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# Observational and modelling study of a major downburst event in Liguria: the Portofino case on 14 October 2016

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Downburst are among the most distruptive severe weather events, with large socio-economic impacts. Downbursts occur globally, although traditionally those in the USA and continental Europe have been studied most thoroughly. The number of observational and modelling studies of downbursts in the Mediterranean region is very low despite the fact that this area represents a hot spot from a climate change standpoint.
This paper is an observational and modelling study of a major downburst episode that occurred on 14 October 2016 over eastern Liguria. This event affected an area 30 km long and 10 km wide and produced observed wind gusts up to 40 m/s with major impacts on railways, trees, and houses, and economic damage of more than 2.5 million euros. Radar reflectivity data, in situ wind, rainfall, and temperature weather stations at fine temporal resolution (30 minutes or less), and lightning data will be used to reconstruct the observed spatio-temporal evolution of the downburst, and to validate modelling results obtained with multi-physics WRF simulations down to 1 km grid spacing.