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Climate of the Past Discussions

Interactive comment on "A high-resolution multi-proxy record of late Cenozoic environment change from central Taklimakan Desert, China" *by* X. Wang et al.

Anonymous Referee #2

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To investigate evolution and forcing mechanism of the dry climate in central Asia is important to understand the climate system in Asia and the beyond; it is also helpful to understand the eolian dust changes in northern Hemisphere. Many unconsolidated sediments in and around Tarim Basin provide such an opportunity to reconstruct the dry climate changes during late Cenozoic, and several papers on this topic were published recently, this paper is one of the such contributions. I have two considerations on this paper: 1) the proxy indicators such as magnetic susceptibility, grain-size distribution and the color reflectance of these sediments may not necessarily indicate the climatic changes, because local landform process may also change the physical features of these sediments. Thus, I am worry about whether interpretations in this paper

are right? I suggest the authors provide more evidences to support their paleoclimatic interpretations of these proxy indicators, in particular, the sediments such as eolian, fluvial and even lacustrine should be different to response to the climatic changes, therefore, the curves such as the magnetic susceptibility should be cautiously interpreted. 2) Which one, the tectonic uplift or the global cooling, is the dominator that has driven the dry climate evolution during the late Cenozoic has been controversial; I am surprised that the authors do not cite the papers conflict to the conclusion of this paper. I suggest the authors to add these references such as Miao et al., Earth-Science Reviews 2012 and thereafter at least, and expand the discussion part to tell the authors what is the certainty and uncertainty.

Interactive comment on Clim. Past Discuss., 9, 2661, 2013.