



INVITATION

for a

VERA - SEMINAR

with

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**Resonant laser-ionization mass spectrometry for
nuclear forensics on hot particles**

Small, highly radioactive fragments, so-called “hot particles”, can be found in the environment as a result of nuclear accidents and weapons tests. Identifying the origin of this material poses a significant challenge for nuclear forensics. The combination of the spatial resolution on a nm-scale of traditional time of flight mass spectrometry with the elemental selectivity of laser ionization makes resonant laser-ionization mass spectrometry an ideal method to investigate such hot particles. As a quasi-non-destructive technique, it can be combined with other analytical methods. The isotope ratio for different actinides can be used to link a hot particle to a specific nuclear event. This presentation explores the investigation of nuclear fuel fragments discovered in the Chernobyl exclusion zone, highlighting the potential advantages of resonant laser-ionization mass spectrometry for nuclear forensics.

Thursday, 21.11.2024, 16:30 o'clock

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