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## a tool to assess and update atmospheric specifications in the middle atmosphere using microbarom observations

The oceanic swell is a global and continuous source of infrasound known as microbaroms. The infrasound stations of the International Monitoring System routinely detect microbaroms depending on acoustic waveguides that form in the middle atmosphere (MA) and the upper atmosphere (UA), roughly between 30 and 120 km. Operational meteorological products are biased at these altitudes essentially due to the lack of measurements to constrain model predictions (notably for winds). We demonstrate how it is possible to assess atmospheric products' relative performances in the MA and the UA using an operational microbarom source model feeding a processing chain that simulates microbarom arrivals at the station. These simulations using different atmospheric specifications are compared through a metric to microbarom observations to assess the realism of the modeled propagation medium. We focus on particular middle atmospheric events like a sudden stratospheric warming or on other dynamical features at various infrasound stations. In addition to assessing relative performances of meteorological products in the MA and the UA in support of operational infrasound monitoring activities, the objective of this processing chain is to demonstrate the benefit of assimilating microbarom observations in atmospheric models.

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