

# Infrasonic Noise Levels with a High Resolution Weather Model

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Microbarometer networks are in place for the detection of atmospheric infrasound waves and verification of the CTBT. The presence of turbulence and other wind-induced effects are considered a nuisance. For this reason, wind noise filters are typically in place for suppression. In this study, we establish a relation between microbarometer observations and in situ turbulence measurements at the Cabauw Atmospheric Research Site in The Netherlands. Using this relation, we compare noise levels from the Dutch microbarometer network to turbulent pressure predictions from the high resolution HARMONIE weather model. This approach has two foreseen applications: (1) modeled turbulence fields could possibly help in identifying regions that are most appropriate for infrasound monitoring and (2) microbarometer observations could possibly be of use in the further refining of sub-grid scale turbulence schemes in weather models.

## Promotional text

Noise levels at infrasound stations are caused by turbulent processes in the lowermost region of the atmosphere. In this presentation we present a method to forecast infrasound noise levels using weather models.

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## Oral preference format

in-person

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