



**Formation of power law spectra of energetic electrons during coalescence of magnetic islands**

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Magnetic reconnection is considered to be one important source to produce energetic electrons. Two-dimensional (2D) particle-in-cell (PIC) simulations are performed to investigate electron accelerations during the merging process of multiple magnetic islands in a current sheet. During the coalescence process of magnetic islands, the islands merge each other continuously until only one big island remains. Energetic electrons are generated during such a kind of process, and the electrons with sufficient high energy own a power-law spectrum.

References

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Note: Abstract should be in 1 page.