



Conjunction observations of global magnetosphere respond to solar wind and IMF variations during an intense storm

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Magnetic fluctuations of the globe magnetosphere driven by the sharp increase of the solar wind dynamic pressure or IMF significant change observed by Cluster, THEMIS, Geotail and ground stations are investigated. Comparing with characteristics of those magnetic disturbances observed around the dayside low-latitude magnetopause, night-side high-latitude magnetopause and in the mid-tail during an intense storm, it is found that those fluctuations responds to the solar wind and IMF variations observed at dayside and night-side are different. The magnetic fluctuations around dayside magnetopause have both respond to the changes of the IMF and Solar wind dynamic pressure. Whereas magnetic fluctuations around night-side high-latitude magnetopause, mid-tail and low latitude station have significant respond to the solar wind dynamic respond but almost no respond to the IMF variations. Our results present a clear route of energy transfer from solar wind to the magnetosphere during storms.