

## Paleointensity Measurements from ca. 5 Ma Jinchonri Basalt in Baekryeongdo Island, the Furthest North Part of South Korea

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Baekryeongdo Island (pronounced peng-nyong-do) is approximately 12 km across and is located at the furthest north part of South Korea in the West Sea / Yellow Sea (<http://korea.wikia.com/wiki/Baekryeongdo>). The island is mainly composed of Proterozoic formations but there is ca. 5 Ma olivine-basalt (Jinchonri Basalt) in the northwesterly part of the island. In winter 2007, we collected oriented block samples from two sites (B1 and B2) of the Jinchonri Basalt. One-inch cores were drilled from the block samples in laboratory and the cores have been subjected to various rock magnetic and paleomagnetic measurements.

Stepwise alternating field demagnetization (AFD, up to 140 mT) has revealed primary paleomagnetic directions from 9 cores. Fisher mean of these directions is  $I=38.3$ ,  $D=347.3$  and  $a95=4.9$ , and the corresponding VGP locates at 70.2N and 342.1E. It is considered that the Jinchonri Basalt formed during normal geomagnetic polarity period.

Absolute paleointensity (intensity of the past geomagnetic field) measurements have been performed on 20 cores with the LTD-DHT Shaw method (Tsunakawa and Shaw, 1994; Yamamoto et al., 2003). Main remanence carriers are Ti-poor titanomagnetites ( $T_c$  is more than 560 C) and there are relatively large contributions of MD (multi domain): about 20 % of laboratory-imparted ARM (anhysteretic remanent magnetization) is demagnetized by LTD (low temperature demagnetization). Twelve successful results give mean paleointensity of 13.1 micro-T with the associated standard deviation of 1.7 micro-T. This is about one-third of the present field intensity at the site location. Although it is only an instantaneous snapshot of the ancient geomagnetic field, it is an important contribution from relatively inaccessible area.