



国立研究開発法人理化学研究所 仁科加速器科学研究センター
第321回 RIBF核物理セミナー
RIKEN Nishina Center for Accelerator Based Science
The 321st RIBF Nuclear Physics Seminar

Nuclear Incompressibility: Does It Depend on Nuclear Structure?

Professor Umesh Garg (University of Notre Dame)

The nuclear incompressibility parameter is one of three important components characterizing the nuclear equation of state. It has crucial bearing on diverse nuclear and astrophysical phenomena, including radii of neutron stars, strength of supernova collapse, and collective flow in medium- and high-energy nuclear collisions.

The only direct experimental measurement of this quantity comes from the compression-mode giant resonances—the isoscalar giant monopole resonance (ISGMR) and the isoscalar giant dipole resonance (ISGDR). There have been some experimental results recently suggesting that nuclear structure effects may influence the energy of the isoscalar giant monopole resonance and, hence, the nuclear incompressibility. However, this being a bulk property of nuclear matter, one expects structure effects to play no role in it.

In this talk, I will review the current status of determination of nuclear incompressibility, and critically examine how, and if, nuclear structure effects play a role.

May 17th (Wed), 2023 13:30 ~
via Hybrid (Zoom + RIBF Hall)



* The talk will be given in English language.
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