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## **Investigations of Ionospheric Infrasound in the Czech Republic**

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Infrasound waves are less known and less studied way of wavy coupling of the lower-lying atmosphere and ionosphere. Analysis of several strong meteorological events revealed well-pronounced infrasound oscillations in the ionosphere only for two events, during a very strong convection storms period in summer accompanied by tornadoes, and during an extremely quickly passing cyclone in January 2007. Czechia is probably less favourable area for occurrence of ionospheric infrasound events in the ionosphere than, e.g., north-west of U.S.A. Peculiar phenomena in the infrasound time-scale region, so called S-shapes and quasi-linear shapes (QLSs) observed in Doppler spectrograms, have been studied, their statistical characteristics determined and possible mechanisms investigated. In 2007 we introduced three new Doppler measuring paths, so now we have five measuring paths with central receiver in Prague; three ground-based microbarographs have been installed in December 2007 - January 2008. Thus now we have observational system which should make possible more detailed studies and better localization and determination of infrasound events in the ionosphere and their possible relation to tropospheric/surface-located events.