

Observations of Solar Flare and Ionosphere by the Dual Frequency Observation Method in VHF band

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It is effective to observe electromagnetic (EM) waves associated with natural phenomena in the VHF band because the man-made noise of the VHF band is lower than that of other lower bands. We have observed the EM waves associated with natural phenomena in VHF band from 76 to 90 MHz of FM broadcasting band in Japan. In our observation, the dual frequency observation method is utilized, and that can clarify and judge whether a received signal is a broadband EM wave or an FM broadcasting wave. This paper shows the observation results of EM waves associated with the Solar flare, the galactic noise and the FM broadcasting wave reflected at the ionosphere. Moreover, this paper proposes a new observation method to observe the electron density of ionosphere by monitoring the galactic noise and the FM broadcasting reflection level.

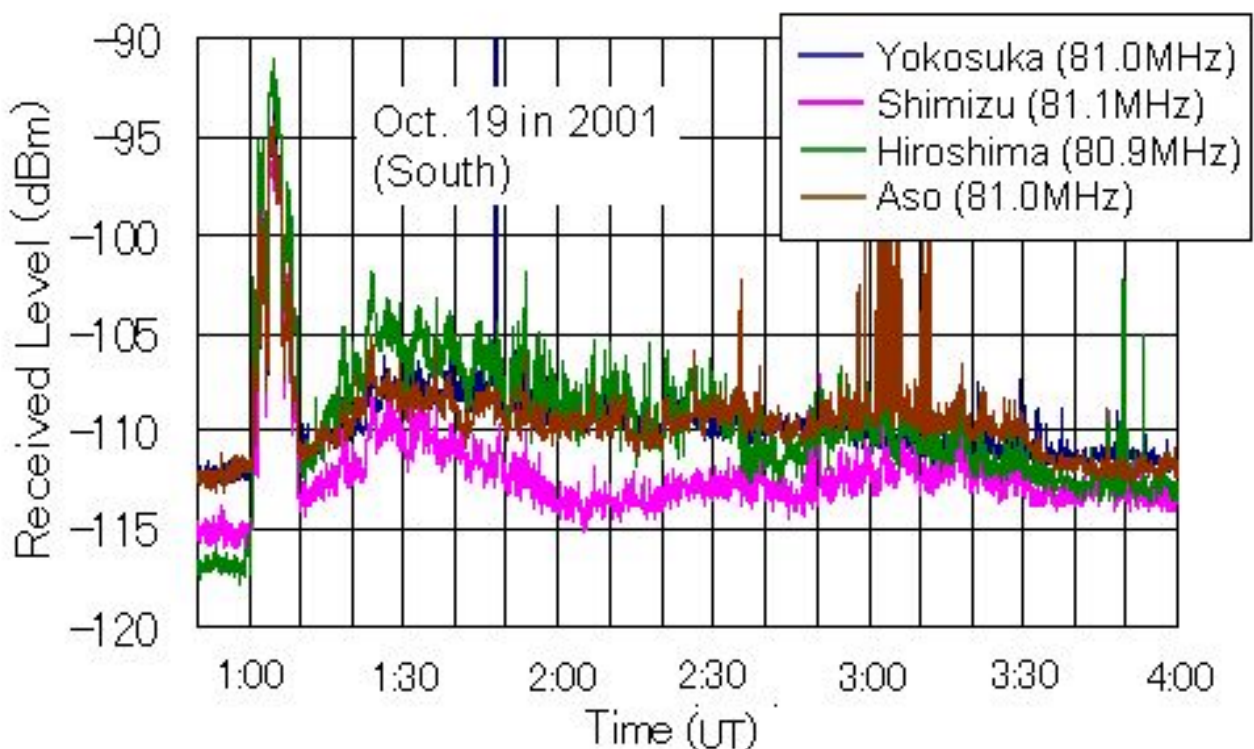


図1: 太陽フレアに起因するVHF帯電磁波の観測結果