

WNRS testing results from the US NACT R&D Testbed Infrasound Array

Here we report on updated testing at the US NACT R&D Testbed Infrasound Array at the Sandia National Laboratories (SNL) F&E site. Rosette and polyethylene hose (HDPE) wind noise reduction systems (WNRS) were co-located at multiple elements in 2016. The long- and short-term frequency response of the two WNRS and associated sensors are compared using the in situ response technique. The installation of new metal inserts in the HDPE WNRS have helped identify the source of the high-frequency roll-off in the HDPE system being related to clogged inlets from dirt and other debris. We detail the changes made to the system and a potential long-term solution to improve and stabilize the response. Wind noise reduction is also compared between the different WNRS, with noise reduction generally matching theory. Small WNRS domes were also installed over the reference sensor ports to increase the coherence, and we also detail the efficacy of these domes for coherence and noise reduction.

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