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Infrasonic precursor of tropical cyclone

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Intense infrasonic emission was observed prior to the birth of a tropical cyclone (Netreba,1991). It is connected apparently with instability of atmospheric layers in cyclone area. There are different mechanisms of this effect. Stratified compressional flow is unstable (Rybak, 2002), providing amplification of its potential component. Cooling of air in upward convection flow makes water vapor supersaturated. This is a nonequilibrium state of fluid where effect of instability can be developed. The equation of infrasonic propagation in such a medium is developed. (Naugolnykh, Rybak, 2006). Solutions of instability equation indicates the effect of radiation instability which produces infrasonic wave generation and its nonlinear evolution. Corresponding analyses of this equation make it possible to clarify the principally important aspects of cyclone infrasonic precursors. [Work supported by ESP.NR.NRCLG982524].