

Isotopic Analysis of Presolar SiC Grains with the Post-Ionization SNMS

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For unveiling nucleosynthesis during stellar evolution, in-situ isotopic analyses of individual presolar grains have played important roles. So far, we have been developing a new mass spectrometer, Secondary Neutrals Mass Spectrometer (SNMS) with a femto-second laser, in order to enable further sensitive and higher mass/spatial-resolution measurements. At the conference, we'll report our recent progress of development of SNMS and application to the analysis of SiC grains collected from Murchison meteorite. As preliminary results, we detected isotopic anomalies of major elements (Si and C), which is consistent with those of previous works. We will also refer the challenging isotopic measurements of other minor elements.

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