

Development and commissioning of a mosaic type array formed by Si photodiodes

Si detectors are extensively applied in the measurement of charged particles produced in fusion reactions. In order to achieve a relatively low-cost charged-particle detection with fair position sensitivity, we have developed a mosaic-type detector array based on Si photodiodes (Hamamatsu S13955-01). Its high modularity allows one to modify the geometric configuration of the array according to specific experimental requirements. The detector array was commissioned using $^{136}\text{Xe} + {}^{nat}\text{Zn}$ reaction in July 2022 at HIMAC. In this report, details of the detector development and experimental results are presented.

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