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The high voltage DC gun design progress for EIC strong hadron cooling

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The EIC requires an electron gun to provide a high current high brightness electron beam for EIC cooler. A 550 kV DC gun using alkali antimonide photocathode was designed to generate a 110 mA electron beam, 1 nC with normalized emittance < 1 mm-mrad. Here, we present the design parameters of this high voltage DC gun. The details of the gun design with electron beam simulation will be described.

Funding Agency

Footnotes

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Yes

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