A One-Dimensiontal Conservative Method to Track Contact Discontinuities in a Compressible Media[1] CAROLINE GATTI-BONO, Lawrence Livermore National Laboratory — We present a one-dimensional algorithm to track an interface between two compressible media. The method can readily be extended to multiple dimensions. The moving interface cuts out time-varying control volumes and a consistent finite-volume discretization is derived by applying the divergence theorem in space-time. The method is fully conservative, even at the discontinuity, and the truncation error is expected to be first-order at the boundary between the two fluids, which is one order higher than conventional methods. Classical benchmark results and convergence studies are presented.

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