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Giant geomagnetic storms during the last three cycles and earth's climatic changes

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0.1 Abstract

The data from work-wide geomagnetic for aa-index and the Number SSCs have been studied analytically during the last 3 solar cycles. The relation between Geomagnetic storms and the climatic change have been appeared. Geomagnetic storms have a good correlation with solar activity and solar radiation variability. Geomagnetic storms correlate with the transparency of the earth's atmosphere too.

It is interesting to note that more proton events and Geomagnetic storms have been already occurred during solar cycles21, 22, 23. Solar cycle 23 will be remembered for the explosion of late cycle activity that occurred first during the Halloween storms of 2003, and again 1 year later, during the period Oct. 30 – Nov. 13, 2004. Occurring more than 4 years past solar maximum (in April 2000), and just 2 years from the predicted solar minimum (fall 2006). The fall 2004 activity presents an interesting comparison with other late-cycle high-activity periods. Studying the data of geomagnetic storms, and these occurred at the last three cycles, will give us a good indication of the climatic change and its behavior during the 21^{st} century.