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High Latitude Signatures of SI and SSC Events CHYNNA SPITLER, Wright State University, MARK MOLDWIN, BRETT MCCUEN, University of Michigan, ADRIENNE TRAXLER, Wright State University — Sudden Impulse (SI) events and Sudden Storm Commencements (SSC) are rapid geomagnetic variations associated with a compression of the magnetic field. Starting in 2006 Ebre Observatory, the IAGA international database on rapid magnetic variations, began to differentiate SI events from SSCs. These events have different magnetic characteristics depending on local time and latitude. Starting in 2006 and ending with the last definitive published dataset, the module SeaPy within Python is used to perform a superposed epoch analysis on SI events and SSCs for high latitude stations and low latitude stations. In relation to low latitude station onset times, we find systematic behavior of the total field strength and North-South component of the magnetic field at high latitudes. Specifically, the SI and SSC signatures are delayed and the compression signature can be highly variable from event to event.

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