



INVITATION

for a

VERA – SEMINAR

with

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Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany

**From supernovae to the r-process:  
Sample processing and the measurement of Be-10,  
Fe-60 and Pu-244 in a ferromanganese crust**

The AMS groups in Munich and Canberra frequently report about their discoveries of the interstellar radionuclide Fe-60 ( $t_{1/2} = 2.6$  Myr) in geological archives such as deep-ocean crusts, sediments, Antarctic snow and lunar soil. In contrast to the well-known nucleosynthesis site of Fe-60, the long-lived plutonium isotope Pu-244 ( $t_{1/2} = 81$  Myr) is a pure r-process nucleus, where the astrophysical production site is still debated in the astrophysics community. Only recently, the first detection of interstellar Pu-244 in a ferromanganese crust has been reported.

I will give an overview on Fe-60 and Pu-244 investigations during the last 25 years and on the astrophysical questions, we are aiming to address. Within my PhD project, I am currently investigating Fe-60 and Pu-244 abundances in the ferromanganese crust VA13/2-237KD. The characterization of the crust, element separation chemistry and preliminary AMS results as well as options for further radionuclide measurements in the future such as Al-26, Mn-53, Hf-182 and Cm-247 will be discussed.

Thursday, 23. June 2022, 16:30 o'clock

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",  
1. Stock, Victor-Franz-Hess Hörsaal**