
SGL045-P07

Room: Convention Hall

Time: May 25 17:15-18:45

The initial value of $^{129}\text{I}/^{127}\text{I}$ ratio

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The natural radioisotope ^{129}I dating covers an important age range for geological samples. The iodine contains ^{129}I that is the long half-life radionuclide besides stable isotope ^{127}I . ^{129}I is a cosmogenic nuclide generated by cosmic rays in the atmosphere. It is possible to measure it by using $^{129}\text{I}/^{127}\text{I}$ at the iodine age. It is possible to measure iodine dating by using this equilibrium. However, present $^{129}\text{I}/^{127}\text{I}$ ratio is very high. Because a large amount ^{129}I was added by the human act of using nuclear power. Therefore, it is indispensable to know initial $^{129}\text{I}/^{127}\text{I}$ ratio that doesn't contain anthropogenic ^{129}I to measure ^{129}I age.

Keywords: iodine, Iodine-129, AMS