

Abstract Submitted  
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**Performance evaluation of novel square-bordered position-sensitive silicon detectors with four-corner readout** A. BANU, Y. LI, M. MCCLESKEY, C.A. GAGLIARDI, L. TRACHE, R.E. TRIBBLE, Cyclotron Institute, Texas A&M University, College Station, TX 77843, M. BULLOUGH, S. WALSH, C. WILBURN, Micron Semiconductor Ltd., 1 Royal Buildings, Marlborough Road, Lancing Business Park, Lancing, Sussex, BN15 8SJ, UK — A new square-bordered type two-dimensional position sensitive silicon detector produced by Micron Semiconductor Ltd. was recently developed in collaboration with Cyclotron Institute at Texas A&M University. It consists of a square-shaped ion-implanted resistive anode framed by an additional square low resistivity strip. The main characteristics of the detectors are given and  $\alpha$ -particle as well as in-beam measurements concerning detector operational parameters such as response to position linearity, position and energy resolutions are presented. Experimental results obtained in beam show a position resolution below 1 mm (FWHM) and a very good non-linearity of less than 1 % (rms).

Adriana Banu  
Cyclotron Institute, Texas A&M University, College Station, TX 77843

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