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Characteristics of gravity-waves during the evolution of tropical cyclone Dina.

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An average of 9 convective tropical disturbances including 4 cyclones is annually observed in the South West Indian basin (30-90°E, 0-40°S). Intense tropical cyclone Dina has directly affected La Reunion (21°S, 55°E) on the 22th of January 2002. Therefore, at La Reunion, different research studies now focus on the understanding of cyclone Dina with experimental observations (Doppler radar, radiosoundings, satellite products) and the numerical French model Meso-NH for improving cyclone trajectory and intensity forcasting in the region (Roux and al., JAOT 2004). High-resolution windsondes are daily launched at Seychelles (4.66°S, 55.53°E) and Tromelin island (15.53°S, 54.31°E) in the South West Indian Ocean since late 1998. In particular Tromelin island is well-located in the convective basin for the survey of the evolution of tropical cyclones during austral summer (November-April). In the present study we propose to characterize observed gravity waves using windsonde data and the numerical model Meso-NH products.