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A dual-axis duo-lateral position sensitive silicon detector upgrade to the FAUST detector Array. SARAH SOISSON, BRIAN STEIN, Texas A&M University, ROBIN DIENHOFFER, Oswego State University of New York, MARIAN JANDEL, Los Alamos National Laboratory, GEORGE SOULIOTIS, D. SHETTY, Texas A&M University, AUGUST KEKSIS, Los Alamos National Laboratory, SARA WUENSCHEL, ZACHARY KOHLEY, SHERRY YENNELLO, Texas A&M University — In looking at current Silicon detector technology and the design constraints of the Forward Array Using Silicon Technology (FAUST), a dual-axis dual-lateral position sensitive silicon detector has been designed and manufactured to allow for linear position sensitivity in two dimensions without sacrificing isotopic resolution in heavy ion reactions. The design has two conductive strip contacts along opposite edges on each side of the detector. The contacts on the front are perpendicular to those on the back. Each side has a different resistivity. When an incident particle hits the detector, the charge is split between the contacts on each resistive layer. This allows for the total energy to be determined by the summation of either the contacts on the front or the back of the detector. The position of each axis can easily determined using standard formulas such as X $\propto$ (Q1-Q2)/(Q1+Q2), where Q is the charged collected from one contact. Results from preliminary testing show a good energy resolution as well as indicate a linear position response.

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