

Towards a physical climatology of tornadoes and waterspouts in Italy.

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The presentation will summarize a work on the climatology of tornadoes in Italy. Starting from the reports collected by weather amateurs over ten years (from 1991 to 2000), a preliminary climatology of tornadoes and waterspouts in Italy has been described. The results show behaviors different from those observed in other Countries. Generally tornadoes and waterspouts are more frequent in late summer and autumn than in the other seasons. The seasonality of tornadoes and waterspouts appears different for different Italian zones, in particular in the Po Valley and Friulian plain and coast (south to the Alps) tornadoes and waterspouts are more frequent in spring and early summer while in the Tirrenian and Ionian coasts (western and southern Italy) tornadoes and waterspouts are more frequent in late summer and autumn. Italian tornadoes and waterspouts are statistically weaker than in other Countries but this difference cannot be completely ascribed to the presence of waterspouts. The CAPE Storm-Relative-Helicity diagrams and Shear Magnitude diagrams obtained for Italian tornadoes and waterspouts show different characteristics than those obtained for US. The cause of these differences is still unknown, it can rely in the sample selection (problems with the concept of proximity sounding) or in a real climatic effect.