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Gravity waves (GW) significantly alter infrasound propagation in the middle atmospheric waveguide.

We validate atmospheric specifications using lidar data and satellite-based estimations of GW potential energy in the stratosphere.

We assess the impact of stratospheric GW on transmission losses (TLoss) comparing propagation simulations using specifications where GW are kept in and filtered out, respectively.

An impact of 10-40 dB (1 Hz) prevails across the IMS with no systematic link between GW energy and GW impact.

