

## Evaluation of silicon monolithic APS for alpha particle detection

Alpha particles as a test stimulus offer several advantages for probing materials of nano- and micrometer thicknesses. Traditionally used solid-state track detectors suffer from poor sensitivity, analogue readout and limited linearity. In this work a CMOS silicon Monolithic Active Pixel Sensor (MAPS) is evaluated for alpha particle detection. Back-thinned CMOS MAPS can offer 100% detection efficiency, low noise and digital readout. Qualitative and quantitative analysis of the back-thinned and standard sensor response to 5.5 MeV alpha-particles for imaging purposes is presented.

**Summary (Additional text describing your work. Can be pasted here or give an URL to a PDF document):**

<http://ppewwww.physics.gla.ac.uk/~maneuski/data/maneuski-VCI2010summary.pdf>

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