

# The industrial production and validation of Micromegas boards for the ATLAS upgrade.

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The muon system of the ATLAS Experiment is currently undergoing a major upgrade with the replacement of the innermost detector wheel with new structures (New Small Wheel, NSW) based on resistive Micromegas (MM) and small-strip Thin Gap Chambers.

MM covers an active area of about 1280 m<sup>2</sup>, being the largest system based on Micro Pattern Gaseous Detector (MPGD) ever built so far. The key element of the detectors are the anode boards which carry the readout strips, the resistive protection layer and the insulating pillars supporting the mesh. In total more about 3000 boards, of 16 different types with size up to 40x220 cm<sup>2</sup>, are produced by two industries in Europe, which opened the road to MPGD mass production.

The talk will review the technological transfer effort to make the Micromegas board production an industrial process. The main challenges encountered and the adopted solutions will be presented in detail, together with the results of the QA/QC performed at CERN.

## TIPP2020 abstract resubmission?

No, this is an entirely new submission.

## Funding information

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