

Abstract Submitted
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Control and measurement of ion-energy distributions in a beam-plasma system¹ WEI ZI-AN, MA JIN-XIU, Univ of Sci & Tech of China, CAS KEY LABORATORY OF GEOSPACE ENVIRONMENT AND DEPARTMENT OF MODERN PHYSICS TEAM — A double plasma device is divided by two grids separating source and experimental chambers. Ions are accelerated by the voltage drop between two grids. To study the ion-energy in the experimental region, the ion distribution function (IDF) was probed using a retarding field energy analyzer, also the correlation between the IDF and discharge parameters was studied. It is shown that the IDF in the experimental region exhibits a double-peak structure containing a background and a high-energy streaming-ion groups. The proportion of the ion groups can be controlled by the filament current.

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