

# ***Interactive comment on “Atmospheric gas records from Taylor Glacier, Antarctica, reveal ancient ice with ages spanning the entire last glacial cycle” by Daniel Bagenstos et al.***

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We thank Todd Sowers for his positive assessment of our study.

The main point raised concerns the quality of the methane data. First off, any offsets between Taylor Glacier and WAIS do not affect the construction of the time scale/stratigraphy, because in our age model we are only using the fast methane transitions at the beginning of D-O events and during the termination, which can be easily identified also in less than perfect quality methane data. However, the methane record does raise the question whether there are systematic offsets between Taylor Glacier ice and WAIS. We think that most of the apparent mismatch can be attributed to the fact that some of the data (and most of it in the glacial) was produced by a field de-

ployable methane extraction system that is not calibrated as well as lab based systems and suffers from generally less than ideal conditions to do precise measurements in the field. As shown in the appendix, glacial ice measured in the lab does not exhibit the apparent offset. We would point this out more clearly in a revised manuscript.

The second comment regarding the end of the easily interpretable stratigraphy is fair and we will add a line denoting this to the figure as suggested.

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