

UNDERSTANDING TRANSONIC WEAPON BAY FLOWS

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This paper presents some of the challenges in measuring and simulating cavity flows. The main characteristics of cavity flows are first described using experimental data, and beamforming is then used to provide good estimates of acoustics away from the cavity walls. Then, a simple model based on standing waves is introduced and it appears that the results capture some of the flow physics. Simulations of cavity flows and of store releases, and the importance of statistics in understanding the physics involved are shown.

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