

Interactive comment on “Compiled records of carbon isotopes in atmospheric CO₂ for historical simulations in CMIP6” by Heather Graven et al.

K. Currie (Referee)

kim.currie@niwa.co.nz

Received and published: 4 August 2017

This manuscript describes the compilation of global data records of atmospheric ¹⁴CO₂ and ¹³CO₂ for use in modelling studies, in particular CMIP6. The methods used for compiling and standardising the individual data sets is well described and justified with appropriate caveats given.

The resulting data compilations are provided both as tables in the supplementary section, and via a website link.

The data compilations themselves will be useful, not only for CMIP6 but also for other modelling studies, and this manuscript is a valuable addition to the metadata as well as standing as a paper in its own right.

C1

The manuscript is well written, is easy to read and the diagrams and tables are clear. The limitations and caveats for use of the data compilations are succinct and well laid out.

Even the descriptions of the standardising of the data sets, which are necessary, but can be tedious to read, are brief and to the point without loss of clarity.

I have only few comments, detailed below:

Page 2, line 14 – the atmospheric exchange with both the terrestrial and oceanic biospheres is on annual as well as decadal timescales, as evidenced by annual signals of ¹⁴C in tree rings and corals.

Figure 2 – caption to include explanation of the two panels, as is done in Figure 3.

Interactive comment on Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2017-166, 2017.

C2