



Figure 1: **Bound vs Unbound with density contours and velocity vectors** Color shows  $(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}} + \mathcal{E}_{\text{pot}}) / \max(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}}, -\mathcal{E}_{\text{pot}})$ , Red means unbound while blue means bound. Snapshots show  $t = 0, 10, 20, 30, 40, 50, 60, 70$  and  $77$  d (last frame of simulation). Contours show the density from  $\rho = 10^{-4} \text{ g cm}^{-3}$  downward in Logarithmic intervals of 1 dex. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.