

# ”Strange” Neutron Stars

*Thursday, 13 February 2014 15:30 (1 hour)*

The high-density nuclear equation of state within the Brueckner-Hartree-Fock many-body approach is discussed. Particular attention is paid to the effects of nucleonic three-body forces, the presence of hyperons, and the joining with an eventual quark matter phase.

The resulting properties of neutron stars, in particular the mass-radius relation, are determined and compared with recent observational data. It turns out that in this approach stars heavier than about 1.4 solar masses contain necessarily quark matter.

**Presenter:** SCHULZE, Hans Josef (Catania University)