

Pc 4 and 5 pulsations simultaneously observed by the CUTLASS HF radars with EISCAT Heater experiment on February 17, 2003

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We have carried out the special coordinated observation of GEOTAIL and CUTLASS HF radars with EISCAT heater experiment at Tromso on February 17, 2003 in order to investigate generation and propagation mechanism of ULF waves. On this day the footprint of GEOTAIL in the afternoon was passing over the field of view of the CUTLASS HF radars covering the ionosphere over Tromso. In order to generate artificial radar backscatter, the EISCAT heater at Tromso was turned on in time to the GEOTAIL conjunction. The HF radars simultaneously detected two types of pulsations, Pc 4 and Pc 5 in the heated ionosphere, and compressional Pc 5 was observed by GEOTAIL in the magnetosphere. We will report detail wave characteristics and discuss the generation and propagation mechanism of these ULF waves.