

Abstract Submitted
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Configuration of Spontaneous Flows in a Plasma Coherent Structure¹ HIROKI HASEGAWA, SEIJI ISHIGURO, National Institute for Fusion Science — Spontaneous particle flows in a plasma coherent structure (blob) have been studied with a three dimensional electrostatic plasma particle simulation code. In the particle simulation, the particle absorbing boundaries are placed on the both ends in the z direction (corresponding to the toroidal direction) and one end in the x direction (corresponding to the counter radial direction). The former boundaries and the latter one corresponds to end plates (divertor plates) and the first wall. A coherent structure is initially set as a column along the external magnetic field and propagates to the first wall because the magnetic field is set as $\partial B/\partial x \neq 0$. In this study, we have investigated the configuration of spontaneous particle flows in a plasma coherent structure. We have found that a spiral current system in a plasma blob and characteristic features in the velocity distribution of plasma particles in a blob.

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