



## **Polar Mesosphere Winter Echoes: does infrasound play role?**

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Polar Mesosphere Winter Echoes (PMWE) are echoes from 50-80 km altitudes seen by VHF radars in the equinox and winter seasons. Strong PMWE are relatively rare phenomena, in most cases the radars observe them during extra ionisation in the lower ionosphere. The PMWE observational facts are controversial and the echo origin is still under debate. Especially intriguing is that in some cases of strongest PMWE the measured horizontal speeds of echoing structures can exceed 300 m/s. In order to explain this we suggested that infrasonic waves in frequency range of 0.1-5 Hz are involved. The current solar maximum provides favourable conditions for PMWE observations and in winters 2012-2015 we collected PMWE data using a 50-MHz radar ESRAD located in the Northern Sweden. We will discuss main characteristics of the echoes and their possible relation to infrasound.