A staggered scheme on unstructured meshes for the Euler equations

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Abstract

We propose a numerical strategy for the simulation of Euler system in the framework of staggered finite volume discretizations where numerical densities, energies and velocities are stored on different locations. The proposed method is strongly inspired, on the one hand, from the kinetic framework for the definition of fluxes and, on the other hand, from the Discrete Duality Finite Volume method.