

THEMIS AND SUBSTORM TIMING

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The THEMIS mission represents the culmination of many years of planning directed towards understanding the processes that drive and trigger geomagnetic substorms. Following Akasofu's discovery of the substorm cycle, it became increasingly clear that timing questions provide the key to discriminating between proposed 'inside-out' and 'outside-in' models for substorms, triggered respectively by current disruption and magnetic reconnection. THEMIS observations provide a wealth of information that is currently being investigated to resolve this question. While observations in the magnetotail generally point towards reconnection, those on the ground point towards current disruption. This talk reviews the relevant observations and recent efforts at reconciliation.