



Multipacting analysis of the conditioning box of the 591 MHz SRF cavity fundamental-mode power coupler in EIC

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A fundamental-mode power coupler (FPC) for the 591 MHz superconducting RF (SRF) cavities is currently being designed and prototyped for use in the Electron Storage Ring of the Electron-Ion Collider. Due to limitations in power source availability and in consideration of the FPC fabrication schedule, the initial high-power tests of the prototyped FPCs are planned to be conducted using a 704 MHz power source. The conditioning box to be used has been structurally modified based on the existing design. Multipacting simulations have been carried out for both the FPC and the conditioning box under high-power conditions. The simulation results will be compared with subsequent experimental tests to provide references for future high-power testing at 591 MHz.

I have read and accept the Privacy Policy Statement

Yes

Footnotes

Funding Agency

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