

Ay 190 Assignment 11

Understanding the Limitations of SPH

March 12, 2013

1 The uniform shear test problem

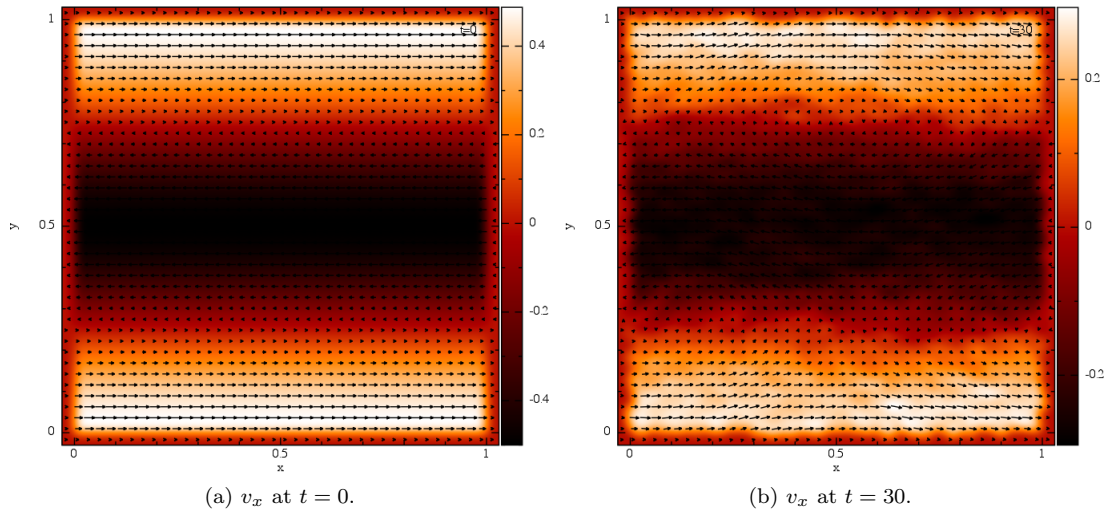


Figure 1: Velocity in the x-direction at (a) $t = 0$ and (b) $t = 30$. The particles are initially segregated by their velocities, but as the distribution evolves over time, the particles diffuse into different velocity bands. The arrows denote particle velocities.

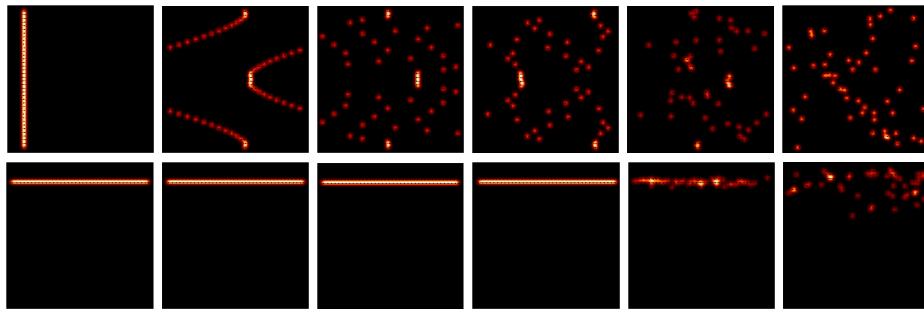


Figure 2: Flow of particles, following a different subset of particles (rows) at times $t=0,1,5,10,20,30$. Row 1: Particles initially in a column. Row 2: Particles initially in a row.