Determining the Impact Parameter and Cross-Section in Heavy-Ion Collisions\textsuperscript{1} ANDIRA RAMOS, Florida International University, WILLIAM LYNCH, BETTY TSANG, RACHEL HODGES, National Superconducting Cyclotron Laboratory, Michigan State University, Physics and Astronomy Department, HIGH RESOLUTION ARRAY (HIRA) TEAM — The collisions of Tin isotopes, $^{112,118,124}\text{Sn} + ^{112,118,124}\text{Sn}$ at $E/A= 70\text{MeV}$ will be used to constrain the nuclear Equation of State at low densities. To identify central and peripheral collisions, the impact parameters and cross-sections for each reaction were calculated using charged particle multiplicities measured with the MSU Miniball/WU Miniwall array. The array consists of 160 CsI crystals covering around 72\% of the solid angle around the target. Each Miniball/Miniwall detector consists of a layer of thin plastic scintillator, followed by a CsI (Tl) scintillator, which is 3 cm thick for the Miniwall and 2 cm thick for the Miniball detectors. The number of charged particles from a collision that hit the Miniball/Miniwall array is defined as the multiplicity for that collision. The methodology for extracting the impact parameter from the multiplicity and the results of the Miniball/Miniwall analysis will be presented in this poster.

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