

## ***Interactive comment on “A 368-year maximum temperature reconstruction based on tree ring data in northwest Sichuan Plateau (NWSP), China” by Liangjun Zhu et al.***

**Anonymous Referee #1**

Received and published: 29 February 2016

This manuscript presented a 368-year temperature reconstruction based on tree-ring record in northeast edge of Tibetan Plateau. It is a necessary supplement of past climate proxy records in this area, especially for the monthly mean maximum temperature reconstruction and its implication for rapid warming in recent at this region. Overall this manuscript is well-written, the work seems to be of high quality and is appropriate for Climate of the Past. Therefore, I would recommend this manuscript for publication in this Journal after the following issues are addressed.

(1) In the past 368 years, you identified seven short cold periods and three long warm periods (two long and one short). Could you explain why it appeared like this?

(2) You detected different significant periodicities of temperature variations in the past

C1

368 years. Only for this, you thought the temperature variations could be driven by ENSO, PDO, AMO and solar activity, which may not accurate. Please give more evidences if possible.

(3) References in text of the manuscript should be listed in chronological order.

(4) It would be better if this manuscript is fluent by a native speaker again.

Other detailed comments: Line 11, Page 1: replace “for” with “in” Line 12, Page 1: move “base on a chronology of tree-ring widths over the period 1646-2013” to the end of “variability”. Line 15, Page 1: replace “between” with “in”, and “in our” with “from this” Line 17, page 1: replace “has” with “had”, and add “The” before “20th” Line 21, page 1: add “in this region” at the end of “level” Line 25, page 1: replace “the Tibetan Plateau and the Sichuan Basin” with “Tibetan Plateau and Sichuan Basin” Line 26, page 1: delete the first “the” Line 29, page 1: replace “of NWSP” with “in NWSP”, delete the last “the” Line 30, page 1: delete the first “the” Line 3, page 2: replace “of NWSP” with “in NWSP” Line 4, page 2: delete the first “the” Line 6, page 2: replace “from NWSP” with “in NWSP” Line 14, page 2: replace “were during a single month” with “reconstructed temperature in a single month” Line 15, page 2: delete “most of them” Line 18, page 2: replace “already has” with “has already” Line 19, page 2: delete “the” before “minimum temperature” and “Northern Hemisphere” Line 22, page 2: delete “the” before “mean temperature” Line 23, page 2: add “Therefore, ” before “the aims” Line 24, page 2: add “temperature” before “variations” Line 25, page 2: replace “the new” with “this”, and “for” with “in” Line 26, page 2: replace “driver” with “driving”, and add “in this area” at the end of this sentence. Line 29, page 2: delete “the” and “forest” Line 31, page 2: delete “type” and “the” Line 4, page 3: delete the space before the first “%” Line 5, page 3: delete “the” before “valley” Line 4, page 3: delete “above sea level (“ and “).” Line 17, page 3: replace “standard” with “traditional” Line 18, page 3: delete “the” before “laboratory” Line 19, page 3: delete “the” before “annual” Line 29, page 3: delete “the” before “composite”, and add “by” before “estimating” Line 7, page 4: replace “for our” with “in this” Line 8, page 4: delete “the” before “weather” Line 9,

C2

page 4: replace “are the” with “were”, and delete “the” before “tree-ring” Line 16, page 4: delete “the” before “tree-ring” Line 20, page 4: replace “of two” with “in two” Line 26, page 4: delete “test” before “(RE)” Line 29, page 4: replace “from” with “in” Line 6, page 5: replace “using SPSS” with “through SPSS”, and add a software reference at the end of this sentence. Line 7, page 5: replace “the chronology of Chali” with “Chali chronology”, and delete “the” before “Hongyuan” Line 18, page 5: replace “tried to reconstruct” with “reconstructed” Line 19, page 5: add “(TRI)” at the end of “tree-ring index” Line 30, page 5: replace “for” with “in” Line 11, page 6: replace “19.58” with “19.59” Line 2, page 7: delete “was also found” Line 3, page 7: replace “show” with “showed” Line 5, page 7: add “,” before “and”, replace “has been” with “had been”, replace “; most” with “. Most” Line 7, page 7: replace “are ” with “were” Line 9, page 7: replace “the growth of spruce trees in treelines of our study” with “the spruce growth at timberline in this area” Line 14-15, page 7: delete “, although late wood would have formed and cambial activity would have stopped” Line 18, page 7: replace “depends” with “depended” Line 20, page 7: replace “has” with “had” Line 24, page 7: replace “tree line has” with “timberline had” Line 26, page 7: replace “explain” with “explained” Line 27, page 7: replace “the tree line” with “timberline” Line 1, page 8: replace “of” with “in” Line 2, page 8: replace “for” with “in” Line 5, page 8: replace “for” with “in”, replace “again” with “also” Line 23, page 8: replace “of” with “in” Line 28, page 8: replace “of” with “in” Line 29, page 8: delete “as has been reported” Line 33, page 8: replace “has” with “had” Line 4, page 9: replace “over the” with “in” and replace “detected over the” with “detected in” Line 11, page 9: delete “This result coincides with the fact that”, and replace “could be” with “had been” Line 12, page 9: replace “over” with “in” Line 18, page 9: replace “of NWSP” with “in NWSP” Line 23, page 9: replace “evidenced” with “confirmed” Line 27, page 9: replace “for the Eastern” with “in Eastern” Line 28, page 9: replace “of northwest” with “in northwest” Line 1, page 10: replace “of NWSP” with “in NWSP” Line 5, page 10: replace “of NWSP” with “in NWSP” Line 6, page 10: add “temperature” before “variance” Line 10, page 10: add “The” before “20th” Line 1, page 15: replace “on the two” with “of two” Line 7, Table 3, page 16: replace “-0.288\*” with

C3

“-0.28\*\*” Line 16, page 17: replace “for” with “in” Line 1, page 18: replace “timberline *Picea purpurea* in Chali. A, Standard chronology and changing sample size over” with “*Picea purpurea* at timberline in Chali. A, Standard chronology and sample size changing with” Line 6, page 18: delete “mean” before “total” Line 7, page 18: replace “gray” with “black” Line 2, page 19: replace “for NWSP” with “in NWSP” Line 7-8, page 19: replace “for NWSP” with “in NWSP” Line 1, page 20: is “1645-2012” replaced with “1665-2012”? Line 2, page 20: delete “and 99%” Line 2, page 21: replace “of NWSP” with “in NWSP” Line 3, page 21: replace “A” with “(A)”, replace “B” with “(B)” Line 4, page 21: replace “for NWSP” with “in NWSP”, “C” with “(C)”, and “for Kathmandu” with “in Kathmandu”

---

Interactive comment on Clim. Past Discuss., doi:10.5194/cp-2016-6, 2016.

C4