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Fully depleted monolithic sensors in 110 nm CMOS

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Fully depleted monolithic CMOS sensors allow the prompt collection by drift of large signals. They therefore can offer better signal-to-noise ratio, time resolution and radiation tolerance with respect to conventional solutions. In this presentation, a technology that, thanks to a patterned back-side, allows a full depletion of the substrate in the 100 um - 400 um range is presented. The technology is fully compatible with a standard CMOS process. The results obtained on first prototypes fabricated in a 110 nm PDK are presented and near term plans to consolidate the technology platform will be discussed.

Author: RIVETTI, Angelo (INFN - National Institute for Nuclear Physics)

Presenters: RIVETTI, Angelo (INFN - National Institute for Nuclear Physics); RIVETTI, Angelo (Universita e INFN Torino (IT))

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