

## ***Interactive comment on “Analysis of ice phenology of lakes on the Tibetan Plateau from MODIS data” by J. Kropáček et al.***

**Anonymous Referee #1**

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This paper detailed the ice phenology of lakes on the Tibetan Plateau based on the MODIS snow and ice products. The results also show that the cumulative above zero temperature is better than annual averaged temperature. It also is an interesting application of remote sensing data in these remote areas. Therefore I recommend accepting this paper. Below are several suggestions that will hopefully improve the final version of the paper.

- 1) It is not enough to analysis the trend of lake ice variability by using only ten-year data, which also can be found from the very large standard deviations.
- 2) What is the error of these dates of lake ice when the MODIS 8-day composite data were used?

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- 3) Page 1741-1742, “the date of the end of the freeze-up period, when the total ice cover is denoted as Freeze-up Date (FU) in this study.” Please make sure its structure.
- 4) Page 1742, “Further deterioration of the ice leads to an eventual disappearance of ice denoted as Water Clean of Ice (WCI) .” Please make sure its structure.
- 5) Page 1753, “Both northern regions appear to have negative trends in both DCI and DI. The duration of the ice cover decreases rapidly for one to two and half days per year on average. Both the northern 5 regions on the contrary feature a positive trend in both variables. However apart from the SE region the variations are exceeding the calculated trend.” I wonder if the first northern should be southern. And, the last sentence is not clear.
- 6) Page 1757, L15, “. . . . .by many studies for a number of lakes worldwide.” It is better to give several references here.
- 7) Page 1975, L22, “This indicates that cumulative above zero temperature. . . . .” What is the range of cumulative above zero temperature? From January to December, or from summer to next summer? I also wonder how to calculate the cumulative above zero temperature from monthly averaged air temperature data.

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Interactive comment on The Cryosphere Discuss., 6, 1739, 2012.

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