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Design and test of an ionization profile monitor at the 80 MeV linac in CSNS

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The beam transverse profile is very essential in the beam diagnostics of a high intensity proton accelerator. A Residual Gas Ionization Profile Monitor (IPM) has been developed and implemented as a non-destructive diagnostic tool at the LRBT of CSNS. The design specifics of the IPM and presents initial measurements conducted in ion collecting mode are discussed in this paper. Big challenges arose during the initial experimental period, especially the honey comb. A series of planned experiments are outlined to address these challenges in future IPM developments.

Footnotes

Funding Agency

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Yes

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