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Development of an X-band RF gun with four-feed coupler

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With the high accelerating gradient, radiofrequency (rf) gun has a significant feature of suppressing the growth of transverse emittance caused by space charge. Field emission cathodes were first used in vacuum electronic devices, which do not require the high electron beam intensity, but the cathode size and integrality. A new X-band (11.424 GHz) rf electron gun has been proposed with the highlight of four-feed coupler, which can eliminate the quadrupole field component observed and analyzed from the imagine experiment, which have affected the resolution of the imaging system to some content.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

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