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Updates on the wake potential calculation for the Electron-Ion Collider with ECHO3D

Thursday, 23 May 2024 16:00 (2 hours)

ECHO3D has been used for calculating the geometric impedance and short-range wake-fields for several EIC (Electron-Ion Collider) beamline vacuum components in the past few years. For the HSR, calculations have been carried out for the polarimeter, the beam screen with pump slots, and the bellows with pump ports. For the ESR, the short-range wake potential for the flange weld as well as various designs of the storage ring cavity have been calculated. In this work, we present the wake potential calculations conducted in the past two years with ECHO3D and discuss some findings while cross-checking the calculation results from multiple codes.

Footnotes

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North America

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