

Review: The dependency of the $\delta^{18}\text{O}$ discrepancy between ice cores and model simulations on the spatial model resolution

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I have re-read the manuscript and the authors' responses and I find that the authors have adequately responded to the reviewers' concerns. I feel the manuscript could benefit from some editing to reduce wordiness. Technical corrections are suggested below.

Technical Corrections

- 1. Line 10:** Change "with ECHAM5-wiso..." to "with the ECHAM5-wiso"
- 2. Line 11:** Change "and MPI-ESM-wiso..." to "and the MPI-ESM-wiso"
- 3. Line 22:** Change "improvements in" to "improvement in"
- 4. Line 27:** Remove comma after "processes"
- 5. Line 208:** Change "climatological parameter" to "climatological parameters"
- 6. Line 209:** Change "parameter" to "parameters".
- 7. Line 242:** Change "arctic" to "Arctic".
- 8. Line 245:** Change "systematic deviations...are simulated." to "are systematic deviations to the observations simulated."
- 9. Line 252:** Change "But in all," to "But in general,"
- 10. Lines 260-261:** The "simulation: 2011, observation: mean present values" is confusing. Is this true for all the simulations shown in this figure? Please clarify.
- 11. Line 264:** Change "in comparison to" to "with respect to"
- 12. Line 272:** Remove "also" after "modeling,"
- 13. Line 276:** Change "and the corresponding" to "versus the corresponding".
- 14. Line 293:** Change "samples location" to "sample locations".
- 15. Lines 299-300:** Change "In this spatial isotopic ratio variability," to "This spatial isotopic ratio variability includes".
- 16. Line 301:** Remove "are included".
- 17. Line 326:** Change "explicitly analyzed" to "explicitly shown"
- 18. Lines 361-362:** I think "rather than COSMO_iso_50km" should be changed to "rather than ECHAM5-wiso".
- 19. Line 370:** Change "four Greenland" to "the four Greenland".
- 20. Lines 372-373:** Change "at Renland" to "and at Renland"
- 21. Line 374:** Change "for NGRIP..." to "and for NGRIP.."
- 22. Line 379:** Change "median of the isotope ratio distribution" to "median of the isotope ratio difference distribution".
- 23. Line 383:** Change "blue points, the" to "blue points, and the"
- 24. Line 405:** Change "Mid-Holocenen" to "Mid-Holocene".
- 25. Line 418:** Change "in principle" to "in general".
- 26. Line 431:** Change "dependent of" to "dependent on".
- 27. Line 475:** Change "temperatures reconstructions" to "temperature reconstructions".
- 28. Line 477:** Change "these pattern" to "these patterns".
- 29. Line 484:** Change "partially be" to "be partially"

- 30. Lines 487-488:** Suggest changing to read: “But in comparison to the spatial $\delta^{18}\text{O}$ -temperature slope, the interannual $\delta^{18}\text{O}$ -temperature slope is rather small.”
- 31. Table 2:** Sometime the decimal is used in the numbers, other times the comma (e.g. 26,73 vs. -27.38) Please make these consistent with the journal requirements.
- 32. Figure S1 caption:** Note the period for the spatial comparison and make clear that “yearly mean values” refers to the temperature correlation.