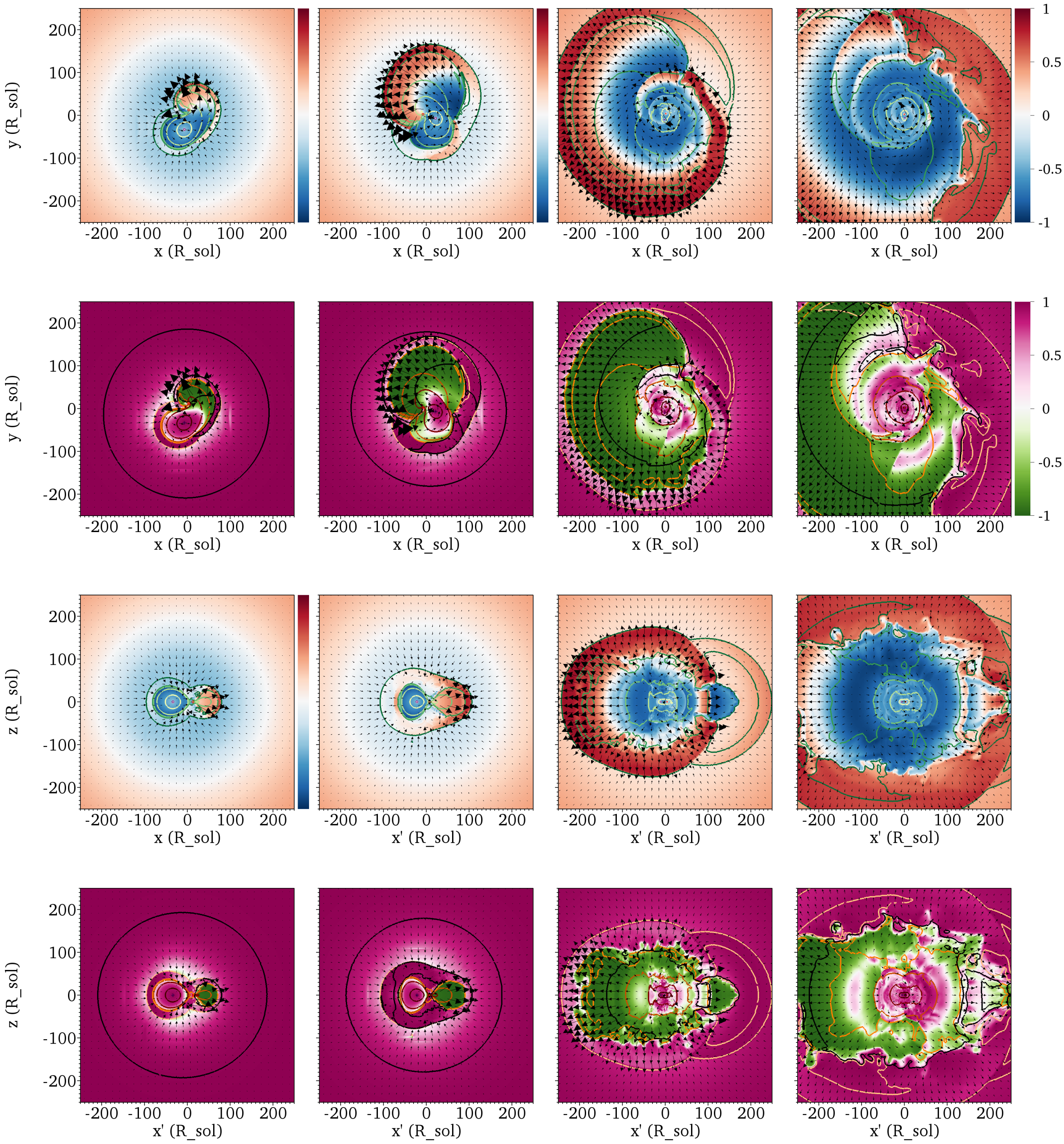
y (R_sol)
z (R_sol)
x (R_sol)
x' (R_sol)
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0.5
0
-0.5
-1

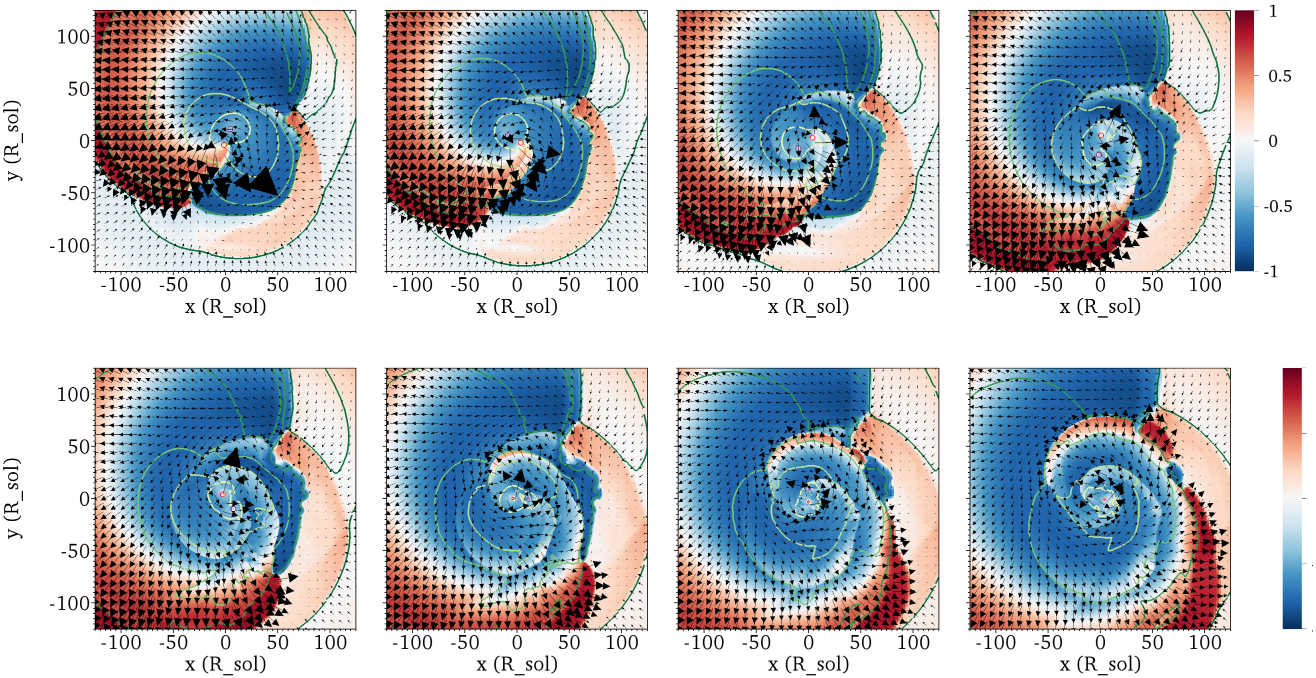

Figure 1: **Bound vs Unbound with density contours and velocity vectors** $(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic}+\mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic}, -\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,{\rm g\,cm^{-3}}$ 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.

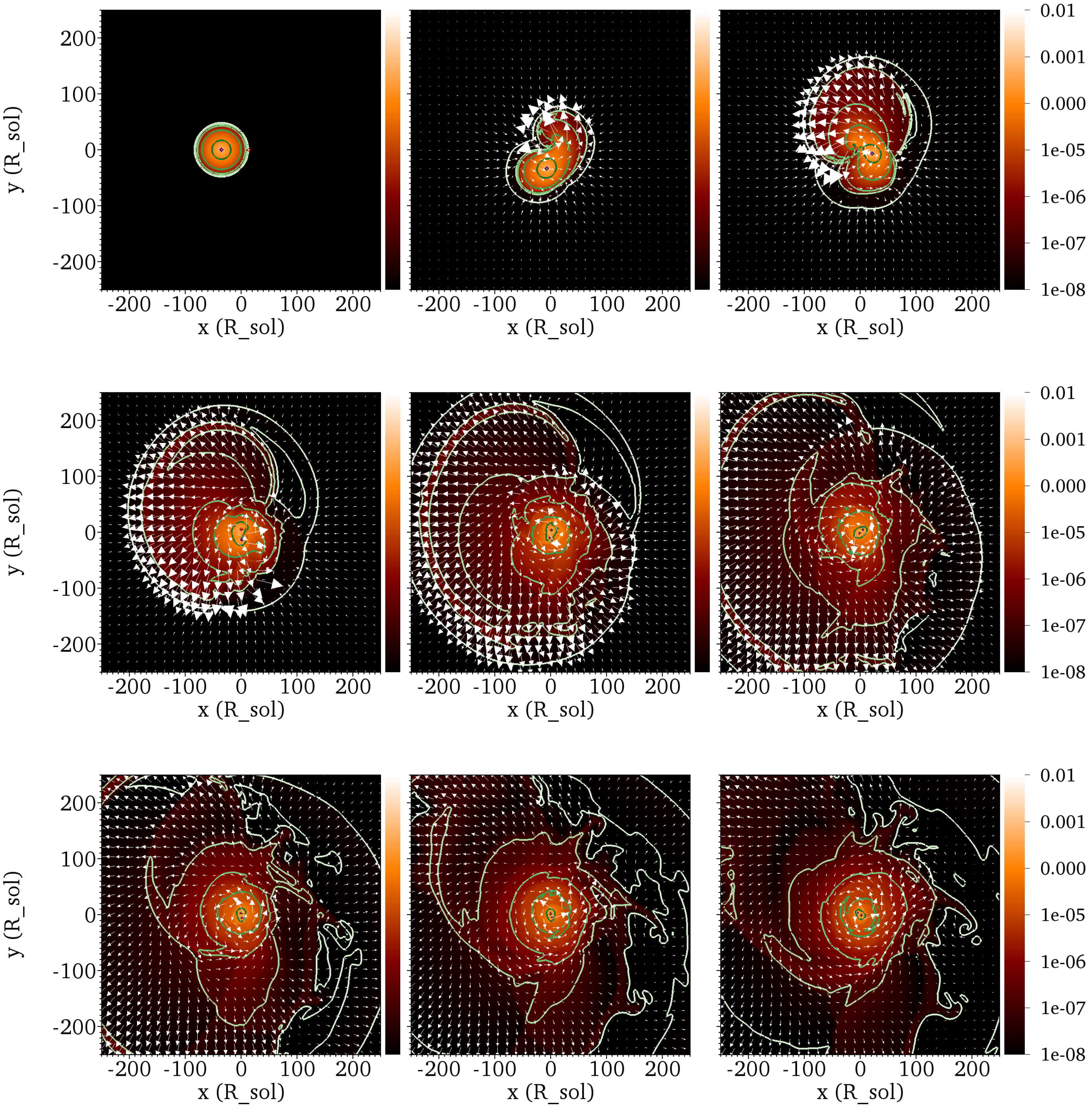

Figure 2: **Density** ρ in $\mathrm{g\,cm^{-3}}$. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ downward in Logarithmic intervals of 1 dex. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.

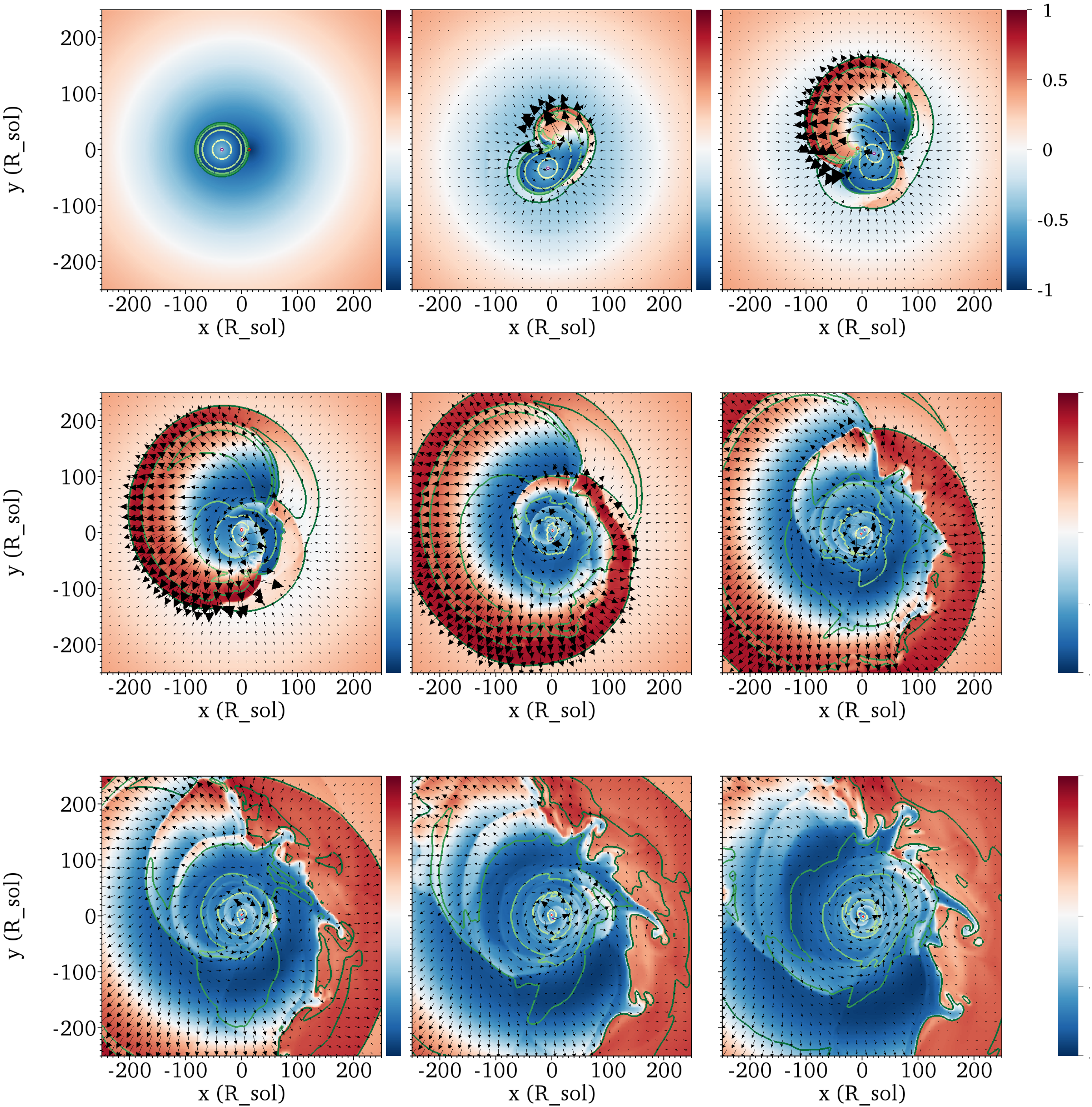

Figure 3: **Bound vs Unbound with density contours and velocity vectors** $(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic}+\mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic}, -\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ 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.

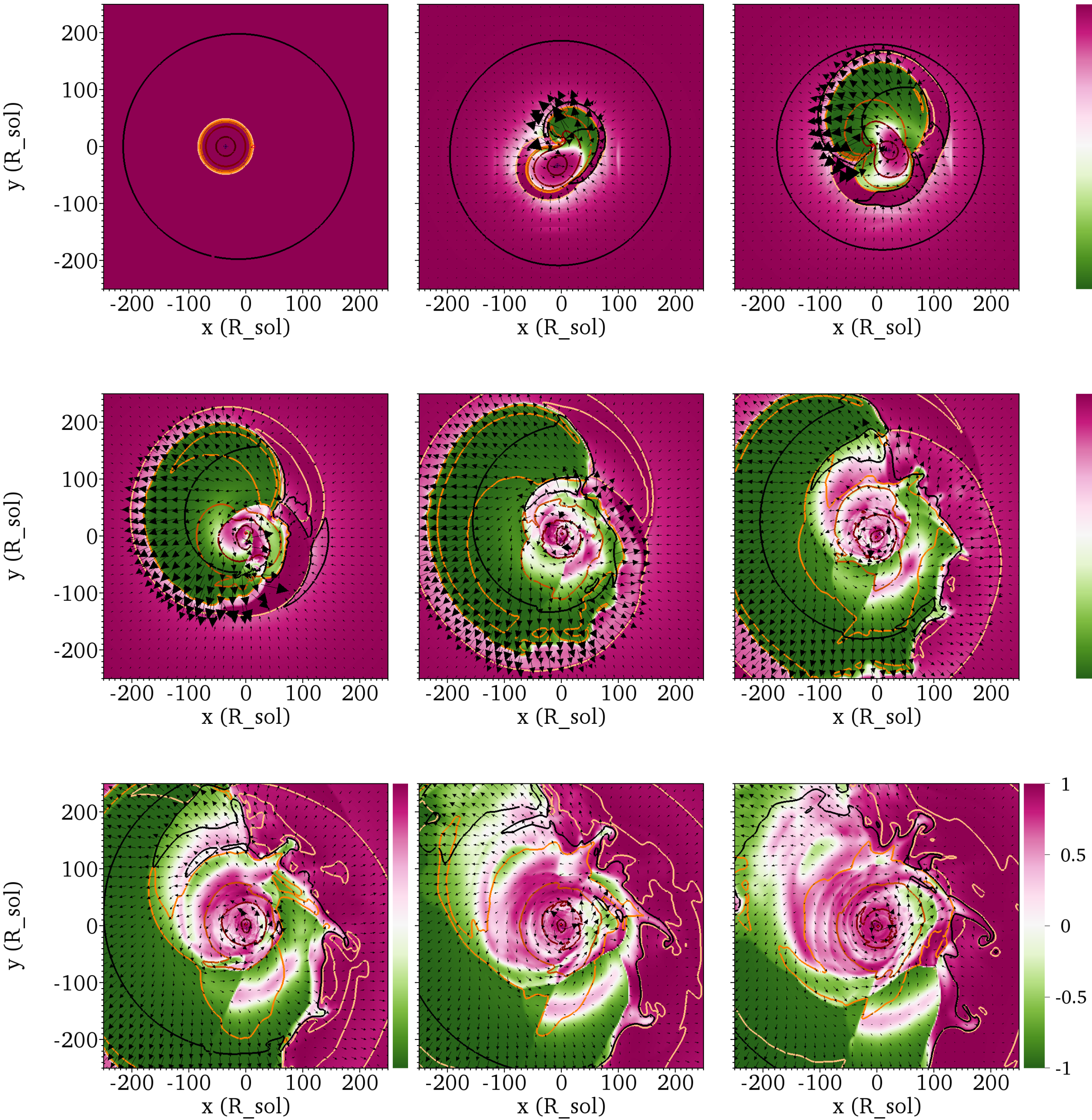

Figure 4: **Internal vs Bulk Kinetic with velocity vectors.** $(\mathcal{E}_{\text{internal}} - \mathcal{E}_{\text{kinetic}})/\max(\mathcal{E}_{\text{internal}}, \mathcal{E}_{\text{kinetic}})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Black contour shows $\mathcal{E} = 0$. Orange contours show density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ 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 cyan and yellow for particles 1 and 2, respectively.

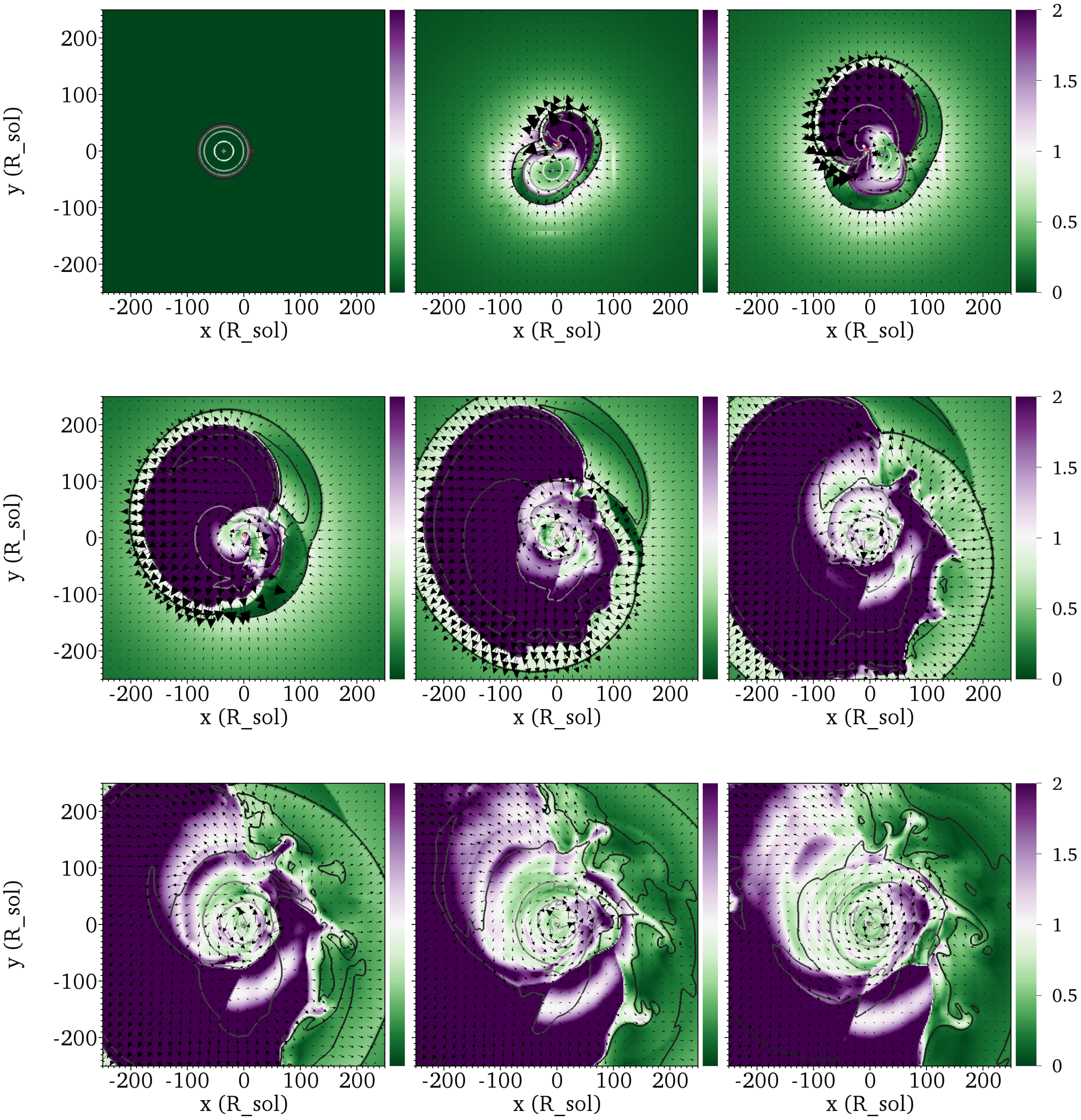

Figure 5: **Mach number** Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ downward in Logarithmic intervals of 1 dex. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.

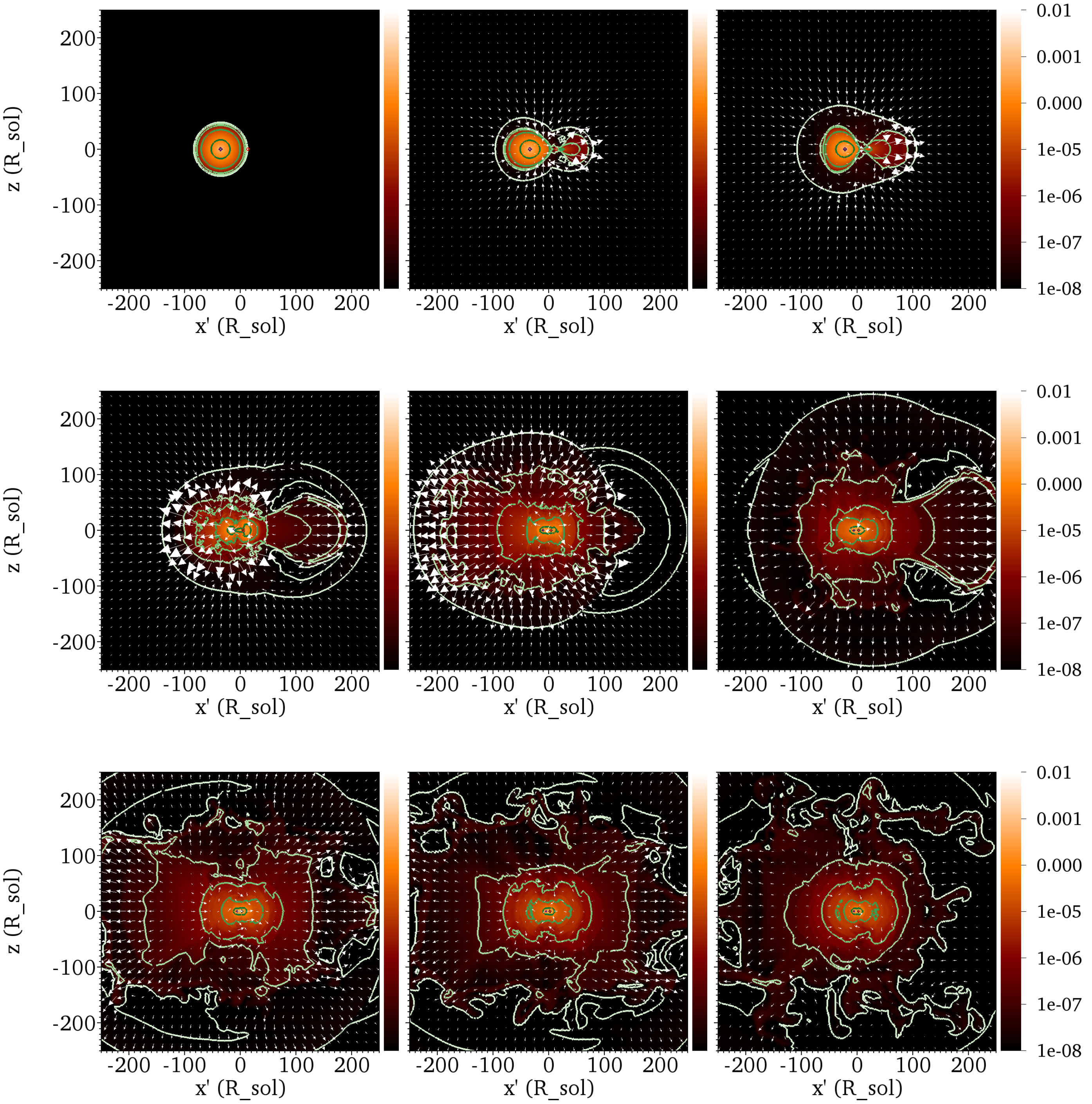

Figure 6: **Density** ρ in $\mathrm{g\,cm^{-3}}$. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ downward in Logarithmic intervals of 1 dex. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.

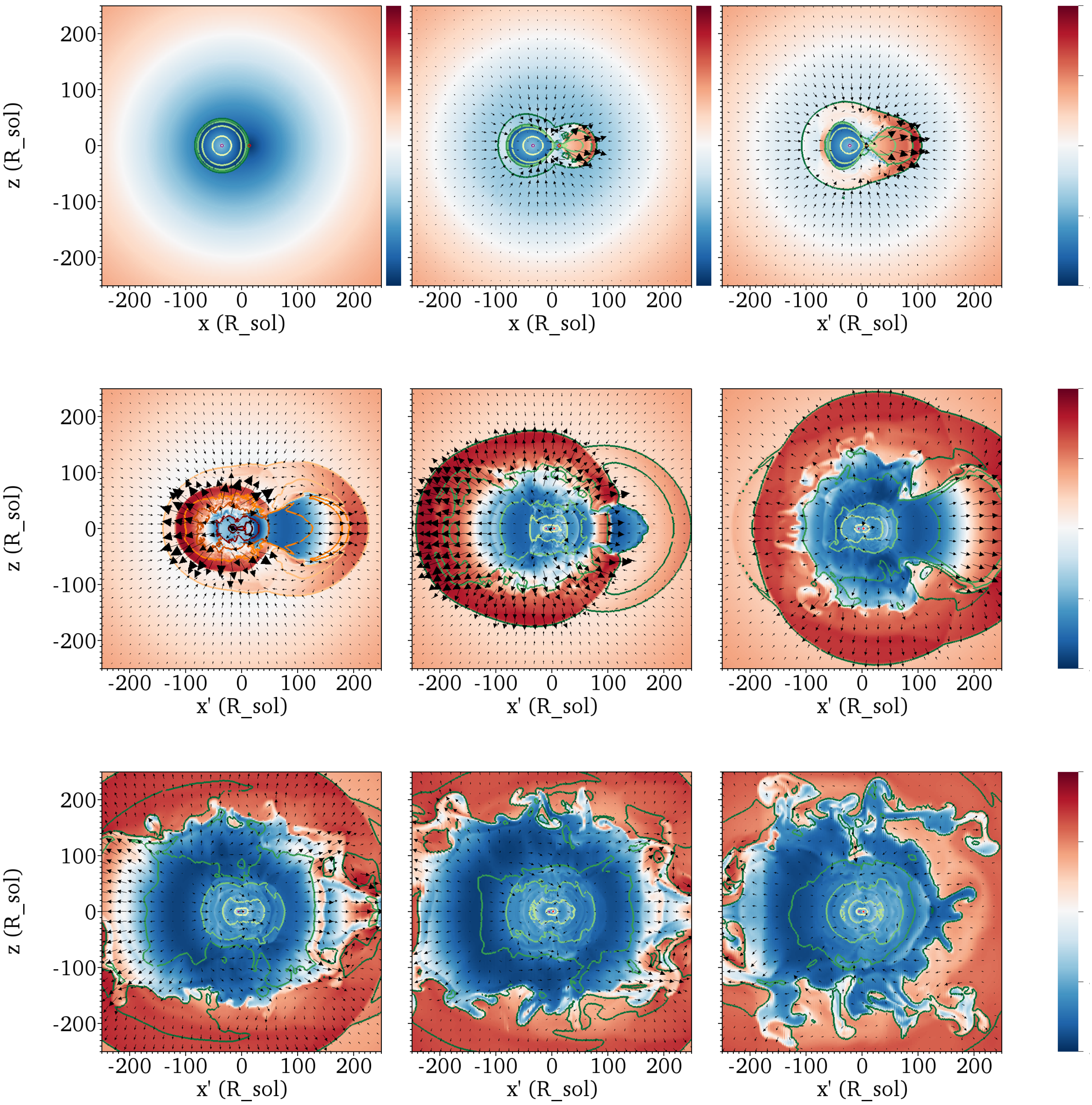

Figure 7: **Bound vs Unbound with density contours and velocity vectors, edge-on view sliced through particles.** $(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic}+\mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic},-\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,{\rm g\,cm^{-3}}$ 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.

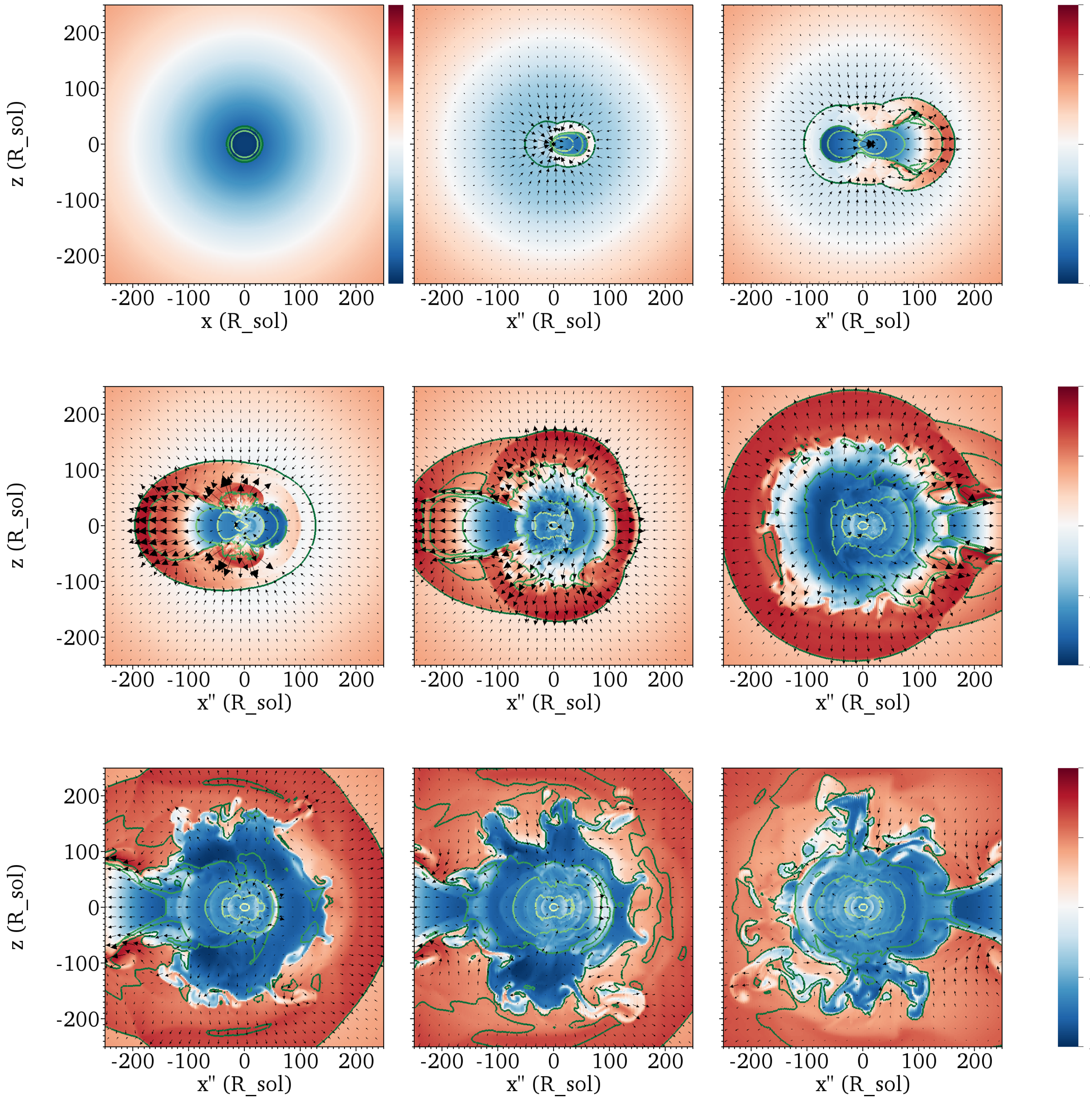

Figure 8: **Bound vs Unbound with density contours and velocity vectors, edge-on view sliced through particle CM orthogonal to particles (facing toward particle 2).** $(\mathcal{E}_{\mathrm{internal}}+\mathcal{E}_{\mathrm{kinetic}}+\mathcal{E}_{\mathrm{pot}})/\max(\mathcal{E}_{\mathrm{internal}}+\mathcal{E}_{\mathrm{kinetic}},-\mathcal{E}_{\mathrm{pot}})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ 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.

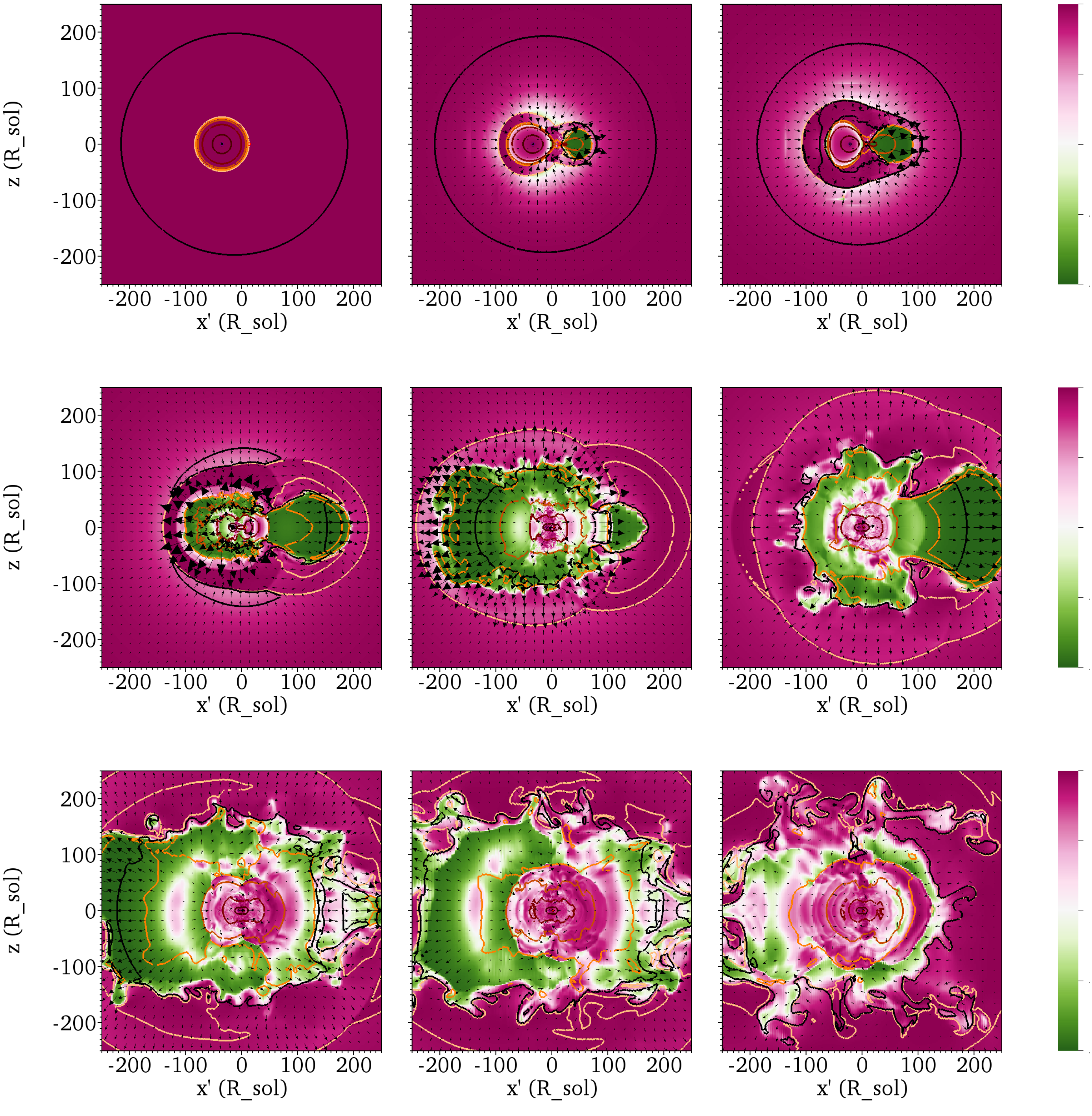

Figure 9: **Internal vs Bulk Kinetic with velocity vectors, edge-on view sliced through particles.** $(\mathcal{E}_{\rm internal} - \mathcal{E}_{\rm kinetic})/\max(\mathcal{E}_{\rm internal}, \mathcal{E}_{\rm kinetic})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Black contour shows $\mathcal{E} = 0$. Orange contours show density from $\rho = 10^{-3}\,{\rm g\,cm^{-3}}$ 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 cyan and yellow for particles 1 and 2, respectively.

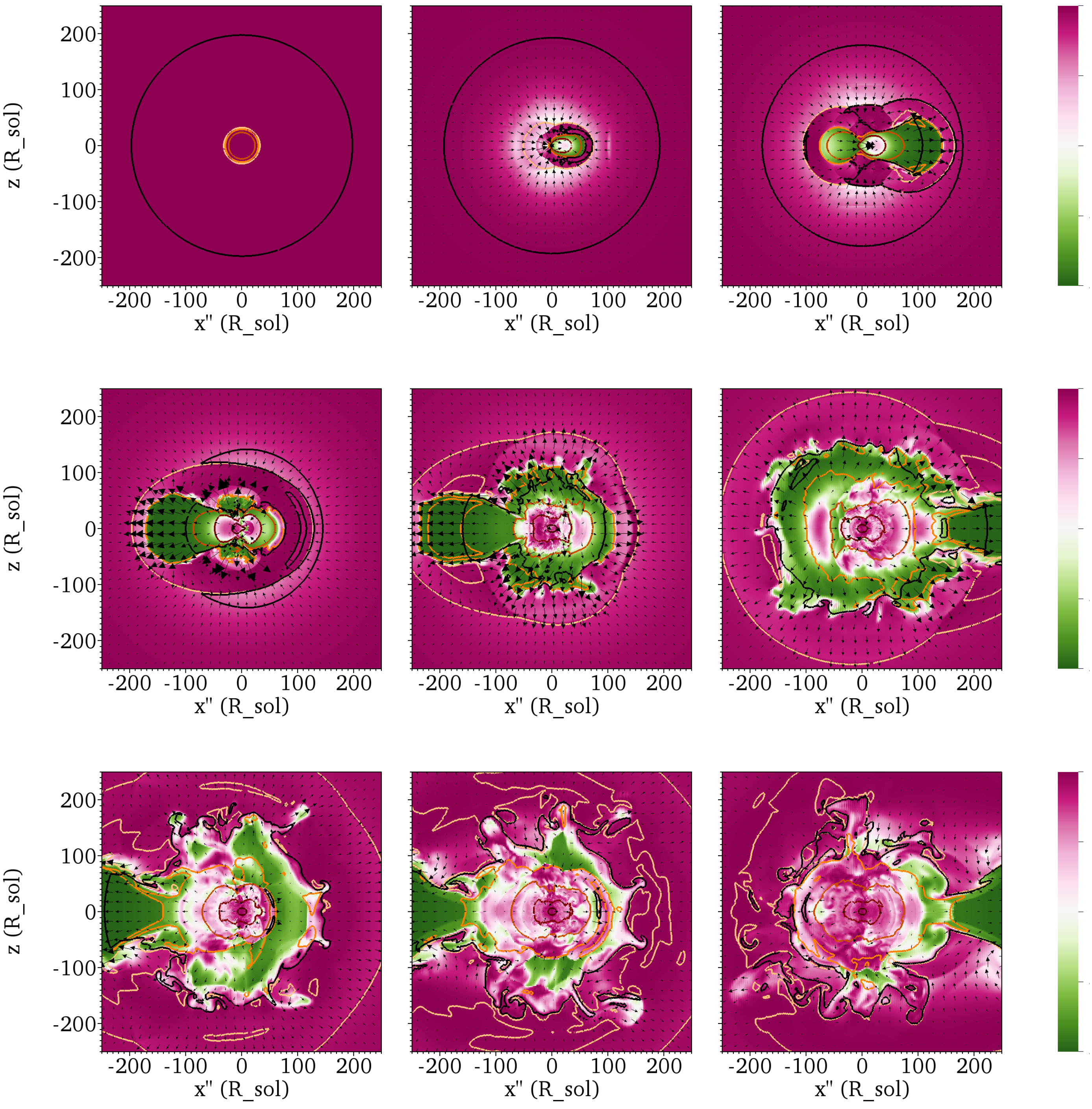

Figure 10: **Internal vs Bulk Kinetic with velocity vectors, edge-on view sliced through particle CM orthogonal to particles (facing toward particle 2).** $(\mathcal{E}_{\text{internal}} - \mathcal{E}_{\text{kinetic}})/\max(\mathcal{E}_{\text{internal}}, \mathcal{E}_{\text{kinetic}})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Black contour shows $\mathcal{E} = 0$. Orange contours show density from $\rho = 10^{-3}\,\mathrm{g\,cm^{-3}}$ 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.

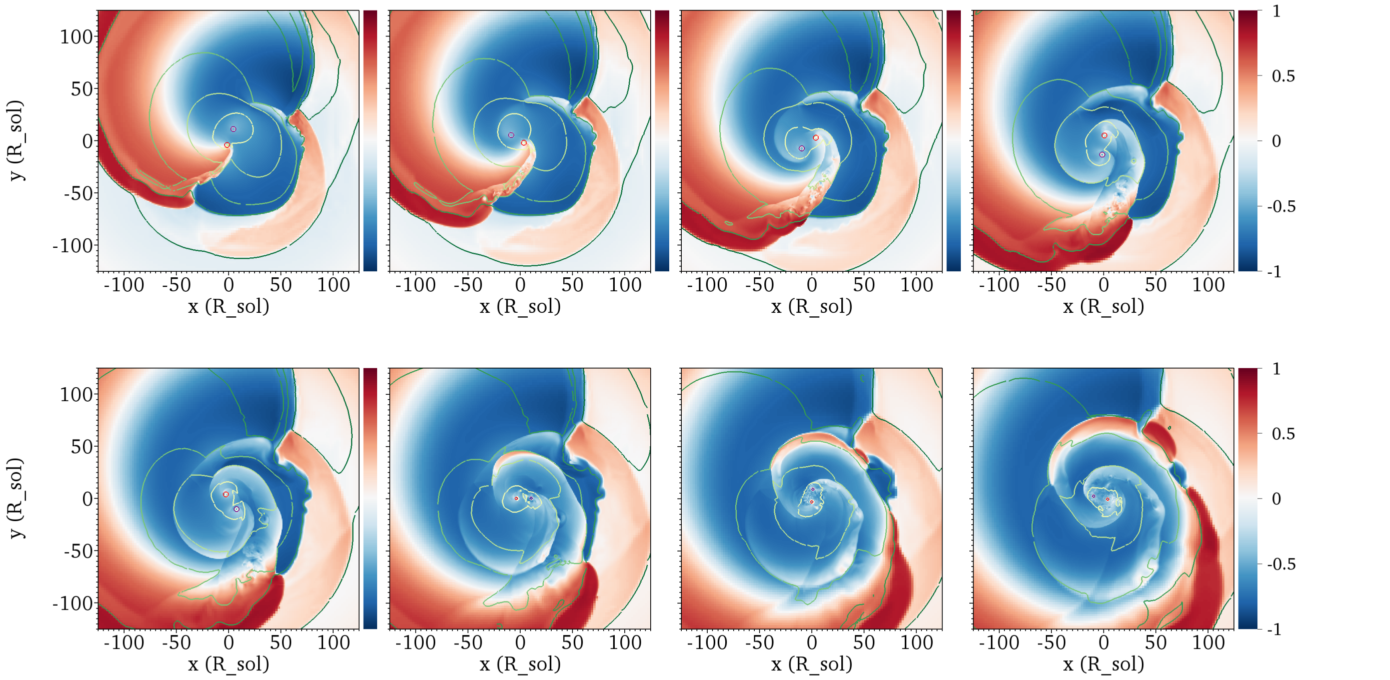

Figure 11: **Bound vs Unbound with density contours** $(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}} + \mathcal{E}_{\text{pot}})/\max(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}}, -\mathcal{E}_{\text{pot}})$ comparing internal and bulk kinetic energy density. Red means positive gas energy (i.e. unbound) while blue means negative gas energy (i.e. bound). Darker colours mean more unbound/bound. Contours show the density from $\rho = 10^{-3}\,\text{g}\,\text{cm}^{-3}$ 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.

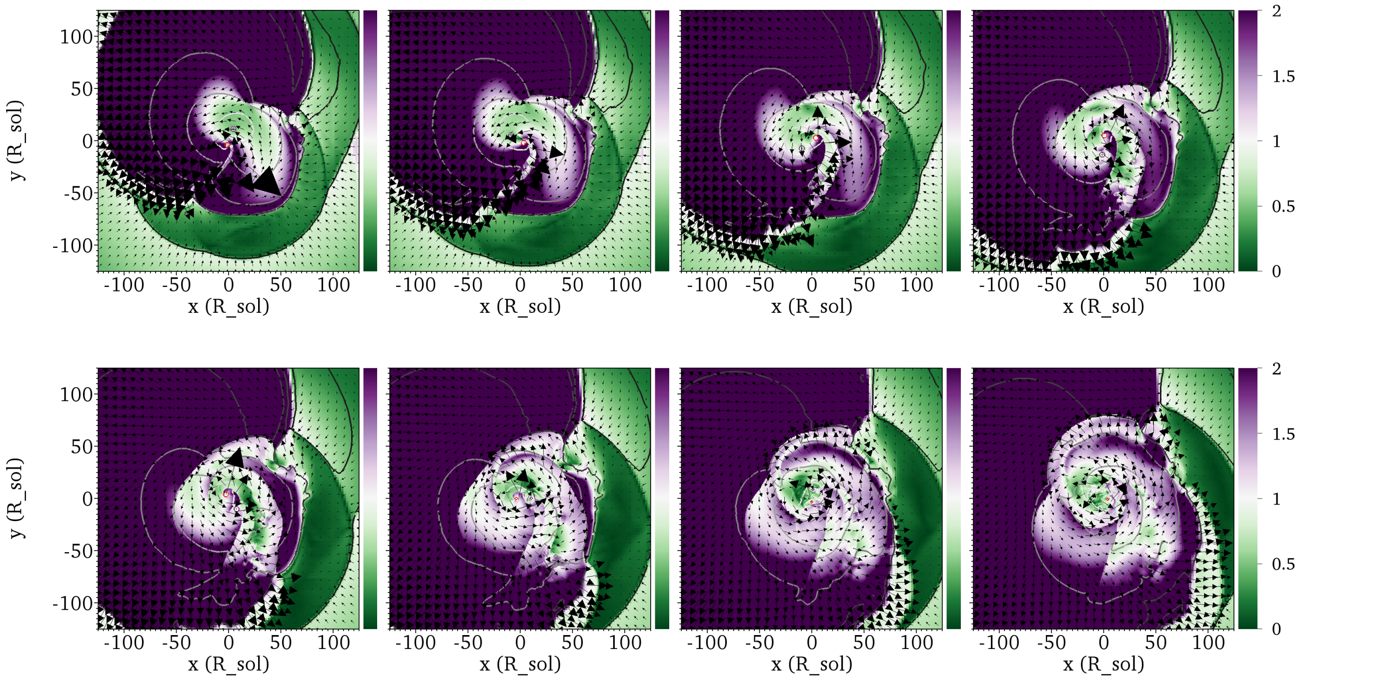

Figure 12: **Mach number** Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,\text{g}\,\text{cm}^{-3}$ downward in Logarithmic intervals of 1 dex. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.

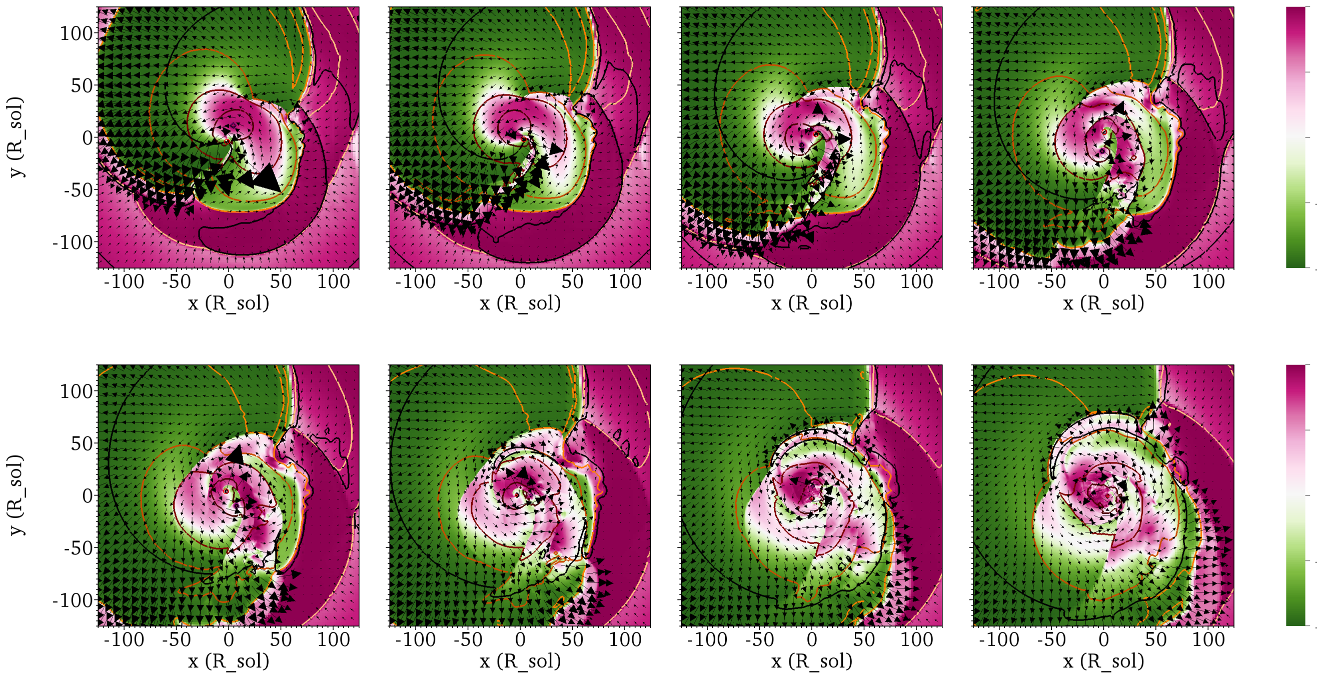

Figure 13: **Internal vs Bulk Kinetic with velocity vectors** $(\mathcal{E}_{\rm internal} - \mathcal{E}_{\rm kinetic})/\max(\mathcal{E}_{\rm internal}, \mathcal{E}_{\rm kinetic})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Black contour shows $\mathcal{E} = 0$. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in cyan and yellow for particles 1 and 2, respectively.

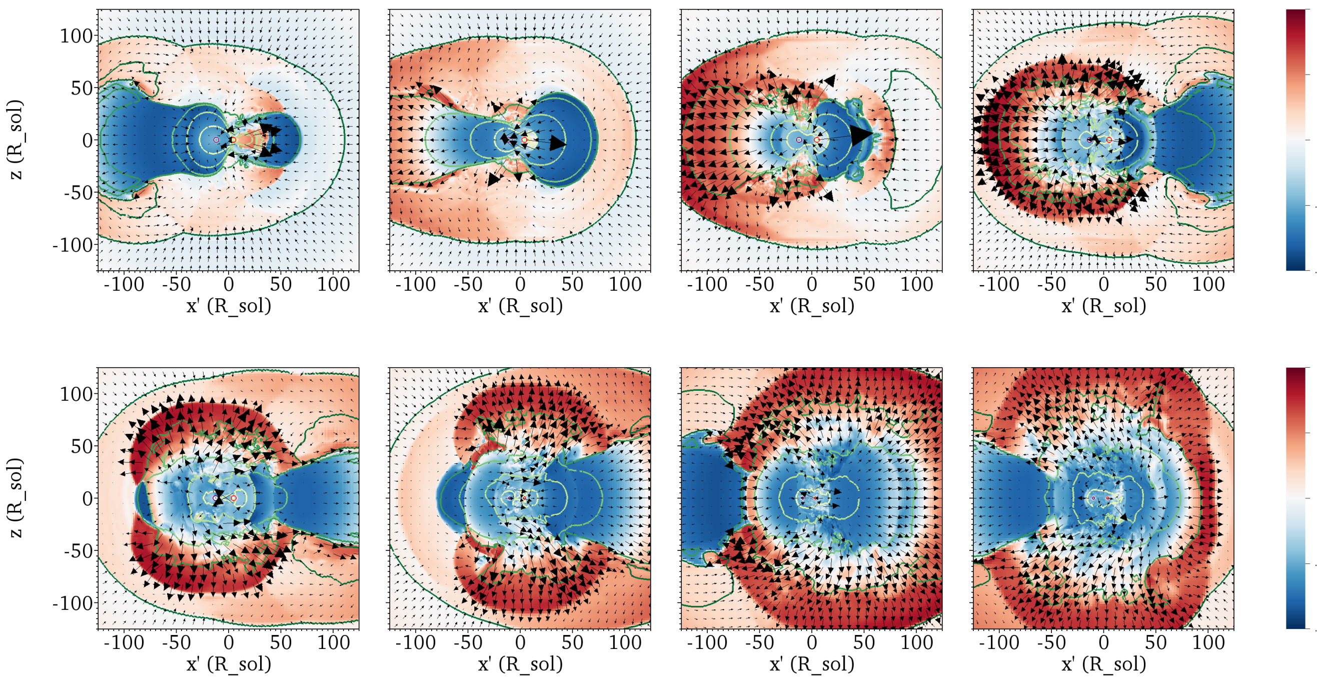

Figure 14: **Bound vs Unbound with density contours and velocity vectors, edge-on view sliced through particles.** $(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm kinetic} + \mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm kinetic}, -\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the density from $\rho = 10^{-3}\,{\rm g\,cm^{-3}}$ 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.

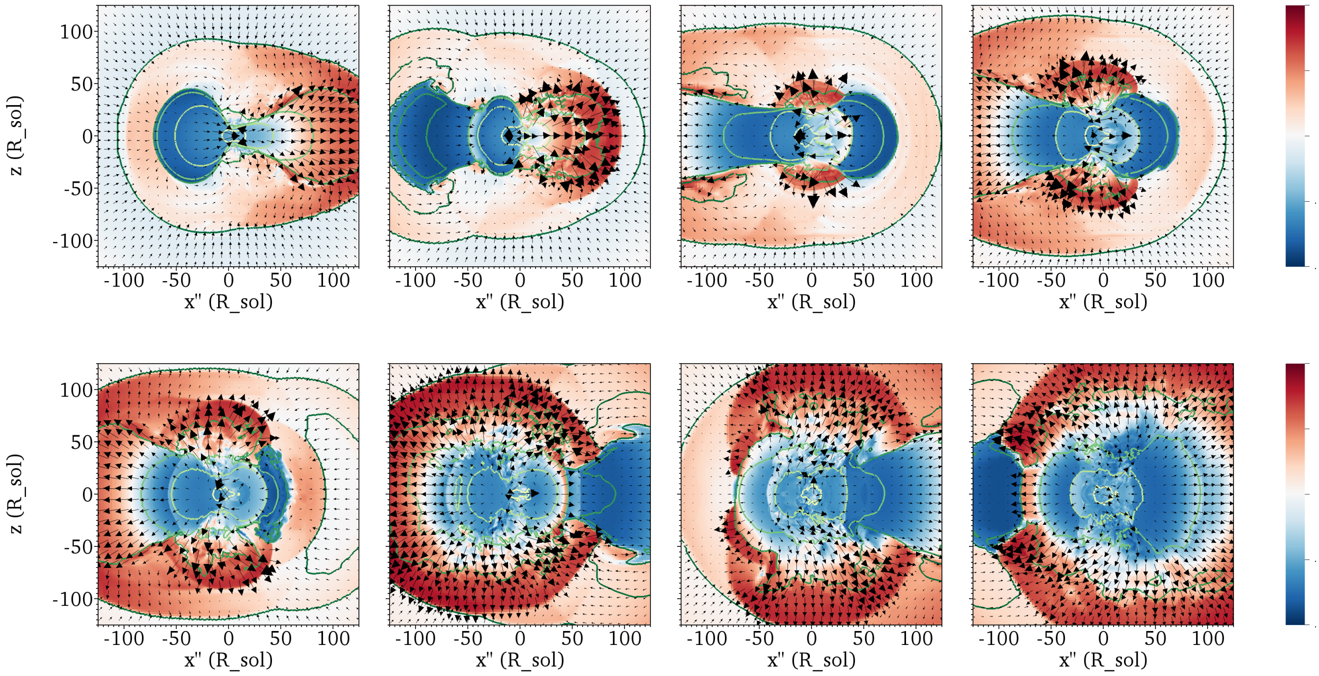

Figure 15: **Bound vs Unbound with density contours and velocity vectors, edge-on view sliced through particle CM orthogonal to particles (facing toward particle 2).** $(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic}+\mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal}+\mathcal{E}_{\rm kinetic},-\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the density from $\rho=10^{-3}\,{\rm g\,cm^{-3}}$ 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.

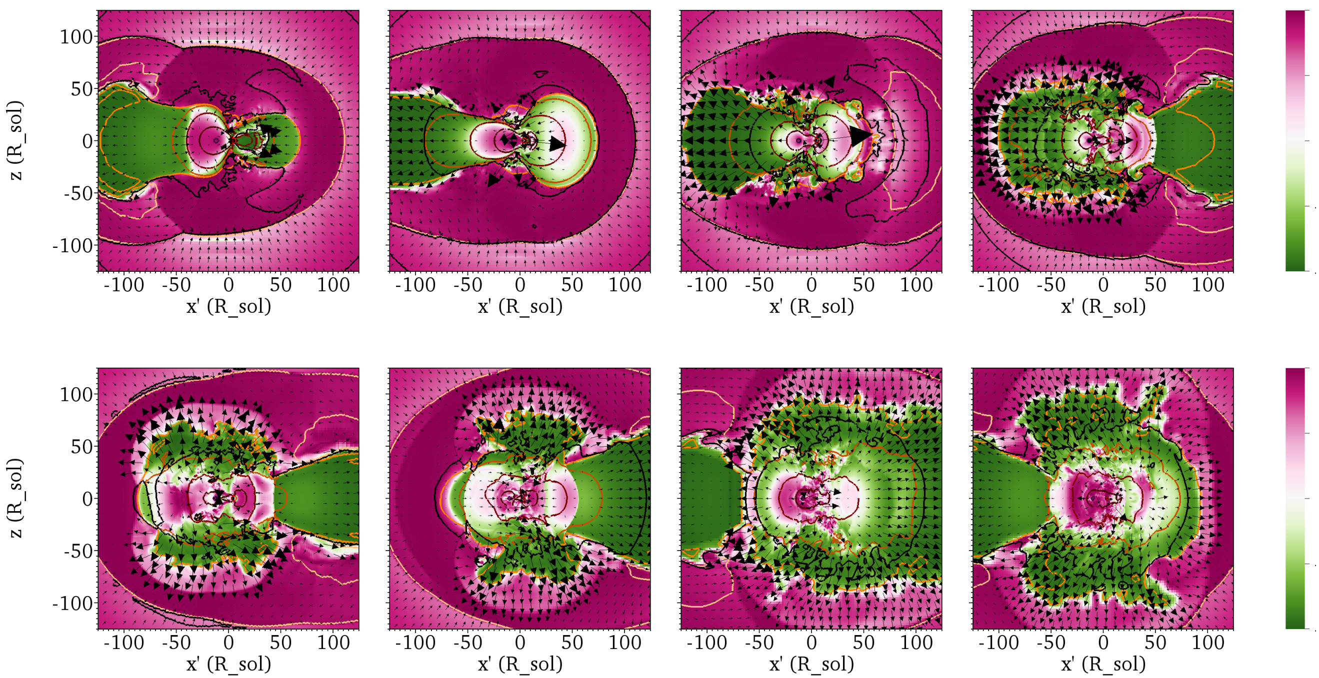

Figure 16: **Internal vs Bulk Kinetic with velocity vectors, edge-on view sliced through particles.** $(\mathcal{E}_{\rm internal}-\mathcal{E}_{\rm kinetic})/\max(\mathcal{E}_{\rm internal},\mathcal{E}_{\rm kinetic})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Black contour shows $\mathcal{E}=0$. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in cyan and yellow for particles 1 and 2, respectively.

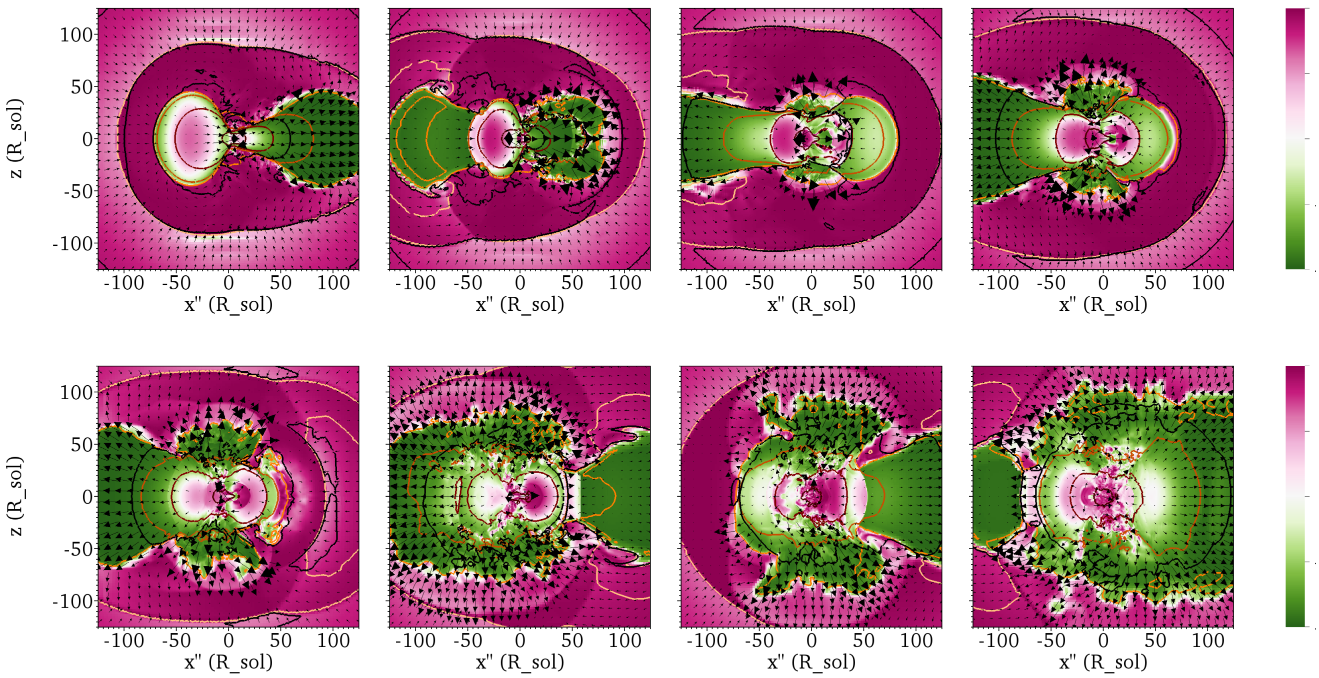

Figure 17: **Internal vs Bulk Kinetic with velocity vectors, edge-on view sliced through particle CM orthogonal to particles (facing toward particle 2).** $(\mathcal{E}_{\rm internal} - \mathcal{E}_{\rm kinetic})/\max(\mathcal{E}_{\rm internal}, \mathcal{E}_{\rm kinetic})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Black contour shows $\mathcal{E} = 0$. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in cyan and yellow for particles 1 and 2, respectively.

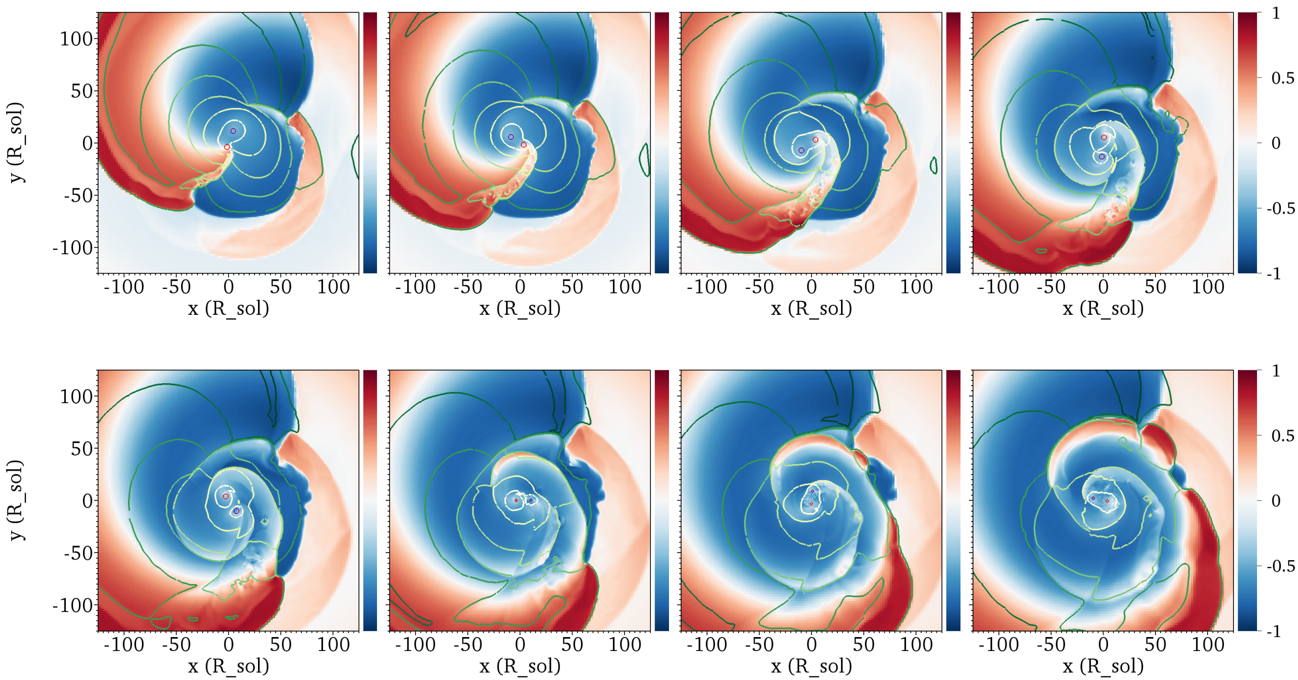

Figure 18: **Bound vs Unbound with pressure contours and velocity vectors** $(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm kinetic} + \mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm kinetic}, -\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Contours show the pressure from $P = 10^{10}\,{\rm dyn\,cm^{-2}}$ 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.

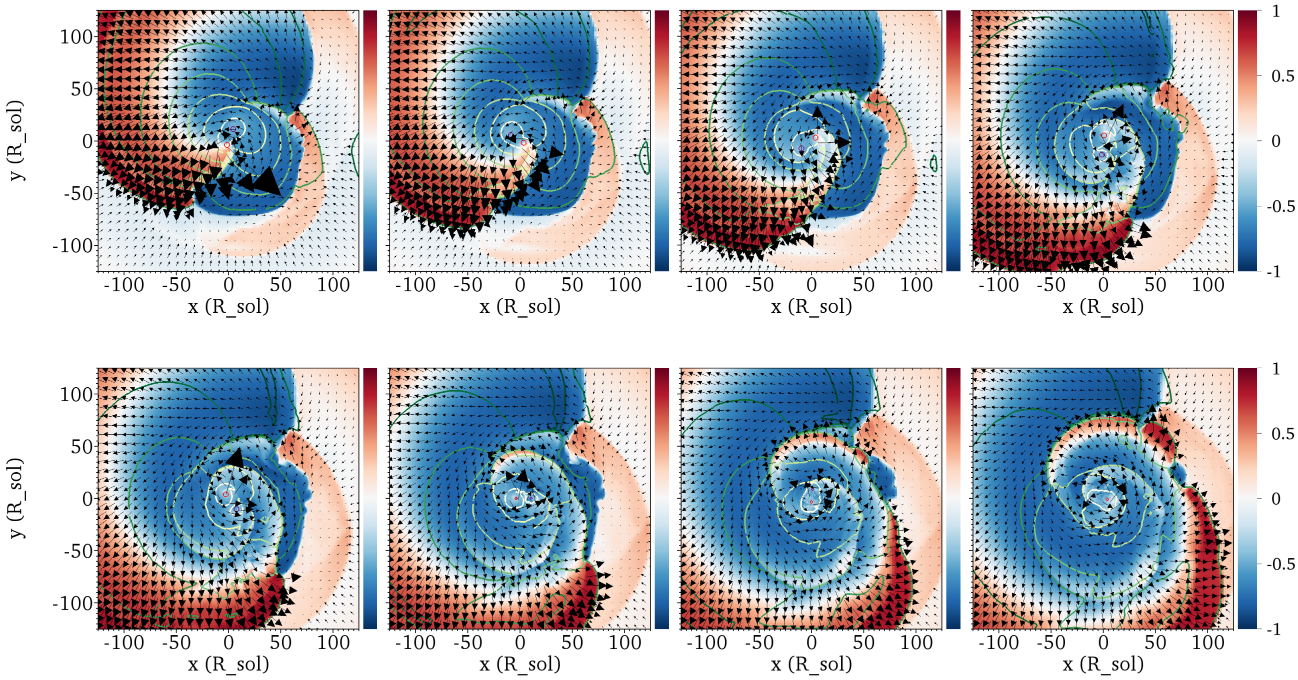

Figure 19: **Bound vs Unbound with pressure contours and velocity vectors** $(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm kinetic} + \mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm kinetic}, -\mathcal{E}_{\rm pot})$ comparing internal and bulk kinetic energy density. Magenta means internal energy dominates (between the two forms), green means bulk kinetic energy dominates, and white means they are about equal. Vectors showing velocity. Contours show the pressure from $P = 10^{10}\,{\rm dyn\,cm^{-2}}$ 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.

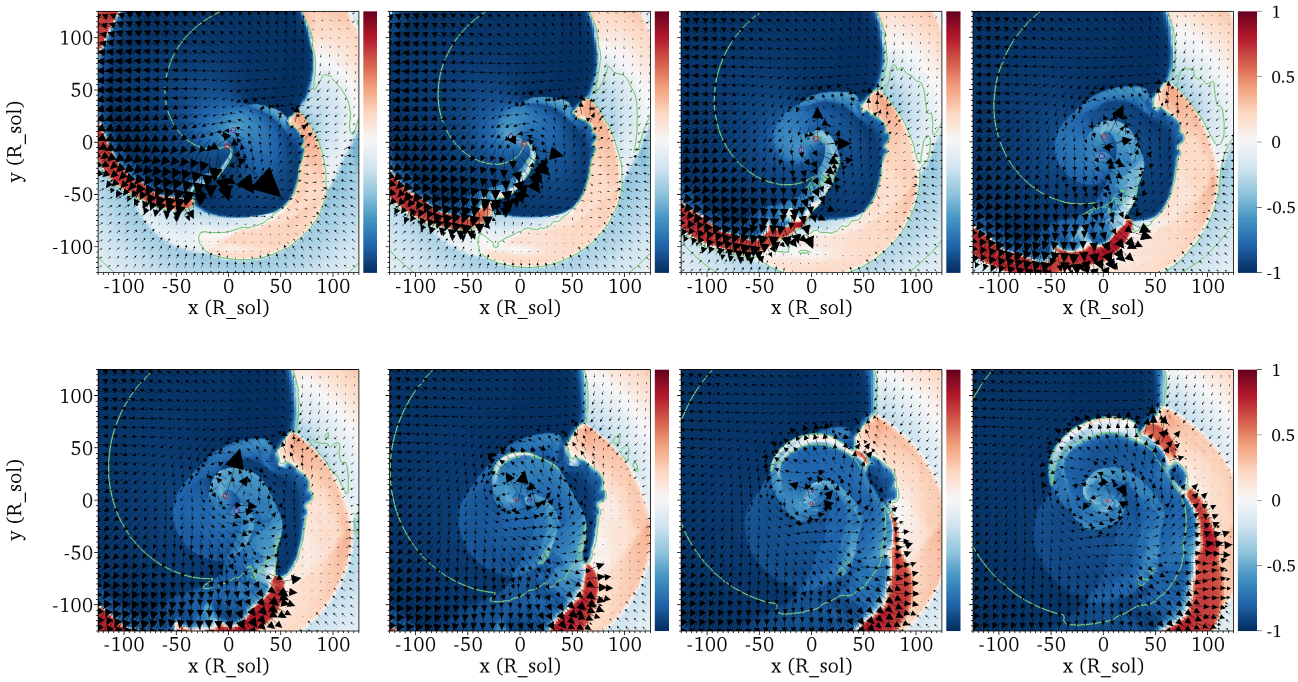

Figure 20: **Internal vs Potential with velocity vectors** $(\mathcal{E}_{\rm internal} + \mathcal{E}_{\rm pot})/\max(\mathcal{E}_{\rm internal}, -\mathcal{E}_{\rm pot})$ comparing internal and potential energy density. Red means internal energy dominates (between the two forms), blue means potential energy dominates, and white means they are about equal. Vectors showing velocity. Green contour shows $\mathcal{E} = 0$. 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.

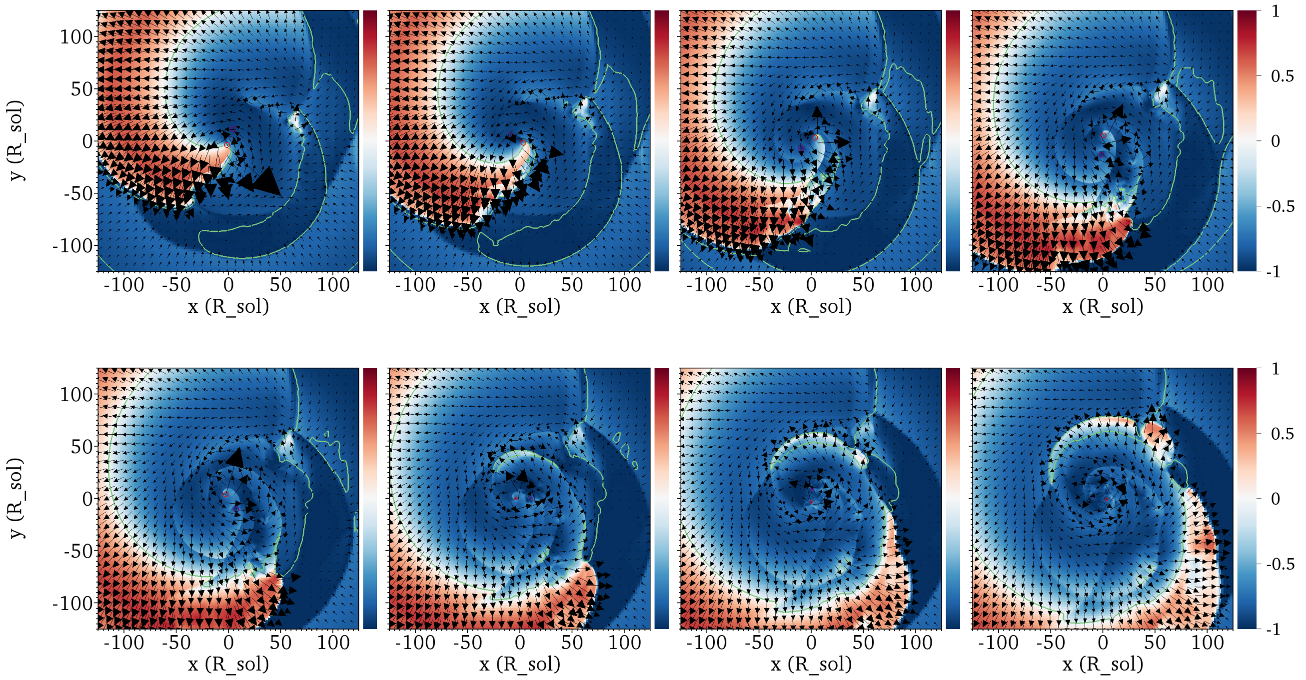

Figure 21: **Bulk kinetic vs Potential with velocity vectors** $(\mathcal{E}_{\text{kinetic}} + \mathcal{E}_{\text{pot}})/\max(\mathcal{E}_{\text{kinetic}}, -\mathcal{E}_{\text{pot}})$ comparing bulk kinetic and potential energy density. Red means bulk kinetic energy dominates (between the two forms), blue means potential energy dominates, and white means they are about equal. Vectors showing velocity. Green contour shows $\mathcal{E} = 0$. 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.

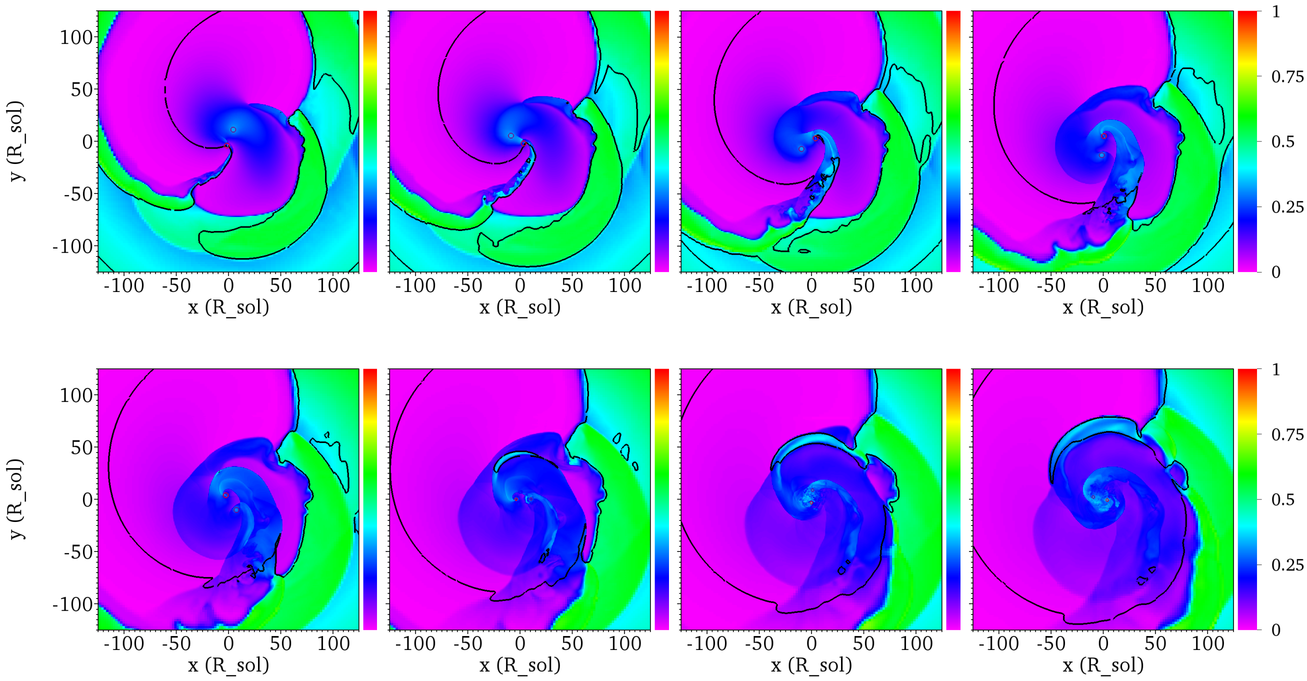

Figure 22: **Internal energy relative contribution** $\mathcal{E}_{\text{internal}}/(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}} - \mathcal{E}_{\text{pot}})$. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.

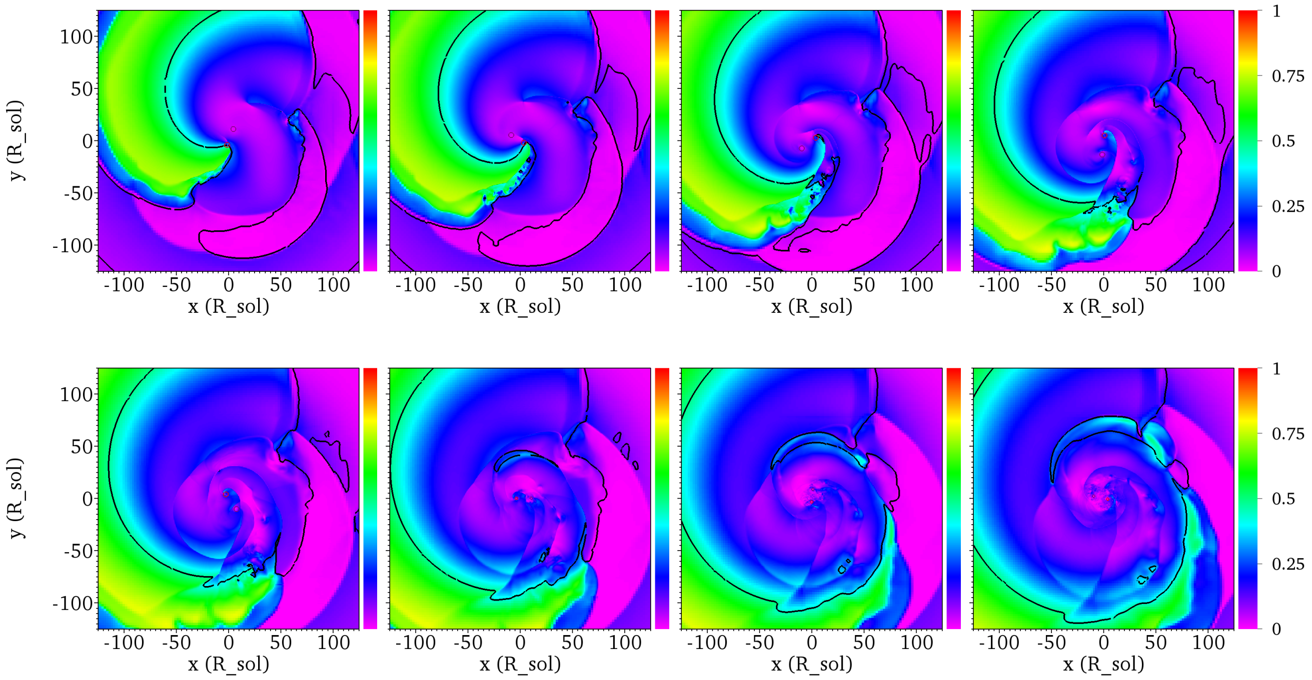

Figure 23: **Bulk kinetic energy relative contribution** $\mathcal{E}_{\text{kinetic}}/(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}} - \mathcal{E}_{\text{pot}})$. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.

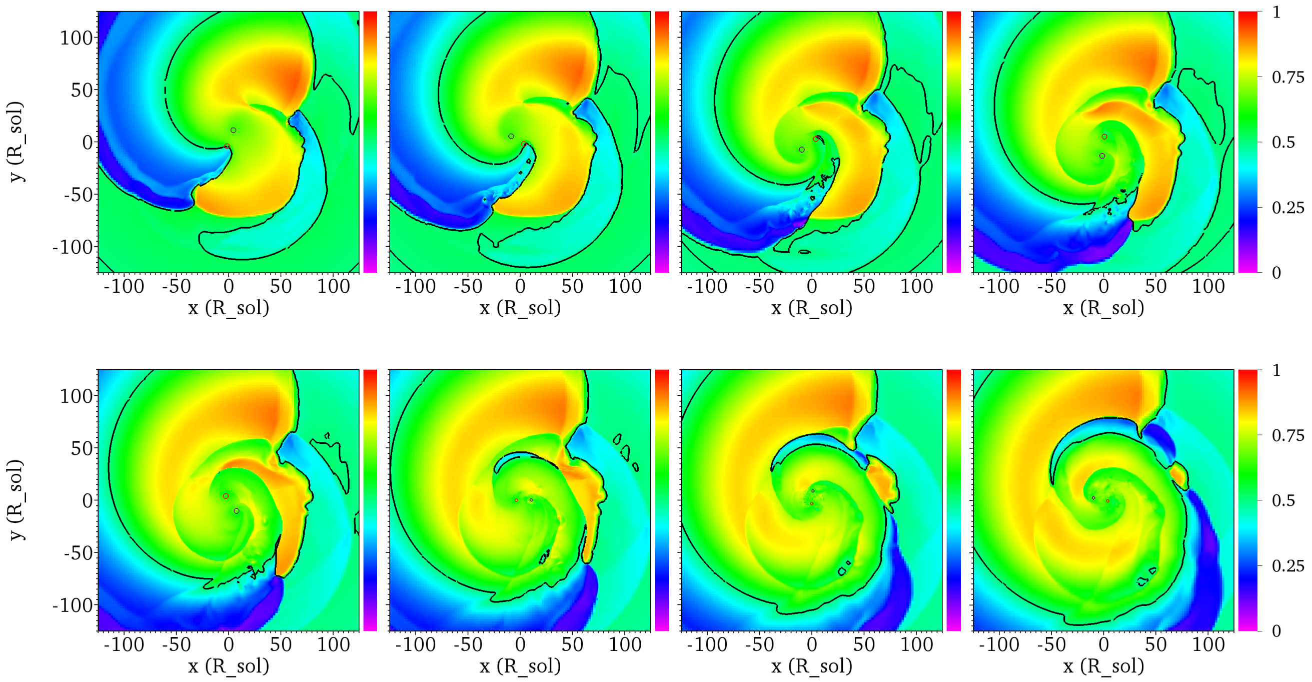

Figure 24: **Potential energy relative contribution** $\mathcal{E}_{\text{pot}}/(\mathcal{E}_{\text{internal}} + \mathcal{E}_{\text{kinetic}} - \mathcal{E}_{\text{pot}})$. Frame of reference is that of the simulation with the particle CM located at the center in each plot, with softening spheres shown in purple and red for particles 1 and 2, respectively.