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Erratum: elemental abundances in Milky Way-like galaxies from a hierarchical galaxy formation model

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Our paper 'Elemental abundances in Milky Way-like galaxies from a hierarchical galaxy formation model' was published in MNRAS, 445, 970 (2014). Due to a mistake, the code used for the runs included in the paper did not account correctly for the decrease of the galaxy stellar mass, following restitution of gas to the interstellar medium through stellar winds and supernovae explosions. As a consequence, the stellar masses given in the paper were slightly overpredicted. This affects in particular Figs 7 and 9 of our original manuscript. The updated versions of these figures are reproduced here for completeness (see Figs 1 and 2).

For Aq-B-2, the predicted stellar mass of the model Milky Way galaxy is $4.5 \times 10^{10}\,\mathrm{M}_{\odot}$ (against $\sim 6 \times 10^{10}\,\mathrm{M}_{\odot}$ quoted in our paper), that is still in very good agreement with the estimated value for our own Milky Way. The current level of star formation rate is $\sim 3.6\,\mathrm{M}_{\odot}\,\mathrm{yr}^{-1}$ ($\sim 2.8\,\mathrm{M}_{\odot}\,\mathrm{yr}^{-1}$ in our paper), and the present value of the SNIa rate is ~ 0.73 (0.58 in our paper) events/century, still higher than a factor of 2 to 3 with respect to the observational estimate of ~ 0.2–0.3 events/century.

All conclusions of our paper are unaffected.

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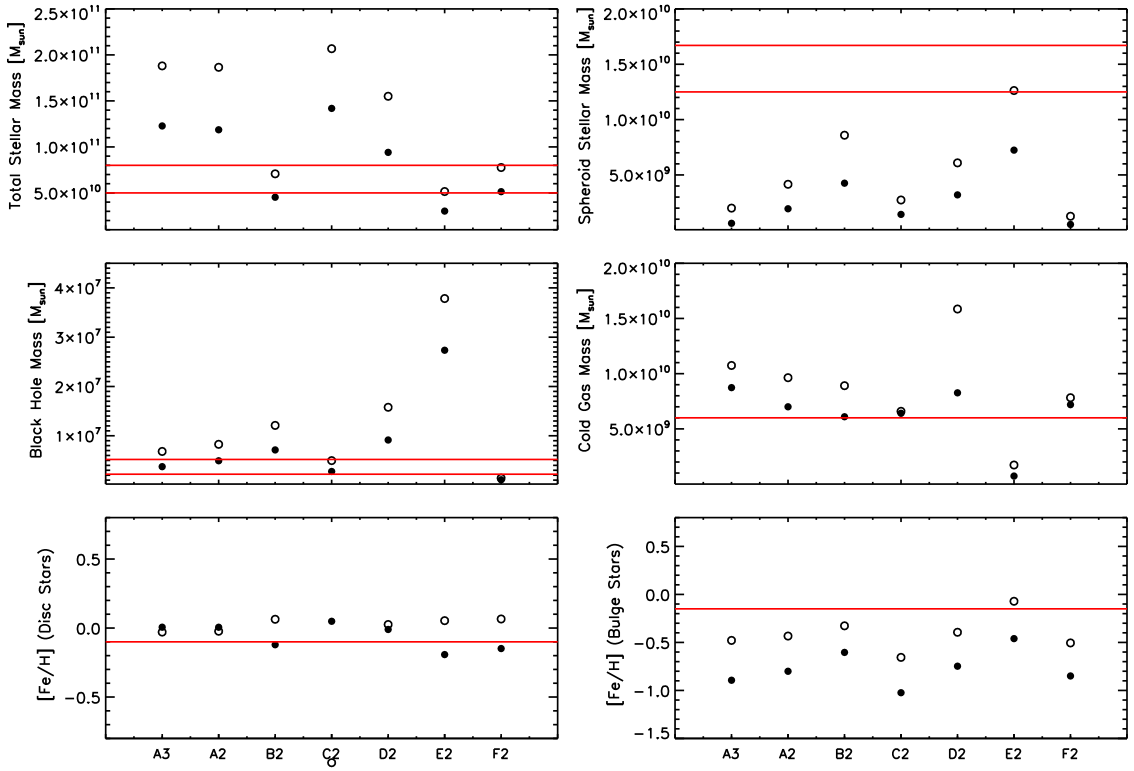


Figure 1. Physical properties of our model Milky Way galaxies, for the different simulations used in this study. The open circles show results from the model based on the instantaneous recycling approximation, while filled symbols show the corresponding results based on the updated chemical model presented in our paper. The red horizontal lines in each panel indicate observational estimates.

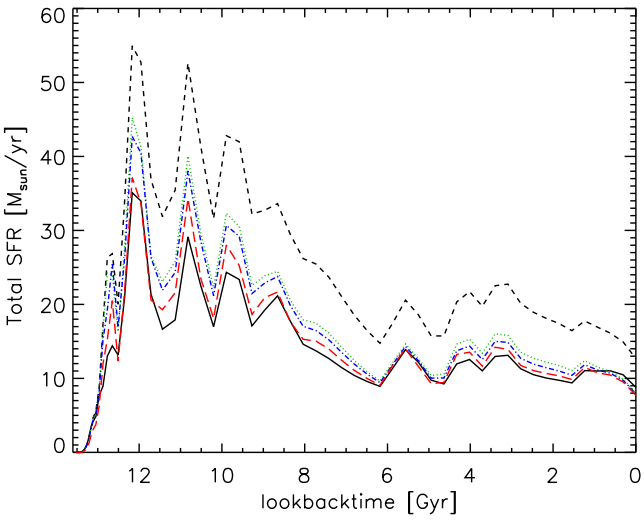


Figure 2. Star formation history for the model Milky Way galaxy in the run Aq-A-3. The solid black line shows the prediction from the reference model used in our study, while the black dashed line shows the corresponding prediction from a run that adopts an instantaneous recycling approximation. The coloured dotted, dot–dashed and long-dashed lines correspond to variations of the latter run with varying parameters.

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