

Séminaire

Searching for Dark Matter and CP Violation

Patrick de Perio

Columbia University

Two outstanding questions in physics are the nature of dark matter and the origin of the matter- antimatter asymmetry in the universe. Astrophysical observations imply the existence of dark matter, an invisible and dominant mass component in the universe, but it has eluded direct detection to date. A measurement of charge-parity (CP) violation in the lepton sector may help explain the observed preponderance of matter over antimatter. I will present new results from the XENON1T dark matter search experiment, consisting of a multi-tonne dual-phase (liquid-gas) xenon time projection chamber, as well as my future plans for the measurement of CP violation by the T2K long-baseline neutrino oscillation experiment and the next-generation large water Cherenkov detector, Hyper-Kamiokande, attempting to answer these two questions.

Mardi, 29 mai 2018, à 14h00
Pavillon McNicoll, Z-205
Café-biscuits à 13h30 au V-221

liste des séminaires : <https://feynman.lps.umontreal.ca/en/seminars>
inscription/Subscription : http://www.physics.mcgill.ca/seminars/sem_lists.html

 **GPP** Groupe de Physique des Particules, Université de Montréal