

Abstract Submitted  
for the DFD08 Meeting of  
The American Physical Society

Sorting Category: 37. (C)

**Solution of Reactive Compressible Flows Using an Adaptive Wavelet Method**<sup>1</sup> ZACHARY ZIKOSKI, SAMUEL PAOLUCCI, JOSEPH POWERS, University of Notre Dame — This work presents numerical simulations of reactive compressible flow, including detailed multicomponent transport, using an adaptive wavelet algorithm. The algorithm allows for dynamic grid adaptation which enhances our ability to fully resolve all physically relevant scales. The thermodynamic properties, equation of state, and multicomponent transport properties are provided by CHEMKIN and TRANSPORT libraries. Results for viscous detonation in a H<sub>2</sub>:O<sub>2</sub>:Ar mixture, and other problems in multiple dimensions, are included.

<sup>1</sup>NASA #NNX07AD10A

Prefer Oral Session  
 Prefer Poster Session

Date submitted: 30 Jul 2008

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