

Interactive comment on “Post-Pliocene establishment of the present monsoonal climate in SW China: evidence from the late Pliocene Longmen megaflora” by T. Su et al.

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This manuscript deals with the reconstruction of Neogene monsoon history in SW China as a prerequisite for understanding the forces and mechanisms of the monsoon system in general. The topic is well within the scope of CP. Based on climate quantifications of several leaf floras on an east-west transect in western Yunnan the study documents spatial differences in precipitation development and thus the monsoon history related to mountain uplift. The manuscript is well-written and clearly structured. I have no concerns about the publication of this manuscript except the minor remarks below.

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For me only one question still remains that might be discussed in more detail: Can the observed differences between the fossil and the modern situations be explained also by uplift alone? Especially in the last paragraph of the discussion (page 1688) please state why rain shadow effects could not cause such differences in precipitation as they are explained here by an increase of East Asian Winter Monsoon?

minor remarks:

page 1678, line 27: replace 'and' with 'or' or 'and/or'

page 1684, chapter 4.1 the warmer than present climate is not significant for MAT and CMMT, this should be mentioned.

and page 1685, line 1-4 this sentence is not clear. what means 'forms the rain'? and why is summer temperature affected more pronounced than the other parameters? it maybe mentioned and discussed that Yao et al observe cooler (also not significant?) than present temperatures.

line 22: 'leading to higher altitudes' delete 'a'

page 1686, line 25-30ff is not clear. please explain what you mean by 'consequently'

page 1688, line 6-8 this sentence makes no sense to me. please rephrase.

line 16 'drier winters' or 'a drier winter'

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