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## MAPS Development for the ALICE Upgrade

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The Monolithic Active Pixel Sensor (MAPS) technology offers the possibility to build pixel detectors with very high spatial resolution and low material budget; at the same time they can be produced in commercial CMOS processes. They are therefore very interesting for the innermost tracking layers of particle physics experiments. Significant progress has been made in the field of MAPS in the recent years, such that they are now considered a viable option also for the upgrades of the LHC experiments.

This contribution will focus on MAPS detectors developed for the upgrade of the ALICE ITS and manufactured in the TowerJazz 180 nm CMOS imaging sensor process on wafers with a high resistivity epitaxial layer. Within the currently ongoing R&D program, several sensor chip prototypes have been developed and produced to optimise both charge collection and readout circuitry. The chips have been characterised before and after irradiation by means of electrical measurements as well as with lasers, radioactive sources and in test beams. The tests indicate that the sensors satisfy the requirements of the experiment and first prototypes with the final size of  $1.5 \times 3 \text{ cm}^2$  have been produced in the first half of 2014. This contribution summarises the characterisation measurements from the R&D program and presents first results with the full-scale chips.

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