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Status of JLEIC and its interaction region design

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An Electron Ion Collider (EIC) has been identified in the Nuclear Physics Long Range Plan as the highest-priority facility for new construction. This talk presents an overview and status of the Jefferson Lab design of an EIC (JLEIC). It features frequent collisions of small electron and ion bunches providing a luminosity of 10^{33} - 10^{34} $\text{cm}^{-2}\text{s}^{-1}$ in a broad range of the center-of-mass energy. The small size of ion bunches is maintained against intra-beam scattering by a novel high-energy bunched beam electron cooling system. The figure-8 shape of the electron and all ion rings allows for preservation and ease of manipulation of the electron polarization and the spin of any ion species (p, d, ^3He , Li, etc.). The interaction region is designed to accommodate a full-acceptance detector with complete coverage and geometry tagging in the forward and ultra-forward directions. The talk highlights recent progress on the JLEIC accelerator design with an emphasis on the integrated interaction region design.

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