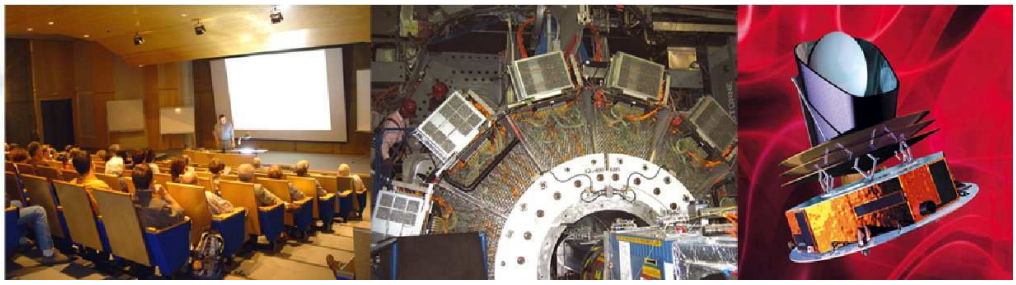
LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE



Séminaire du Laboratoire de l'Accélérateur Linéaire

Pavel Nadolsky

Southern Methodist University (Dallas, USA)

Vendredi 22 Mai 2015 à 11 :00

CT14 and META2.0 parton distribution functions

Parton distribution functions (PDFs) test detailed properties of hadronic interactions and provide core input for QCD simulations for the Large Hadron Collider. Modern parametrizations for parton distributions are obtained in global analyses of high-energy hadronic data and account for a rich variety of experimental and theoretical factors. I review current issues in determination of PDFs on the example of recent studies by the Coordinated Theoretical-Experimental project on QCD (CTEQ). Implications of a new generation of PDFs from CTEQ with the LHC data, named CT14, are discussed. I also discuss combination of predictions for LHC observables using PDFs from several groups, such as CT, MMHT, and NNPDF, in the context a new "meta-parametrization" approach developed within our group. The META2.0 ensemble combines PDFs from three groups directly in the PDF parameter space. It consists of a small number of PDF error sets that propagate information contained in the full input ensembles, while greatly reducing total computation costs for LHC observables, in comparison to the currently adopted methods.

Salle 101 du LAL - Bât. 200, Orsay

Thé et café seront servis 5 mn avant le séminaire

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