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Rotor-based multileaf collimator for beam shaping

Monday 11 August 2025 16:00 (2 hours)

Multileaf collimators (MLC) are versatile tools for beam shaping, both transversely or, when used in conjunction with an emittance exchange (EEX) beamline, longitudinally. The requirement for ultra-high vacuum compatibility introduces significant constraints on the design of a MLC. Here, we present a novel design for a MLC based on stacks of rotors with angularly dependent radii. The use of tabs and slots allow dozens of these rotors to be positioned using a single vacuum feedthrough, dramatically reducing complexity over independently positioned leaves. We discuss other design elements and also the considerations arising from having a volumetric rather than planar beam mask.

Please consider my poster for contributed oral presentation

Yes

Would you like to submit this poster in student poster session on Sunday (August 10th)

No

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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