

Progress of the EIC HSR cryogenic BPM mechanical design

The Electron Ion Collider (EIC) Hadron Storage Ring (HSR) aims to leverage the hardware from the RHIC storage ring as much as possible. However, the RHIC stripline beam position monitors (BPM) used in the superconducting magnet cryostat will not be compatible with the planned EIC hadron beam parameters that include shorter bunches, higher beam current and operation of the beam with a radial offset in the vacuum chamber. A new cryogenic BPM design using button pick-ups integrated in a new interconnect bellow assembly will be installed adjacent to the decommissioned RHIC BPMs. This talk will review some of the challenges and the proposed design for the BPM buttons ahead of their procurement.

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