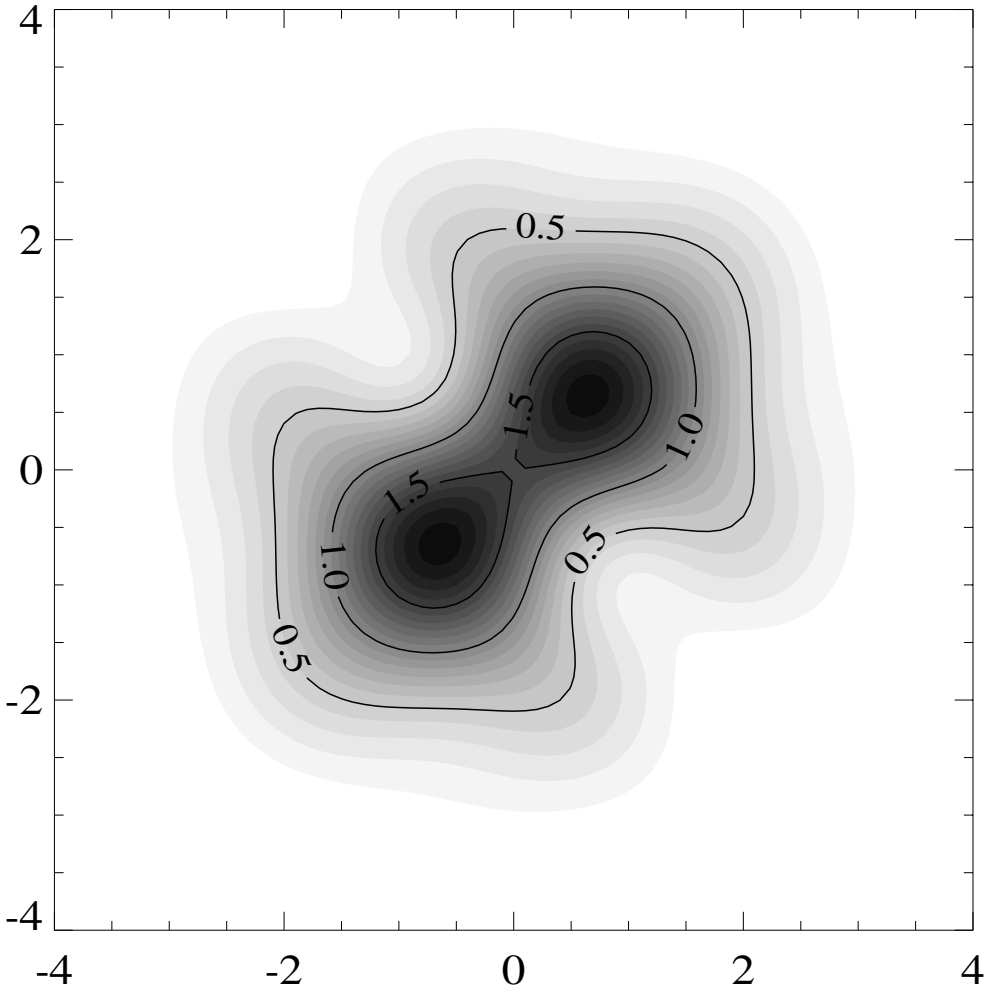
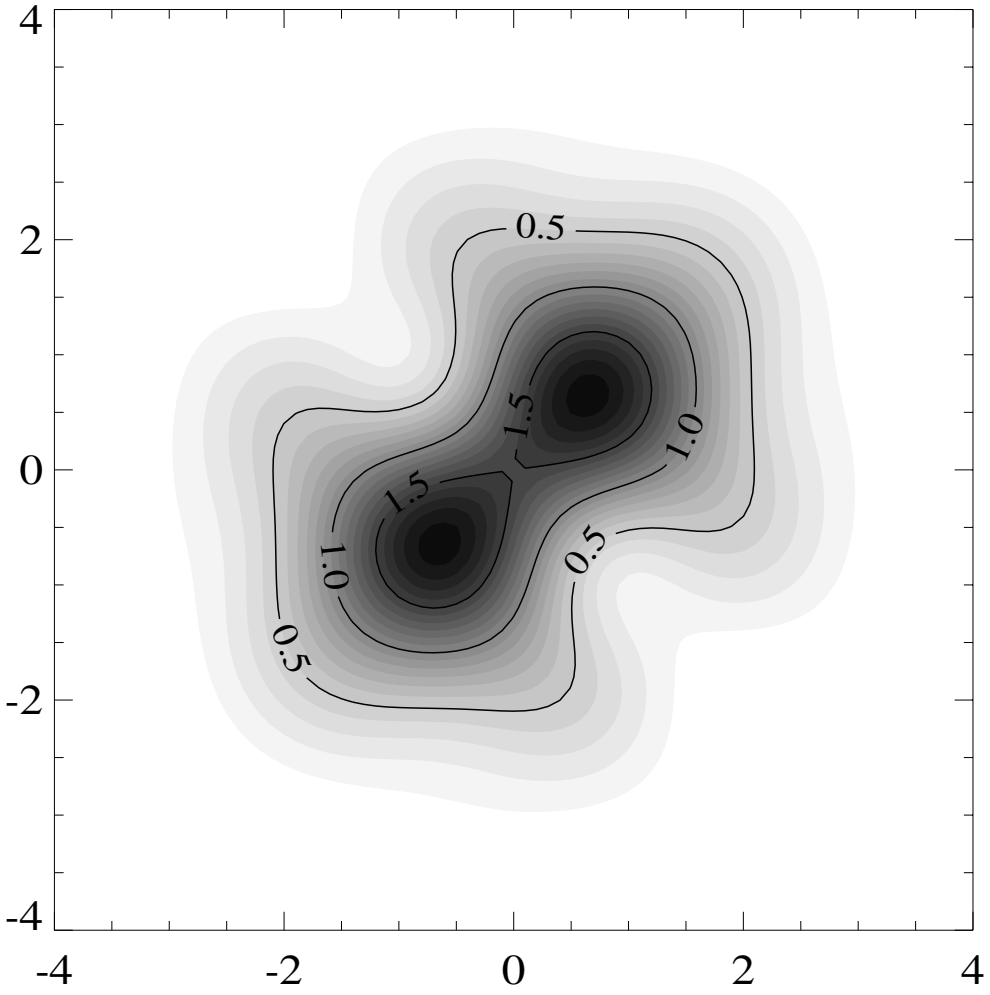
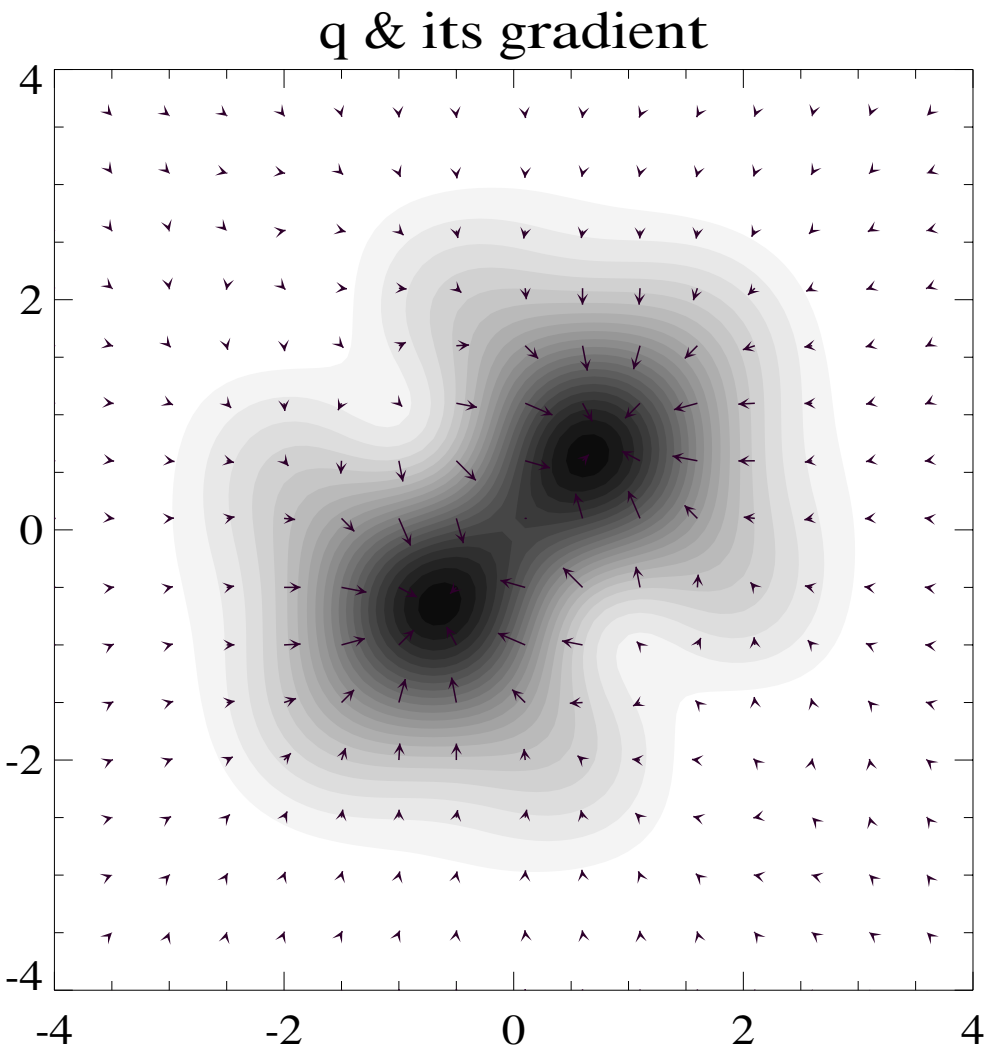
A patchy scalar field, say humidity q (g/kg)

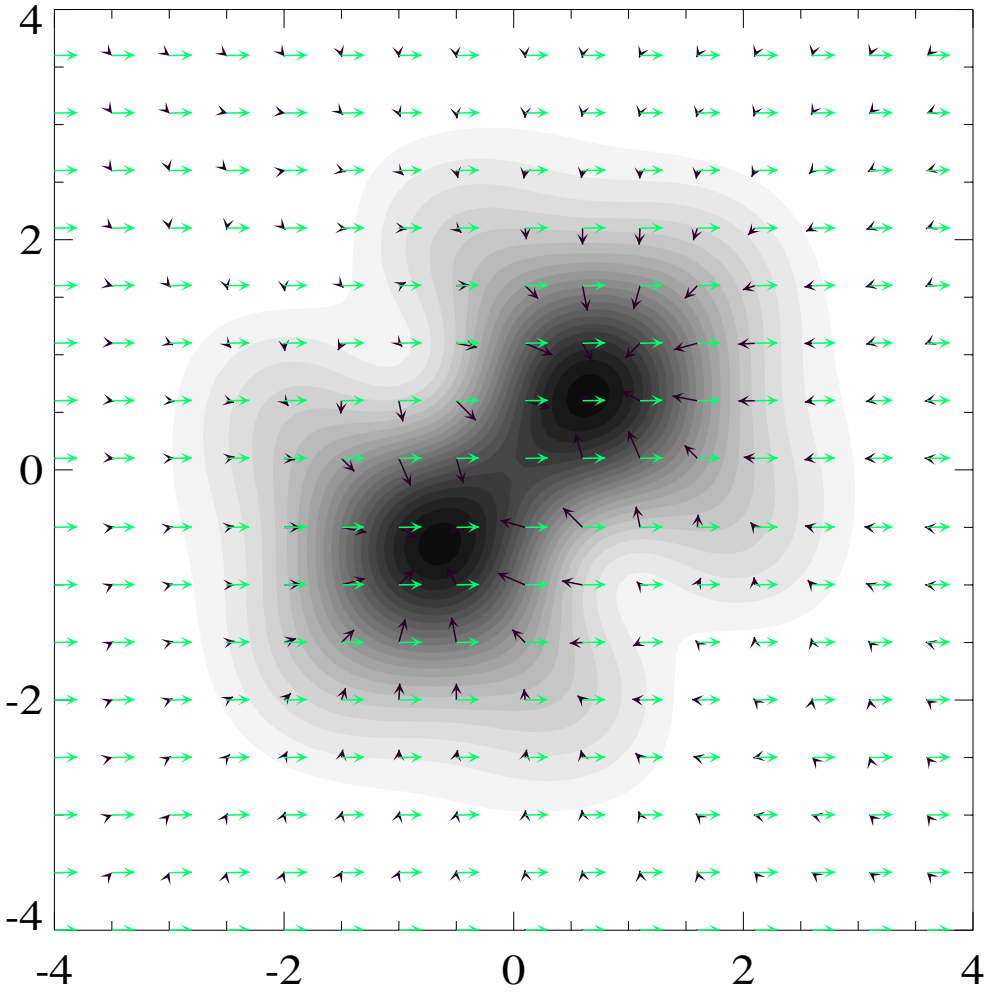


A patchy scalar field, say humidity q (g/kg)

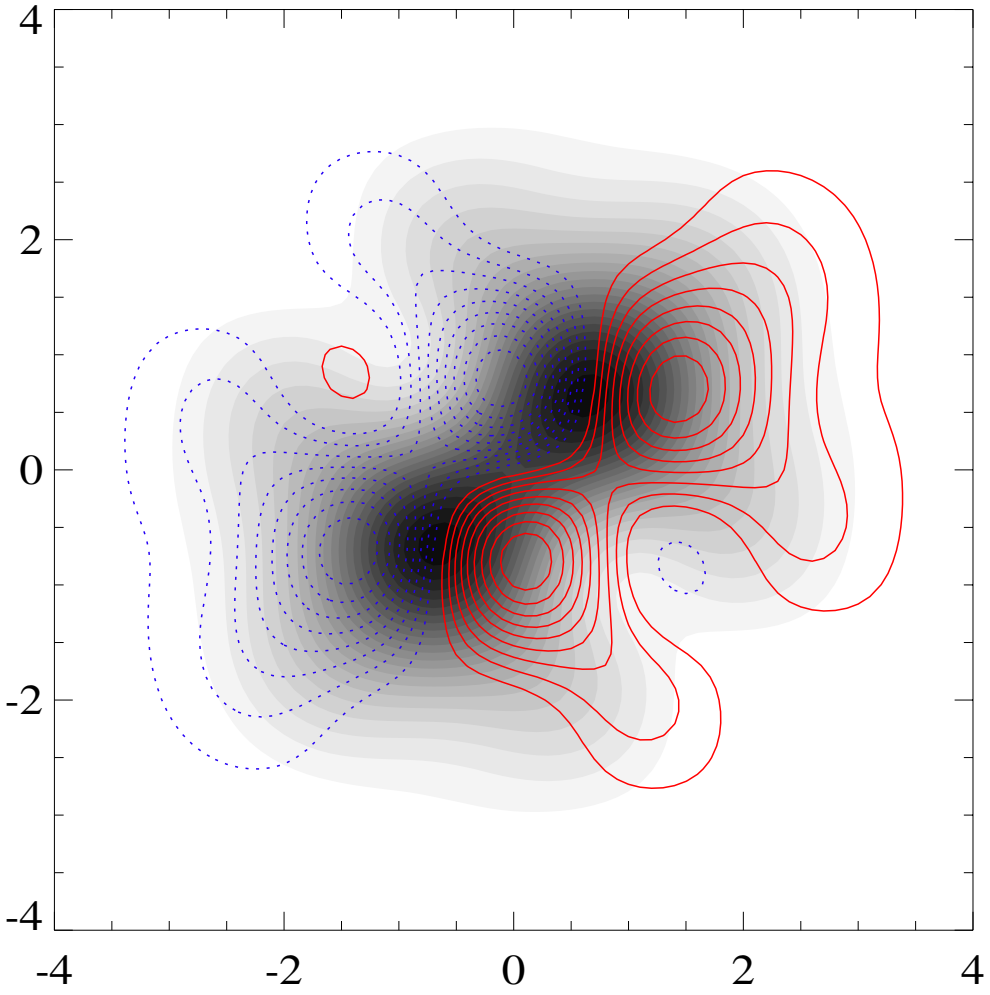


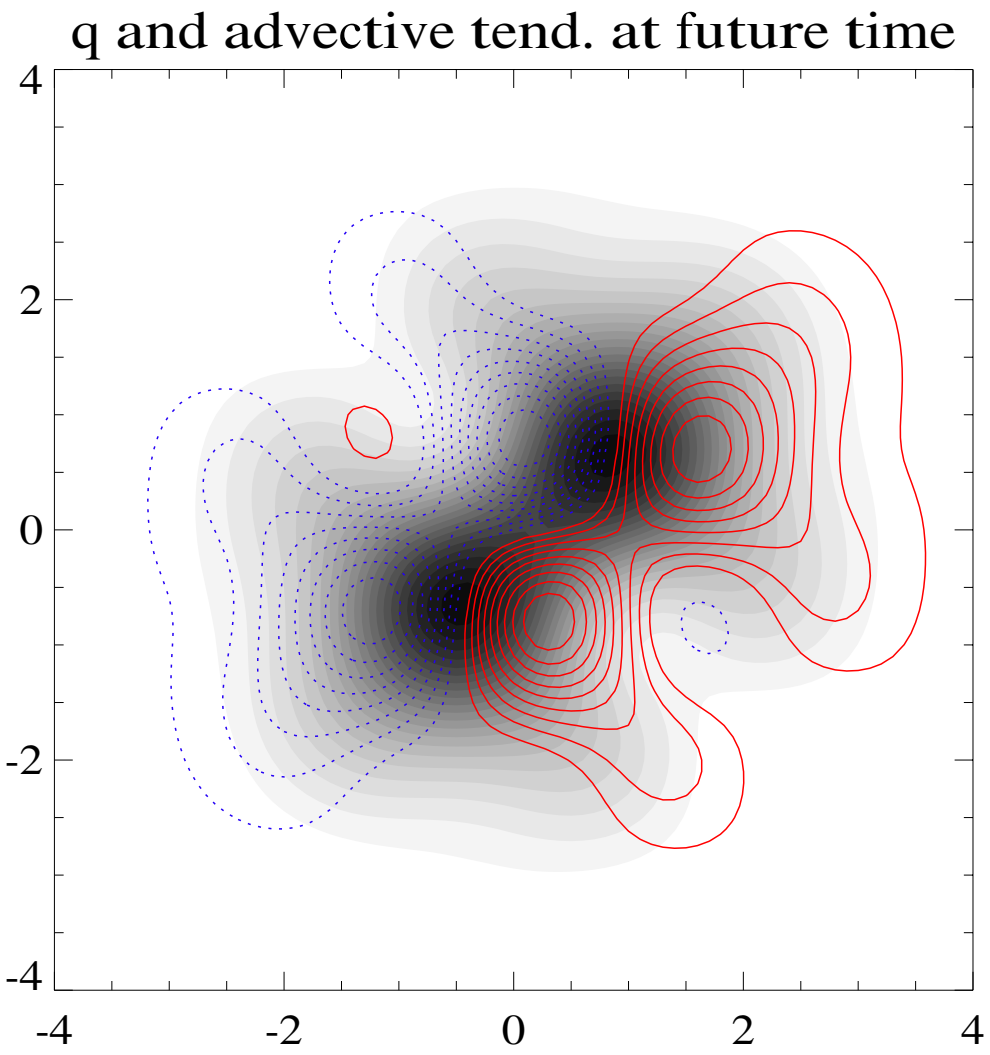

q & its gradient
4
2
0
-2
-4
-4
-2
0
2
4

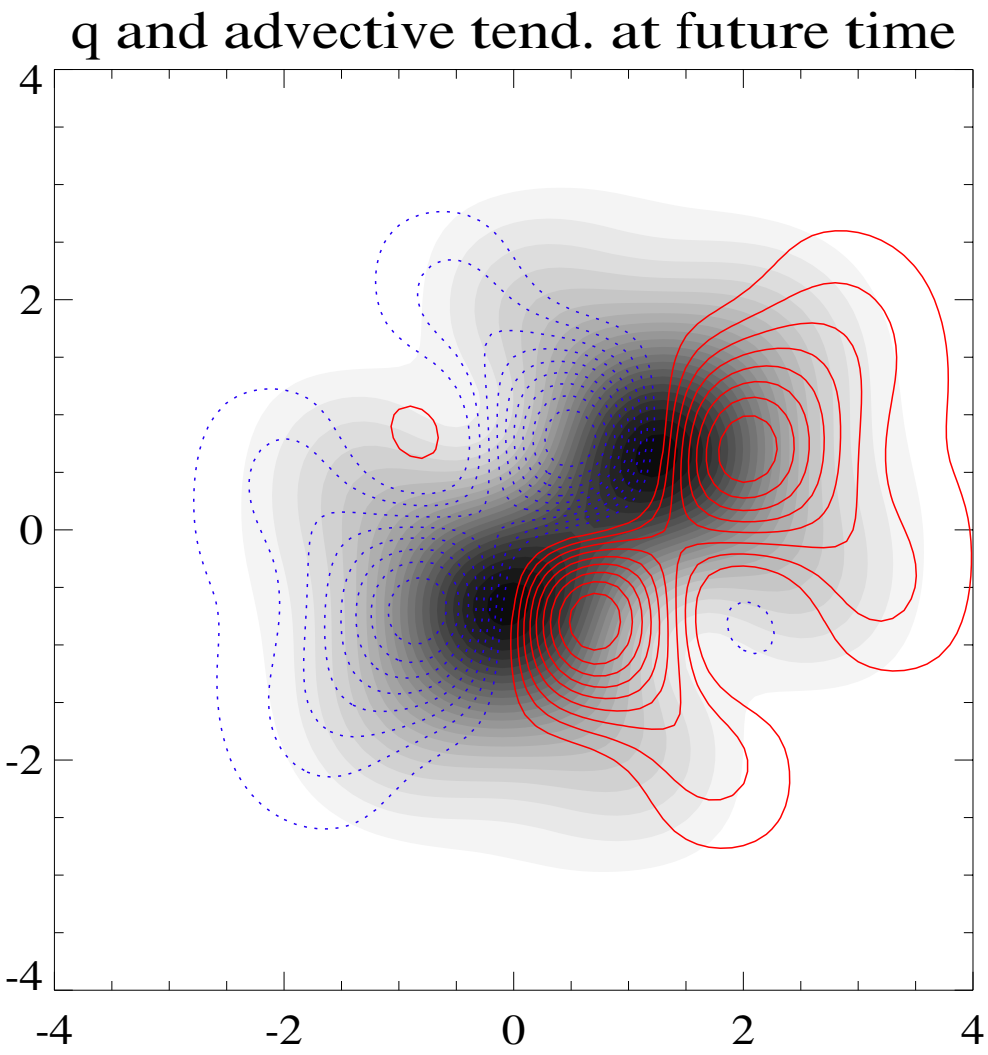
q & its gradient AND A CONSTANT WIND

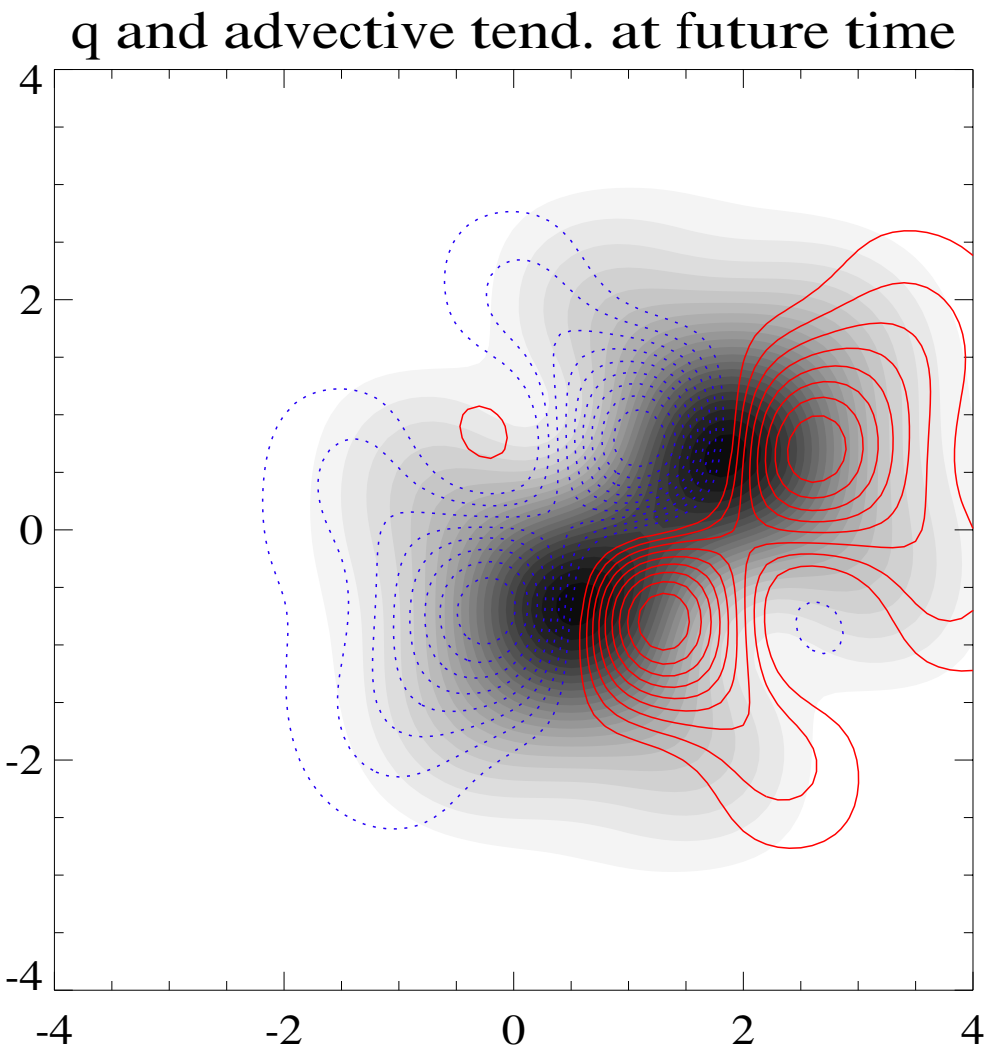


-U.grad(q) = ADVECTIVE TENDENCY



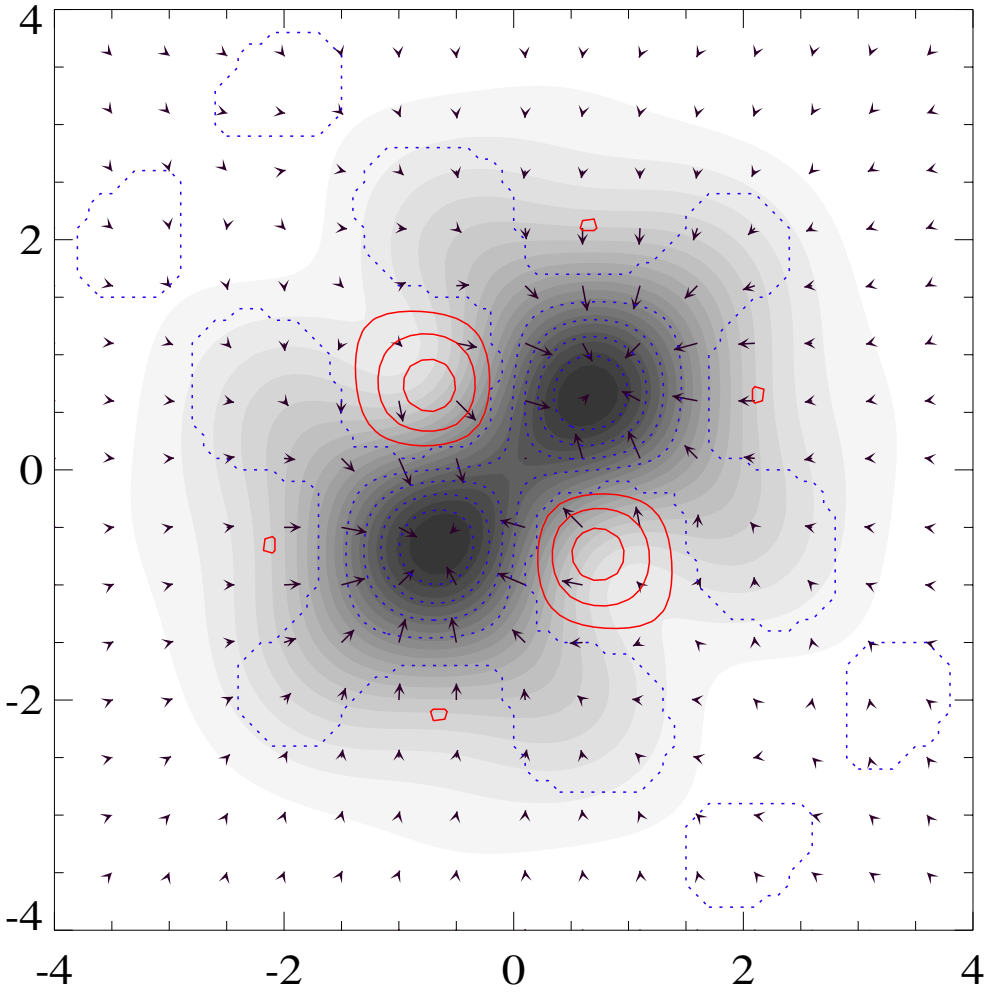

q and advective tend. at future time
4
2
0
-2
-4
-4
-2
0
2
4

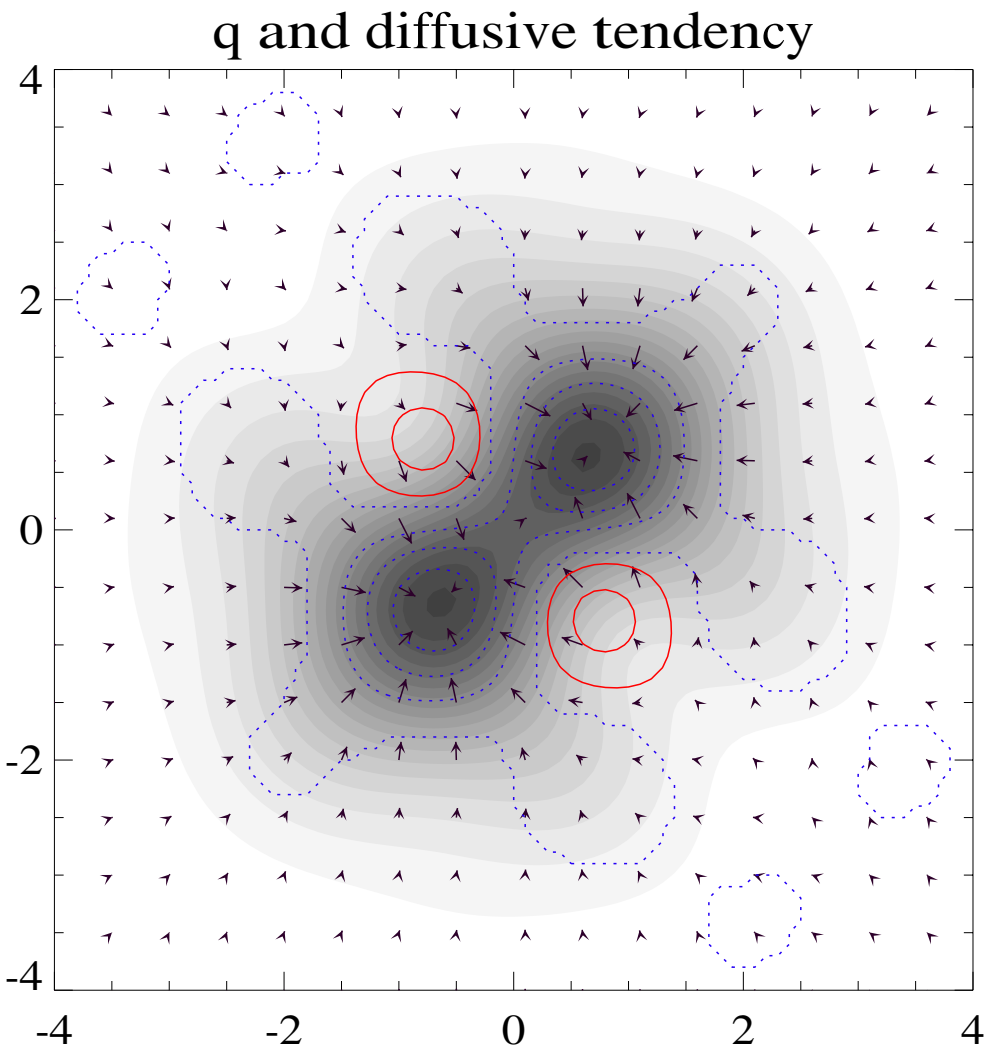

q and advective tend. at future time
4
2
0
-2
-4
-4
-2
0
2
4

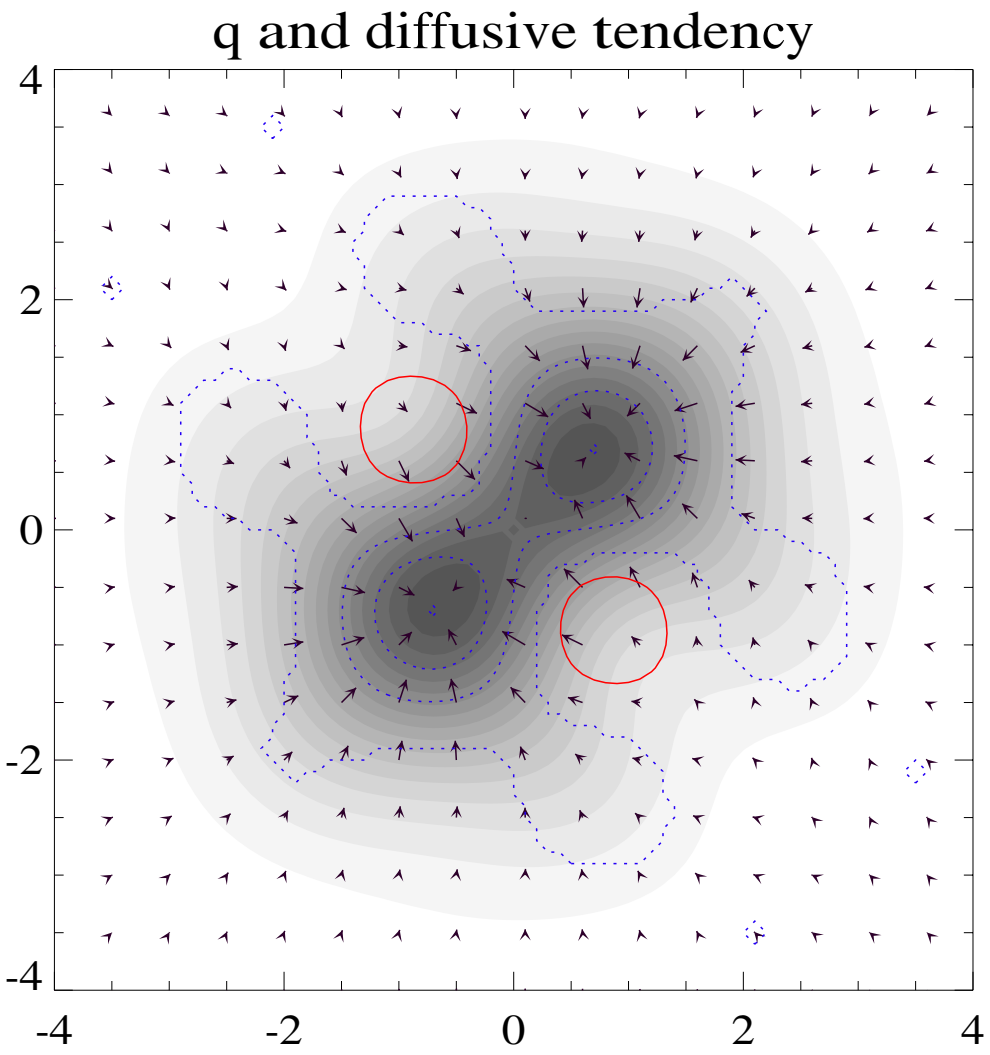


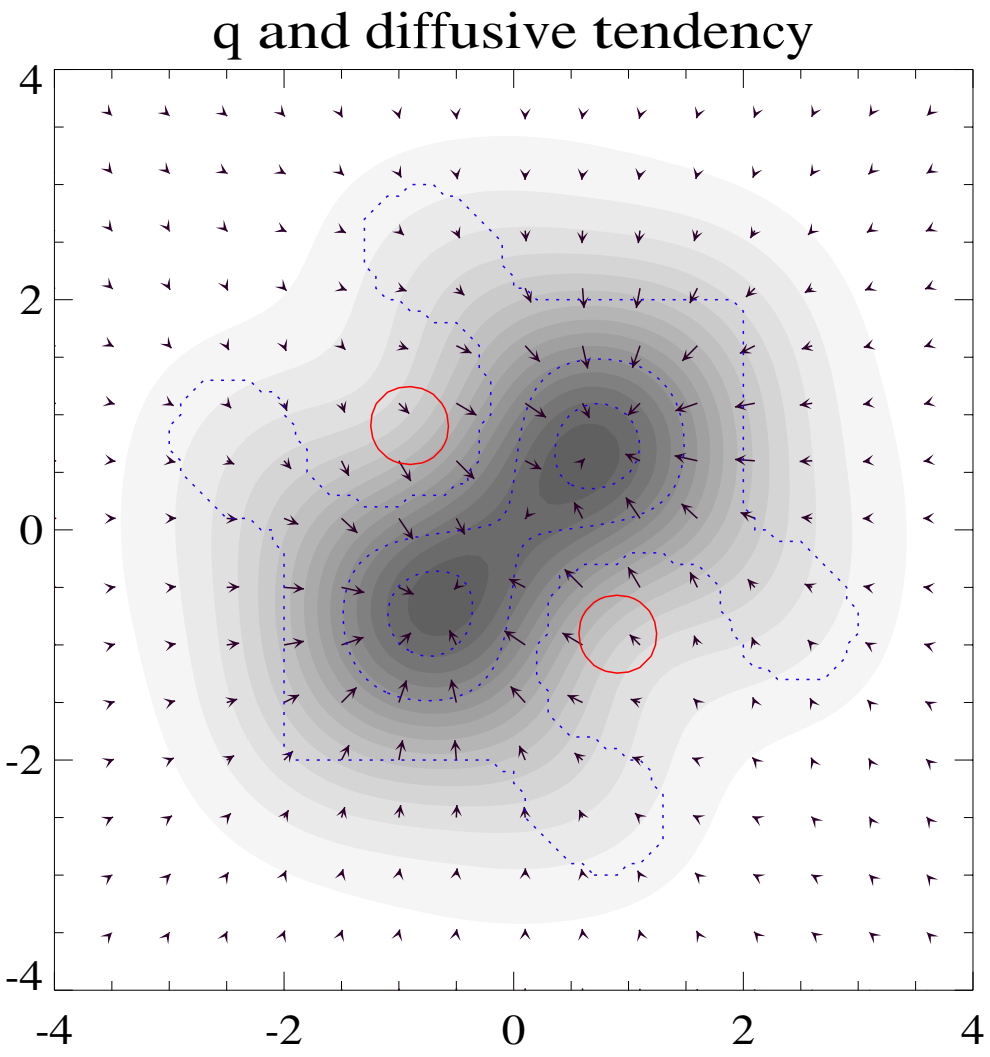
Next: diffusion (back to page 2)

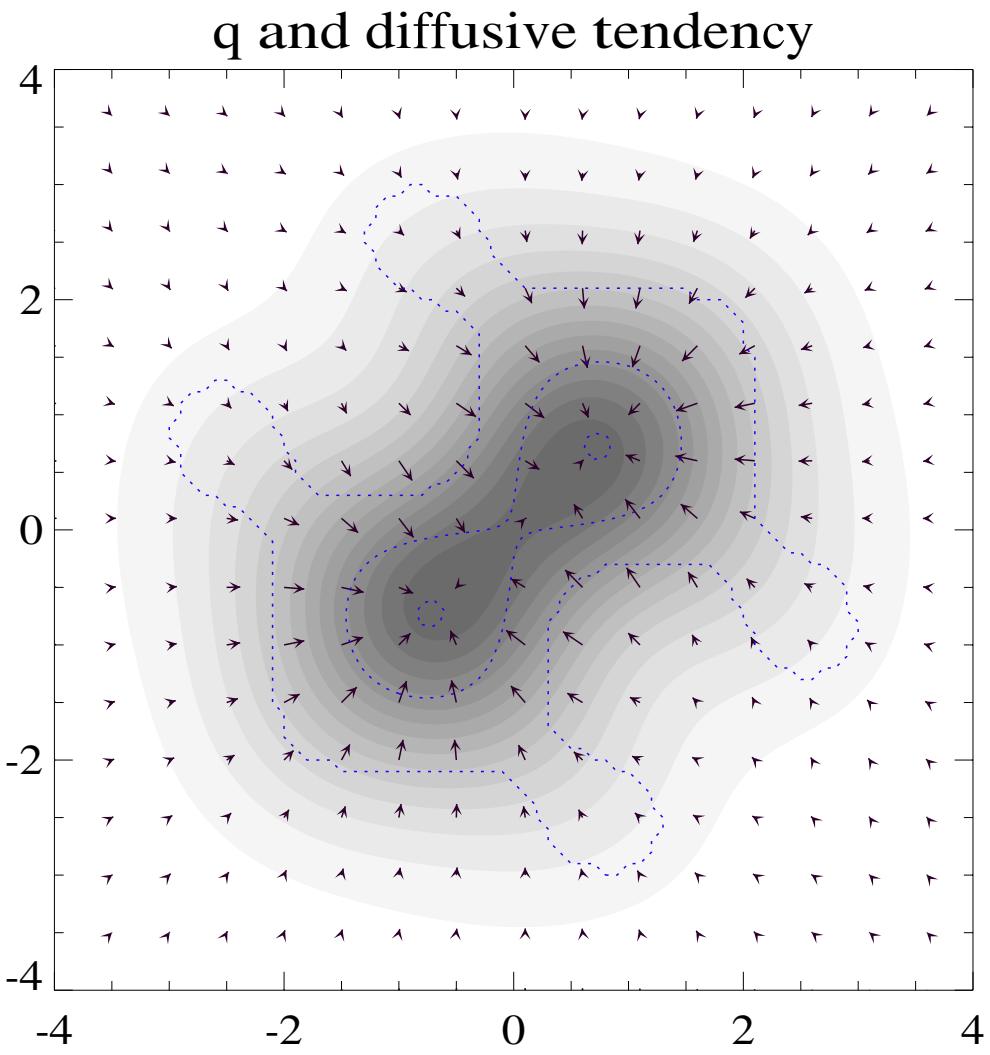
q, gradient & LAPLACIAN (diffusive tendency)

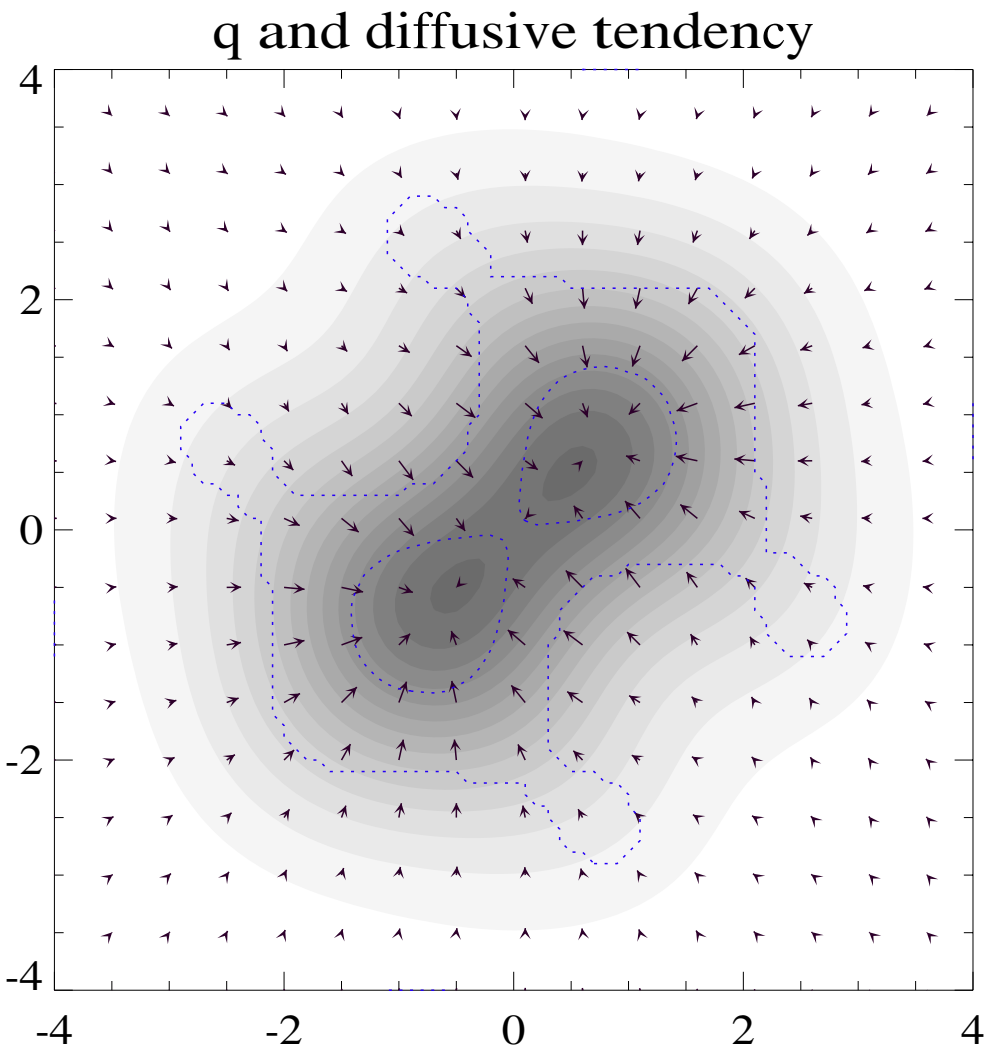



q and diffusive tendency
4
2
0
-2
-4
-4
-2
0
2
4


q and diffusive tendency
4
2
0
-2
-4
-4
-2
0
2
4


q and diffusive tendency
4
2
0
-2
-4
-4
-2
0
2
4


q and diffusive tendency
4
2
0
-2
-4
-4
-2
0
2
4


q and diffusive tendency
4
2
0
-2
-4
-4
-2
0
2
4