



Contribution ID: 268 Contribution code: NIM-5

Type: Oral Presentation

## The search of $^{28}\text{Si}$ doubly charged negative ion by Accelerator Mass Spectrometry

*Friday, 25 October 2024 11:00 (20 minutes)*

Here we search the  $^{28}\text{Si}$  doubly charged negative ion ( $^{28}\text{Si}$  DCNI) with Accelerator Mass Spectrometry (AMS). Five kinds of silicon including samples made of Si, Si+Fe, Si<sub>3</sub>N<sub>4</sub>, SiO<sub>2</sub>+Fe, and Si<sub>3</sub>N<sub>4</sub>+Fe were prepared to find  $^{28}\text{Si}$  DCNI. These samples were loaded into an AMS, which was a tandem type machine with a negative ion source by cesium sputtering (SNICS). The ions produced from these samples went through the AMS and were measured in  $\Delta E$ -Eresidual of an ionization detector. The existence of the  $^{28}\text{Si}$  DCNI ( $^{28}\text{Si}^{2-}$ ) was originally believed to be in the spectrum of  $\Delta E$ -Eresidual of the AMS.

### Student Submission

No

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**Session Classification:** New Isotopes Methodologies

**Track Classification:** New Isotopes Methodologies