



**UNIVERSITÉ
DE GENÈVE**

FACULTÉ DES SCIENCES
Département de physique
nucléaire et corpusculaire

SÉMINAIRE DE PHYSIQUE CORPUSCULAIRE

SUJET: **Precision oscillation neutrino experiments, nuclear physics
and the need of near detectors**

PAR: **Dr Federico SANCHEZ**
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LIEU: Science III, Auditoire 1S081
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RÉSUMÉ:

Neutrino oscillation physics have entered the era of precision physics. Next decade might see the first measurement of CP violation in neutrinos. But, this precision experiments requires to understand two main elements: neutrino flux and neutrino-Nucleus cross-sections. Near detectors, located few hundred meters from the neutrino production points, are in charge of these tasks. But, this enterprise is not trivial, our knowledge of neutrino-nucleus interaction model is lacking the precision and understanding of other fields of particle physics. Modern neutrino oscillation experiments focuses most of their efforts in this specific task. We will discuss neutrino oscillation experiment methodology, its challenges in the boundary between particle and nuclear physics and the need of near detectors in running and future experiments.

INFORMATION : <http://dpnc.unige.ch/seminaire/annonce.html>

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