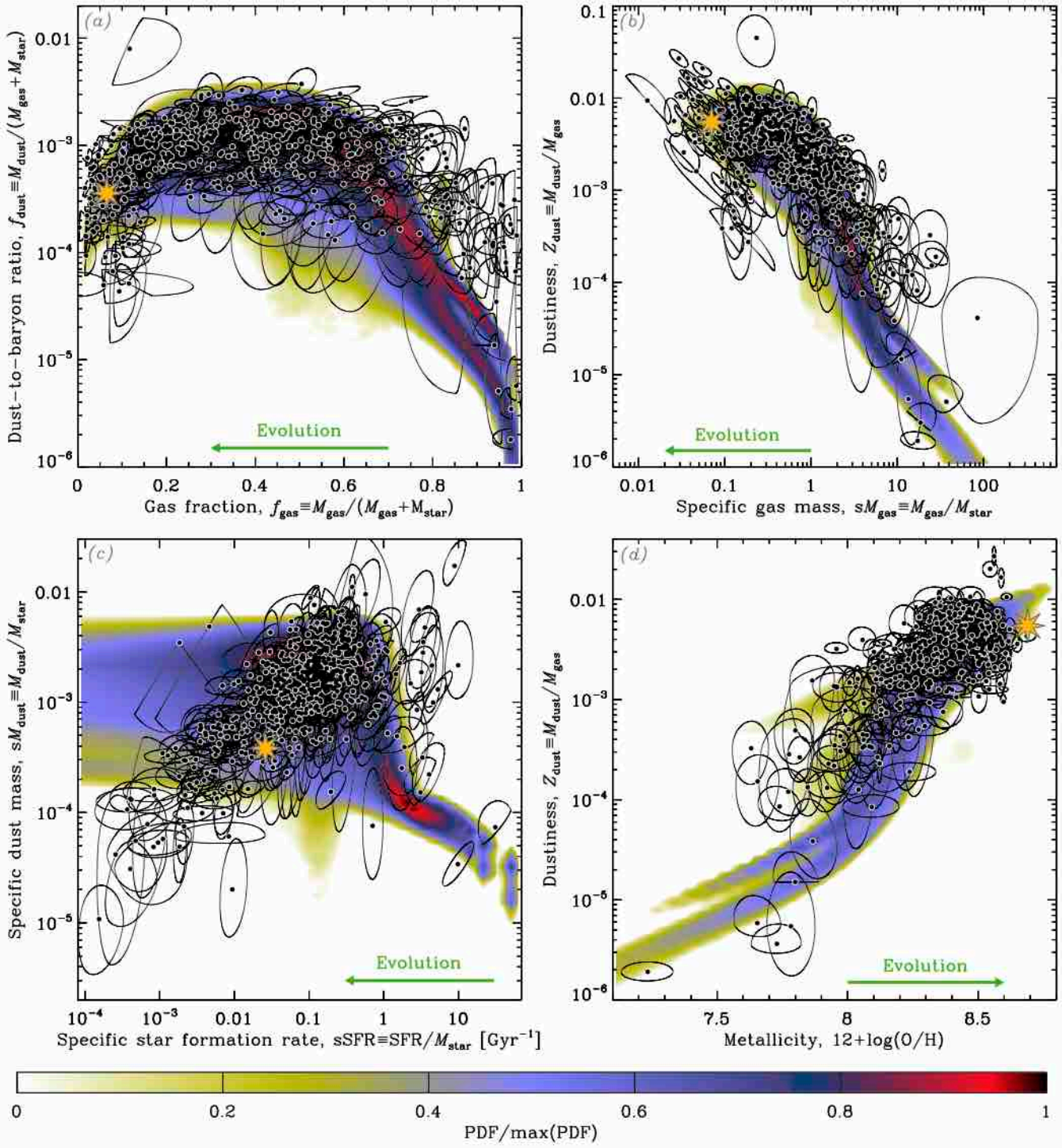

Fig. 14. Fitted dust evolution tracks, assuming a Salpeter (1955) IMF. The four panels represent the same quantities as Fig. 8. The black SUEs represent the 556 galaxies of our subsample. The yellow star is the Milky Way. The colored density contours represent the posterior PDF of dust evolution tracks, marginalizing over the individual SFH of each galaxy.

5.3. The inferred dust evolution parameters

We now discuss the parameters inferred from the fit of Sect. 5.2.3.

5.3.1. Parameter distribution

The fits of Fig. 14 allow us to infer the common dust evolution tuning parameters, as well as the individual SFH-related parameters (Table 6).

The dust evolution tuning parameters. The PDF of the three common dust evolution tuning parameters is displayed in Fig. 16. We infer the following values: $\langle Y_{SN} \rangle \simeq 7.3^{+0.2}_{-0.3} \times 10^{-3}\,M_\odot$/SN; $\epsilon_{grow} \simeq 4045^{404}_{-354}$; $m_{gas}^{dest} \simeq 1288^{+7}_{-8}\,M_\odot$/SN. The relatively small uncertainties on these parameters reflect the fitting uncertainties. They indicate the values we infer are not ambiguous. However, they do not include the assumption-dependent uncertainties. In particular, the precise value of $\langle Y_{SN} \rangle$ relies mainly on our estimate of the dustiness of the few ELMGs in our