

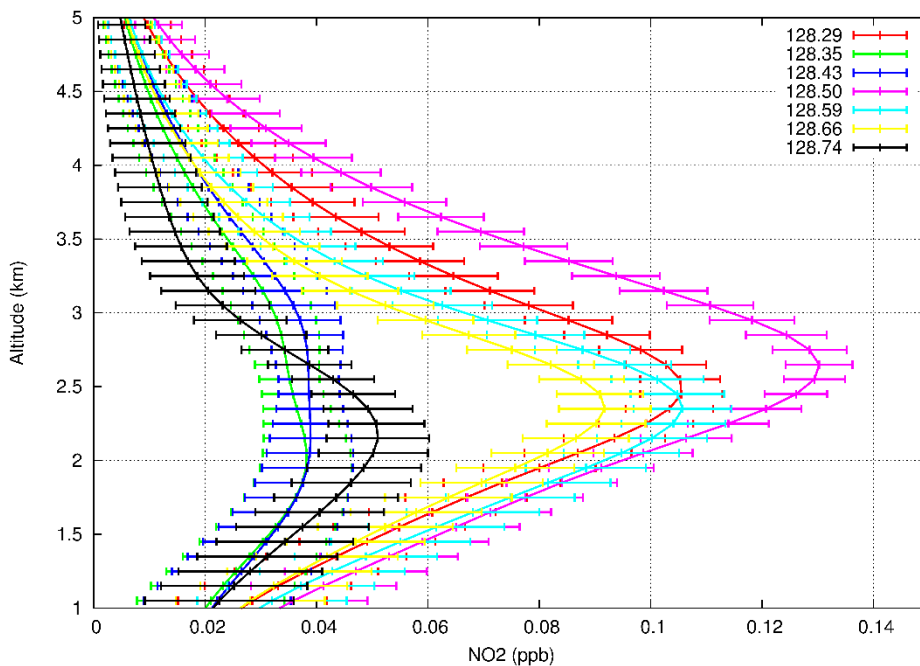
This is a short comment in response to the first of the technical corrections addressed by Editor. The remaining corrections have been made in the manuscript.

1/Page 9, line 17: '1 to 5 kms' -> '1 to 5 km'; is the mean value of  $9.1 \times 10^{-3}$  ppb correct ?

The average value of the error is actually 0.01, instead of  $9.1 \times 10^{-3}$ . The cause of this small difference is that we used a number of profiles of 33 when we calculated the average, while we should have taken into account only 30 (we have not use 3 profiles that presented big experimental errors). This also changes a little bit the average value of the difference between the profiles that take into account aerosols and those that don't take into account aerosols. The actual average value of this difference is 1.6%. This has been consequently changed in the manuscript.

Looking at plot b) in the author response document, it appears that for most altitudes, the total error is larger than 0.01 ppb with values up to 0.13 ppb. So a mean value of  $9.1 \times 10^{-3}$  ppb seems to be too small.

In this figure the error bars are represented as  $\pm$  error, where "error" is the one obtained with the formula of the caption. Thus, each of these error bars has a length that is the double of the corresponding error. This is accordingly explained in the figure caption now.



**Figure 2 (according to the previous response to Editor).** Total retrieval errors ( $S$ ) for each altitude computed by  $S = S_a - GyKS_a$ , where  $S_a$  is the a priori profile error covariance matrix,  $Gy$  is the gain matrix and  $K$  is the weighting functions matrix. **Error bars correspond to  $\pm$  the corresponding error given by  $S$ .**

Olga Puentedura and Laura Gómez on behalf of all co-authors.