

1145-35-696

Zhiyuan Zhang* (zhiyuan_zhang1@brown.edu), 151 Thayer St, Providence, RI 02906. *Linear Stability Analysis of the Relativistic Vlasov-Maxwell System in an Axisymmetric Domain.*

We consider the plasma confined in a general axisymmetric spatial domain with perfect conducting boundary which reflects particles specularly, and look at a certain class of equilibria, assuming axisymmetry in the problem. We prove a sharp criterion of spectral stability under these settings. Moreover, we provide several explicit families of stable/unstable equilibria using this criterion. (Received September 13, 2018)