



ULF waves simultaneously observed at the bow shock, in the magnetosphere and on the ground

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In this study we analyzed a long duration Pc3 pulsation event detected on 18-19 February, 2005 by Cluster satellites, located in the SW at the nose of the bow shock. The event was identified through an overall analysis of Cluster measurements, searching for periods during which the spacecraft was upstream of the bow shock. Interestingly, simultaneous data were also available from Geotail satellite located upstream of the bow shock near the dawn flank, allowing us to compare the different observations. Then, we investigated the transmission of the external waves through the magnetosphere, using data from Polar satellite, and to the ground, in Antarctica and at low latitude, obtaining interesting results about the different wave propagation paths.