

***Interactive comment on “Response of “Glacier-Runoff” system in a typical monsoonal temperate glacier region, Hailuogou Basin in Mt. Gongga of China, to global warming” by Zongxing Li et al.***

**Anonymous Referee #1**

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The authors consider an important problem regarding the effect of global climate changes on the evolution of glaciers. They collected and processed a large body of data and obtained results that could be of interest and importance. However, the substantiation of the results presented in the paper seems not quite adequate for the following reasons. 1. The method used to reconstruct mass balance data is not clear, and, taking into account that the paper where it is described and to which the authors refer has been published in Chinese, it appears reasonable for the authors to give at

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least a brief description of this method in their paper. 2. The correlation between the mass balance and air temperature is surprisingly high. However, it is likely that it has been calculated by using a smoothed temperature curve rather than the raw data. If this is the case, the correlation coefficient to be obtained is strongly dependent on what is the family of functions used to approximate those data. Unfortunately, no details of the calculation procedure are given in the paper. 3. The authors mention some time lag between climate changes and the response of the glaciers (p. 3400, line 5). Again, no details are given about how it was determined and treated. Moreover, in the beginning of the paper (p. 3397, lines 20-23), the monsoon glaciers are said to have an advantage over polar glaciers in that the latter feature a time lag of 10 - 20 years, which is too large. At the same time, the lag in monsoon glacier retreat (p. 3400) is also said to be 10 or 20 years. The proposed paper cannot be published in its present form and needs radical revision.

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