



EINLADUNG

zum

VERA - SEMINAR

von

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**Supernova explosions near Earth**

The Interstellar Medium (ISM) is continuously fed with new nucleosynthetic products. The solar system moves through the ISM and collects dust particles. A pioneering work at TU Munich, using accelerator mass spectrometry (AMS), found an extraterrestrial radioactive  $^{60}\text{Fe}$  deposition in deep-sea crusts, possibly of supernova origin.

Within an international collaboration we demonstrated recently that indeed multiple supernova explosions happened in our galactic neighbourhood within the last 10 million years and left their fingerprint on Earth.

Still unknown is the astrophysical site where the heaviest elements are made in nature. Low concentrations measured for interstellar  $^{244}\text{Pu}$  indicate a rarity of heavy element nucleosynthesis, incompatible with standard supernovae as the predominant actinide-producing sites.

I will present new results for both  $^{60}\text{Fe}$  and  $^{244}\text{Pu}$ , measured with unprecedented AMS sensitivity. These data provide new insights into recent nearby supernova explosions and heavy element nucleosynthesis.

**Donnerstag, 29.06.2017, 16:30 Uhr**

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