

Comments to the Author:

Thank you for the work that you have undertaken to address the review comments. You have obviously done this carefully and I'm sure the manuscript has been improved as a result. I noticed that a few minor technical corrections are needed.

p10, line 5: 'ingassing' instead of 'ingassig'

p14, line 4: Suggest delete 'As you can see'

p14, line 16: Suggest 'stagnation' instead of 'stagnancy'

Fig 5. There are numbers on the y axis, 360, 0, 0. It is not clear which of the timeseries they relate to so perhaps they should be removed. Perhaps the figure caption needs to say that the timeseries have been offset to allow them to be plotted on the same panel.

Fig 7 caption: I think there are 3 more places where 'ratio' needs to be changed to 'rate'.

All above corrections and suggestions have been included in the final manuscript.

As for Fig. 5, the numbers of the y-axis represent the values for HAT data. To clarify it, we have redrawn Fig. 5. As the co-editor suggested, the time-series have been offset to allow them to be plotted on the same panels. Consequently, we have changed the figure caption to “**Fig. 5.** Time series of the atmospheric CO₂ mole fraction (left), O₂/N₂ ratio (middle), and APO (right) of the flask samples obtained from the NIES flask sampling network shown in **Fig. 1**. Observed data from COI, HAT, and cargo ships operating between 40°S and 30°N were used for the global carbon budget calculation. The time series of CO₂, O₂/N₂ and APO are offset by 20 ppm, 150 per meg, and 100 per meg, respectively, to allow them to be plotted on the same panels. The numbers on the y-axis represent the values for the data at HAT.”

