FRIDAY

SEPTEMBER 18

2:00 P.M.

RM 124 NSH

Accelerator Mass Spectrometry at the University of Cologne

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CologneAMS is a new Centre for Accelerator Mass Spectrometry (AMS) at the University of Cologne which is designed to measure all standard cosmogenic nuclides (^{10}Be, ^{14}C, ^{26}Al, ^{36}Cl, ^{41}Ca, ^{129}I). It became operational in October 2011. The AMS spectrometer is based on a 6 MV TANDETRON accelerator (HVEE) equipped with an all solid-state power supply, foil and gas stripper. Since 2011 effort was spent to increase the number of nuclides which can be measured routinely at CologneAMS, e.g. the plutonium isotopes ^{239,238,240,242}Pu.

In this seminar I will report on the general performance of the total AMS system and on the quality of the AMS measurements which has been achieved for different nuclides. Examples of research work which is based on AMS measurements performed at CologneAMS, will be presented.

In addition I will report on a new project which aims for AMS measurements for intermediate mass nuclides, e.g. ^{53}Mn and ^{60}Fe at the Cologne FN tandem accelerator where higher beam energies enable isobar separation.