

Abstract Submitted  
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**Control of plasma oscillations in a short dc discharge making use of external auxiliary electrode**<sup>1</sup> ALEXANDER MUSTAFAEV, ARTIOM GRABOVSKIY, National Mineral Resources University, VLADIMIR DEMIDOV, West Virginia University, IGOR KAGANOVICH, Princeton Plasma Physics Laboratory — A dc discharge with a hot cathode is the subject to current and voltage oscillations, which have deleterious effect on its operation. The oscillations can be inhibited by installing an auxiliary electrode, placed outside of anode. By collecting a modest current through a small opening in anode, we show that the discharge becomes stable, in certain pressure range. This method of avoiding current and voltage oscillations can be used, for example, for high current stabilizers.

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