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MALTA —Rad Hard Monolithic Pixel Sensors in Tower 180 nm for Tracking and Timing

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Depleted Monolithic Active Pixel Sensors are of highest interest at the HL-LHC and beyond for the replacement of the Pixel trackers in the outermost layers of experiments where the requirement on total area and cost effectiveness is much bigger. They aim to provide high granularity and low material budget over large surfaces with ease of integration. Our research focuses on MALTA, a radiation hard DMAPS with small collection electrode designed in TowerJazz 180 nm CMOS imaging technology and asynchronous read-out. Latest prototypes are radiation hard up to 2×10^{15} 1 MeV n/cm² with a time resolution better than 2 ns.

Speed talk:

I am unwilling/unable to present a speed talk

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