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**The Campinas Tornado: A Case Study of the Damage Track, Radar Characteristics and  
Lightning Observations**

by

Lucí Hidalgo NUNES<sup>1</sup>

**KEYWORDS.** — Tornado; Campinas (Brazil); Damage; Doppler Radar; Lightning; TITAN.

**SUMMARY.** — The study describes the life cycle and impacts of a tornado recorded on 5 June, 2016 in Campinas, state of São Paulo, Brazil. Damage to solid structures and twisted tree branches suggest it was an EF2-3 tornado, but only minor injuries and no fatalities were reported. Another supercell estimated as EF3 tornado devastated the small city of Jarinu three hours earlier and caused one death. In early June 2016, the synoptic situation over Brazil was characterized by a strong anticyclone centred over the northern half of South America at 250 hPa level, resulting in moist air being advected from the Amazon and Pacific region, thus creating favourable conditions for strong convection in the state of São Paulo. Observations of a Doppler S-band radar confirmed typical tornado signatures, such as a hook echo and a mesocyclone with a rotational velocity of 12.5 m.s.l. The supercell was accompanied by intense lightning activity throughout its life cycle, including a lightning jump during the tornado touch-down. The signatures described will contribute to improving now-casting of severe events in the region, but they also highlight the importance of an integrated radar network, featuring more radars and radiosonde stations than those currently available.

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<sup>1</sup> RAOS Member