

## **THE INDIAN MICROBAROGRAPH ARRAY FOR THE DETECTION AND IDENTIFICATION OF INFRASOUND**

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Continuous observations of the infrasonic wave has been recently started at low latitude northern hemisphere, Tirunelveli (8.7°N, 77.8°E), India. In detection of the infrasonic signal in the turbulent boundary layer, it is often indispensable to reduce the irregular noise caused by the turbulent fluctuation of the wind. In the present study, linear as well as circular noise reducer has been designed. The circular noise reducer is noise – reducing lines of pipe typically consisting of about 300 meter of pipe of various diameters, tapering from 3-inch (inside diameter) pipe at the center in steps to 0.5 inch (inside diameter) pipe at the ends. The pipe line is equipped with capillary ports to the atmosphere usually set at 10-ft intervals, and the input to the microphone is connected to the center of this spatial filter. From several tests, it has been shown that the wind noise is remarkably attenuated by the use of multi-pipe line microphone. The attenuation of infrasonic waves in the atmosphere is so little that the signal of appreciable intensity has been observed even when the source is at the distance of several thousand kilometers. As a result, various sources of infrasonic waves has been identified in the present work, Gujarat earth-quake on 26 Jan 01, severe geomagnetic storm on 31 March 2001, meteor shower over the pacific ocean in May 2001, severe cyclone in Bay of Bangal etc. Moreover, there are possibly be other sources not identified so far, for infrasonic waves from unknown sources are sometimes reported. The detailed result will be presented during the workshop.