



SECTION DE PHYSIQUE

COLLOQUE DE PHYSIQUE

24, QUAI ERNEST-ANSERMET, CH-1211 GENÈVE 4

Lundi 24 février 2020, 12h30
Ecole de Physique, Auditoire Stueckelberg

«The High Luminosity LHC Project at CERN : the
new challenges in Physics and Technology»

Prof. Lucio Rossi
High Luminosity LHC Project Leader, CERN and
University of Milano

LHC is among the largest and most complex scientific instruments ever conceived and operated, which has allowed the discovery of the long-awaited Higgs boson in 2012, by mean of its main experiments ATLAS and CMS. While LHC is approached its limits, to go beyond it CERN has launched a project, called High Luminosity LHC (HiLumi). Based on a modification of the present LHC, it employs novel more advanced technology, like Nb₃Sn superconducting magnets of 12 tesla, Superconducting RF cavities kicking the beam transversally, giant MgB₂ superconducting cables to transport some 120 kA, new composite materials (Mogrographite and Cu-diamond). The HL-LHC project has two main functions: it can unveil the route toward new physics beyond standard model and it is also a critical step in preparing the new technologies necessary for a post-HiLumi collider: a giant 100 km machine that by means of super-magnets can reach an energy territory of about 5 to 10 times the one of LHC.

Une collation en compagnie du conférencier sera offerte après le colloque.

Prof. Dmitry Abanin

Genève, le 18 février 2020/nc

Secrétariat de la Section de Physique - N. Chaduiron – 022 379.63.83