Review of the "Weakening anomalies of East Asian Summer precipitation Influenced by the Tibetan Plateau Warming Amplification" by Mei Liang, Jianjun Xu, Xiangde Xu

This paper mainly addresses three key points: (1) the surface temperature-warming rate of TP area is greater than the rate of global warming; (2) the temperature change is related with elevation; (3) the TP warming is one of the factors which influence the East Asian summer monsoon. Linear regression analysis and Mann-Kendal trend test are adopted. Overall, the statistical methods used in this paper are not rigorous. For instance, the linear regression used in this paper does not provide the assessment of goodness of fit or validation. With this problem, all of the diagnosis which based on the regression are not acceptable. So, I would not recommend this paper unless the authors significantly improve their study.

Major Comments:

Lines 134-135: "In the eastern part of the TP, stations at altitudes above 2000 m are selected as representative stations." Why stations above 2000m are selected? Why only eastern part?

Line 139-146: Regression analysis and linear correlation are different, please double check the methodologies and cited literatures.

Line 157-170: Station based and region based trend analysis are done, together with some discussion on interannual variability. In fact, these results suggest that the study did not clarify which part is the trend, which part is the variability. Because the authors themselves also noticed and mentioned that "Between 1979 and 2004, the interannual variability of temperature on the TP is relatively small (except in 1981), basically remaining between 12.6°C and 14°C." Then before, the authors said "A marked increase is apparent in the past 40 years in the eastern part of the plateau, of which 56 stations show a statistically significant trend at the 95% confidence level (solid red dots). There are 16 stations with a trend exceeding 0.5°C/decade, all distributed over the northeast and southwest sides of the TP, among which Mangya Station (No.51886) even has a trend greater than 1.0°C/decade." These results made me wonder whether the trend analysis is reliable as probably there are abnormal

years that affect the trend analysis, especially, trend analysis is not robust when the data is short.

Line 186-190: "From the results of the two sets of data (Figures 2a and 2b), it is clear that the temperature of the TP and its surrounding areas decrease with increasing altitude, which is consistent with the variation of tropospheric temperature with height. However, it decreases at a rate of 0.43°C–0.45°C/100 meters, which is lower than the lapse rate (0.6°C/100 meters)in the tropospheric 190 atmosphere. " This statement is also based on the linear regression, assessments of goodness of fit shall be added. The same problem also exists in Line 199-201 and Line 222-223 and other places.

Line 207: "The large-scale terrain of the TP has a magnifying effect on the warming rate of warm air, …" I could not follow the authors conclusion. This might be speculation without evidence.

Line 214-218: Authors divide the altitude into three and two levels based on MERRA reanalysis data and observational data. However, there is no explanation on why they did this.

Line 220-224: "As shown in Figure 3a, the normal distribution curve of the 2000–4000 meters temperature rate is significantly more concentrated and shifted to the right than that of 0–2000 meters. The average temperature-change rate increases from 0.26°C/decade to 0.38°C/decade, and the variance reduces from 0.05 to 0.04." There is no statistical significant test, it is hard to believe the conclusion. In addition, authors shall make clear about how did they obtain the normal distribution of temperature.

Line 238-240: " In this period, the summer precipitation in China is characterized by the so-called "southern flood–northern drought" spatial distribution (Rectangular area from north to south, respectively present north and south eastern Asia region)." The interdecadal variations of summer precipitation over 1979-2016 in China has been investigated in many literatures. Authors should check the literatures and provide precise statement.

Line 247-248: "In China, the southern flood–northern drought pattern is also seen with the MERRA data, and is extremely significant. " what is the "extremely significant"? Any test to provide evidence.

Overall, the study relies on one single approach – linear regression/correlation. I don't think the linear method is sufficient to explain the complex system in Tibet and EASM. The study doesn't offer additional knowledge to the community, if the authors check the pool of literature regarding either EASM precipitation and climate variability of Tibet Plateau, they will find a lot of good studies that have been done years ago. Also, ESD, to our readers' understanding, emphasizes on the physical understanding of the system, the study does not offer deeper understanding.