



Contribution ID: 31

Type: **not specified**

Upgrades of the ATLAS muon spectrometer with new small-diameter drift tube chambers

Wednesday, 23 March 2022 14:45 (15 minutes)

The goals of the upgrades of the ATLAS Muon Spectrometer with new small-diameter Muon Drift Tube Chambers (so-called sMDT) are to make room to install new triple-Resistive Plate Chambers (tRPC) to increase the trigger efficiency in the inner barrel muon region and to improve the rate capability of the muon chambers in the high background regions corresponding to the HL-LHC project. As a pilot project for the whole replacement of the MDT chambers in the small azimuthal sectors of the barrel inner layer (so-called BIS1-6) by new sMDT-RPC detectors in the long shutdown 3 (LS3), 8 New small diameter (15 mm) Muon Drift Tube chambers (so-called sMDT BIS7A) have been installed in the long shutdown 2 (LS2) in the transition region between Barrel and Endcap of Muon spectrometer $1 < |\eta| < 1.3$. The Author will present an overview of the installation and read-out electronics of the new sMDT BIS7A chambers, their cavern commissioning status and their performance.

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Session Classification: Parallel Session VI, Instrumentation