Contribution ID: **6** Type: **not specified**

Performance of the room temperature Systems for Magnetic Field Measurements of the LHC Magnets

The LHC will be composed of 1232 horizontally curved, 15 meter long, superconducting
dipole assemblies and 474 Short Straight Sections containing various types of quadrupoles. These magnets are manufactured by several European companies and half of them are currently produced. The field quality at room temperature is strictly monitored to guide and validate the assembly at different stages of the production in the industry. Dipoles and quadrupoles are measured with two different rotating coil systems. Thes “moles” travel inside the 50 mm aperture and accurately measure the field and gradient strength integrated over the length, the field direction and high order harmonics. In this paper we describe these two systems, their performance
and experience gained through the two first years of operation.

Primary author: Prof. GARCIA PEREZ, Juan (CERN)

Co-authors: Mr GILOTEAUX, David (CERN); Mr BILLAN, Jacques (CERN); Mr BUZIO, Marco (CERN); Mr GALBRAITH, Peter (CERN); Mr REMONDINO, Vittorio (CERN)

Presenter: Prof. GARCIA PEREZ, Juan (CERN)

Track Classification: Measures