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Signatures of gravity waves, acoustic-gravity waves, and infrasonic signals derived from OH-Airglow by means of the Fast Airglow IMager, FAIM

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Measurements of the nocturnal emission of the OH airglow (mesopause height region, ca. 87 km) covering the brightest OH vibrational-rotational bands between about 1.0 and 1.7 μm are presented which were recorded by means of ground-based FAIM (Fast Airglow Imager) instruments at various sites of the Network for the detection of Mesospheric Change, NDMC (http://wdc.dlr.de/ndmc) in the Alpine region.
Different temporal and horizontal resolution allows deriving information about gravity wave structures (wavelength, frequency, propagation direction), as well as acoustic-gravity waves and probably infrasound; evidence for observing turbulent structures is found.
In our presentation, we focus on signals near the Brunt-Vaisala and acoustic cut-off frequencies. A very first case study to estimate turbulent parameters from FAIM observations is presented.