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LES BY USE OF A NUMERICAL WEATHER PREDICTION MODEL

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en salle Joël Noilhan

Abstract :

Extreme weather phenomena are simulated by a numerical weather prediction model whose resolution is fine enough to be regarded as a large eddy simulation (LES). These simulations can reveal turbulence structures associated with extreme phenomena. I will introduce some results in my recent works. An entire tropical cyclone is firstly treated in a LES, and boundary layer rolls and wall clouds are investigated. A quasi-steady linear convective system that causes a torrential rainfall is reproduced, cumulus clouds characteristics are examined. LES is also shown to be useful to predict turbulence near the surface at an airport.