

University of Mississippi

National Center for Physical Acoustics

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Government Project Description

The National Center for Physical Acoustics (NCPA) at the University of Mississippi under contract W9113M-06-C-0029 from the US Army Space and Missile Defense Command is conducting infrasound research in support of the US involvement in the International Monitoring System of the Comprehensive Test Ban Treaty Organization.

Description of Research Project

This research program focuses on technologies to identify and localize sources of infrasound signals, capture and identify infrasound signals, and calibration and metrology of infrasound arrays. Key components of this research include the development of advanced infrasound sensors and the deployment of these sensors to study infrasound propagation phenomenology. Because localization of infrasound sources is of critical importance, exact location of the infrasound station arrays is crucial. In the development, calibration, and metrology of the sensors for these arrays, the University of Mississippi needs a capability to assess the functionality of the GPS components in the laboratory in a clean environment. A GPS repeater is required to meet this need since ambient GPS signals cannot penetrate to the laboratories being used in the development, calibration, and metrology of these sensors.