Observation of fine structures of solar radio Type III bursts at UHF range

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Type III solar radio bursts is radio phenomena which observed with solar flares at the frequency range from several gigahertz down to around 10kHz with drift rate at roughly 100MHz per second. It is widely accepted that they are caused by streams of electrons accelerated by the solar flare.

Type III solar radio bursts are well known to have some fine structures on dynamic spectra especially at decameter range, but it has not well discussed about the fine structure of UHF range type III bursts.

To investigate the character of fine structures of the Type III bursts, we are planning to observe with high resolution radio telescope of the range around 327MHz at Zao observatory, which belongs to Planetary Plasma and Atmospheric Research Center (PPARC) of Tohoku University . This radio telescope has the sensitivity of 1 sfu at 327MHz, so that it is possible to observe fine structures of the Type III bursts in UHF range.

We are now making the back-end system to cover the range of 300MHz ˜350MHz with a high time and frequency resolution. In this presentation, we will introduce the observation plan and preliminary results.