

Measuring radioactive contamination using ICP-MS

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The Super-Kamiokande Gadolinium project (SK-Gd) aims to measure Supernova Relic Neutrino by adding Gadolinium Sulfate into the Super-Kamiokande. Before loading, radioactive contamination (e.g. U, Th) in Gadolinium Sulfate should be purified.

At present, purification of Gadolinium Sulfate is in progress, however there is no way to measure radioactive contamination in Gadolinium Sulfate with ppq level.

At the end of 2016, new ICP-MS was installed in Kamioka to measure radioactive in Gadolinium Sulfate. For more precise ICP-MS measurement, we are now developing new method that extracting radioactive contamination from Gadolinium Sulfate.

In the conference, the ICP-MS measurement and new technique of chemical extraction will be presented.

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