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# Design and optimization of an ERL for cooling EIC hadron beams

*Monday 8 May 2023 16:30 (2 hours)*

**The baseline scheme for hadron beam cooling in the Electron Ion Collider (EIC) calls for Coherent electron Cooling (CeC) of the hadrons with non-magnetized electrons at high energy (150 MeV electrons), and additional cooling via conventional bunched beam cooling using a precooler system. The electron beam parameters for these concepts are at or beyond the current state of the art, with electron bunch charges of the order of 1 nC and average currents on the order of 100 mA and require an Energy Recovery Linac (ERL) to produce such beams. Using specifications provided by BNL and Jefferson Lab, physicists and engineers at Xelera Research are working on a complete design of an ERL system capable of satisfying such a cooler.**

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## Footnotes

## I have read and accept the Privacy Policy Statement

Yes

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