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reference sensors for in-situ calibration

One approach for meeting the on-site calibration requirements for infrasound stations of the International Monitoring System (IMS) involves installation of one or more reference sensors at each element. Sandia National Laboratories (SNL) has equipped two of its Facility for Acceptance, Calibration and Testing (FACT) Site Array (FSA) elements with reference sensors – two at each of the two elements – to evaluate various implementations of permanent reference sensors. The performance of these references has been studied for more than a year. The principal goal of the project is to recommend a reference-sensor configuration for operational IMS infrasound elements to enable reliable, remote determination of element response by in-situ calibration. In this presentation, several issues will be addressed: (1) limitations of a single reference sensor balanced against the cost of two references at each element; (2) number and orientation of inlet pipes for the reference sensor; (3) potential for response errors using permanent references. [Funded by the US Defense Threat Reduction Agency. Approved for public release]

Primary author: SMITH, Chad (The Pennsylvania State University, Applied Research Laboratory)

Presenter: SMITH, Chad (The Pennsylvania State University, Applied Research Laboratory)

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