

Simultaneous GEOTAIL/SuperDARN observations to investigate Pc 3 ULF waves.

Yuichi Shinkai[1], Natsuo Sato[2], Mark Lester[3], Steve Milan[3], Tim Yoeman[3], Darren Wright[3], Mike Rietveld[4], Tohru Sakurai[5], Yutaka Tonegawa[6], SuperDARN/GEOTAIL Research Group Natsuo Sato

[1] The Graduate University for Advanced Studied, [2] NIPR, [3] Univ. Leicester, [4] Max-Planck-Institut, [5] Dept. Aero. & Astro. Tokai Univ., [6] Dept. Aero. & Astro., Tokai Univ.

It is believed that Pc3 ULF waves are generated in the upstream and the boundary regions, and then they propagate by penetrating into the magnetosphere and on the ground. However, it has not yet been revealed fully how the wave energy propagates through the magnetosheath and magnetopause. Although some limited recent observations showed that some of the wave energy, at least, transmitted along the cusp field lines, the mechanism of the transmission has not yet been explained. Therefore, simultaneous observation of GEOTAIL/SuperDARN has been conducted in order to investigate the relation between Pc 3 ULF wave in the ionosphere and those in the dayside magnetosheath.