Erratum: The evolution of massive black holes and their spins in their galactic hosts

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Key words: errata – black hole physics gravitational waves galaxies: evolution galaxies: formation

This is an erratum to the paper entitled “The evolution of massive black holes and their spins in their galactic hosts ”, published in Mon. Not. R. Astron. Soc. 423, 2533-2557 (2012). Because of a problem in the code implementing the model described in the text, the dynamical friction timescale was overestimated in some systems. As a result, the predictions for the number of massive black hole mergers presented in Figs. 10 and 11 (lefts panels) are too low by a factor $\sim$ a few at low redshifts. The corrected figures are shown below. The number of mergers quoted in the text, in the sentences “In the heavy-seed scenario (Fig. 11), the events in the mass range $10^4 M_\odot < M_{\text{bin}} < 10^6 M_\odot$ are instead much more numerous ($\sim 200$ per year for $z < 10$)” and “As for the low-mass range $M_{\text{bin}} < 10^4 M_\odot$, our light-seed scenario predicts about 25 mergers per year for $z < 10$”, should also be changed, respectively to 680 and 63.

The other figures and results of the paper are not significantly affected, and the conclusions remain unchanged.

Figure 1. The amended predictions of our model (in the light- and heavy-seed scenarios) for the number of MBH mergers per year of observation (and unit redshift), as a function of redshift and in different mass ranges.