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Ionization profile monitors for the IOTA proton beam

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We present the design details and outline the construction progress of the Ionization Profile Monitors (IPMs). Two IPMs, designed for transverse beam size measurements of 70 MeV/c protons, are slated for installation—one horizontal and one vertical—in the IOTA ring. These IPMs are fast (1.8 microsecond, one turn), accurate (to better than 10%) and non-destructive diagnostics. They will play a pivotal role in facilitating comprehensive beam studies, particularly in investigating the dynamics of space-charge dominated proton beams in IOTA.

Footnotes

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North America

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