

# The measurement of $^{129}\text{I}$ in Fe–Mn crust and aerosol samples with AMS at the CIAE

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In order to develop  $^{129}\text{I}$  applications, the marine Ferromanganese (Fe–Mn) crust and aerosol samples were measured with AMS at the China Institute of Atomic Energy (CIAE).

Fe–Mn crust which growth history was about 10-100 Ma is a very important mineral resources in the ocean. It is not enough for dating Fe-Mn crust by  $^{10}\text{Be}$  AMS method which can only give a data of 10-15 Ma.  $^{129}\text{I}$  with the half of 15.7 Ma can be used for dating of the time scale of about 80 Ma. The first Fe–Mn crust  $^{129}\text{I}$  measurement was carried out.

$^{129}\text{I}$  is also an important tool for monitor of nuclear power plant.  $^{129}\text{I}$  in aerosol samples in Beijing during the accident of Fukushima nuclear power plant were measured. The result shown that  $^{129}\text{I}$  has some important advantages than  $^{131}\text{I}$   $\gamma$  detection.

Sample collection, preparation, AMS measurement and results in detail will be introduced at the symposium.