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## Abstract

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## 1. Introduction

## 2. The Entropy Viscosity Method

### 2.1. Background

### 2.2. Issues in the Low-Mach Regime

## 3. All-speed Reformulation of Entropy Viscosity Method

### 3.1. New Entropy Production Residual

### 3.2. other ???

## 4. Solution Techniques Spatial and Temporal Discretizations

### 4.1. Spatial and Temporal Discretizations

#### 4.1.1. CFEM

#### 4.1.2. Time

#### 4.2. Solver

MOOSE etc.

## 5. Numerical Results

ideas

1. Nozzle fluid

2. Nozze gas

3. Leblanc

4. Gaussian hump

5. Cylinder

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<sup>21</sup> **6. Conclusions**

<sup>22</sup> **Acknowledgments**

