

WE Heraeus Physics School und 62. Karpacz Winter School in Theoretical
Physics "Multimessenger Astrophysics and Cosmology"

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Two talks on dense matter (Part 1)

Tuesday, 3 March 2026 09:00 (1 hour)

Bulk viscosity in nuclear matter. In a neutron star merger, nuclear matter experiences dramatic changes in temperature and density that happen in milliseconds. Mergers therefore probe dynamical properties that may help us uncover the phase structure of ultra-dense matter. I will describe some of the relevant material properties, focusing on flavor equilibration and its consequences such as bulk viscosity and damping of oscillations.

Presenter: ALFORD, Mark