Contribution ID: **14** Type: **not specified**

Movements monitoring of CMS Tracker detector during cooling procedure with the Laser Alignment System

Wednesday, 2 July 2014 14:15 (30 minutes)

The Laser Alignment System (LAS) of the CMS Tracker detector monitors the position variation of its components with a rate of five minutes. A precision of 1 micrometer for the x and y translations, and 1.1 microradians rotation around z-axis was achieved. For rotations around x- and y-axis the achieved precision is 3.7 and 2.6 microradians, respectively.

During the cooling down test performed in November 2013, the Tracker internal structure was monitored and movements of thermal nature were observed. With the tracks based alignment algorithm, Millepede, the observed LAS alignment parameter variations were cross-checked using cosmic rays.

The results obtained from both alignment strategies, LAS and tracks based, are presented. The consistency of the alignment parameters variations is discussed.

Primary author: PERIEANU, Adrian (Rheinisch-Westfaelische Tech. Hoch. (DE))

Presenter: OSTAPTCHOUK, Andrei (RWTH Aachen)