

Microscale Electron and Plasma Wave effects near Magnetic Reconnection regions in the Earth's Magnetotail

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Studies are made of Cluster measurements of short time-scale electron dynamics and associated wave modes close to identified reconnection sites in the Earth's magnetotail. These studies examine the role of the electrons in the reconnection processes that are occurring and in turn how the direct reconnection processes effects the electrons. In particular the role of various high frequency wave modes are examined in conjunction with the high time resolution electron data.