

**Irfu**Institut de recherche
sur les lois fondamentales
de l'Univers**Séminaire
SPP****Lundi 16/11/2015, 11h00**

CEA-Saclay Bat 141, salle André Berthelot

Neutrino mass hierarchy and CP violation

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Determinations of the mass ordering and the CP violation phase are the "next big" in neutrino physics. From theoretical point of view relation between the hierarchy and CP-phase is not clear; on the contrary, their experimental determinations are substantially entangled. The "race" for the mass hierarchy has started with main players being JUNO, RENO 50, PINGU, ORCA, double beta decay experiments, supernova neutrinos and Cosmology. Concerning the CP-phase we are at critical point in view of recent results from T2K and NOvA which may change our future strategy. Although it is believed that precise measurements of the phase will be done by dedicated accelerator experiments, it is worthwhile to explore potential of future possible upgrades of PINGU and ORCA with atmospheric neutrinos.

Le café sera servi 10 minutes avant.

NB : La présentation d'une pièce d'identité est exigée à l'entrée du centre. Tous les auditeurs extérieurs sont priés de prévenir à l'avance Martine Oger, tél. 01 69 08 23 50, e-mail : martine.oger@cea.fr. (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).