

1086-65-2375

Jeffrey M Connors* (connors4@llnl.gov). *Quantification of operator splitting effects in finite volume calculations of advection-diffusion.*

Some issues are presented involving splitting effects in operator-split finite volume calculations for advection-diffusion. In applications, it is desirable to understand the errors and sources of errors in calculations, such as splitting effects, which may be difficult to determine. One approach is presented for *a posteriori* error estimation to calculate the error in a quantity of interest (QoI) and investigate the effect of the splitting on the computed QoI value. The details of the error budget are useful to inform uncertainty quantification studies and to help with code verification as well as code optimization. (Received September 25, 2012)