

Abstract Submitted
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Performance of Focal-Plane Tracking Detector CRDC for SHARAQ HIROSHI TOKIEDA, SHINICHIRO MICHIMASA, SHINSUKE OTA, SUSUMU SHIMOURA, TOMOHIRO UESAKA, CNS, University of Tokyo, SHUMPEI NOJI, HIDEYUKI SAKAI, Department of Physics, University of Tokyo, PATRICIA ROUSSEL-CHOMAZ, JEAN-FRANCOIS LIBIN, PATRICE GANGNANT, CHARLES SPITAEELS, GANIL — The high-resolution magnetic SHARAQ spectrometer has been constructed at the RI Beam Factory (RIBF) at RIKEN. For tracking of charged particles at the dispersive focal plane of SHARAQ, we have developed two 2-dimensional position-sensitive Cathode Read-out Drift Chambers (CRDCs). The CRDCs have large active areas of 550(H) x 300(V) mm² with i-C₄H₁₀ gas at low pressure of 15 - 30 Torr. The vertical and horizontal positions of charged particles are determined by measuring the drift time of electrons in the CRDC and deduced from the distribution of induced charges on the cathode divided 512 pads, respectively. The cathode signals are read out by using GASSIPLEX chips, which is developed at CERN for multiplexed readouts. In March and May, 2009, we evaluated the performance of the CRDCs by using the primary beam of ¹⁴N at 250A MeV and its fragments. We found that the CRDCs have 100% efficiency not only for heavy ion beam but also for light ion beam such as ³H. The performance of the CRDCs evaluated from further analyses will be presented.

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