

# Nuclear giant dipole resonance width as a potential probe of the in-medium nucleon-nucleon cross sections

*Wednesday, 9 October 2019 18:00 (1 hour)*

The spreading width of nuclear giant dipole resonance in Pb208 is studied in the Boltzmann-Uehling-Uhlenbeck transport theory with a lattice Hamiltonian method.

The obtained spreading width shows a strong dependence on the in-medium nucleon-nucleon elastic scattering cross sections, which suggests the spreading width of nuclear giant dipole resonance as a novel probe of the medium correction of the nucleon-nucleon elastic scattering cross sections. We then find that the experimental value of giant dipole resonance width of Pb208 measured at RCNP prefers a strong medium effects.

## Abstract Type

Poster

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**Session Classification:** S5: Poster 分会场

**Track Classification:** S5 分会场: Poster