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long-term infrasound sensor comparison results and application to I53US and US IMS arrays

Comparison of infrasound sensor responses from field-based testing at the Sandia National Labs FACT site has revealed notable deviations from lab-based calibrations under standard conditions of temperature and pressure. All sensors tested have exhibited amplitude variations occurring on both long-term (months) and short-term (diurnal) timescales. Here we present results from continued field testing over the past year, including the response of five infrasound sensors (two MB3a's, a Hyperion IFS-5100, a Chaparral M64LN, and a Chaparral M64Plus) connected to a single port to the atmosphere, as well as internal and external temperature, humidity, and absolute pressure sensors. We examine the sensor response and performance as a function of time and compare it to lab-based calibrations and environmental conditions. As a result of this testing, the U.S. is in the process of replacing the Chaparral 50A at US IMS arrays and installing a reference sensor at each element. We will present the installation and testing of the replacement Hyperion sensors at I53US and how the reference sensors will be implemented and used.

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