Geoscientific
Model Development
Discussions

Interactive comment on "Implicit-explicit (IMEX) Runge-Kutta methods for non-hydrostatic atmospheric models" *by* David J. Gardner et al.

Anonymous Referee #1

This paper is very thorough and clear. It also addresses the important issue of evaluating which IMEX Runge–Kutta methods are best suited for simulation of non-hydrostatic atmospheric models. Many methods are considered and the results are clearly reported as well as the reason these methods perform the way they do. I would be curious to see how this compares to the IMEX SSP methods presented in the recent paper by Conde et al, especially their third order method which is based on the explicit Shu-Osher method and a well-known family of implicit methods.