

## Magnetic Czochralski silicon as detector material

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The Czochralski silicon (Cz-Si) has intrinsically high oxygen concentration. Therefore Cz-Si is considered as a promising material for the tracking systems in future very high luminosity colliders. In this contribution a brief overview of the Czochralski crystal growth is given. The fabrication process issues of Cz-Si are discussed and the formation of thermal donors is especially emphasized.  $N^+/p^-/p^+$  and  $p^+/n^-/n^+$  detectors have been processed on magnetic Czochralski (MCz-Si) wafers. We show measurement data of AC-coupled strip detectors and single pad detectors as well as experimental results of intentional TD doping. Data of spatial homogeneity of electrical properties, full depletion voltage and leakage current, is shown and n and p-type devices are compared. Our results show that it is possible to manufacture high quality  $n^+/p^-/p^+$  and  $p^+/n^-/n^+$  particle detectors from high resistivity Czochralski silicon.

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