INSTITUT FÜR ISOTOPENFORSCHUNG UND KERNPHYSIK
DER UNIVERSITÄT WIEN

E I N L A D U N G

zum

I N S T I T U T S S E M I N A R

von

Avishai OFAN

Racah Institute of Physics
Hebrew University of Jerusalem

Development of a detection method for ^{244}Pu by Resonance Ionization Mass Spectrometry

The long-lived actinide ^{244}Pu ($t_{1/2}$= 81 Myr) is expected to be present in the Interstellar Medium from fresh *r*-process nucleosynthesis or in direct ejecta from supernovae. Deposition onto Earth may result in traces of live ^{244}Pu in suitable reservoirs. We are developing a method for ^{244}Pu detection based on resonance ionization mass spectrometry. Using Gd as a proxy, we determine an overall efficiency of 0.7 % in conditions applicable to the detection of Pu. Preliminary results on ^{242}Pu detection yield an efficiency of 0.4% and development of a sample preparation method is in progress.

Dienstag**, 1. August 2006, 11:00 Uhr**

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",
1. Stock, Seminarraum von VERA**

R. Golser W. Kutschera