

Interactive comment on “Modeling the statistical distributions of cosmogenic exposure dates from moraines” by P. J. Applegate et al.

Anonymous Referee #1

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The dating of moraines by cosmogenic nuclides has many difficulties; the authors present a clear discussion of these problems, and make a valuable contribution towards a solution.

There is one big improvement that could be made in this paper however. The real 'punchline' of this paper for many researchers is put (oddly enough!) in the final discussion section. This punchline is the testing of various ways of getting a moraine age (i.e. mean, oldest,...) versus their numerical experiments. This is very interesting, and deserves a bigger treatment in its own section. For example, much of the relevant information seems to be buried in the caption to Figure 10. The preceding parts of the paper are solid, but not as interesting as this material.

Small points:

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1) Equation (5) could be left in its exact form as an integral over time involving $P(t)$. Why present the numerical integration form here?

2) The paragraph towards the end of 2.1.1 beginning "Although we do not emphasize..." is not clear. Are they taking into account boulder erosion or not?

Interactive comment on Geosci. Model Dev. Discuss., 2, 1407, 2009.