

Dear Dr. Rousseau,

Thank you for the opportunity to revise our manuscript, “Non-spherical microparticle shape in Antarctica during the last glacial period affects dust volume-related metrics.” Based on our conversation, I have edited the final document which includes the following changes.

Our responses are given below with reviewer comments in italics; author response in regular font, and revised text from the paper is provided in blue.

With Best Regards,
Aaron

Line 36: Changed 50 – 10 ka to 50 – 16 ka.

Line 40: Removed temporal resolution and added temporal resolution of each time period. Sentence now reads “The 41 discrete samples were collected during three periods of millennial scale climate variability: Heinrich Stadial 1 (18 – 16 ka, n = 6; ~250 years/sample), the LGM (27 – 18 ka, n = 19; ~460 years/sample), and during both Heinrich Stadial 4 (42 - 36 ka, n = 8; ~620 years/sample) and Heinrich Stadial 5 (50 – 46 ka, n = 8; ~440 years/sample).”

Line 363: Added space between CO₂ and (Bauska et al., 2021; salmon).

Figure S8: Added letters in figure and caption to match style of other figures.

Figure S9: Edited letter’s parentheses used in the figures matched other parentheses. Caption names were also changed to reflect particle shape instead of shorthand form (i.e., prolate vs El. 1). The figure caption has also been correspondingly changed.

Figure S11: Edited letter’s parentheses in figure to match parentheses style of other figures.

Figure S12: Edited letter’s parentheses in figure to match parentheses style of other figures.

Supplementary Material: Added Refences label before first reference.

Supplementary References: Removed duplicate references