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Seminar of the theory group of APC

Mardi 26 Mai 2015, 14 :00 APC, 483A Malevitch Domaines : hep-th

Titre : Formal and interdisciplinary aspects of neutrino flavour conversion

Orateur : Cristina Volpe (APC - Université Paris Diderot)

Résumé : Neutrinos are elusive weak interacting particles that have revealed numerous properties since the oscillation discovery in 1998. Neutrinos change their flavour in intriguing ways in astrophysical environments such as core-collapse supernovae, binary neutron stars and collapsars. In this talk, I will briefly summarize some of the developments in the field. Then I will discuss the evolution equations usually employed in the description of neutrino flavour conversion in media, their approximations and the current attempts to go beyond. I will emphasise the connection with condensed matter and nuclear physics.