

Figure 1: Convergence of the Newton-Krylov Algorithm for no-flux source control. Top three plots show the convergence in the state variable for different  $\kappa$ , while the bottom plots show the convergence in the adjoint variable.

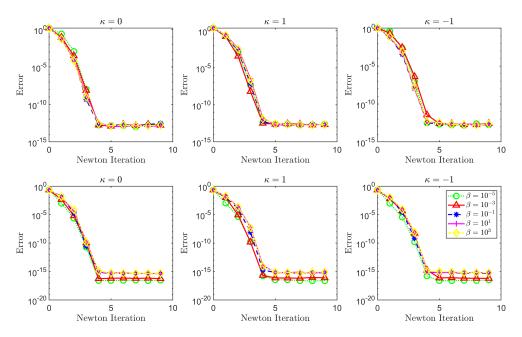


Figure 2: Convergence of the Newton-Krylov Algorithm for Dirichlet source control. Top three plots show the convergence in the state variable for different  $\kappa$ , while the bottom plots show the convergence in the adjoint variable.

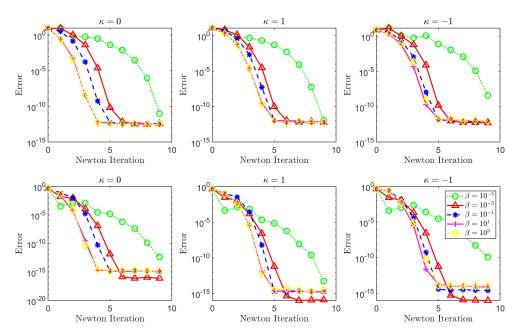


Figure 3: Convergence of the Newton-Krylov Algorithm for Dirichlet flow control. Top three plots show the convergence in the state variable for different  $\kappa$ , while the bottom plots show the convergence in the adjoint variable.

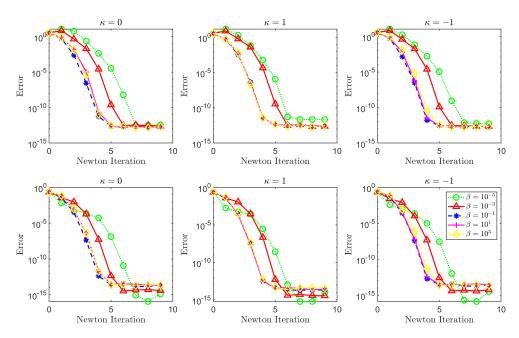


Figure 4: Convergence of the Newton-Krylov Algorithm for no-flux flow control. Top three plots show the convergence in the state variable for different  $\kappa$ , while the bottom plots show the convergence in the adjoint variable.