

Preliminary results of a new solar radio wave observing system in the HF to VHF band

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Tohoku University has developed a new radio receiving system in the HF to VHF band in the Zao observation station. This system enables us to investigate fundamental plasma processes of particle acceleration, heating and plasma environment with the existing solar radio telescope IPRT/AMATERAS in the radial distance of about 1.1Rs - 4Rs from the photosphere. Furthermore, it also potentially contributes to disaster science/space weather research by enabling to obtain early information on occurrence of solar energetic particle events. The new system will consist of wide-band antenna array and high resolution spectro-polarimeter. In the last autumn the first set of antennas was constructed and tentative observations were started with low time and frequency resolutions. Although it is a minimum configuration, some wide-band solar radio bursts have been detected. In the presentation, we will introduce the new radio observing system and also show preliminary results of observed radio bursts.

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