Structure of the cross-tail current during magnetic reconnection in the Earth’s magnetotail.

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We study structure of the cross-tail current during magnetic reconnection in the Earth’s magnetotail. We carry out superposed analysis of the current density as a function of distance from X-type neutral line by the Cluster spacecraft in the period July-October 2001. The cross-tail current density has a peak in the center of the current sheet in quiet periods. During reconnection, the cross-tail current density near the edge of the current sheet is enhanced.