

SIT038-18

会場: 202

時間: 5月27日10:00-10:15

オマーンオフィオライトにおける海洋地殻岩のホウ素濃度および同位体組成

Boron concentration and isotopic composition of the oceanic crust in the Oman ophiolite

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This study provided the first complete vertical profiles of boron content and isotopic composition through the oceanic crust formed at a fast-spreading ridge system. Although the boron contents decrease with increasing depth, hydrothermally altered gabbros constructing the lowermost part of the oceanic crust still show higher boron contents than fresh gabbro. The delta-11B values of the rocks, in contrast, increase with increasing depth, indicating the decrease in isotope fractionation between rock and fluid with increasing temperature of alteration. The average boron content and isotopic composition of the oceanic crust is 3.3 ppm and 6.9 per mil, respectively. These results suggest that hydrothermally altered oceanic crust is a considerable sink of boron enriched in 11B.