Astro multi-messenger, theory of compact stars, Bayesian analysis

• How to combine different messengers and their uncertainties (also systematic ones)? What are the reliable information channels, and what should be considered with caution?

• There is the possibility of negative thermal pressure.

Which analysis is potentially affected by this, and how can we probe such a negative thermal pressure experimentally?

• There is a connection between the symmetry energy and phase transition(s) in dense matter. If low-density phase transitions occur, e.g., through pion condensation, it shall be implemented in the analyses of the nuclear EDF.

How do we account for such a potential bias, and how can we perform agnostic studies?