

amt-2018-376 Submitted on 23 Oct 2018

Development of a balloon-borne instrument for CO₂ vertical profile observations in the troposphere

Reply to the comments by Editor

Comment by Editor

I congratulate to the final article which can be published with the following technical correction :

Please revise lines 180 - 183 in the following way:

Eqs. (1) and (2) hold for monochromatic light only and eq. (2) only holds for small absorptions. Although the NDIR analyzer exhibits non-linear absorption due to the saturation of strong absorption lines, it is known to have a good linearity within a certain concentration range (Galais et al. 1985) and eq (2) may be used correspondingly.

(reply)

We appreciate the editor for the careful consideration. We have revised manuscript according to the comments.

(lines 179-183)

The eq. (1) and (2) hold for monochromatic light only and that eq. (2) only holds for small absorptions. Although the NDIR analyzer exhibits non-linear absorption due to the saturation of strong absorption lines, it is known to have a good linearity within a certain concentration range (Galais et al. 1985) and eq. (2) may be used correspondingly.