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Nb3Sb conduction cooled SRF photogun for UEM/UED status update

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SRF photoguns become a promising candidate to produce highly stable electrons for UEM/UED applications because of the ultrahigh shot-to-shot stability compared to room temperature RF photoguns. SRF technology was prohibitively expensive for industrial use until two recent advancements: Nb3Sn and conduction cooling. SRF gun can provide a CW operation capability while consuming only 2W of RF power which eliminates the need of an expensive high power RF system and saves a facility footprint.

Euclid is developing a continuous wave (CW), 1.5-cell, MeV-scale SRF conduction cooled photogun operating at 1.3 GHz. In this paper, we present the current status of the project.

Funding Agency

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Footnotes

I have read and accept the Privacy Policy Statement

Yes

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