

QUANTIFICATION OF OPERATOR-SPLITTING EFFECTS FOR ADVECTION-DIFFUSION

Some issues are presented involving splitting effects near boundaries 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. Some discussion will be provided on the extension of these ideas to other types of coupling commonly found among multi-physics applications.