

Lundi 8 décembre 11h00

CEA-Saclay Bât 141, salle André Berthelot

LHC overview, commissioning plans and current status.

REYES ALEMANI

CERN

The Large Hadron Collider is an unprecedented machine that will explore new energy frontiers in physics. In order to accomplish this, the accelerator is a technological challenge working at design parameters never achieved before : a factor two in magnetic field, a factor seven in beam energy and a factor 200 in stored energy, compared to precedent accelerators. The energy stored in LHC magnets presents a considerable challenge for commissioning even before any beam is injected. Furthermore, the energy stored in the nominal LHC beams is such that it presents a serious threat to accelerator equipment in case of uncontrolled beam loss. Therefore, one of the most important systems in LHC is the Machine Protection System.

Operating the LHC at design performance is not going to be easy. The machine is complex and with nominal beams has the capacity to destroy itself. Consequently, a staged approach has been developed, in which the complexity and the destructive power of the LHC beams are both increased incrementally.

The seminar will be focused on the LHC Machine Protection System and on the overall approach for beam commissioning, with particular emphasis on the first results from the 10th of September. Finally, some details about the incident on the 19th of September will be given.

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 Emilie Chancrin, tél. 01 69 08 23 50, e-mail : emilie.chancrin@cea.fr. (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).