

## ENVIRONMENTAL AIR BLAST AROUND LARGE SHOCK TUBES

REED, J.W.

Recent interest in building and operating large shock tubes has generated concerns about the nuisance level air blast disturbance around these installations. Background material, obtained by James at AWRE during the 1960's, indicated that there could be problems with siting a much larger simulator in the US. Microbarograph measurements were obtained in 1983 around the French simulator at Gramat; this facility was described by Cadet at MABS 8. Results indicated that only minor adjustments to the James model were necessary but there was rather poor correlation with available gun data.

Further measurements have since been made around an experimental tunnel simulator at the Nevada Test Site, as well as 2 shocktubes at Albuquerque, one of 2 m and one of nearly 6 m diameter. These data are presented and discussed in light of the provided model as well as weather influences on the air blast propagation.

Finally, a computer model has been developed and installed at Sandia, for predicting actual test propagations from updated inputs of weather observations or forecasts of winds and temperatures in the atmospheric boundary layer.