

**Phase fluctuation of standard LF signals observed during Dec. 2006 magnetic storm**

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We installed observation system of the time and frequency standard signal in the LF range at Rikubetsu and Zao observatories in 2006 in order to study temporal and spatial characteristics of energetic electron precipitation from the inner radiation belt region. During the strong magnetic storm event occurred from Dec. 14 to Dec. 16, 2006, characteristic phase fluctuation of the LF signals was recorded at the both observatories. In this presentation, we will present detailed characteristics of the LF wave fluctuation during the magnetic storm.