

## *Interactive comment on* "Relationship between climate change and wars between nomadic and farming groups from the Western Han Dynasty to the Tang Dynasty period" *by* Y. Su et al.

## Anonymous Referee #1

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The authors examined 367 wars between nomadic and farming groups from the Western Han Dynasty to the Tang Dynasty and built a relationship between climate change and wars. They found that warm climates corresponded to a high incidence of wars on a 30-year timescale, and the battlefields were mostly in the southern regions during the cold periods.

This is an interesting paper of detecting the climate impact from the perspective of wars. Unfortunately the results are ambiguous. There are four reasons for this:

1. What is the uncertainty of climatic reconstruction? Based on historical documents and observations, Ge et al. (2007; 2010) showed large uncertainties in proxy tem-

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perature, especially for the period prior to 1000AD. During certain decades, regional temperature variations were even opposite between two climatic reconstructions. So how could the authors justify their temperature data?

2. What is the coverage of temperature reconstruction? Does it cover all the battlefields of 367 wars, or will the temperature shown in Fig.2b be able to represent the temperature in the whole studying region?

3. What is the uncertainty of the war data? War records may vary from different historical documents. How could the authors justify their war data?

4. How could the authors justify the relationship between climate change and wars? Besides climate change and its induced effects, some other factors can also modulate the war frequency between nomadic and farming groups. For example, the Han dynasty carried out "marring for the sake of peace", which effectively reduced the war frequency with Hun and is totally independent of climate change. So how could the authors separate such human-induced factors from climate change?

Therefore, this paper would require major revision before it can be accepted.

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