



## 591 MHz SRF cavity for EIC ESR

*Tuesday 23 September 2025 14:30 (3 hours)*

Electron-Ion Collider (EIC) is a next generation particle accelerator to be built at Brookhaven National Laboratory, in partnership with Thomas Jefferson National Accelerator Facility. In Electron Storage Ring (ESR), 18 single-cell 591 MHz SRF cavities are required to compensate for energy loss from synchrotron radiation. Effective damping of higher-order-modes (HOMs) is also critical to ensure beam stability. This paper presents the design of the single-cell 591 MHz cavity, including cavity geometry optimization, multipacting evaluation, HOM damping analysis.

### I have read and accept the Privacy Policy Statement

Yes

### Footnotes

### Funding Agency

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