The analysis of the ionization-only (S2) signal for the Xenon100 and Xenon10 experiments contained a coding mistake. A numerical factor responsible for the conversion of ionized electrons into the number of generated photoelectrons (PE), the Jacobian $\zeta$, ended up in the denominator rather than in the numerator of the event rate integral where it belongs.

Correcting the error has the effect that the Xenon10 bounds in Fig. 6 weaken and the regions of most interest are less likely to be excluded (the constraint depends on the charge yield $Q_y$ which is experimentally not well known). On the flip side, the Xenon100 projections for the detection of an ionization signal in Fig. 7 diminish. Entertaining a lowered software threshold as is indeed currently pursued by the Xenon100 Collaboration becomes crucial.

In the Conclusions, in the paragraph beginning “On the negative side for the model,” $N_{\text{eff}}/C_{24}^{10}$ should now read $N_{\text{eff}}/C_{24}^{40}$. In the paragraph beginning “Future prospects,” “deep into” in the last sentence should be removed.

FIG. 6 (color online). Summary plot of direct detection favored regions and constraints in the parameters $\Delta m^2_{\text{DM}}$ and $N_{\text{eff}}$ at 99% confidence. Favored regions: the broad light shaded gray band shows the CRESST-II region. The two darkest islands are the regions in which the CoGeNT excess is explained. In the presence of an exponential background contamination (e.g. due to “surface events”), the region below the thin gray line labeled as “CoGeNT hull” becomes, in principle, viable (see main text for details). The two medium gray shaded islands indicate the regions in which the DAMA modulation amplitude is fitted; these regions as well as any other parameter choices, however, exhibit a tension in timing when compared to the DAMA residuals. Constraints: $N_{\text{eff}}$ values above the respective lines are excluded (or seriously challenged). The top constraint is the one from Xenon100 and the two degenerate ones below are obtained with the CRESST-II data and CDMS-II low-threshold data. The two dotted lines at the bottom show the constraints arising from the Xenon10 low-threshold analysis with two different assumptions on the ionization yield $Q_y$ (see main text for details.)
FIG. 7 (color online). Projection for a Xenon100 low-threshold analysis for an exemplary parameter choice $\Delta m^2 = 2.5 \times 10^{-10}$ eV$^2$ and $N_{\text{eff}} = 100$. The $x$ axis gives the ionization signal $S_2$ in units of PEs. The horizontal and vertical dashed lines show the maximum rate from radioactive Kr decay and the $S_2$ software threshold of the detector, respectively. The solid lines are the $\nu_b$ signals from $^8$B and hep neutrinos as labeled. The vertical arrow at 700 PEs indicates the current threshold of the $S_1$ scintillation signal. The dotted line shows again $^8$B neutrinos for a calibration scale following [57] instead of [53]. This highlights the severe sensitivity on the extrapolation of $Q_y$. 

ERRATA PHYSICAL REVIEW D 88, 039904(E) (2013)