

**Author response to Associate Editor Decision: Publish subject to technical corrections (24 Jun 2020)**

The modifications, all except the last suggested by the editor, were made in the submitted manuscript :

- « in-situ » was changed to « in situ » in the entire manuscript
- « meters » was changed to « m » in the entire manuscript
- Line 190 : Mentions of CO2SYS as an algorithm were replaced by « software » (line 190)
- Line 494 : The availability of the data from Dlugokencky and Tans was clarified by providing the URL to the repository website (line 494)
- Line 192 : The expression  $\partial pCO_2 / \partial T / pCO_2$  was replaced by its correct mathematical form  $\partial \ln(pCO_2) / \partial T$ , which is the one mentioned most often in the literature (including in Dinauer and Mucci, 2017, Biogeosciences, <https://doi.org/10.5194/bg-14-3221-2017>).
- Addition of grid and uniformisation of coordinates to certain figures.