

## PHYSICS COLLOQUIUM

*Speaker:* **Prof. Michael Wiescher**  
University of Notre Dame,  
USA



*Topic:* **Neutron Sources in Stars**

*Time and* Tuesday, May 14, 2024, **2:50 pm** – hybrid event

*place:* **The colloquium will be held in REC/C213.**

Online participation possible:

Zoom-Meeting: Meeting-ID: 631 3817 8900 / passcode: PC-SoSe24

<https://tu-dresden.zoom-x.de/j/63138178900?pwd=am9nSzYyeUhh3SWxMdnNBWkpUaXI5UT09>

*Host:* Prof. Daniel Bemmerer

*Abstract:* Compared to the timescale of stellar evolution neutrons are short-lived particles, yet they appear to be stable for nucleosynthesis in explosive stellar environment. In any case, they need to be produced on-site within the various stellar environments where they facilitate the production of most of the heavy elements with masses above iron. The production and the production path of these heavy elements depend on the nature of the neutron sources that occur at different temperature and density conditions in a number of stellar environments. This talk will discuss the various neutron sources and the conditions at which they may play an important role for the various known heavy element nucleosynthesis conditions.

*Bio:* Ph.D. in Nuclear Physics Universität Münster, Institut für Kernphysik, 1980; currently: Freimann Chair Professor of Physics University of Notre Dame & Director of the Institute for Structure and Nuclear Astrophysics University of Notre Dame, USA & GSI as EMMI visiting professor.

### Get-Together:

The colloquium will be followed directly by a Get-Together with Prof. Michael Wiescher in REC/B101 (around 4:00 p.m.). All students and staff are invited to talk to the speaker and discuss perspectives on the academic career, work-life balance and the professional life as a scientist.