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Readout system for a strip ionization chamber dedicated for proton beam profile measurement

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This work presents a 448-channel readout system integrated into a multi-strip ionization chamber for proton beam profile measurements. Miniaturized current-input ADCs inside the detector vessel provide direct digitization of charge collected on 1.5mm cathode strips. An FPGA configures ADCs dynamically and handles acquisition triggering and data processing, enabling real-time beam analysis. This compact, flexible architecture achieves sub-millimeter spatial discrimination across the 420mm x 320mm area for efficient beam parameter quantification.

Minioral

Yes

IEEE Member

No

Are you a student?

No

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