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Design progress for the 22 GeV CEBAF energy upgrade

Wednesday 13 August 2025 14:00 (30 minutes)

In this work we examine the progress made in the design of the proposed FFA upgrade to the Continuous Electron Beam Accelerator Facility (CEBAF). This proposed upgrade will double the number of passes through the two linacs by replacing the two highest energy arcs with new Fixed Field Alternating Gradient (FFA) arcs, roughly doubling the energy. These FFA arcs will use permanent magnets in a Halbach configuration to shape their fields. The design involves new optics for the linacs and remaining electromagnetic arcs, as well as new electromagnetic separators. These feed into the permanent magnet FFA arcs. We also report on ongoing studies of the dynamics of the beams, and an experiment to measure the effects of radiation on the permanent magnets.

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

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I have read and accept the Privacy Policy Statement

Yes

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