IPAC'24 - 15th International Particle Accelerator Conference



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Enhancing beam current in compact cyclotrons for diverse applications

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Compact cyclotrons, with their ability to deliver high-intensity beams, hold immense potential for advancements in radioisotope production, cancer therapy, and materials research. However, achieving this potential has been limited by inherent challenges and technological constraints. This work presents a comprehensive approach to boosting beam current in compact cyclotrons, paving the way for unlocking their full potential. By combining innovative strategies in axial injection optimization, beam loss mitigation, and novel beam extraction technologies, significant increases in beam intensity can be achieved.

Footnotes

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