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The Speed of Sound in Dense Isospin-Asymmetric Matter from the Linear Sigma Model

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Content

For decades, the scientific community has dedicated great effort to characterizing the most extreme objects in the universe, where immense temperatures, densities, and magnetic fields reign. Fifteen years ago, a discovery caused a stir: evidence of an unexpected peak in the speed of sound at high isospin densities, such as those found in neutron stars and the early universe. This presentation addresses this intriguing phenomenon through the study of strongly interacting matter with isospin imbalance, using the linear sigma model with two quarks for this purpose.

Primary author(s) : Mr. PARRA LARA, Luis Carlos (Insituto de Ciencias Nucleares, UNAM)

Presenter(s) : Mr. PARRA LARA, Luis Carlos (Insituto de Ciencias Nucleares, UNAM)