Plasma wave phenomena triggered by SC and Si in the plasmasphere

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Generation of plasma waves associated with SC and Si is studied in detail by using the long term archived SDB data of the Akebono satellite. A data group of 62 cases of dynamic spectra which cover SC periods in the plasmasphere are investigated. Every SC events are associated with enhancement of whistler waves appearing near the LHR frequency and electrostatic ion cycrotron waves near the 1.5 helium cycrotron frequency with a lead time of 1 minutes to SC's. According to a result of the delay time analysis, it is showed that the disturbed region associated with SC is propagating in the geomagnetic equator from the dayside to the nightside plasmasphere with a propagation speed of about 340[km/sec].