EoS Figures: Ionization and Recombination of Helium

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ABSTRACT
Figures

Key words: binaries: close – stars: evolution – stars: kinematics and dynamics – stars: mass loss – stars: winds, outflows – hydrodynamics

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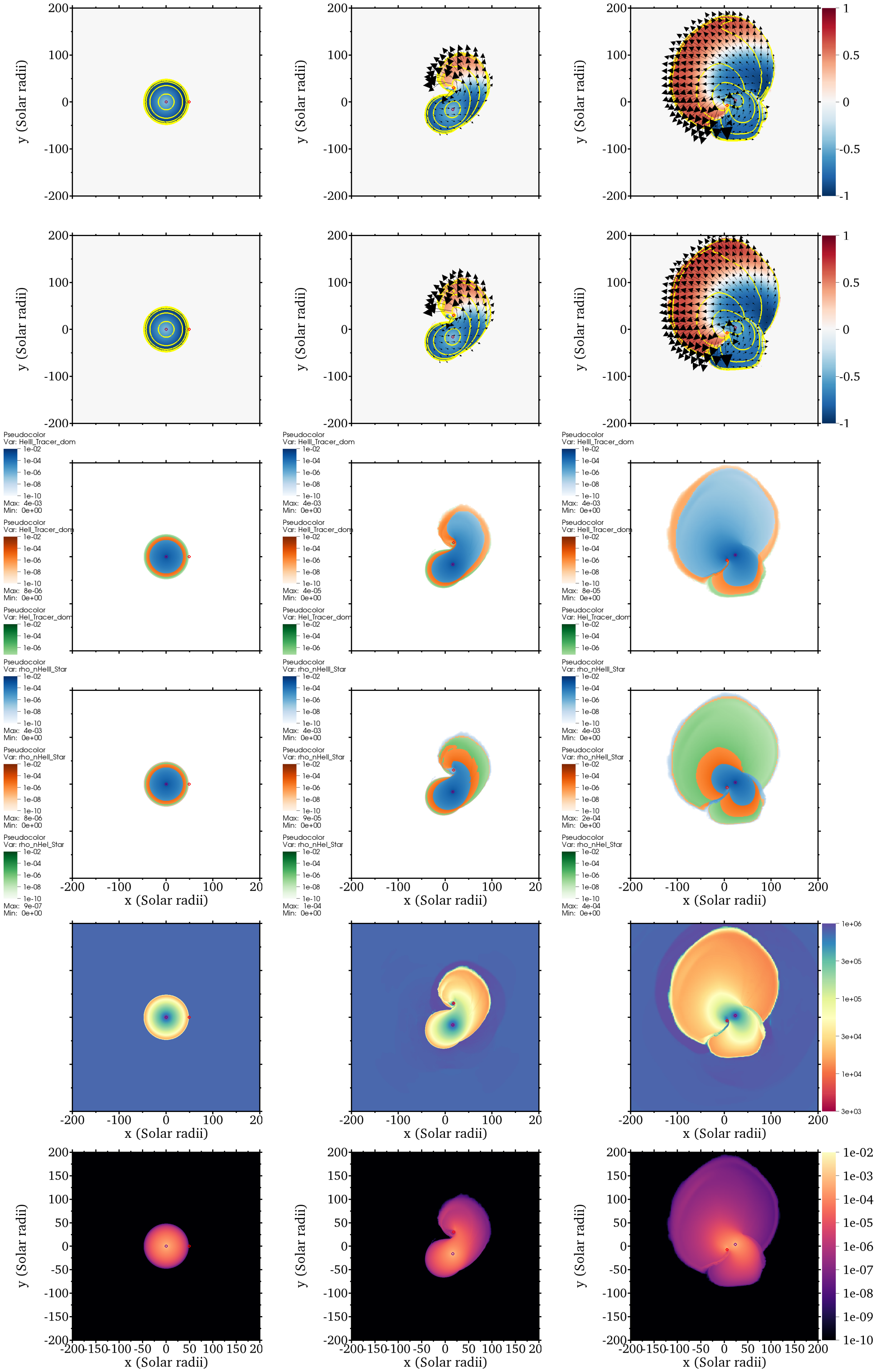

Figure 1. Columns show $t = 0$, 5.8 and 11.6 d. Rows are: (1) Normalized binding energy density of star tracer gas for Run 282 ($\gamma = 5/3$ ideal gas), (2) Normalized binding energy density of star tracer gas for Run 277 (MESA EOS without radiation energy)), (3) Gas density at location where a given He tracer density is highest for Run 277, (4) Gas density at location where a given He ionization state is highest, (5) Gas temperature, (6) Gas density.

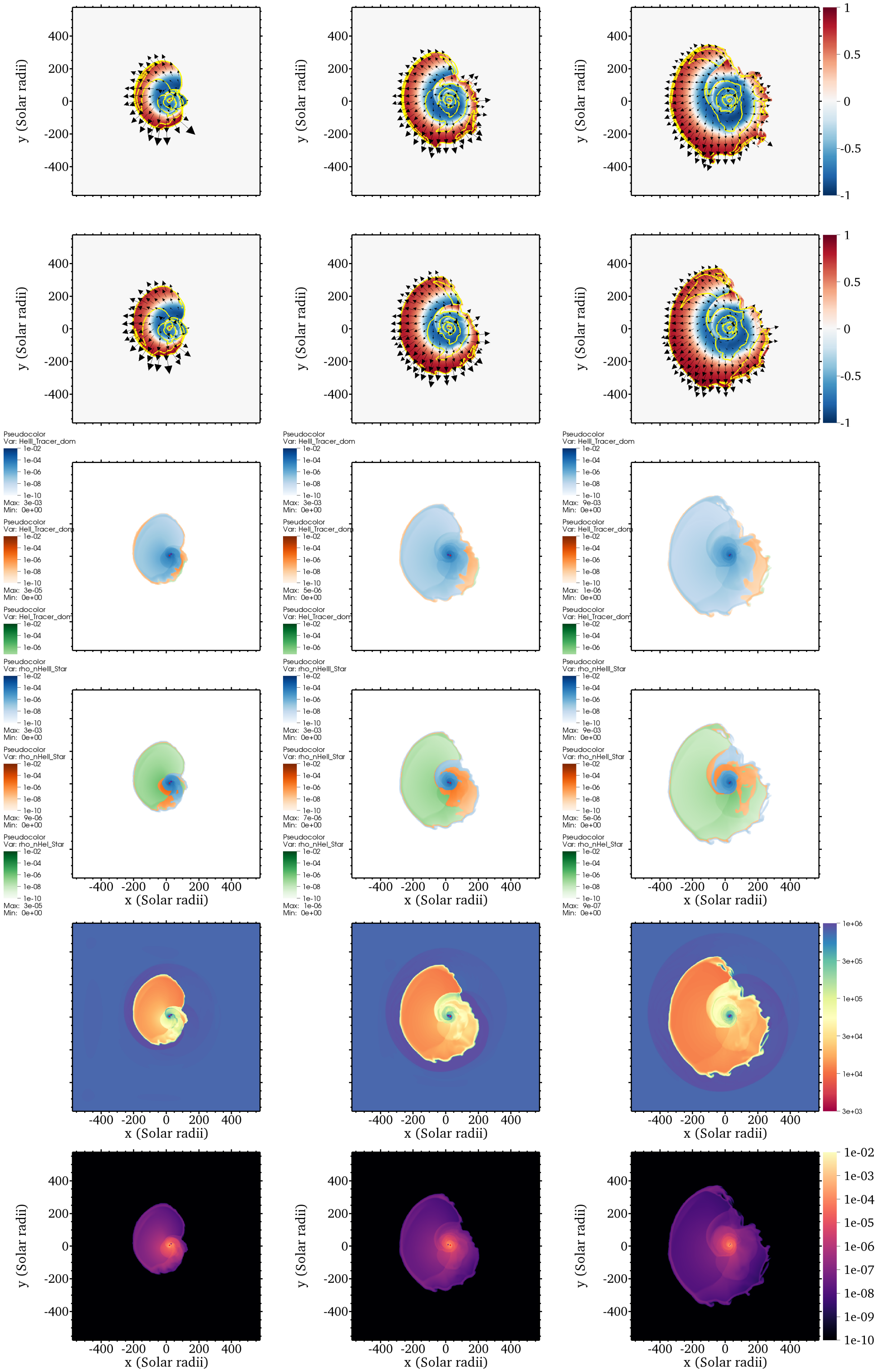

Figure 2. Continuation of Fig. 1 for times t = 17.4, 23.1 and 28.9 d.

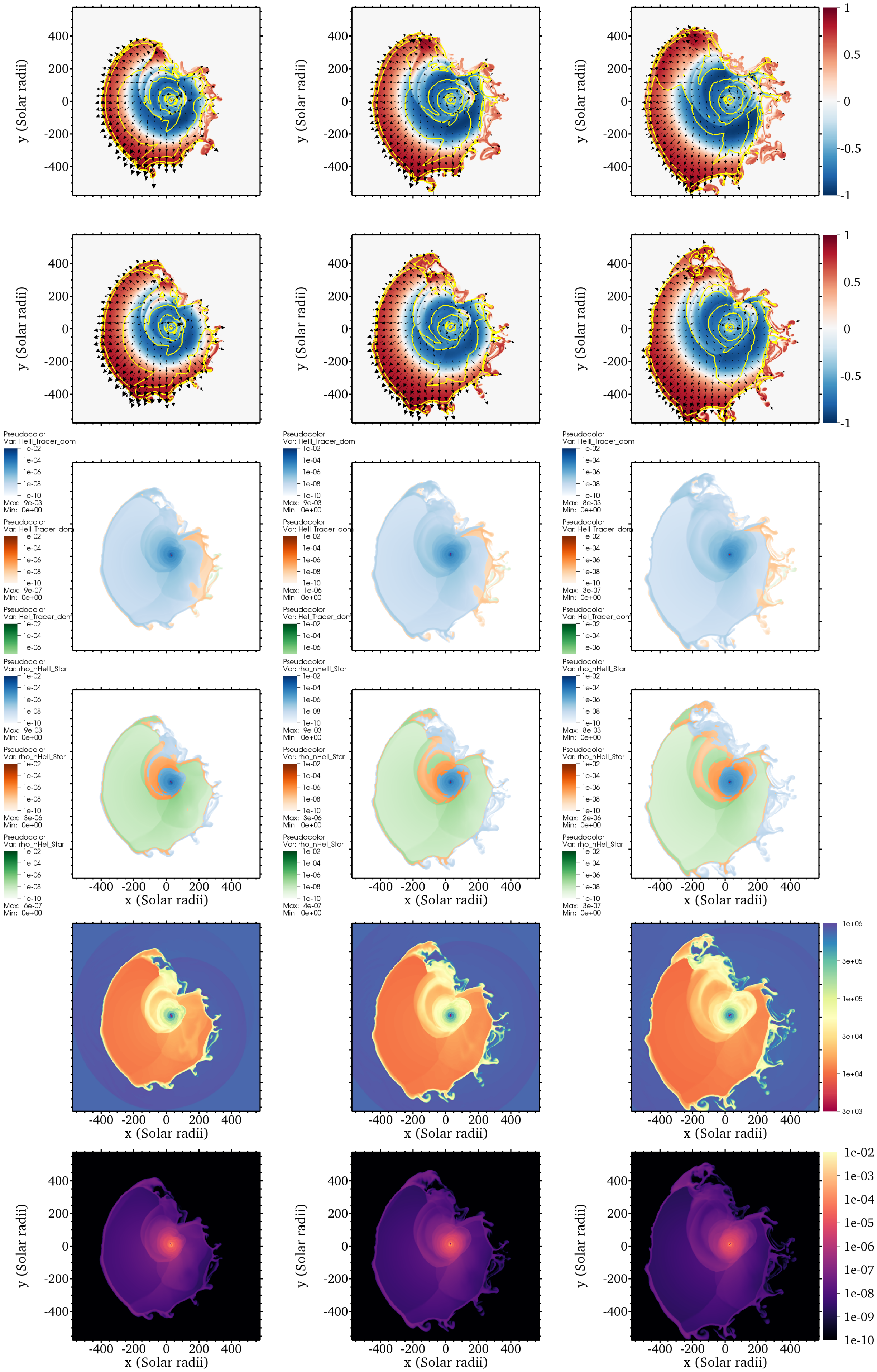

Figure 3. Continuation of Fig. 1 for times t = 34.7, 40.5 and 46.3 d.

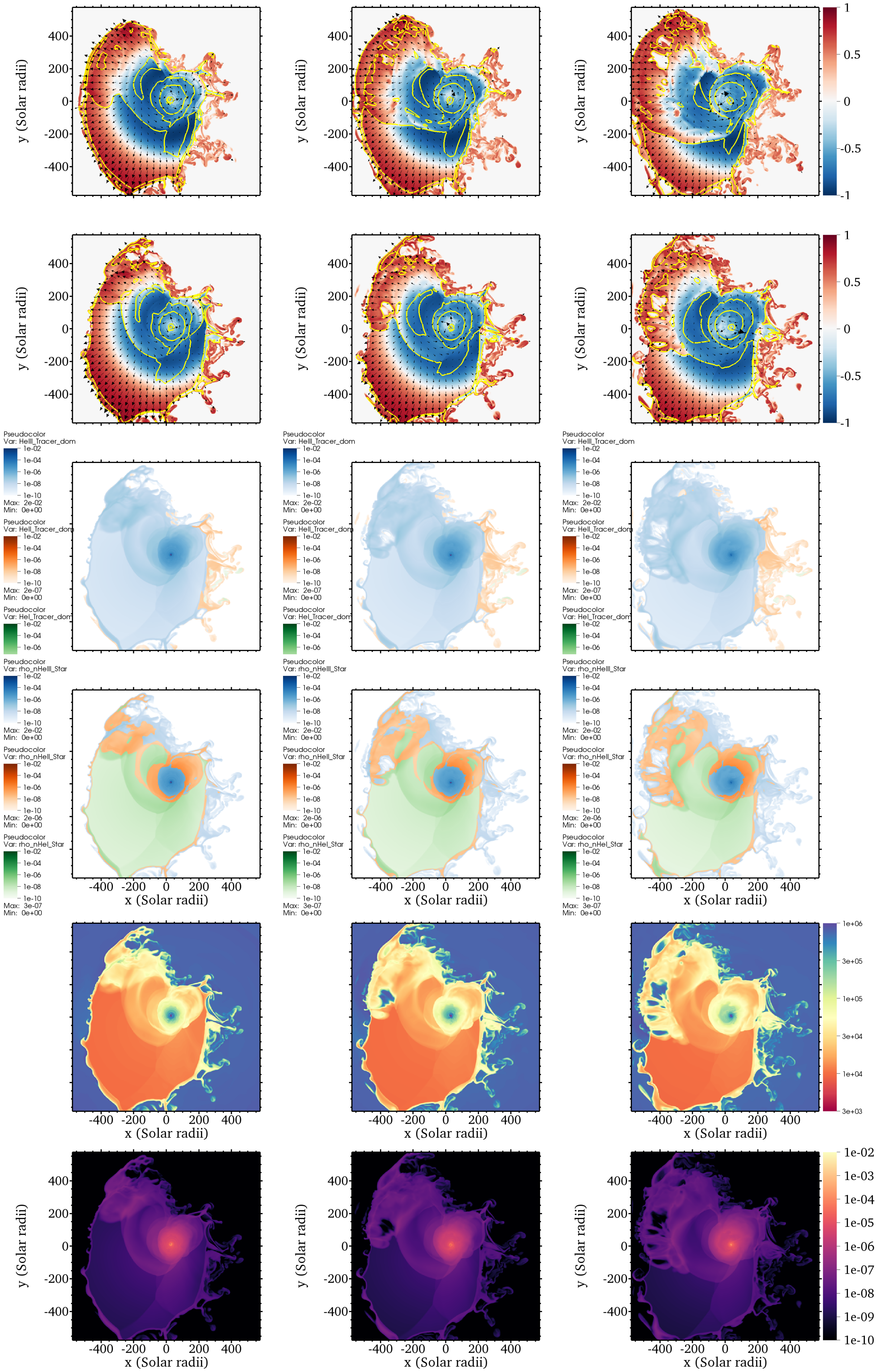

Figure 4. Continuation of Fig. 1 for times t = 52.1, 57.9 and 63.7 d.

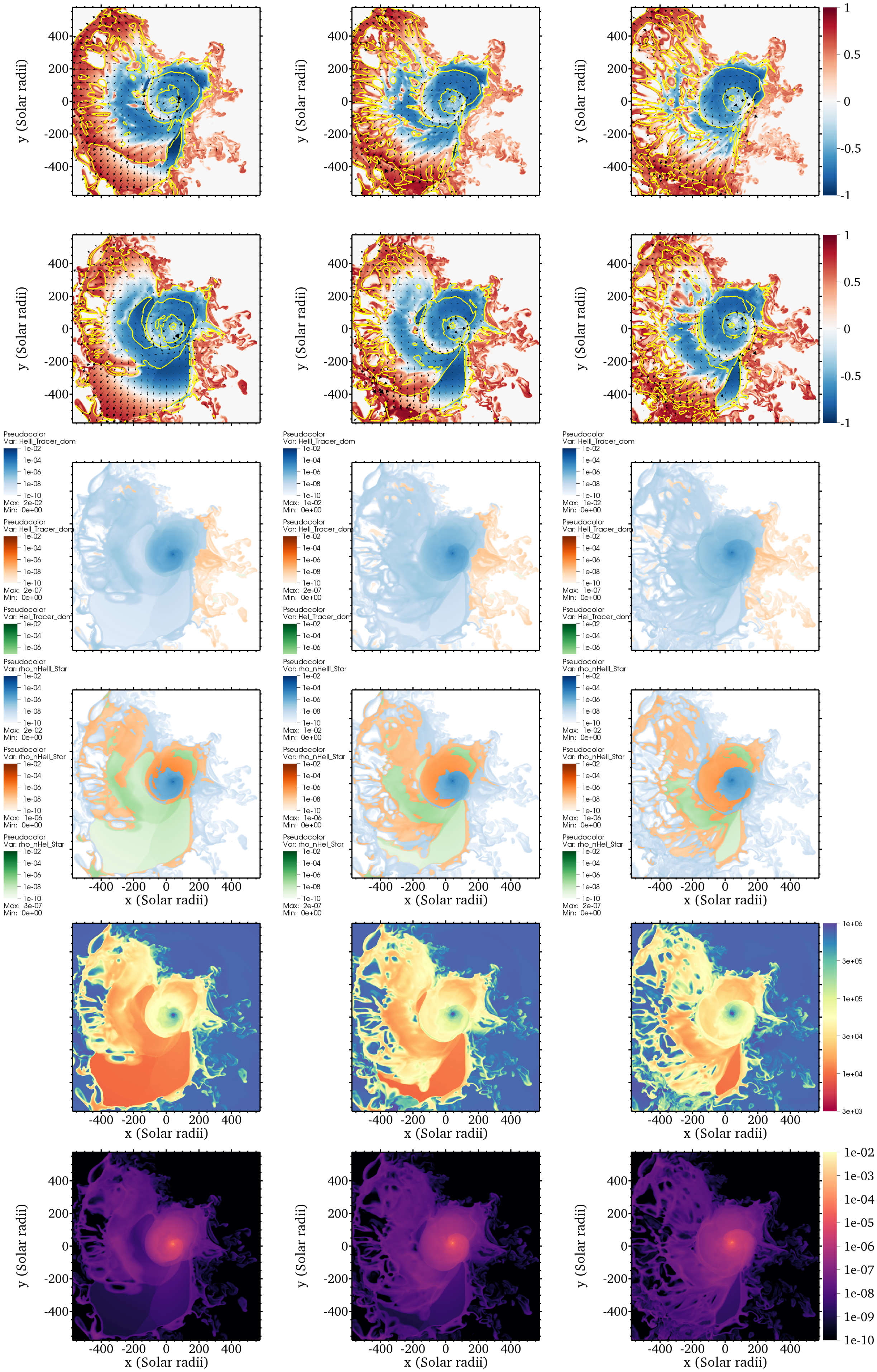

Figure 5. Continuation of Fig. 1 for times t = 69.4, 75.2 and 81.0 d.

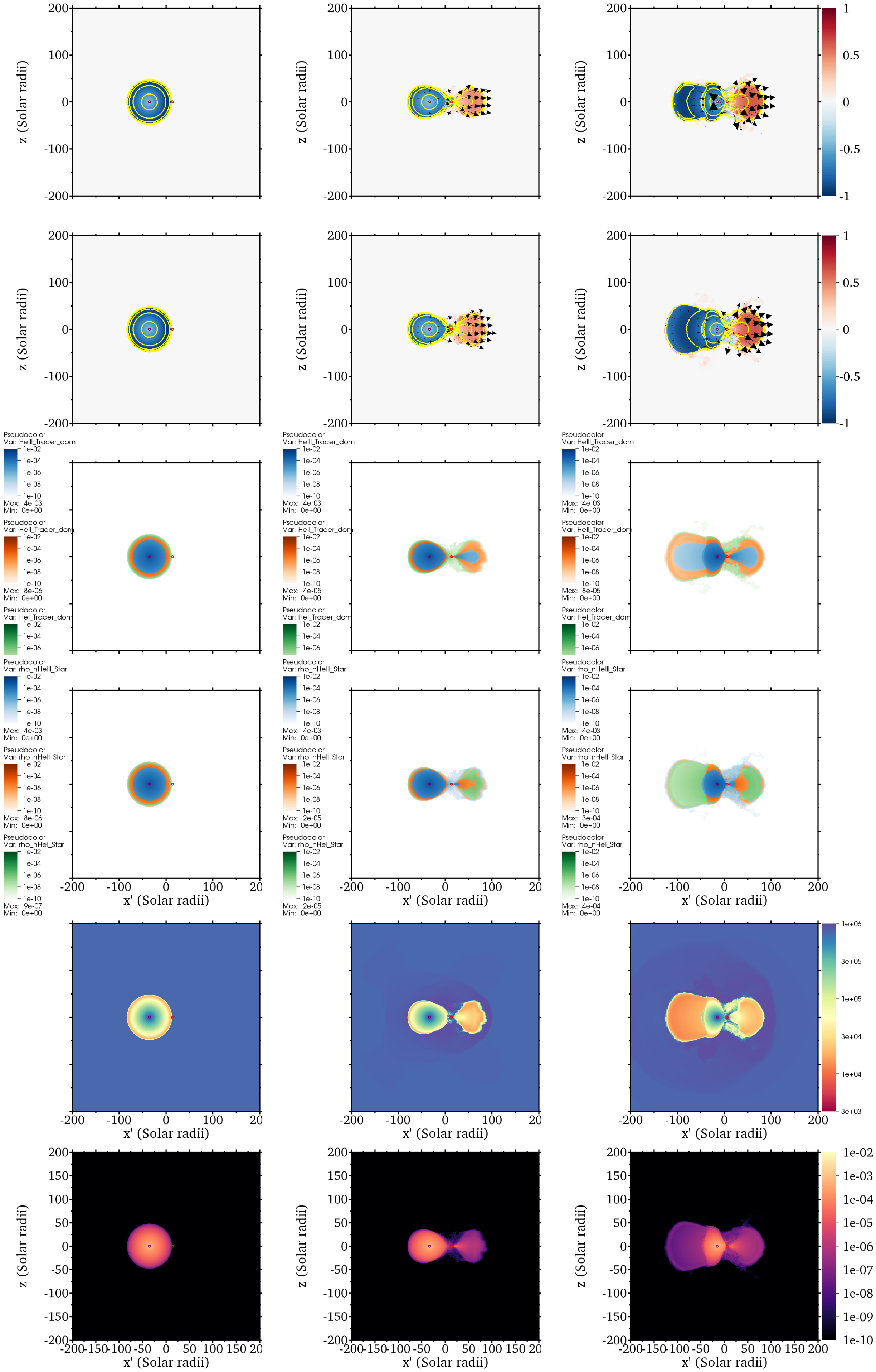

Figure 6. Columns show t = 0, 5.8 and 11.6 d. Rows are: (1) HeI-dominant gas tracer, (2) HeII-dominant gas tracer, (3) HeIII-dominant gas tracer, (4) Normalized binding energy density of star tracer gas, (5) Current dominant local ionization state of gas, (6) Gas temperature.

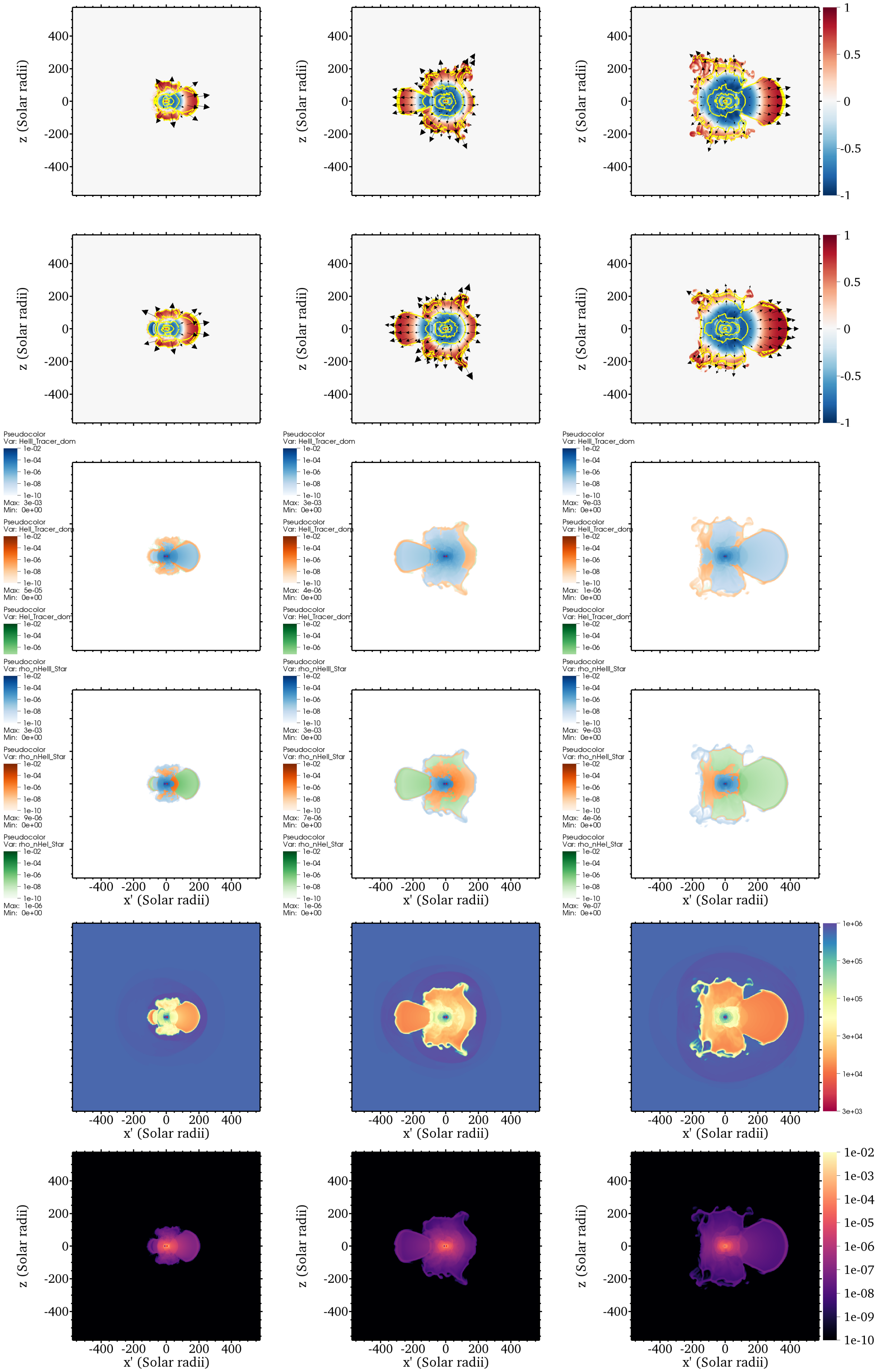

Figure 7. Continuation of Fig. ?? for times t = 17.4, 23.1 and 28.9 d.

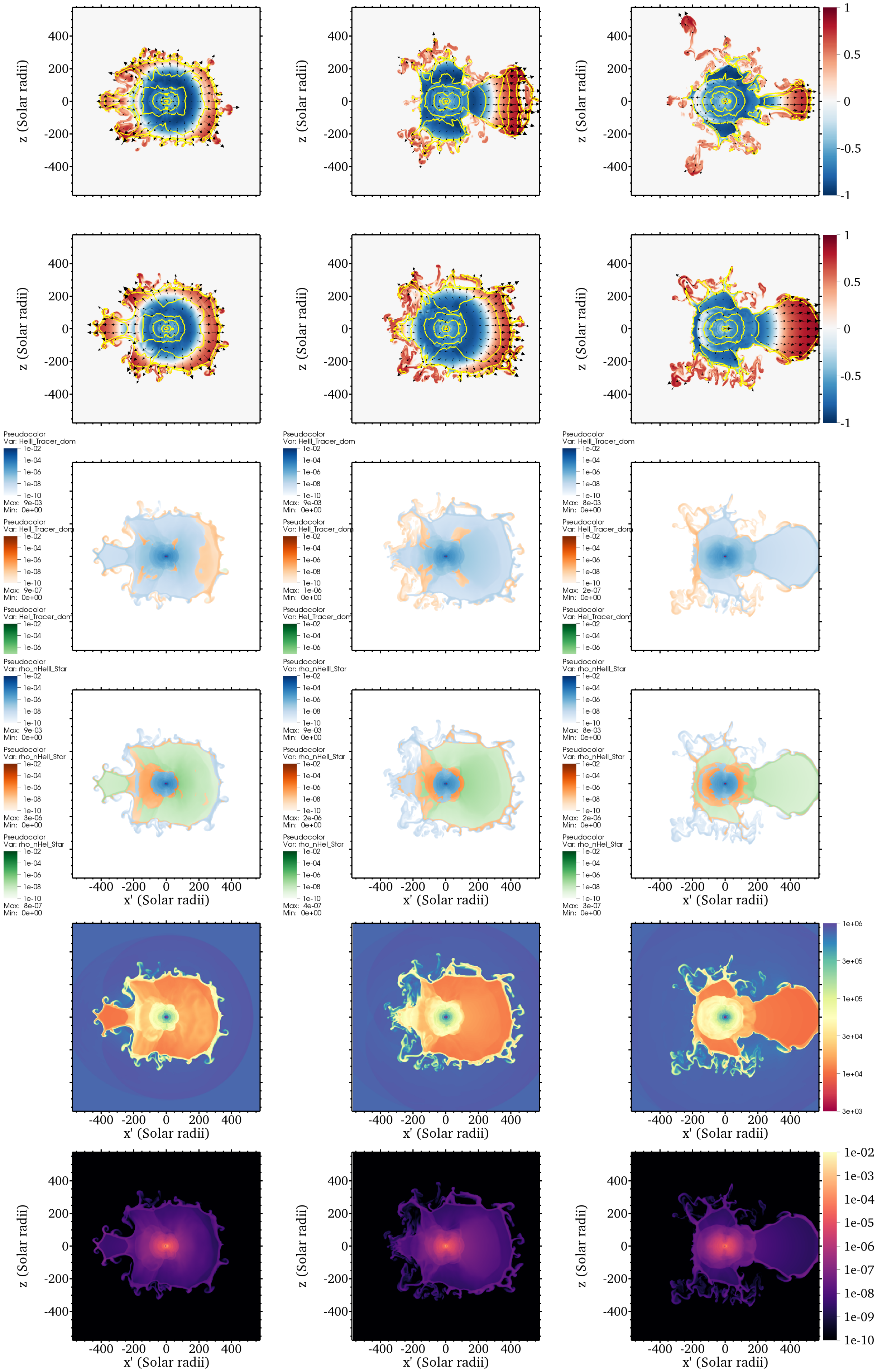

Figure 8. Continuation of Fig. ?? for times t = 34.7, 40.5 and 46.3 d.

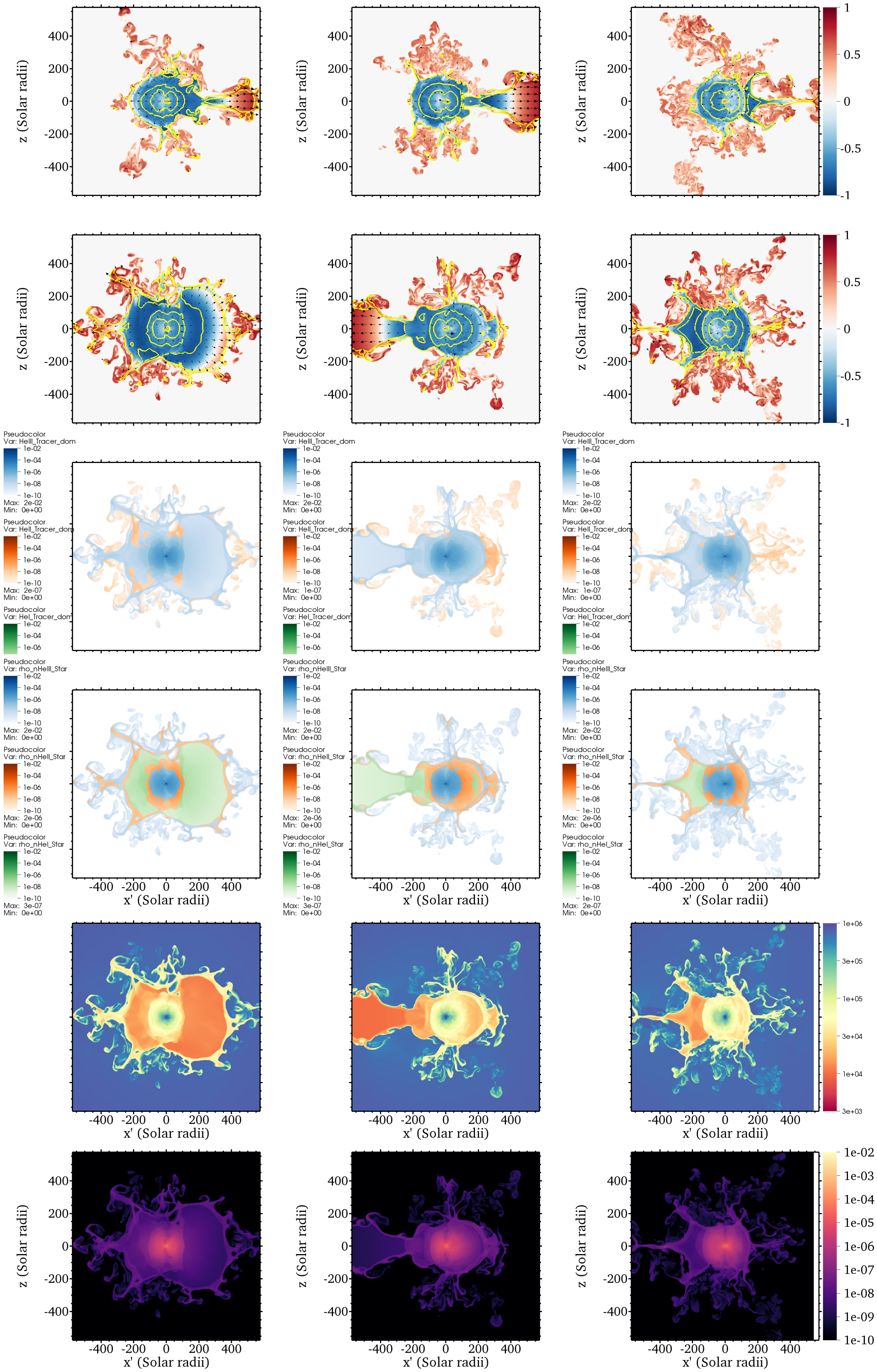

Figure 9. Continuation of Fig. ?? for times t = 52.1, 57.9 and 63.7 d.

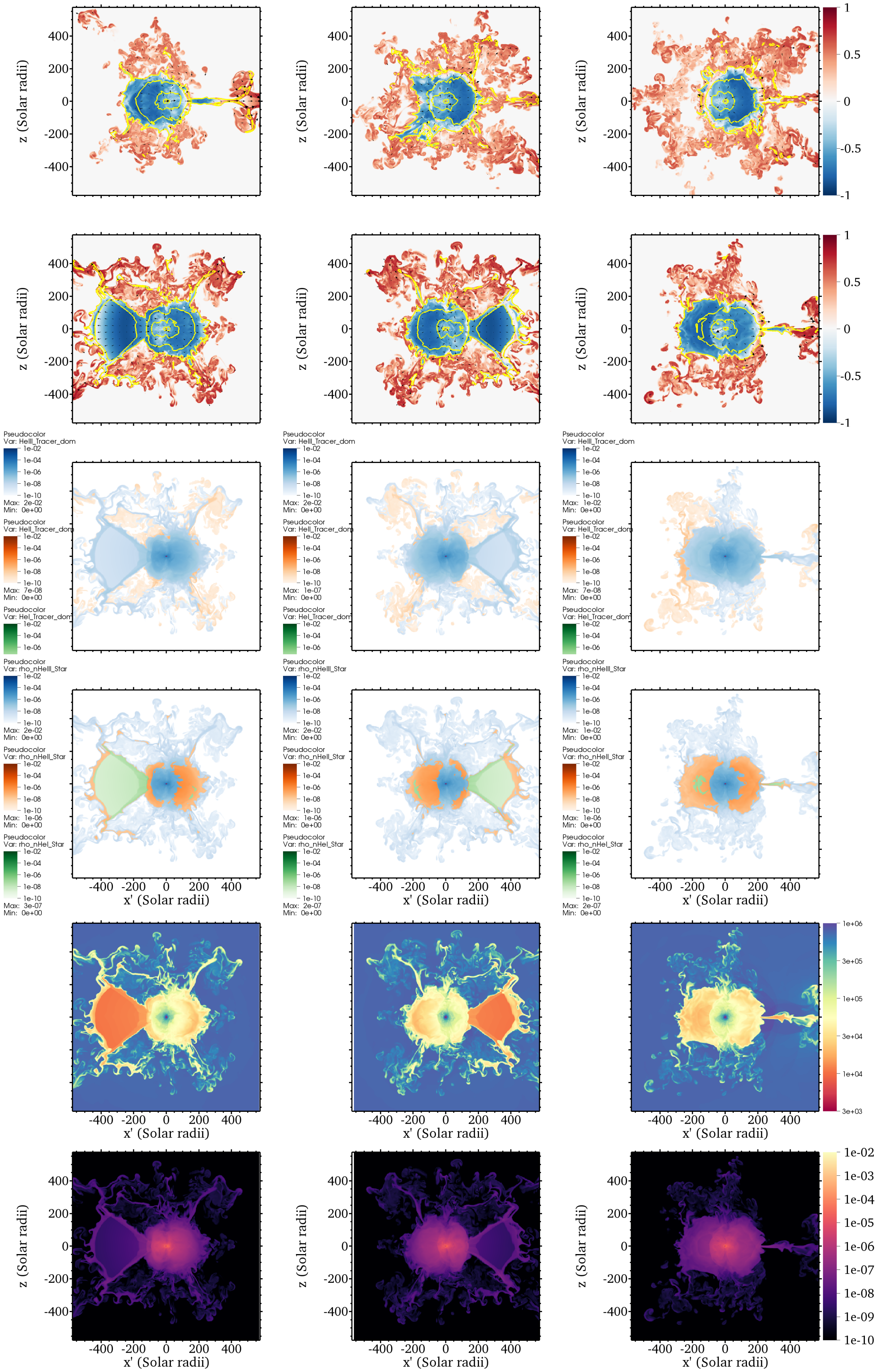

Figure 10. Continuation of Fig. ?? for times t = 69.4, 75.2 and 81.0 d.