

## 8th "Trento" Workshop on Advanced Silicon Radiation Detectors (3D and p-type)

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### 3D Double-Sided sensors for the CMS phase-2 vertex detector

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By 2020 a two stage upgrade of the accelerator complex, the High Luminosity-LHC (HL-LHC), will increase the instantaneous luminosities up to a factor of ten compared to the current design. The particle fluxes at CMS experiment will increment substantially with special impact on the inner tracking detector which will be subjected to large occupancies and radiation damage. In order to cope with the higher instantaneous luminosities CMS will upgrade its current vertex detector. The so-called 3D sensors are a very promising technology as they offer efficient operation at moderate bias voltages after fluences above  $1 \times 10^{15} \text{cm}^{-2}$  1 MeV neutron equivalent.

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