

## Free Oscillations of the Earth Excited by the Mw 8.2 Earthquake of Balleny Islands Region, the Antarctic Ocean, in 1998 March 25

Shizuo Kashiwabara [1], Toshikazu Odaka [1], # Yuji Nishimae [1], Hiroyuki Takayama [2], Yuichi Imanishi [3]

[1] Matsushiro Seismological Observatory, JMA, [2] Matsushiro Seismological Observatory, [3] ORI, Univ. of Tokyo

The free oscillations of the earth excited by the Mw8.2 earthquake of Balleny Islands Region, on 25th March 1998 were analyzed by using the records observed by the STS1 seismometer and the super conducting gravimeter at Matsushiro. Two spectra of the records obtained by the seismometer and the gravimeter show good agreement in both periods and amplitudes. The observed eigenperiods are about 0.2% shorter than the theoretical eigenperiods expected for the PREM earth model. The observed disturbances are regarded as surface waves and body waves travelling between the source and receiver along a great circle path which, in the present case, mainly pass through regions with high wave-velocity anomalies in the earth. This may cause the discrepancy between the two eigenperiods.