

## ***Interactive comment on “Holocene weak summer East Asian monsoon intervals in subtropical Taiwan and their global synchronicity” by K. Selvaraj et al.***

### **Anonymous Referee #3**

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The Indian or South Asian monsoon and East Asian monsoon are the two important components of the Asian monsoon system, varying on both millennial and orbital time scales. Quite often it is debated if the two monsoon systems behaved similarly or distinctly and what forcing factors have driven changes in the two monsoon systems. Selvaraj have generated an interesting dataset which has already been published in GRL, 2007. L01703. Thus the present paper adds nothing to the existing knowledge on East Asian Monsoon than a review, combining old data of the authors with published records from other regions. The authors have tried to discuss their results in greater detail and to find links between changes in the Retreat Lake record and proxy records from other regions. Unfortunately, they have not been able to suggest a reliable hy-

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pothesis that could explain changes in the study area. I thus have apprehensions as to the suitability of this ms to the journal *Climate of the Past as Discussions*. However, I leave it to the Editors to accept or not to accept this manuscript. The following are the main observations:

1. The chronology of various events does not match with those shown in figure 3. The authors suggest that all these events are abrupt/major events, but looking at figure 3, I find only 5 Kyr event as a major event which is followed by a major hiatus.
2. The authors have related changes in the Retreat Lake with almost every component of the climate-ocean system and with regions ranging from the tropics to the Northern Hemisphere. These changes in the Retreat Lake have been related to ENSO, Hadley circulation, West Pacific Warm Pool, Tibetan Plateau ice accumulation, Siberian Highs, North Atlantic Deep Water circulation, Global Conveyor, Indonesian Through-flow, CO<sub>2</sub> variability, methane production, African aridification, sea level changes, cold spells in the North Atlantic, ITCZ and solar insolation, changes in North American and Caribbean climates, etc. I have failed to understand as what is the purpose of relating Retreat Lake changes with so many events and forcing factors without any conclusions.
3. The 8.2 ka event is weakly present in the Retreat Lake record compared to 5.4 ka event; any thought? The latter coincides with the aridification of Africa, a major weakening of the South Asian monsoon that may have led to the demise of civilizations in the South Asian region.

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