



Contribution ID: 2777 Contribution code: SUPM098

Type: **Poster Presentation**

## A nanosecond power supply for grid-controlled electron guns

*Sunday, 7 May 2023 16:00 (2 hours)*

Grid-controlled electron gun usually uses specially designed power supplies to supply power, the performance of the power supplies can directly affect the beam performance of the accelerator. In this paper, a nanosecond power supply for a grid-controlled electron gun is designed. It uses avalanche transistors and superimposes Marx generators to improve the power. Finally, its rise edge is less than 1 ns. The power supply can be used in the thermal cathode grid-controlled electron gun, the electronic source scheme of Hefei Advanced Light Facility (HALF), which is practical and feasible.

### Funding Agency

### Footnotes

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

Yes

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**Session Classification:** Student Poster Session