

# ROCKSTAR: Towards a Roadmap of the Crucial measurements of Key observables in Strangeness reactions for neutron sTARs equation of state

Contribution ID: 9

Type: **not specified**

## Sound velocity, equation of state, and strangeness in neutron star matter

*Tuesday 10 October 2023 09:45 (45 minutes)*

The speed of sound in the core of neutron stars is a key quantity for providing a characteristic signature of a possible phase transition or the occurrence of non-standard degrees of freedom in dense baryonic matter. The first part of this talk presents a status summary of results from a systematic Bayes inference analysis of the equation-of-state based on observational data. In the second part the quest for the appearance of hyperons in neutron stars is examined and discussed, with emphasis on the role of hypernuclear three-body forces in this context.

**Primary author:** WEISE, Wolfram (Technical University of Munich)

**Presenter:** WEISE, Wolfram (Technical University of Munich)

**Session Classification:** Session III