Séminaire SCOPI Paris-Saclay

Arthur B. McDonald (Queen's University)

Lundi 3 septembre 2018 à 15h00

Measurements of Neutrino Properties with SNO and SNO+ and Experiments for Dark Matter Detection with Liquid Argon

A description of the science associated with the Sudbury Neutrino Observatory and its relation to other neutrino measurements will be given, along with a discussion of several present experiments that are at various stages of development or operation for measurements of neutrino properties and searches for Weakly-Interacting Massive Particles (WIMPS) as Dark Matter candidates. The experiments include SNO+, in which the central element of the SNO detector will be replaced with liquid scintillator with Te dissolved for neutrino-less double beta decay measurements; DEAP, in operation at SNOLAB, using about 3300 kg of liquid argon for single phase direct Dark Matter detection; and a sequence of future experiments being pursued by the Global Argon Dark Matter Collaboration to use the unique properties of liquid argon to reach several orders of magnitude further to the Neutrino Floor: Darkside 20k and a future detector with 300 tonnes of liquid argon. The relevance of neutrino and Dark Matter properties to the composition and evolution of our universe will be emphasized.

Amphithéâtre Bloch, IPHT - CEA - Orme des Merisiers

Le séminaire sera précédé d'un café/thé à 14h30

Le LABoratoire d'EXcellence Physique des 2 Infinis et des Origines (P2IO) organise conjointement avec les départements Physique des 2 Infinis (P2I) et Sciences de la planète et de l'Univers (SPU) de l'Université Paris-Saclay une série de "Séminaires Communs des Origines et de la Physique des 2 Infinis" (SCOPI).
Ces séminaires s'adressent à un large public.