

## ***Interactive comment on “Sediment history mirrors Pleistocene aridification in the Gobi Desert (Ejina Basin, NW China)” by Georg Schwamborn et al.***

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General Comments: This paper is based on a 223 m sediment core obtained from Ejina basin in NW China. The core was drilled on one of the world's largest fan, namely Heihe AF, which constitutes part of the Gobi desert. Several techniques were used such as grain size and end member modeling analyses, geochemical and mineralogical XRF/XRD measurement and bioindicators (fossils, n-alkanes) to understand the palaeoenvironments during the Pleistocene. Cosmogenic burial dating and magenstratigraphy provide the required ages.

The results are clearly indicating that the basin was filled with playa-lacustrine deposits that later pass to fluvial/alluvial systems in time and space. This transition from humid

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to much drier conditions (as indicated by dust contribution from the Ejina basin to the Chinese Loess Plateau) is attributed to the uplift of the study area after about <1 Ma.

Technical comments: The English is excellent and is acceptable as is. I just wonder if it is not better to use aeolian with capital A: Aeolian.

Specific comments: Figure 9 shows a section a conceptual model illustrating the progradation of the Heihe AF into the Ejina basin. A map view of this model with different stages would help the reader to better visualise the development of Heihe AF in time and space.

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