

Dear Dr. Janssen,

Thank you very much for your careful review. We confirm that all requested technical corrections have been made exactly as specified, including:

- Line 150: placing the equation inline and removing the space after the parenthesis, as requested: ($\alpha = k_{\text{light}}/k_{\text{heavy}}$).
- Line 520: correcting “Fig.5b and d” to “Fig. 5b and d”.
- Line 568: correcting “four errors sources” to “four error sources”.
- Line 655: replacing the sentence:
“However, it is noteworthy that the IASI data closely match the observed $\delta^2\text{H}$ for all other periods in the 4000–7000 m range, except for June 2020, where they are lower too.”

We have carefully checked the full manuscript to ensure consistency and accuracy following these adjustments.

With kind regards,

Di Wang (on behalf of all co-authors)