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Climate of the Past Discussions

Interactive comment on "Two distinct decadal and centennial cyclicities forced marine upwelling intensity and precipitation during the late Early Miocene in Central Europe" *by* G. Auer et al.

Anonymous Referee #1

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General Comments

It is my opinion that this a valuable addition to research in this area. Employing a multi proxy approach and grouping the proxies by process type results in a well thought out model of this depositional area.

Specific Comments

The major weakness of this study is that it lacks an accurate estimate of the sedimentation rate. They employ a best fit model to tweak the sedimentation rate so that their periodicities are more in line with numbers seen in the literature. I believe they do their due diligence in: showing that the sedimentation rate is within the range of other simi-

lar sites, that all periodicities were consistently higher, and their use of process based reasoning.

P8L08 "a continuous sedimentation rate was assumed" This section could be ameliorated by the inclusion of a justification for this assumption. Is this assumption adopted in the absence of any available information? How well does a constant sedimentation model fit for this depositional setting?

P9L16 "Significant periodicities" Although the significance levels are included in Table 3 the authors do not state at which level they consider to be significant. I would assume that only those perodicities >95% were considered significant.

Technical Corrections

P1L23 change "over all" to "overall" P2L18 change "earth's" to "Earth's" P2L21 change "earth's" to "Earth's" P2L22 remove ";" P3L02 change "warved" to "varved" P5L23 change "mm, that" to "mm that" P8L08 remove "also" P14L18 change "to" to "too" P14L18 change "both the" to "the" P15L09 change "well known" to "well-known" Table 1 change "allochthonous" to "Allochthonous" Figure 1 caption change "Laa and der" to "Laa an der" Figure 4 caption change "paramters" to "parameters"

Interactive comment on Clim. Past Discuss., 10, 1223, 2014.