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Acoustics of a Helmholtz Resonator MAXWELL HENRY, Davidson College — NASA Langley Research Center developed the software package OVERFLOW to solve the time-dependent, Reynolds-averaged, Navier-Stokes equation using multiple overset structured grids. The accuracy of the algorithm used in OVERFLOW permits the study of acoustics better than commercial software. To test the accuracy of acoustic prediction of OVERFLOW, the acoustic data from NASA scientist Patricia Block's cavity research will be compared to 2- and 3-dimensional models. This project will focus on simulating 2- and 3-dimensional computational models of the Helmholtz Resonator and comparing them to theoretical results.

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