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Wind induced mixing processes in the coastal surface layer

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Mesoscale and submescale patterns participate in mixing processes in the coastal surface layer. A process oriented numerical investigation using MARS 3D code and high resolution atmospheric forcing using AROME is presented by comparison with HF radar measurements in the Gulf of Lions, Western Mediterranean Sea.
As a result, wind reversal conditions have been observed to be responsible for inertial motion and anticyclonic eddy formation when vertical mixing due to internal waves is expected to erode the halocline.

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