

Plenarvortrag PV I Mo 11:15 HS 1
The gravitational signal of newly born protoneutron stars —
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A protoneutron star formed in a gravitational collapse or after the merging of two neutron stars, is a hot and rapidly evolving object. To describe its internal structure, a hot equation of state of nuclear matter

has to be used and the viscous coefficients, which strongly constrain the effectiveness of gravitational instabilities, have to be computed consistently; moreover, neutrino processes play a fundamental role in removing energy from the star, which consequently contracts and cools down. All these processes affect the oscillation spectrum and the gravitational signal emitted by the star, which is quite different from that emitted by an old, cold neutron star.