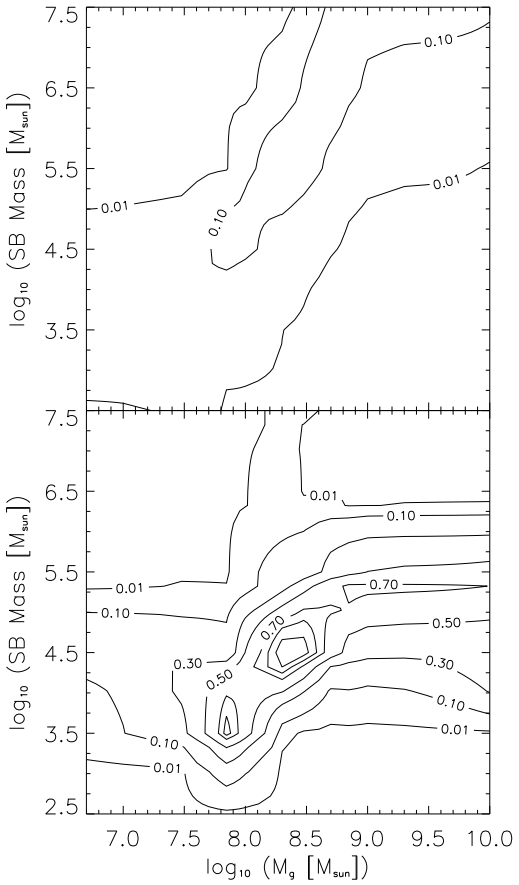

Fig. 4. Fractions of bound gas (χ_b, top) and bound metallic gas ($\chi_{b,z}$, bottom) that reach an altitude of at least $3H$, for the adiabatic models.

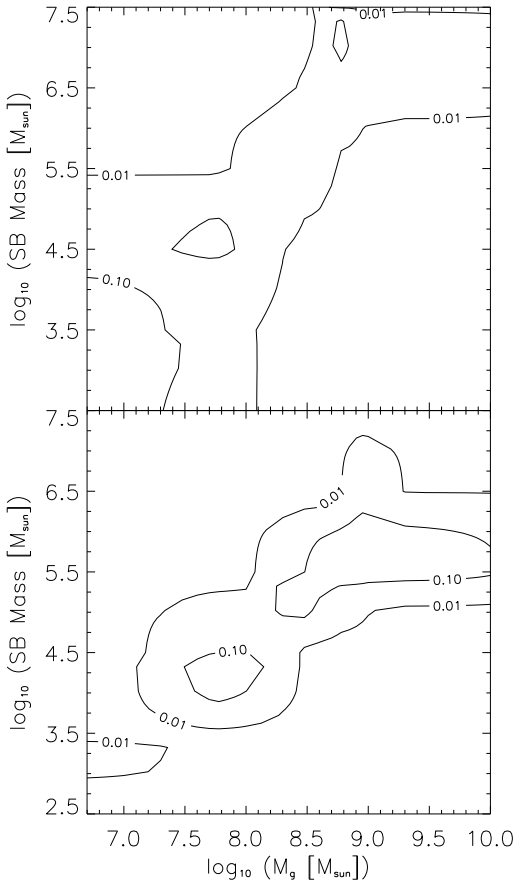

Fig. 5. Same as Figure 4, but for the radiative models.

Figure 3 shows the ξ_m (mass ejection) and ξ_z (metal ejection) efficiencies as a function of galactic gas mass and starburst mass computed from the radiative models. Both the ξ_m and ξ_z contour maps (top and bottom panels of Figure 3) are qualitatively similar to the ones computed from the adiabatic models (see Figure 2). Even though the detailed shapes of the contours vary, the main difference between the radiative and adiabatic cases is the following: in order to obtain similar ejection efficiencies, one needs a starburst mass larger by a factor of $\sim$2 in the radiative case.

5.2. *Material returned to the galactic disk*

Figure 4 shows the efficiencies of gas (χ_b, top panel) and metal mass ($\chi_{b,z}$, bottom panel) which reach at least 3 scale heights (H) above the disk but remain gravitationally bound, computed from the adiabatic models. Both panels show two low efficiency regions divided by a high efficiency ridge (which runs diagonally from low to high SB and galactic gas masses). In the high galactic mass/low SB mass region, the SB ejection mostly remains close to the galactic plane, and does not reach the required $3H$ height above the disk plane (in order to be counted in the χ_b and $\chi_{b,z}$ efficiencies). In the low galactic mass/high SB mass region, the SB ejection mostly escapes from the galaxy. From the $\chi_{b,z}$ distribution (bottom panel), we see that models with $M_g \sim 10^8 \rightarrow 10^9\ M_\odot$ and $M_{\rm SB} \sim 10^3 \rightarrow 10^5\ M_\odot$ are able to redistribute more than $\sim$50% of the ejected metals over the galactic ISM.

Figure 5 shows the χ_b (top panel) and $\chi_{b,z}$ (bottom panel) efficiencies computed from the radiative models. The efficiencies show the same qualitative behaviour (with two low efficiency regions separated by a high efficiency ridge) as the ones calculated from the adiabatic models. However, the maximum values of the efficiencies are lower. In the adiabatic case, the maximum values of the gas mass redistribution efficiency is of $\sim$20%, while a maximum value of only $\sim$10% is found for the radiative models. For the