

## **AXISYMMETRIC CALCULATIONS FOR THE LARGE BLAST/THERMAL SIMULATOR (LB/TS) SHOCK TUBE CONFIGURATION**

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Computational fluid dynamics (CFD) is a tool which predicts the gas dynamics of blast problems of interest to the Army by solving a set of mathematical equations with a high speed digital computer. The governing equations for the blast problem presented here are the 2D unsteady Euler equations. The computations were performed on a Cray XMP/48 supercomputer by discretizing the Euler equations with an upwind, Total Variation Diminishing (TVD), finite-volume, implicit scheme. In a paper by Molvik, the scheme was presented in detail and proved to be well suited for blast wave calculations. The scheme is discussed in the computational algorithm section. The algorithm is used here to provide gas dynamic information for a candidate large-scale blast and thermal simulator (LBTS) concept.