19th International Conference on QCD in Extreme Conditions (XQCD 2023)

Contribution ID: **11** Type: **Talk**

Topology and robustness of a quark matter phase candidate for magnetars core

Wednesday 26 July 2023 11:25 (25 minutes)

One central question in nuclear astrophysics nowadays is determining the matter structure of neutron stars (NS). With the wealth of newly available and upcoming astrophysical observations, it is of most relevance to find ways to compare the characteristics of potential NS matter phase candidates with those gathered from NS observations. As part of these efforts, I will discuss how some unique topological properties of a spatially inhomogeneous, dense quark matter phase in a magnetic field lead to robustness and resilience against thermal phonon fluctuations, making it a plausible candidate for magnetars'inner core matter.

Author: INCERA, Vivian (University of Texas Rio Grande Valley)

Presenter: INCERA, Vivian (University of Texas Rio Grande Valley)

Session Classification: Plenary session