# Numerical Study of Pressure Waves Using Finite Volumes Method

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The work investigates the pressure waves behavior in a cavity, the way that the treatment with Finite Volumes Method can be understood, aiming future studies like pressure waves in air intake system of an internal combustion engine. Using a CFD code it is possible to analyze more complex systems, including three dimensional effects. In most of cases, the problem is solved using analytical methods or one-dimensional numerical method. In the present work, the governing equations was discretized by Finite Volumes Method with an explicit formulation, and the time integration was made using the multi-stage Runge-Kutta time stepping scheme. The solution is independent of mesh or time-step. The analysis presents a good agreement with other numerical studies.



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