leonids (at 3 points), the Geminis (at 6 points), the Quadrans (at 7 points), and analyzed the data. The observation points which could be set up were limited to the roof of the building at the participating universities, participants' homes, and we met the various problems of the variation of the observing conditions (the variation of the noise level), lack of the freedom degrees of the distance between the every observation points and the smaller number of the simultaneous meteor echo than expectations. Even while there were so various problems, error evaluation was done to the meteor parameters which was decided as well, too.