



EINLADUNG
zum
VERA - SEMINAR
von

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**Underground nuclear astrophysics for the Sun,
and for the Big Bang**

After the resolution of the solar neutrino problem in 2002, the study of the Sun has now entered a precision era, and an entirely new dilemma has come up: New elemental abundance data from Fraunhofer line analyses are in contradiction with helioseismological observables. Observations of ^{13}N and ^{15}O neutrinos from the Sun may address this so-called solar abundance problem, but their interpretation will require precise nuclear reaction data. Due to the low cross sections involved, such data can only be provided by experiments in an underground low-background setting. Work at the world's only underground accelerator, the 0.4 MV LUNA machine in Gran Sasso (Italy), on solar fusion reactions and on the Big Bang production of $^{6,7}\text{Li}$ will be reviewed. Higher-energy underground accelerators are planned in Italy and also at the Dresden Felsenkeller in Germany.

Donnerstag, 07. November 2013, 16:30 Uhr
1090 Wien, Währinger Str. 17, "Kavalierstrakt",
1. Stock, Victor-Franz-Hess Hörsaal