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ALICE ITS3: the first truly cylindrical inner tracker

The ALICE ITS3 project is planning to build a new vertex tracker based on truly cylindrical wafer-scale MAPS sensors, with <0.05% X0 per layer and as close as 18 mm to the interaction point. This will be possible exploiting the stitching technique and the natural property of 50 um thick silicon chips to be flexible. Furthermore, implementation of 65 nm CMOS technology will allow to reduce powering consumption and improve radiation hardness. This contribution will summarise the main technological innovations of this project and the corresponding advantages.

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