

Interactive comment on “Paleoclimate and weathering of the Tokaj (NE Hungary) loess-paleosol sequence: a comparison of geochemical weathering indices and paleoclimate parameters” by A.-K. Schatz et al.

A.-K. Schatz et al.

ann.schatz@uni-tuebingen.de

Received and published: 18 March 2014

Dear Gabor,

thank you very much for your thoughtful and constructive comment and the detailed additional statistical explanations. Your remarks will help us significantly improving the manuscript.

1./ You raised a very important point about grain size and weathering and we agree that GS cannot be used as a first-order weathering proxy. We are going to include

C89

this in the revised manuscript and review the whole chapter accordingly. Further, we also agree on the fact that Rb and Sr concentrations are heavily grain-size dependent, as you have shown. Therefore, the strong correlation between the Rb/Sr ratio and GS cannot be used to rate the Rb/Sr index as a particularly suitable index to quantify weathering intensity. We are going to review and rewrite the chapter on the evaluation of weathering indices completely based on your suggestions.

2./ By using reconstruction approaches based on geochemical transfer functions, we wanted to contribute to the range of well-established approaches. However, as you point out correctly, our manuscript lacks an appropriate discussion of the reliability of the results in comparison with those obtained from other methods, which we are going to address in the revised version of the manuscript. We also agree that the PWI-based MAP/MAT reconstructions after Gallagher et al. (2013) have several shortcomings and don't work well. We appreciate your calculations and the improved uncertainty estimates very much and we are going to include these new estimates in our discussion of the PWI-based MAT/MAP data following your argumentation.

Again, thank you very much for your detailed comments and explanations, your criticism and your support.

Best regards,

Ann-Kathrin Schatz

Interactive comment on Clim. Past Discuss., 10, 469, 2014.

C90