Contribution ID: **233** Type: **Poster**

# Beam test results for the new prototype ITS3 sensor design

*Tuesday 24 September 2024 18:10 (20 minutes)*

The ITS3 is the future upgrade for the ALICE Inner Tracking System for Run 4 of the LHC. It replaces the three innermost layers with a truly cylindrical design of bent and stitched MAPS sensors, along with material budget as low as 0.07% $X_0$ per layer and less than 40 mW/cm$^2$ power consumption. These improvements increase the pointing resolution by a factor of two, and tracking efficiency by up to 30% at transverse momenta less than 300 MeV/$c$, and allow for operation of the innermost layer at 19 mm away from the LHC beam pipe. MOnolithic Stitched Sensor evaluation circuits have been produced in two variants, one 27 cm long (MOSS) and one 2.2 cm long (babyMOSS). This poster reports on recent test beam campaigns using babyMOSS sensors to quantify their performance metrics such as tracking efficiency, fake hit rate, and spatial resolution.

## Category

Experiment

## Collaboration

ALICE

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**Session Classification:** Poster Session

**Track Classification:** 6. Future experimental facilities and new techniques