



Contribution ID: 422

Type: **Poster Presentation**

Linac to BAR/RCS transfer line design for EIC electron injection system

A transfer line has been designed for the Electron-Ion Collider (EIC) to transport electron bunches from the linac to the Rapid Cycling Synchrotron (RCS). In its initial operational stage, the line accommodates 1 nC electron bunches directly from the linac. To support a future upgrade involving a Beam Accumulator Ring (BAR), which will stack individual bunches to form high-charge 28 nC bunches, the design incorporates two switching dipoles enabling injection into and extraction from the BAR. Additionally, a beam dump has been included for operational flexibility and safety. The final segment of the line interfaces with the RCS through a modified Penner bend, preserving beam quality while satisfying geometric constraints. This layout ensures compatibility with both current and future operational modes of the EIC injection system.

Please consider my poster for contributed oral presentation

No

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

No

Footnotes

Funding Agency

Jefferson Science Associates, LLC under U.S. DOE Contract DE-AC05-06OR23177, Brookhaven Science Associates, LLC, Contract DE-SC0012704

I have read and accept the Privacy Policy Statement

Yes

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Session Classification: MC5

Track Classification: MC5 –Beam Dynamics and EM Fields