**8-16\_breathing.cpp**

*Main*

Constants (used throughout the program):

nx, ny, nsteps, sd, omega, lambda, t\_off, t\_on, ftrue ( Boolean), T0, c, nop, wi.

Constants (temporary: used to compute another constant in main)

dtreal, wxreal, dtsim,w1, w2, w3

Change on every iteration:

fIn, fOut, rho, ux, uy,ts

*initi\_gaussian,eq\_and\_stream, write\_gaussian*

Constants:

middlex, middley.

Everything else in all functions changes throughout the function.