Response to Reviewers

December 19, 2016

1) Point out that RK schemes have Butcher barriers, which limit how high an order of temporal accuracy one can comfortably achieve. ADER schemes have no such barriers.

This has been added to the background section, in the sentence beginning on the 6th line of the first paragraph.

2) Also point out that timing comparisons have been carried out between ADER and RK schemes. The results show something very interesting. They show that for the same computational cost as an RK scheme of a certain order one can get an ADER scheme of one higher order of accuracy. That is noteworthy and has been documented in J. Comp. Phys. Vol. 235, Pgs. 934-969 (2013).

This has been added to the background section, in the sentence beginning on the 3rd line of the first paragraph.

3) Along with the ADER-DG schemes that have very good convergence, there also exist ADER-CG schemes which converge even faster and are based on the same Galerkin strategy. See J. Comp. Phys., Vol. 228, Pgs. 2480-2516 (2009). In this same paper, it is desirable to prove the convergence properties of ADER-CG schemes. That will greatly improve the scope and range of this paper.

Section 2.2 has been added to explain how ADER-CG schemes are constructed. The result is proved for ADER-CG schemes in the newly-added section 3.2.