Abstract Submitted
for the 4CF12 Meeting of
The American Physical Society

Analysis of noise from reusable solid rocket motor firings TREVOR W. JEROME, KENT L. GEE, TRACIANNE B. NEILSEN, Dept. of Physics and Astronomy, Brigham Young University, Provo, UT, United States, BRIGHAM YOUNG UNIVERSITY ACOUSTICS RESEARCH GROUP TEAM — As part of investigations into the design of next-generation launch vehicles, near and far-field data were collected during horizontal static firings of reusable solid rocket motors. Spatial variation of overall and one-third octave band pressure levels at sideline and polar arc arrays is analyzed. Spectra at individual microphone locations were analyzed. Positively-skewed pressure waveforms were observed in the probability density functions. Extreme skewness in the first-order estimate of the time derivative was found as a result of the presence of significant acoustic shocks.

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Date submitted: 24 Sep 2012 Electronic form version 1.4