Fig. 8. Density stratifications (color scale given in cm^{-3}). Top, middle and bottom figures correspond to model 1 (and 2), 3 and 4, respectively. The integration time is $t = 5 \times 10^3$ yrs (top). The axes are labeled in units of 10^{17} cm. The broken line delimits the analytic solution proposed in § 2. The color figure can be viewed online.

Fig. 7. Same as Figure 6 but for models 4, 5, and 6 (top, middle, and bottom respectively). The color figure can be viewed online.

(see Table 1). One can also see that the place at which the solution curves sharply coincides nicely with the end of the dense wall of the jet.

In order to illustrate the effect of the numerical resolution, we computed two extra simulations with the setup of model 1. The resulting density stratifications for an integration time $t = 5 \times 10^3$ yr, are shown in Figure 10.

Even though more complex structures are obtained for increasing resolutions, the basic morphology of the flow (stagnation point, cocoon size, density profile, etc.) is the same in all cases. Taking the number of grid points across the jet as an estimate of the Reynolds number of the simulation (Re), in these models we only reach Re $\sim R_j/\Delta x \approx 10^2$ (in our hr run). To avoid Reynolds number dependency, the simulations should have resolutions larger by a factor of at least two orders of magnitude, which is presently unattainable. However, from the results shown in Figure 8, it is clear that the mr resolution appears to produce the correct basic morphology for the flow. We must note that this result is similar to the one found by Wareing, Zijlstra, & O'Brien (2007a). In this study, the authors simulated the interaction of an AGB star moving through the ISM (with also Re $\sim 10^2$). The key result was that independently of the Reynolds number, the ISM ram pressure stripped material from