



LNGS SEMINAR SERIES

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Exploring pulsar glitches with supersolids

Abstract

Glitches, spin-up events in neutron stars, are of prime interest as they reveal properties of nuclear matter at subnuclear densities. We explore a possible glitch mechanism due to vortex unpinning using analogies between neutron stars and dipolar supersolids. We numerically observe the vortex and crystal dynamics during a glitch and its dependence on the supersolid quality, providing a tool to study glitches from different radial depths of a neutron star. Our work paves the way for the quantum simulation of stellar objects from Earth.

May 9, 2024 - 2:30 pm CEST

Room B. Rossi

Laboratori Nazionali del Gran Sasso

Via Giovanni Acitelli 22, Assergi (Italy)



Further info and registration

<https://agenda.infn.it/e/trabucco>