Dear Joel and two referees,

We carefully revised our manuscript according to your comments. We appreciate your helpful comments on our manuscript. These comments make our manuscript more perfect and accurate. All detailed revision and response are as below. Thank you so much for all your help in processing our manuscript.

Sincerely yours,

Shanna Lyu and Xiaochun Wang,
on behalf of all co-authors

Responses:

1. The periodicity analysis revealed cycles similar to the cycles of sunspot or ENSO activity. To support such ideal, it's better to provide more evidences. The periodicity analysis along is far from enough.

***The authors' response*:** Comment accepted. According to your comments, the section 3.5 was removed from the revised paper because of the non-significant period of solar or ENSO and less contribution to this paper.

2. The Little Ice Age is generally abbreviated as LIA, instead of LAI or LA. Such expression should keep consistent in the MS (LA in line 1 of page 11).

***The authors' response*:** Comment accepted. All such expressions "The Little Ice Age" in the MS were abbreviated as LIA.

3. Since the acceptable tree-ring chronology begins from 1660, it shouldn't be a 414-year temperature reconstruction (in the MS title), and "Results and Discussions" should based on the credible period (1660-2015).

***The authors' response*:** Thank you for this suggestion. A reliable tree-ring chronology spanning 1660-2015 was developed on the basis of an EPS value greater than 0.85 (eleven trees). However, although an EPS value from AD 1600 to 1659 was less than 0.85, it matches a minimum sample depth of 6 trees in this segment. It is very important to extend the reconstruction tree-ring chronology as possible as we could because of few long climate reconstructions in this area. Moreover, the northern Hemisphere temperature series (D'Arrigo et al., 2006) and historical documents also partly confirmed that the reconstruction temperature from 1600 to 1659 was valuable. Therefore, we kept the reconstruction in this part. To help the readers to better understand this problem, we added some explanations (or illustration) of EPS in the segment of the chronology from 1600 to 1659 in the main text.