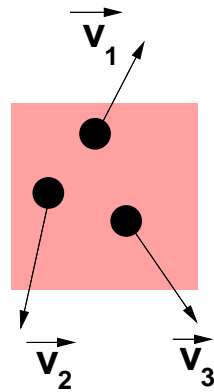
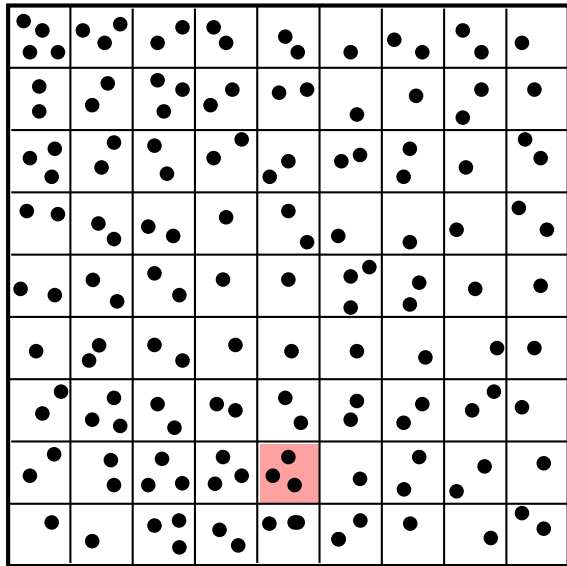


# Multi-Particle Collision Dynamics (MPCD)



Streaming:

$$\vec{r}_i(t+h) = \vec{r}_i(t) + h\vec{v}_i(t)$$

Collision: In *one* box:

- $\vec{v}_{CM} = \frac{1}{n} \sum_{i=1}^n \vec{v}_i$

- $\tilde{\vec{v}}_i = \vec{v}_i - \vec{v}_{CM}$

- $\tilde{\vec{v}}_i' = \overset{\leftrightarrow}{R} \tilde{\vec{v}}_i$

- $\vec{v}_i' = \tilde{\vec{v}}_i' + \vec{v}_{CM}$

- $\overset{\leftrightarrow}{R}$  random rotation