



Remote sensing of reconnection via ARTEMIS dual-spacecraft observations

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Each month the two ARTEMIS probes spend about four days in the Earth's magnetotail near lunar orbit. Due to the near-equatorial orbit, the probes spend a considerable time near and inside the plasma sheet. This allows us to investigate large-scale effects of reconnection, such as flux ropes and high-speed flows, utilizing dual-probe observations on a regular basis. On August 31, 2012 around 03:00 UT, the ARTEMIS probes were separated by only 350 km in X_{GSW} and 0.6 (1) RE in Y_{GSW} (Z_{GSW}), where GSW denotes the Geocentric Solar Wind coordinate system, which x-axis is antiparallel to the solar wind flow direction. The two probes observe several TCRs and flux ropes. The inter-spacecraft separation allows us to determine the size of these structures to be not more than 6 RE in z . Counterstreaming beams observed by both probes indicate the simultaneous activity of two X-lines, earthward and tailward of the probes, respectively.