

## A case study of magnetotail variations and auroral activities during a substorm

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We studied relationship among the magnetotail variations, the Pi 2 pulsations, the magnetic field variations on the ground, and the auroral brightenings during a substorm. We found that the auroral brightenings and the Pi 2 pulsations were highly correlated with the fast plasma flows and total pressure enhancements in the magnetotail. We conclude that the auroral brightening and the Pi 2 pulsation are generated as a result of the magnetic reconnection which occurs in the magnetotail.