Comment on tc-2022-82
Derek Fabel (Referee)

Referee comment on "New $^{10}$Be exposure ages improve Holocene ice sheet thinning history near the grounding line of Pope Glacier, Antarctica" by Jonathan Richard Adams et al., The Cryosphere Discuss., https://doi.org/10.5194/tc-2022-82-RC2, 2022

The authors present 12 new $^{10}$Be surface exposure ages from glacial erratics collected on scoria cones at the northern extent of Mt Murphy, close to the grounding line of Pope Glacier which drains into Crosson Ice Shelf in the Amundsen Sea Embayment. The new ages allow the authors to improve the previously published Holocene ice sheet lowering rates from cosmogenic nuclide data obtained from the area, concluding that lowering was more rapid by a factor of about 1.5 and occurred about 1100 years earlier than previously established.

Overall this is a very good paper. It is clearly written. It presents new data that fill a gap in the existing vertical profile data at Mt Murphy. The figures are clear and necessary, although the figure numbering does not match the numbers in the text and Supplementary Material.

In Figure 5 caption at line 242, (Fig. A3) should be (Fig. B1), and at line 243 (Fig. A4) should be (Fig. B2).

There is a full stop missing in line 251.

In the text at line 288 Fig. 5a should be Fig. 4a.

At line 380 the word "is" after Mt. Murphy should be deleted.

At line 471 the ITGC Contribution number should be added.

Other than these very minor editorial issues, I have no further comments, except that the paper was a pleasure to read.