
Oral | Symbol P (Space and Planetary Sciences) | P-PS Planetary Sciences

[P-PS22_1AM2] Planetary processes from meteorites and experimental works

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Thu. May 1, 2014 11:00 AM - 12:45 PM 415 (4F)

In order to explore the planetary materials and their evolution, both meteorites and experimental studies are necessary. In this session, we will discuss these topics from meteorites and experimental works. The research works on differentiated meteorites and parent body processes for chondrites are especially included in this session.

12:30 PM - 12:45 PM

[PPS22-P02_PG] Secondary Ion Mass Spectrometry (SHRIMP) U-Pb dating of Chelyabinsk meteorite

3-min talk in an oral session

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On February 15, 2013, a meteorite fell into the area of Chelyabinsk in Russia. The petrographic and chemical analysis of the Chelyabinsk meteorite unambiguously classifies it as an LL5 ordinary chondrite (Galimov et al. 2013). The reported Sm-Nd age of 3.7 Ga and Rb-Sr age of 0.29 Ga suggest that the Chelyabinsk meteorites could have suffered from the secondary event possibly due to shock metamorphism. For further understanding of the thermal history of Chelyabinsk meteorite, we carried out an in-situ U-Pb dating of phosphates of which closure temperatures is high (~600°C), using Hiroshima-SHRIMP. (Sensitive High-Resolution Ion MicroProbe).