

Interactive comment on “Transient climate simulations of the deglaciation 21–9 thousand years before present; PMIP4 Core experiment design and boundary conditions” by R. F. Ivanovic et al.

A. Carlson

acarlson@coas.oregonstate.edu

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Hi all, so just looking through the text, I noticed one incorrect statement on page 9055 lines 18–22. The timing of CIS-LIS separation was around the time of MWP-1A according to Dyke (2004) is not right. Dyke (2004) specifically states:

"Unfortunately, the initial opening of the ice-free corridor remains only tenuously dated. The initial opening at the south end probably started about 15 ka BP, based on an AMS date of 15.67 ka on wood, mentioned above (Beierle & Smith, 1998) and expo-

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sure dates on the Laurentide terminal moraine in the south-western Alberta Foothills (Jackson et al., 1999). By 13.5 ka BP, the southern half of the corridor seems to have opened, because wood (evidently small wood, probably arctic willow; P. Bobrowsky, personal communication, 2002) from basal sediment of glacial Lake Peace yielded an AMS date of 13.97 ka BP (Catto et al., 1996). It is possible that the corridor was entirely open by 13.5 ka BP, because the dated site is located midway within it. However, in the absence of similarly old dates from the northern part of the corridor, and assuming slower ice ablation further north, initial joining of the southern and northern approaches of the corridor may not have occurred until 12.5 ka BP or possibly even 12 ka BP. It seems exceedingly unlikely, however, that ice coalescence could have continued until 11.5 ka BP, for the Mackenzie Lobe of Laurentide ice had by that time receded halfway up the Mackenzie Valley (Mackay & Mathews, 1973; Smith, 1992). Furthermore, south-eastern Cordilleran ice had by then receded into the alpine zone (Reasoner et al., 1994), and Cordilleran ice distribution in Alaska was close to the present one. In summary, the known history of the ice-free corridor, although imprecise, does not preclude the possibility of pre-Clovis people using this route and its availability to early Clovis people is almost certain."

These are all ages in 14C years, meaning the corridor started opening by ~ 18.8 cal ka and was over half complete by ~ 17 cal ka, thousands of years before MWP-1A. I think this section needs to be clearly redone to reflect this much slower and earlier separation of the CIS-LIS that Dyke (2004) discussed to stop this propagation of the idea (never stated by Dyke) that it was fast around MWP-1A.

Anders

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