

Abstract Submitted
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Shock-capturing discontinuous Galerkin schemes in SpECTRE¹

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We present an update on limiters shock-capturing schemes for discontinuous Galerkin in the SpECTRE code (<https://github.com/sxs-collaboration/spectre>). In general, a limiter provides a prescription for correcting the unphysical solutions that can arise when the high-order discontinuous Galerkin solution becomes oscillatory near shocks. The development of limiters for discontinuous Galerkin methods is ongoing, with recent efforts from the community pushing to increase their robustness and accuracy. We implement different limiters, from simple slope limiters to more recent, higher-order WENO-based limiters. We compare their performance on standard shock problems and single-star evolutions.

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