Geochronology and Isotope Geology

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Reliable reconstruction of geohistory is of primary importance to better envision the present and future of the Earth. Geochronology and isotope geology play major roles in the reconstruction. This session offers an opportunity to present the results of fundamental studies, including the developments / improvements of analytical methods and age calibration, as well as applications to the Earth and planetary materials. We particularly focus on: (1) radiometric dating, bio-stratigraphy, magnetostratigraphy and stable isotopic time series that provide the age information, (2) radioisotopes and stable isotopes widely employed for analyzing the Earth and planetary systems and (3) hypothesis and numerical modeling that utilize / assimilate the age and isotopic data. We also welcome contributions that integrate a variety of relevant disciplines.

Unspiked K-Ar dating for lavas from Zao volcano

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Zao volcano is located in the central part on the volcanic front of the NE Japan arc. Previous study revealed that the onset of the volcanic activity is ca. 0.8 Ma, the main edifice-building stage is ca. 0.3-0.1 Ma, and the newest stage is from 0.03 Ma to the present. On this volcano, about 50 K-Ar age data are reported, but not all units are covered and some data contradict the stratigraphy probably because of low-K and/or excess Ar contamination. We report new unspiked K-Ar age data for the lavas collected also from unexplored units, in order to construct the detailed history of the volcano.