

Geosci. Model Dev. Discuss., author comment AC2  
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## Second Reply on CEC1

Nadine Goris et al.

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Author comment on "The emergence of the Gulf Stream and interior western boundary as key regions to constrain the future North Atlantic carbon uptake" by Nadine Goris et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2022-152-AC2>, 2022

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Dear Dr. Juan A. Añel,

After carefully re-reading the GMD code and data policy, we realize that the data for  $p\text{CO}_2^{\text{sea}}$ ,  $C_{\text{ant}}$ , and AMOC included in the "code and data availability"-section of our preprint do not belong to the 'data' category defined in the policy, i.e., they are clearly presented and referenced in the main text, and they are not required to reproduce the key findings presented in our paper. We sincerely apologize for this misunderstanding.

Additionally, there has been a slip up in our previously archived version of the genetic algorithm and its related documentation, such that we have created new versions (Johannsen, 2022a, DOI: <https://doi.org/10.5281/zenodo.7037947> and Johannsen, 2022b, DOI: <https://doi.org/10.5281/zenodo.7037981>).

In our revised manuscript (if we are invited to resubmit), we will include the following statements under the "code and data availability"-section: "The code of the genetic algorithm including the relevant input and output data for our 2D North Atlantic case study is available through Johannsen (2022a) (DOI: <https://doi.org/10.5281/zenodo.7037947>). The genetic algorithm code and the relevant input and output data for our 3D North Atlantic case study is available through Johannsen (2022b) (DOI: <https://doi.org/10.5281/zenodo.7037981>)."

Thank you for helping us to comply with the "Code and data policy", this is very much appreciated.

All the best,

Nadine Goris (on behalf of all co-authors)

### **References:**

Klaus Johannsen (2022a). Genetic algorithm for regional optimisation of Emergent Constraints in the surface North Atlantic (v1.3). Zenodo.  
<https://doi.org/10.5281/zenodo.7037947>

Klaus Johannsen (2022b). Genetic algorithm for regional optimisation of Emergent Constraints in water column North Atlantic (v1.3). Zenodo.  
<https://doi.org/10.5281/zenodo.7037981>