ACOUSTICS2008/2223
Correlating electromagnetical and infrasonic signals from thunderstorms

Jelle Assink, Laeslo Evers and Iwan Holleman
Royal Netherlands Meteorological Institute (KNMI), PO Box 201, 3730 AE De Bilt, Netherlands

During thunderstorm activity, electromagnetical and infrasonic signals are emitted due to the process of lightning and thunder. It is shown that correlating infrasound detections with results from a electromagnetical lightning detection network is successful up to distances of 50 km from the infrasound array. Infrasound recordings clearly show blast wave characteristics, relatable to CG discharges, with a dominant frequency between 1-5 Hz. Amplitude measurements can partly be explained by the beam pattern of a line source. The ability to measure thunderstorm activity with infrasound arrays has both positive and negative implications for infrasound verification purposes.