

## A STATUS REPORT ON THE DYNAMIC AIRBLAST SIMULATOR

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There have been recent advances in the development of the Dynamic Airblast Simulator (DABS). The basic performance characteristics and design of DABS is reviewed. An overburden motion and vent model is described and comparisons made with the experimental data. Data on the effects of charge and facility geometry on the airblast environment is presented and same conclusions made about design. A comparison between nuclear and DABS dynamic pressure is made and a model which described the differences at any specified range and time is presented. Two-dimensional hydrocode calculations were performed to characterize the effects of shock interaction between an end-on cylinder and the shock tube boundary on cylinder loading. These results may be used to estimate DABS facility size for a given structural shape and size to keep the structural loading due to shock interaction at an acceptable level. Methods to attenuate reflected shocks are also investigated. Finally, improvements in a TNT-sensitized ammonium-nitrate castable slurry explosive are described and the results of the fielding of an advanced pilot-static blast probe design are presented. In summary, all of the major technical issues concerning the use of DABS as a single surface burst airblast simulator have been addressed.