



ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE
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POZVÁNKA

na 267. seminář ÚTEF ČVUT v Praze
pod záštitou Československé sekce NPSS IEEE

Luminosity Monitoring in ATLAS with MPX Detectors

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Abstract: The ATLAS-MPX detectors are based on the Medipix2 silicon devices designed by CERN for the detection of multiple types of radiation. Sixteen such detectors were successfully operated in the ATLAS detector at the LHC and collected data independently of the ATLAS data-recording chain from 2008 to 2013. Each ATLAS-MPX detector provides separate measurements of the bunch-integrated LHC luminosity. An internal consistency for luminosity monitoring of about 2% was demonstrated. In addition, the MPX devices close to the beam are sensitive enough to provide relative-luminosity measurements during van der Meer calibration scans, in a low-luminosity regime that lies below the sensitivity of the ATLAS calorimeter-based bunch-integrating luminometers. Results from the MPX luminosity studies are presented for 2012 data taken at $\sqrt{s}=8$ TeV proton-proton collisions.

Seminář se bude konat v úterý 26. listopadu 2013 ve 14 hodin
v zasedací místnosti ÚTEF ČVUT, Praha 2 - Albertov, Horská 3a/22

Ing. František Krejčí
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