



## **Tornado occurrence in Greece: Influencing variables and spatio-temporal variations**

Michalis Sioutas (1), Stavros Dafis (2), George Papavasileiou (3), and Robert Doe (4)

(1) ELGA, Meteorological Applications Centre, Thessaloniki, Greece (sioutas@elga.gr), (2) University of Ioannina, Greece (sdafis@cc.uoi.gr), (3) D. Gioldasi 3, Larissa, Greece (george\_papavasileiou@yahoo.com), (4) University of Liverpool, U.K (robert.doe@liverpool.ac.uk)

Tornado occurrence in Greece has been actively recorded for the 5-year period 2010-14. The systematic effort for recording whirlwind activity in Greece, initiated in the year 2000, developed the first Greek tornado database and climatology. This ongoing initiative, in collaboration with technological advancements, has resulted in improved observational and reporting opportunities along with quantitative and qualitative improvement in the database.

The objectives of this study are to investigate increased tornado reports over the last 5 years in relation to the previous decade, and examine influencing factors such as; a) population density, b) improvements in recording including the proliferation of observers, c) improvements in observational technology including the use of time-lapse and smart phone cameras, d) reporting possibilities in the internet era and e) public awareness of tornadoes.

The 5-year data (2010-14) of tornado, waterspout and funnel cloud occurrences have been analyzed and mapped. Spatio-temporal distributions are highlighted and prone areas identified. Tornado intensity, tracks and damage characteristics are analyzed. Remarkable events including multiple outbreaks and other notable events are also presented.