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Pc3-4 による EMIC 波動振幅の増幅
Amplification of EMIC waves by Pc3-4 waves

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Electromagnetic ion cyclotron (EMIC) wave is one of the key phenomena for the dynamics of high energy electrons in the radiation belt, since EMIC waves can scatter particles and make them precipitate into the ionosphere from the inner magnetosphere. The EMFSIS of Van Allen Probes observed the proton-band EMIC wave with the frequencies 2-6Hz at ∼3RE in the GSM coordinates at 1110-1140UT on 29 June 2013. It was during the recovery phase of the magnetic storm started on 27 June. This event has significant enhancements of wave amplitudes up to ∼10nT at 1123 and 1130UT. At these times, the magnetic field variations in the Pc3-4 range are also observed. We present the relation between amplitudes of EMIC waves and Pc3-4 wave occurrences, and discuss the amplification mechanism of EMIC waves by ULF waves with longer periods.
Keywords: EMIC waves, Pc3-4