

Pasta phases within the QMC model

Monday 19 March 2018 16:00 (1 hour)

The search for the existence of pasta phases in the low density regions of nuclear and neutron star matter is performed within the context of the quark-meson coupling (QMC) model, which incorporates quark degrees of freedom.

Fixed proton fractions are considered, as well as nuclear matter in beta equilibrium at zero temperature. We discuss the recent attempts to better understand the surface energy in the coexistence phases regime and we present results that show the existence of the pasta phases subject to some choices of the surface energy coefficient. We also analyse the influence of the nuclear pasta on some neutron star properties.

Summary

Primary author: GRAMS, Guilherme (UFSC)

Co-authors: SANTOS, Alexandre (U); PROVIDÊNCIA, Constança (University of Coimbra); MENEZES, Debora (UFSC)

Presenter: GRAMS, Guilherme (UFSC)

Session Classification: Monday Posters