

## Characteristics of Pc 3 and Pc 5 Waves Observed by the AGO Network at Southern High Latitudes

# Hiroshi Fukunishi[1], Ryuho Kataoka[2], Louis J. Lanzerotti[3]

[1] Department of Geophysics, Tohoku Univ., [2] Planetary Atmosphere Physics Group, [3] Bell Laboratories

<http://www.geophys.tohoku.ac.jp>

Using ULF wave data measured by search coil magnetometers installed at six Automatic Geophysical Observatories (AGOs) locating from 70 to 87 degree magnetic latitude, the characteristics of Pc 3 and Pc 5 waves have been investigated in detail. It is found that the frequencies of Pc 3 coincide with the frequencies of upstream waves excited by the bow shock, suggesting that these Pc 3 waves are originated from upstream waves. It is also found that damped-type Pc 5 waves occur at P2 and P3 at 70 degree magnetic latitude when magnetic impulse events (MIEs) occur at P1 and P4 at 80 degree magnetic latitude. Alfvénic magnetic field and velocity fluctuations are often observed in the solar wind during these events, suggesting that such waves may be a source of MIEs and Pc 5 waves.