



Geomagnetic index variability and ring current asymmetry during April 1999 (magnetic cloud driven) and February 2000 (complex ejecta driven)

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There are basically two types of interplanetary ejecta: magnetic clouds (MC) and complex ejecta (CE). In this work we present a comparison of the geomagnetic activity during two magnetic storms associated with different interplanetary ejecta. The first magnetic storm was observed on April 16-17, 1999, and it was driven by a MC; it shows a smooth and regular storm development. The other event, observed on February 11-13, 2000, was caused by the interaction of two interplanetary coronal mass ejections and shocks (complex ejecta). Observations of this CE show a very irregular and fluctuating storm development. The behavior of the geomagnetic activity during these two different storms is analyzed by using the Kp and Dst indices. Further, the ring current asymmetry is investigated through the SYM-H and ASY-H high resolution indices and ground-based observations of low latitude magnetometers. This study is a continuation of our previous works that have analyzed solar and interplanetary events of these two Sun-Earth connection events.