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The July 27, 2002 tornado event in Athens, Greece

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Tornadoes, as results of extreme convective weather at local or large scale, are associated with strong winds, which cause extended damage and in many cases loss of life. The increased atmospheric moisture content due to global warming may force an increase in severe weather and tornado activity. These fury phenomena are rare in Greece and in most of the cases appear in the sea without causing significant damage, until they take place over an urban region with remarkable consequences.
This study analyzes the tornado event on July 27, 2002 at Athens International Airport (Eleutherios Venizelos), an urban area located at the east of Athens. The tornado formed approximately at 10:30 UTC, characterized as T4-T5 (T-Scale) and crossed the runway of the Athens International Airport.
A synoptic discussion of ECMWF analysis charts from the surface up to the 500hpa geopotential height is presented along with the composite anomaly (reference period: 1968-1996) of the meteorological parameters from NCEP/NCAR reanalysis dataset. The vertical profile of the atmosphere is also presented, derived from the operational sounding of the nearest upper air meteorological station to the tornado incidence site. The tornado caused the injury of a woman as a parked plane was shifted and several light damages were found on that plane.