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Dual-Axis Duo-Lateral Detector Signal Recreation Events MOLLY ASLIN, Mount Holyoke College, MIKE YOUNGS, ANDY HANNAMAN, SHERRY YENNELLO, Texas AM University Cyclotron Institute — The dual-axis duo-lateral (DADL) silicon detector, used in the Forward Array Using Silicon Technology (FAUST), displays a particularly high position resolution and has previously been seen to minimize a pin cushion effect often seen in similar silicon detectors. However, it is estimated that 5% of incident protons and 1% of incident alpha particles are not picked up by the DADL detector and must be recreated manually. Using proton and alpha beams from the K150 cyclotron, we look to see how position on the detector affects signal resolution. We have isolated some extrema of a DADL detector using a brass mask, which will shield off most of the detector with the exception of selected edges and corners. By analyzing the full waveform for each incident particle, we are able to examine the locations where these contacts prove unreliable and verify how accurate our methods of signal recreation actually are. We have produced maps of position resolution for the DADL and as such, we are able to further characterize the position resolution on the detector.

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