

Sensor Testing Capability Advancements at Sandia National Laboratories

The Facility for Acceptance, Calibration and Testing (FACT) at Sandia National Laboratories has been a valued resource for the U.S. monitoring community for decades. The FACT site hosts a number of capabilities focused on component evaluation including a recently added acoustic chamber, which provides superior isolation for sensors-under-test from the acoustic and pressure environment, and has the ability to be pressurized to sea-level conditions and evacuated to pressure levels found in the stratosphere. We also have recently installed a Spektra CS18 seismic calibration system, which we have leveraged for the purpose of determining seismic susceptibility of infrasound sensors. We have operated this chamber and seismic calibration system, conducting infrasound sensor evaluations and seismic susceptibility evaluations, for nearly one year. This work has included repeated calibrations, approximately once every three months for the past year, of ten infrasound sensors (two sets of five sensors), which are installed in the FACT site array as part of a separate sensor field evaluation effort. We have also utilized our seismic calibration system for evaluating the seismic susceptibility of an infrasound sensor. Here we present the preliminary results of quarterly calibrations of these sensors-under-test and the seismic susceptibility results of the infrasound sensor under test.

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Track Classification: Poster session