ID de Contribution: **31** Type: **Poster**

Fluctuations in the nuclear pasta phase

mercredi 15 septembre 2021 16:04 (1 minute)

Exotic shapes of nuclei, known as nuclear pasta phase, can exist in the crust of neutron star and in supernovae exposions. Calculations involving the pasta assume a perfectly crystalline structure, described by identical Wigner-Seitz cells, but such an approximation is unrealistic due to the small free energy variation with respect to the different pasta configurations, and these may coexist in equilibrium. The presence of different types of clusters leads to an impure system, that can have macroscopic consequences in the star, such as alteration of the thermo-magneto evolution, neutrino opacities and of gravitational wave production. In this work we calculate the amount of different pasta structures at a given depth of the star and introduce the anisotropic impurities of the pasta, that are essential to calculate the transport coefficients, with the IU-FSU force.

Auteur principal: M. PELICER, Mateus (Universidade Federal de Santa Catarina)

Orateur: M. PELICER, Mateus (Universidade Federal de Santa Catarina)

Classification de Session: Poster