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Large-aperture high-field Nb₃Sn magnets for the 2nd EIC interaction region

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The design concept of the Electron Ion Collider (EIC), which is under construction at BNL, considers adding a 2nd Interaction Region (IR) and detector to the machine after completion of the present EIC project. Recent progress with development and fabrication of large-aperture high-field magnets based on the Nb₃Sn technology for the HL-LHC makes it interesting for using this technology in the 2nd EIC IR. This paper summarizes the results of feasibility studies of large-aperture high-field Nb₃Sn dipoles and quadrupoles for the 2nd EIC IR.

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