

Estimating the age of Rishiri-Wankonosawa and Rishiri-Hotoku tephras using OSL dating of aeolian deposits bracketing the tephras

Reisuke Kondo[1]; Sumiko Tsukamoto[2]; Masayuki Oishi[3]; Hideaki Tachibana[4]

[1] Dept. of Geography, Meiji Univ; [2] Dept. of Geogrphy, Tokyo Metropolitan Univ.; [3] Dept. of Geography, Tokyo Metropolitan Univ.; [4] Geogaphy, Gradeated school of Meiji Univ.

Rishiri-Wankonosawa tephra (Rs-Wn) and Rishiri-Hotoku tephra (Rs-Ho) are important key beds in Northern Hokkaido, Japan. A previous study (Miura, 1995) using a ^{14}C age of humic soil and the existence of the widespread Shikotsu pumice fall-1 (Spfa-1) below Rs-Wn suggested that these tephras erupted between 8-42ka. It is known that permafrosts existed in northern Hokkaido during the Last Glacial by the distribution of ice-wedge casts. We applied OSL dating to the aeolian deposits, which bracket the tephras, in order to estimate the age of the ice-wedge casts.

Fine grain quartz (4-11 μm), which is considered to have been transported from the Asian continent, was used all the samples. The single aliquot regenerative dose (SAR) protocol was applied to determine the equivalent dose. The preheat-plateau test and dose recovery test were conducted for most of the samples. Ages of the Rs-Wn and Rs-Ho and the ice wedge casts are discussed.