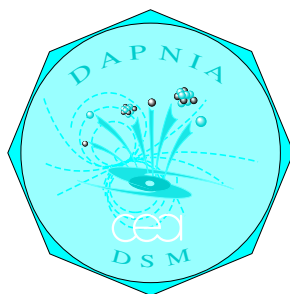


# Service de Physique Nucléaire



## Séminaire

**Vendredi 12 octobre 2007 à 11h00**

CEA Saclay, DSM/DAPNIA/SPhN

Orme des Merisiers, Bât. 703, Salle 135

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### **From meteorites to accelerator driven systems - The need for nuclear cross sections**

Ingo Leya

*Space Research and Planetary Sciences*

*Physikalisches Institut*

*University of Bern*

This talk presents some recent applications for integral cross sections, thereby we focus on two fields which are actually widely discussed. First, interpreting cosmogenic records in meteorites allows one to study the dynamics of small bodies in the solar system and to answer the long standing question of whether the galactic cosmic-ray intensity was constant or not. Second, reliable integral cross sections are very important input data modeling the residual nuclide production in the spallation target and the surrounding material of existing neutron spallation sources and planned ADS/EA systems. However, for both applications reliable cross section data are needed. I will present some of the data obtained by us using noble gas mass spectrometry. The new data for Fe and Ni enable us for a first time to establish model calculations for the interpretation of cosmogenic records in iron meteorites and the recent obtained data for Pb and Bi permits the study of various important reaction mechanism, like evaporation, spallation, multifragmentation, and hot and cold symmetric fission.

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*Le café sera servi 15 minutes avant*

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