

RECENT PROGRESS ON DESIGN STUDIES OF HIGH-LUMINOSITY RING-RING ELECTRON-ION COLLIDER AT CEBAF

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Abstract

The conceptual design of a ring-ring electron-ion collider based on CEBAF has been continuously optimized to cover a wide center-of-mass energy region and to achieve high luminosity and polarization to support next generation nuclear science programs. Here, we summarize the recent design improvements and R&D progress on interaction region optics with chromatic aberration compensation, matching and tracking of electron polarization in the 10^{-8} ring, beam-beam simulations and ion beam cooling studies.

**CONTRIBUTION NOT
RECEIVED**