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High order Finite Volume Schemes for Balance Laws with Stiff Relaxation

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Highlights

- High order FV shock capturing schemes for hyperbolic systems with relaxation
- Source average written as the sum of the source of the average plus a correction
- Semi-implicit IMEX treatment of the source term avoiding cell coupling
- Asymptotic analysis is performed suggesting the use of GSA-IMEX schemes
- Several numerical tests show the efficiency and robustness of the method

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