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Type: **Talk**

Large Size Micromegas for the Upgrade of the ATLAS Muon Spectrometer, ready for the installation of the New Small Wheel in 2021

Wednesday, 25 August 2021 17:55 (25 minutes)

The ATLAS experiment is currently upgrading the first muon station in the high-rapidity region with the New Small Wheels (NSW), based on large-size multi-gap resistive strips Micromegas technology and small-strip Thin Gap Chambers (sTGC).

The NSW system is going to be installed in the ATLAS underground cavern during the LHC long shutdown 2 (2021) to enter in operation for Run3 (starting in February 2022). 128 Micromegas quadruplets, each composed by four measurement layers two square meters in size, are needed to build the two New Small Wheels, covering a total active area of about 1280 m². The construction of all MM modules, carried out in France, Germany, Italy, Russia and Greece, is completed. Their mechanical integration into sectors, the installation of on-detector services and electronics, for the first NSW is also completed, along with all validation and acceptance tests. The preparation of the second NSW is very well advanced.

The advanced status of the project, in view of the imminent installation of the two NSW in ATLAS by the fall of 2021 will be reported.

The presentation will describe the integration workflow of Micromegas detector into sectors and will focus on the results obtained with cosmic rays data during the final validation tests. Finally, the impressive steps of the wheel assembly completion, will be shown.

Is the speaker for that presentation defined?

Yes

Details

SPEAKER: Giada Mancini - INFN Frascati - Italy - email: Giada.Mancini@cern.ch

Is this abstract from experiment?

Yes

Name of experiment and experimental site

ATLAS CERN

Internet talk

Maybe

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