

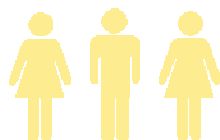
## SEMINAIRE SACM

15

Novembre 2006

14 H 00 David RICHTER  
CERN  
Pièce 311, Bât.123

# Evaluation of the transfer of heat from the LHC dipole coil to LHe



During operation of the Large Hadron Collider at CERN, heat will be generated inside the coils of its superconducting magnets as a consequence of ramping of magnetic field, and of the interaction of lost beam particles with the magnet mass. Heat has to be transferred from the conductor into the He II coolant and removed from the magnet environment. During the LHC R&D stage, this transfer has been extensively studied on simulated coil segments at the CEA Saclay, and by analyzing dynamic behavior of short model magnets at CERN. Owing to the importance of efficient cooling for the design of future superconducting magnets, study of heat transfer has been restored at CERN and in frame of the Next European Dipole Collaboration. Attempt to analyze archived high ramp rate quench data of the 1m long LHC model dipole magnets of the 2nd generation and development of a method for direct measurement of heat transfer on segments of production LHC dipole coils are presented.



NB : La présentation d'une carte d'identité ou d'un passeport est exigée à l'entrée du centre .  
Tous les auditeurs extérieurs sont priés de prévenir à l'avance de leur visite : Geneviève  
VERON, Tél. : 01 69 08 69 49 (UE : délai de 24h, hors UE : délai de 4 jours) .

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