

## Substorm Swift Search ( $S^3$ ): A web service for quick and easy search of substorm onset

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Substorms are one of the most conspicuous phenomena in space physics. A substorm releases a large amount of electromagnetic energy stored in the magnetotail into the ionosphere and the inner magnetosphere in a short time scale of minutes. Their occurrence gives rise to a number of different events, including auroral breakup, energetic particle injection in the inner magnetosphere, magnetic field dipolarization, bursty bulk plasma flow in the plasma sheet, magnetic reconnection in the magnetotail, and plasmoid development in the distant tail. Substorms also cause disturbances in the ground-based geomagnetic field, that is, high-latitude negative bays, mid-latitude positive bays, and low-latitude Pi2 pulsations.

We create daily stack plots displaying the AE, ASY, and Wp indices as well as the high-energy electron flux measured by Data Relay Test Satellite (DRTS)/SDOM and the magnetic field measured by Engineering Test Satellite (ETS)-VIII/MAM. Such daily stack plots are useful for users to search for substorm onsets swiftly from five different viewpoints, that is, high-latitude negative bay, mid-latitude positive bay, low-latitude Pi2 pulsation, energetic electron injection, and magnetic field dipolarization. The stack plots are available at a web site called "Substorm Swift Search ( $S^3$ , S-cubed)" (<http://s-cubed.info>). Digital data of the geomagnetic indices can also be downloaded from the Web site for public use.