Jets and plumes in cross flows appear in many engineering topics of interest. Topics include chimney smoke, fires, and exhaust from vehicles. The forward problem has been thoroughly studied via experiments and simulations and has been reported upon by many people (e.g. Morton [1996], Rudman [1996], Carvel [2001], Mokhtarzadeh-Dehghan [2006], Hu [2009]). The inverse problem, however, has received less attention and is often of more interest to environmentalists, engineers, and fire fighters.

; however, the high thermal conductivity of the second copper block affects the results and needs to be explained.

MASS

MOMENTUM

Energy

k transport

e transport

eddy viscosity

turbulent prandtl number