

Clim. Past Discuss., community comment CC5  
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## Reply on AC1

Dr. Istvan Daruka

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Community comment on "Orbital insolation variations, intrinsic climate variability, and Quaternary glaciations" by Keno Riechers et al., Clim. Past Discuss.,  
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To clarify these issues a bit further, I wrote this Comment to call into the Authors attention that they cited our DD16 model mistakenly, *missing out its principal component*, that is, the slow change in parameter kappa, which leads to the MPT-like behavior. Without this, as this commented manuscript improperly assumed (by suggesting a constant kappa value), there would not be any MPT-like behavior in the DD16 model:

a) In particular, in line 457 of the commented manuscript the Authors wrote "*The constant parameter values are chosen as  $\kappa = 1$ ,  $\tau = 100$ , and  $\lambda = 10$ .*" Thus they missed the crucial time dependence in kappa, which will be hopefully inserted after the revision, as the Authors indicated in their response.

b) By the same token, in line 460 "*We deviate from Daruka and Ditlevsen (2016), though, by introducing a slow change in the parameters  $a(t)$  and  $\beta(t)$  of Eq. (29b), as follows: ...*" the Authors did not mention the departure from the DD16 model that they cancel the time dependence in kappa and treat it as a constant later on.

There appears a further ambiguity introduced in the commented paper as parameter tau displayed in Eqs. (29a-b) is taken there as  $\tau = 100$ , while in the original DD16 model it seems that we had  $\tau = 1$ . This difference is not listed either as a departure from the original DD16 model. Or did I miss something relevant here?

Furthermore, as the Authors used the very same type of tanh()-functional for implementing the slow change in their parameters (as the DD16 model had before in kappa) and they treated our kappa as a constant (line 457), it definitely made the (false) impression that this slow change in the parameters was introduced first by this commented paper to mimic a MPT-like behavior, which, our DD16 model *in its improperly cited form* could not exhibit at all. (But demonstrates nicely with the time dependent kappa.)

These are indeed the principal issues which I intended to sum up and clarify. As I found these developments unfortunate, I added a related, thought provoking footnote encompassing on some much overlooked yet menacing traits which could be worth of consideration for the whole community. Sadly, this crucial footnote was unilaterally deleted by the editor without giving any prior notice; but I re-posted it now as CC3 and CC4.

