



EINLADUNG

zum

VERA - SEMINAR

von

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**Supernova footprint on the doorstep: ^{60}Fe , ^{53}Mn ,
and other possible correlations**

In our Galaxy, around 1 to 2 supernovae (SN) explode over the course of 100 years. Such a titanic event happened during the last 10 Million years close to our solar system, so to speak on our doorstep. The ejected debris has entered our solar-system, and a fraction lodged on our Earth and on the Moon. Clear signals are long-living radioisotopes, which do not exist naturally or at low amounts on Earth; such as ^{60}Fe ($t_{1/2} = 2.6$ Ma). After a short summary of measurement results of ^{60}Fe , performed at TU-Munich and at ANU (Canberra), I will present first indications of another supernova-formed radioisotope in deep-sea crusts, ^{53}Mn ($t_{1/2} = 3.7$ Ma).

The, so called, local fluff (local interstellar cloud), presently imbedding the solar system, could originate from these close-by SNe, hence should comprise ^{60}Fe that enters the solar system now. Search in 500 kg snow from the Antarctica reveals a signal of ^{60}Fe that supports a recent SN-origin of the local fluff.

The time slot where we found ^{60}Fe deposition in crusts and sediments, coincide with a drop in Earth's temperature, that happened between 2 or 3 Million years before now, and it enforced glaciations on the Earth. These glaciations are considered the cause for the evolution and development of mankind. Possible correlations will be discussed.

Donnerstag, 09. Mai 2019, 16:30 Uhr

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