Review of Nd-Sr-Pb isotope for volcanic rock from Ulreung Islands.

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Nd-Sr-Pb isotope data base supports the identification by Hart (1988) of four end member isotope components in oceanic basalts: no EM array (without enriched mantle) or matle plane (DMM-HIMU:ΔNd=0), hi(gh)-Nd (EMII:ΔNd=+), lo(w)-Nd (EMI:ΔNd=-). Isotopic ratio of Sr (0.7047-0.7053) and Nd (0.512463-0.512586) for volcanic rock from Ulreung Is. have shown EMI (ΔNd=-5～-7) signature which is similar to Walvis Ridge or Kerguelen. Otherwise, volcanic rocks from Ulreung Is. have shown Dupal anomaly which is similar to Walvis Ridge or Kerguelen. ($^{206}Pb/^{204}Pb$- $^{207}Pb/^{204}Pb$, $^{206}Pb/^{204}Pb$- $^{208}Pb/^{204}Pb$ diagram). Dupal equation is $\Delta^{206}Pb/^{204}Pb = 【(^{206}Pb/^{204}Pb)_{DS} - (^{206}Pb/^{204}Pb)_{NHRL}】 \times 100$. Here, DS (data set; $\Delta^{206}Pb/^{204}Pb$ ratio of the sample for studied area, NHRL(northern hemisphere reference line); that of Mid-Atrantic Ridge, East Pacific Rise, Iceland, Azores, Carnaries Cape Verde. Cheju Is. (Dupal) and SOPITA(south pacific isotopic and thermal anomaly; not Dupal: Samoa) have EMII component. However, SOPITA have HIMU (high $^{238}U/^{204}Pb$), Cheju Is. (Dupal) have not HIMU component. $\Delta^{206}Pb/^{204}Pb$ ratio for HIMU component is -60～-120, but $\Delta^{206}Pb/^{204}Pb$ ratio for Dupal component is more than +80. $\Delta^{206}Pb/^{204}Pb$ ratio for rock from Ulreung Is. is +128～+143. Therefore, rock from Ulreung Is. have not HIMU component. Sr-Pb and Nd-Pb diagram have shown for rock from Ulreung Is. DMM-EMI (mantle) array. Isotope ratio (Nd-Sr-Pb) of Ulreung rock deviated slightly from DMM-EMI. Maybe mantle of magma source for Ulreung Is. is very weakly affected by EMII component.