Interactive comment on “New constraints on the gas age-ice age difference along the EPICA ice cores, 0–50 kyr” by L. Loulergue et al.

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Corrections to the empirical delta depth and delta age estimates. We have recently entirely checked our stratigraphic synchronisations between NGRIP and EDC-EDML using Antarctic CH4 and Greenland isotope. We found that the values used in the submitted work were slightly incorrect. It now appears that at EDC, the estimated delta age (3960±308 and 4040±313 yr) and the estimated delta depth (47.3±2.3 and 47.5±2.3m) at the two Lashamp reference points are in very good agreement with our scenario 4, solving what appeared like a paradox in our submitted manuscript. Now the differences between the empirical and modelled delta depth are of the same amplitude as the one from the delta age, confirming an overestimation of the CODIE for all the glacial period as we have already proposed. At EDML, the new values are about 1080±231 and 1220±202 for delta age (compared to the old values 910 and
890 yrs) and about 21.4±4.5 and 23.1±4.5m (compared to the old values 24.7 and 25.1m) for delta depth.

The correction thus does not fundamentally change the discussion and conclusion of our paper, but clarify it. (This will implicate some changes on the table 1, 3 (for the empirical values) and figure 3.)