

## **Statistical relation of tornadoes to instability of hosting prominences**

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### **Abstract**

We analyzed observational data obtained by the SDO/AIA 171 and 304 Å from 2011 January 01 to 2011 December 31. We studied the dynamics of all prominence tornadoes detected above the solar disk for the whole year. We identified totally about 361 events, which consist in separate tornadoes, group of tornadoes and hedgerow tornadoes. We studied statistical relation of tornadoes to the instability of hosting prominences and consequently to CMEs. We concluded that tornadoes generally cause instabilities of prominences and thus could be used as precursors for CMEs and consequently for space weather predictions.