Supplement of

Contribution of Surface Solar Radiation and Precipitation to Spatiotemporal Patterns of Surface and Air Temperature Warming in China from 1960 to 2003

Jizeng Du et al.

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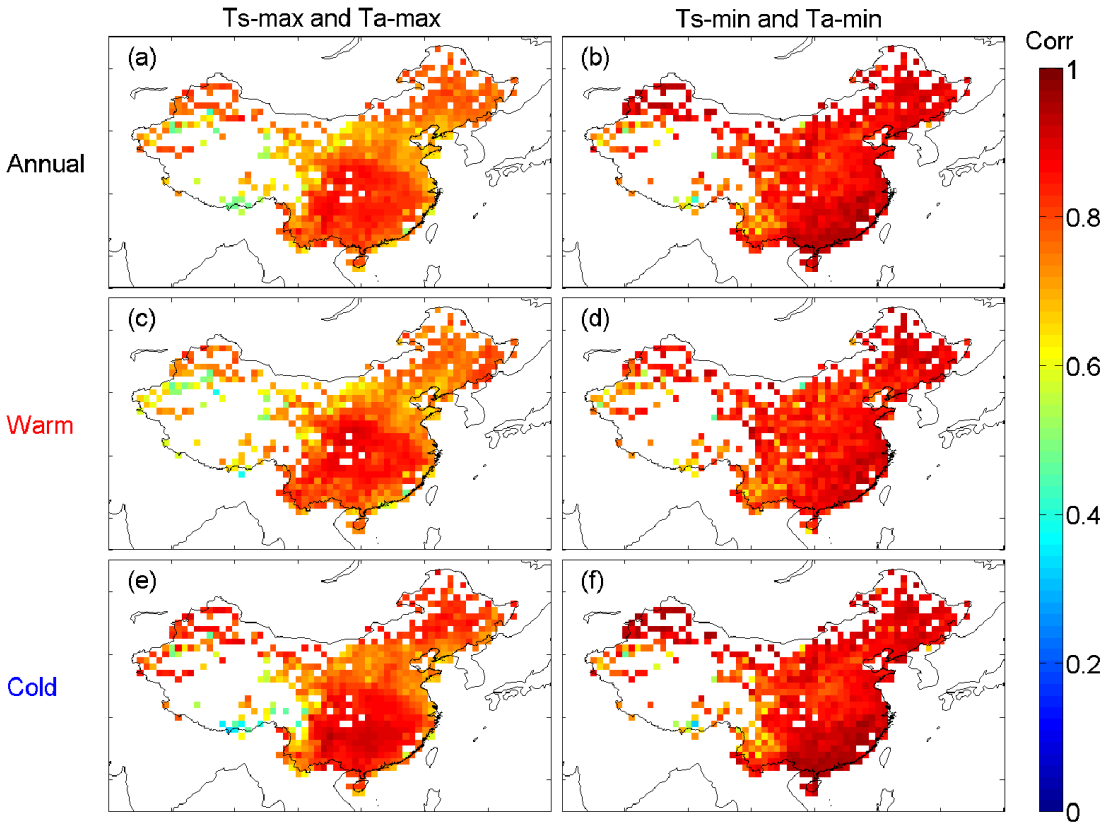


Figs. S1. The spatial patterns of the correlation coefficients (Corr) between the surface temperature and the near-surface air temperature: (a), (c), and (e) are the correlation coefficients between $T_{s\text{-}max}$ and $T_{a\text{-}max}$ on annual, warm, and cold seasonal scales, respectively; (b), (d), and (f) are the correlation coefficients between $T_{s\text{-}min}$ and $T_{a\text{-}min}$ on the annual, warm, and cold seasonal scales, respectively.

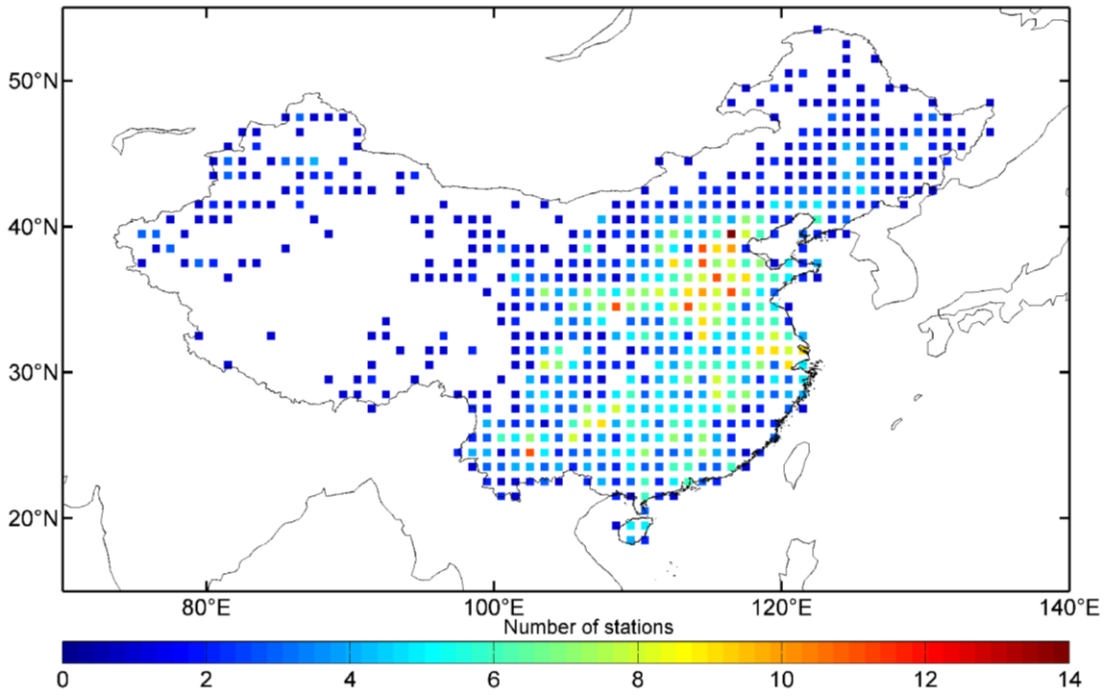
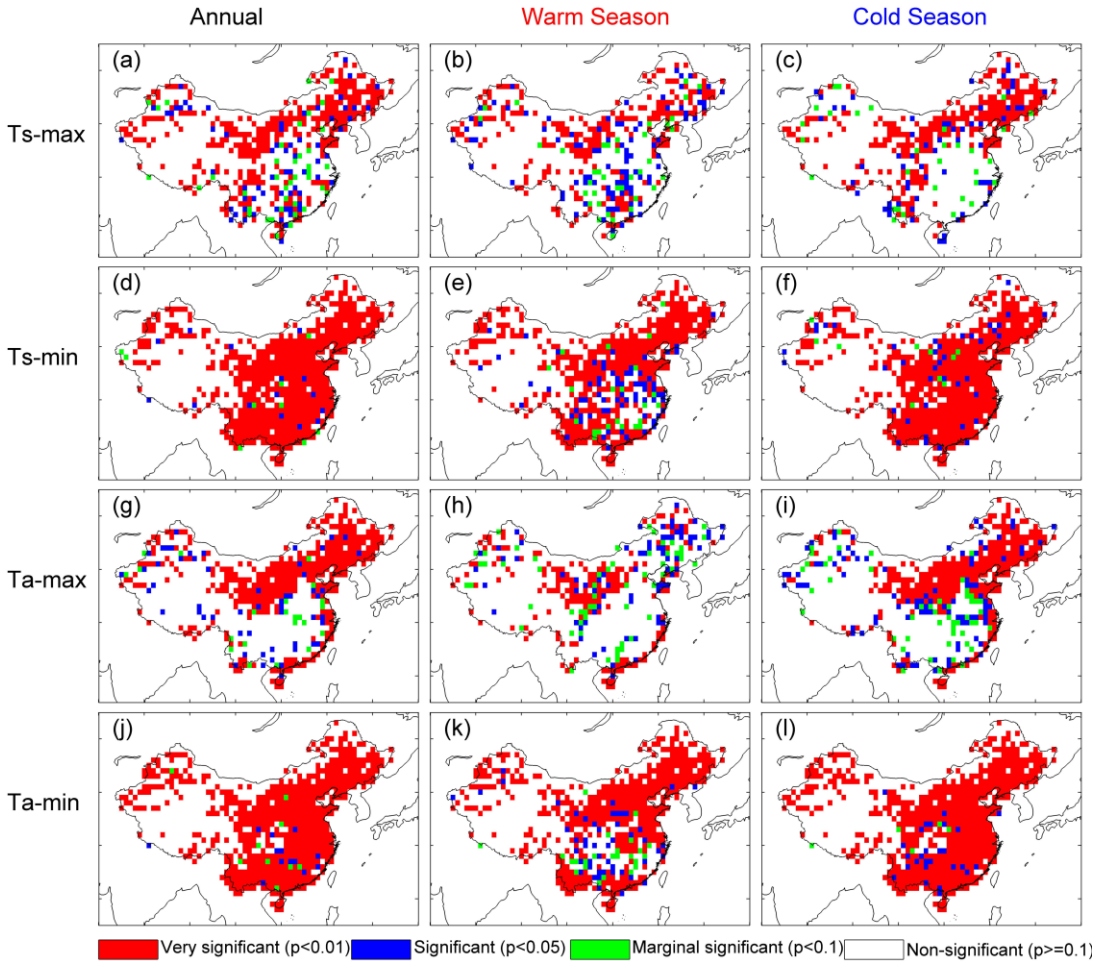
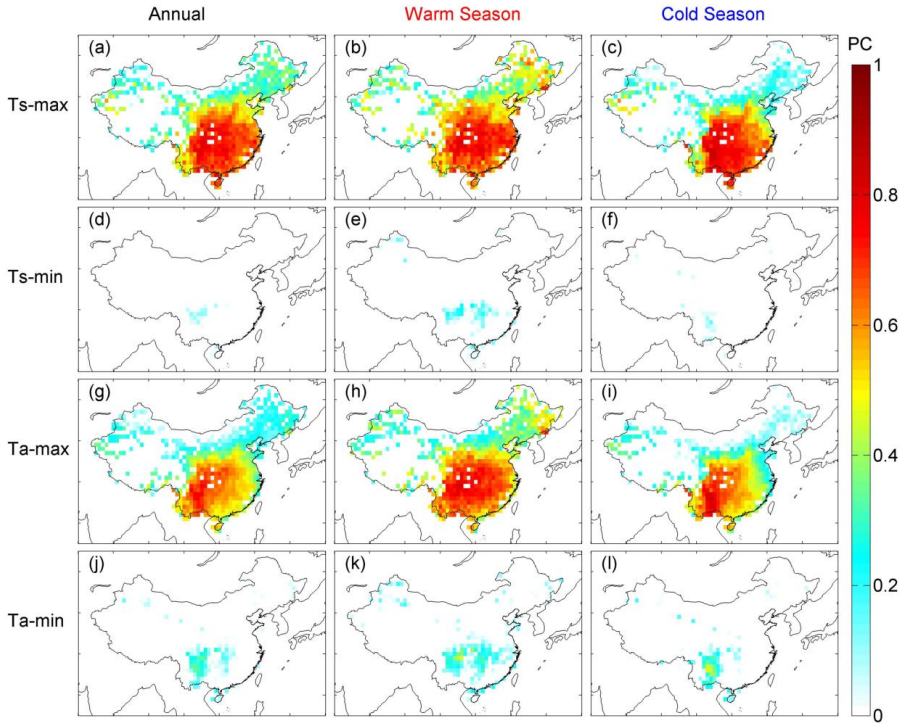


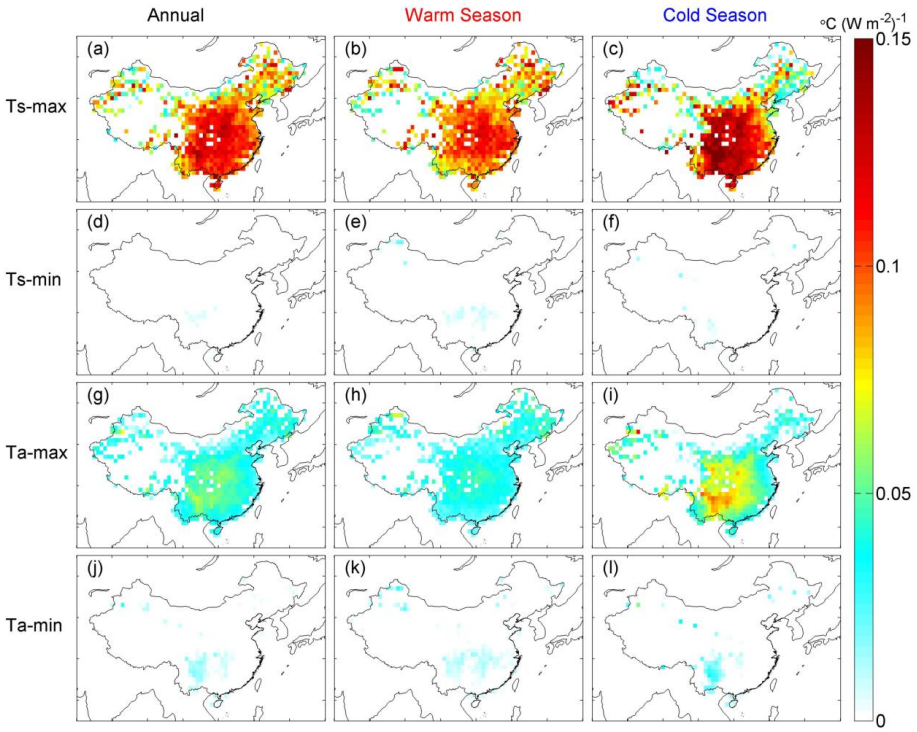
Fig. S2. Number of selected stations in each 1° × 1° grid. To reduce the impact of the spatial heterogeneity of the station density, the monthly anomalies of all variables are binned into 1° × 1° grids. Six hundred twenty-seven such grids are obtained, accounting for 65.79% of all the grids in Mainland China (Zhao et al., 2006). The values of the grids are the average values of the stations in the grid and the regional averaged values are the average of all the grids in the period. On average, the results covered the equivalent of 65.79% of China's land surface.



Figs. S3 the corresponding significant test of trends of temperatures (see Figs 4) in China during 1960-2003.



Figs. S4. Maps of the partial correlation coefficients (PCs) between the surface solar radiation (SSR) and the temperatures on annual, warm, and cold seasonal scales. The PCs are the linear partial correlation coefficients calculated based on the monthly anomalies of the SSR and temperatures, taking the precipitation as a control variable.



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44 Figs. S5. Maps of the sensitivity of the temperatures to the surface solar radiation (SSR)

45 variation on annual, warm, and cold seasonal scales.

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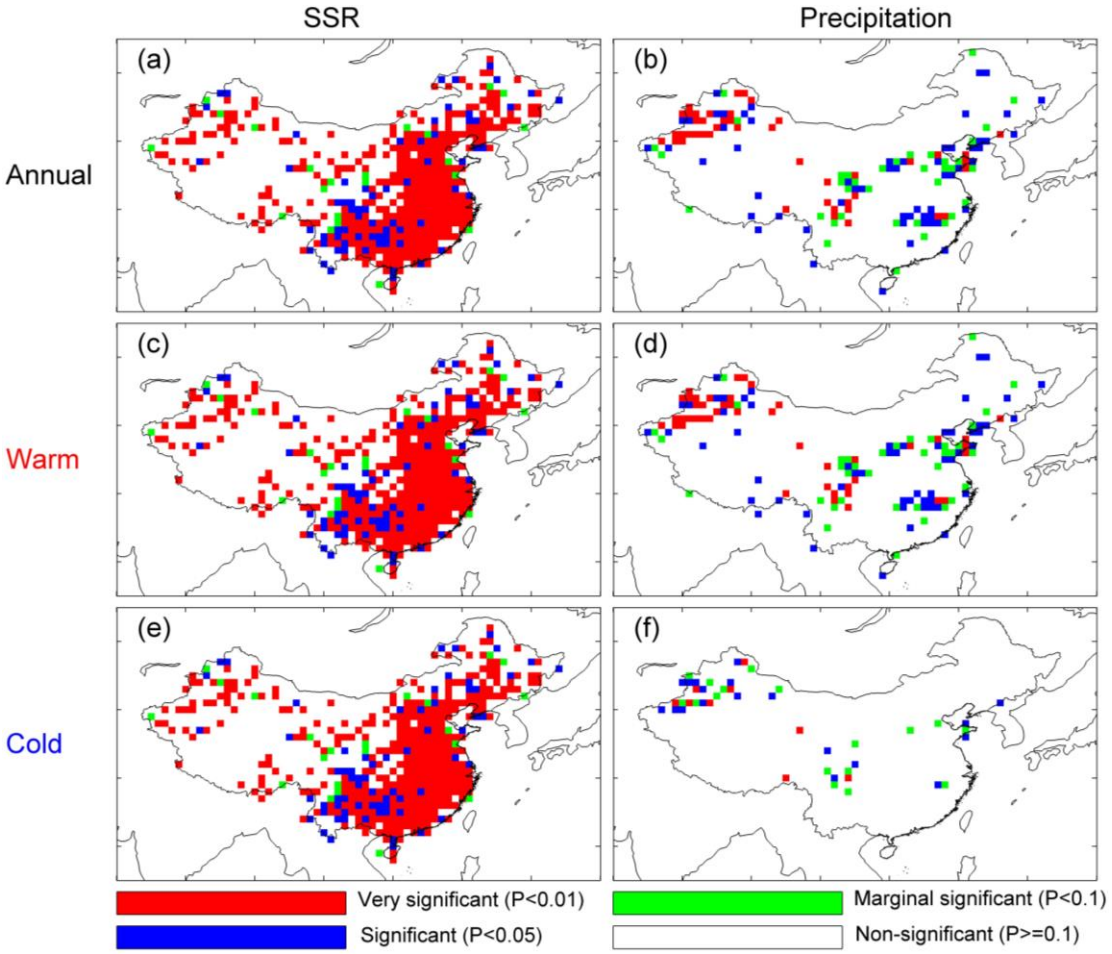

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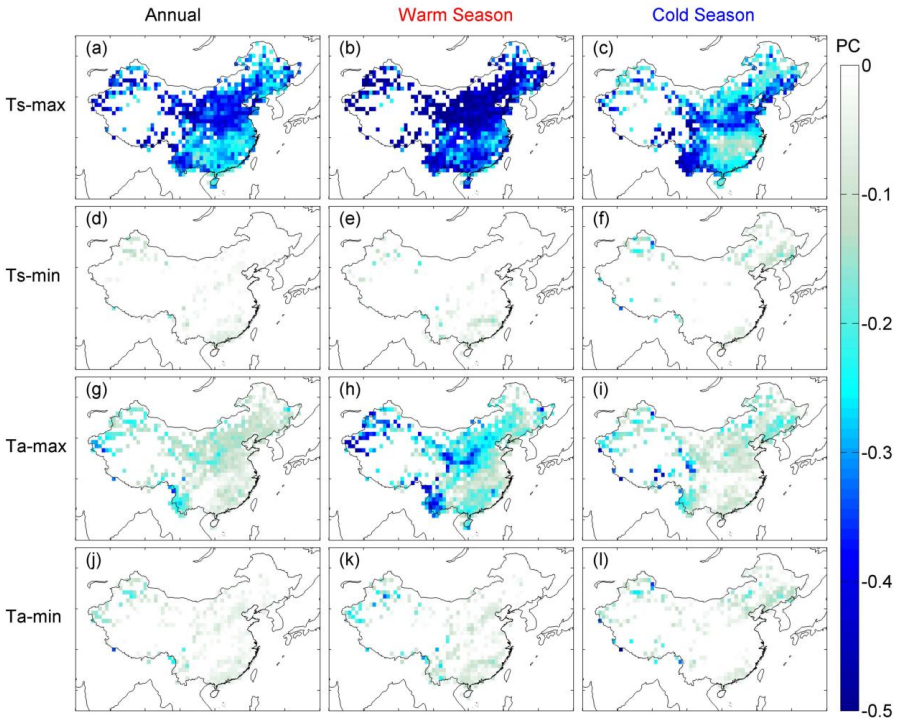
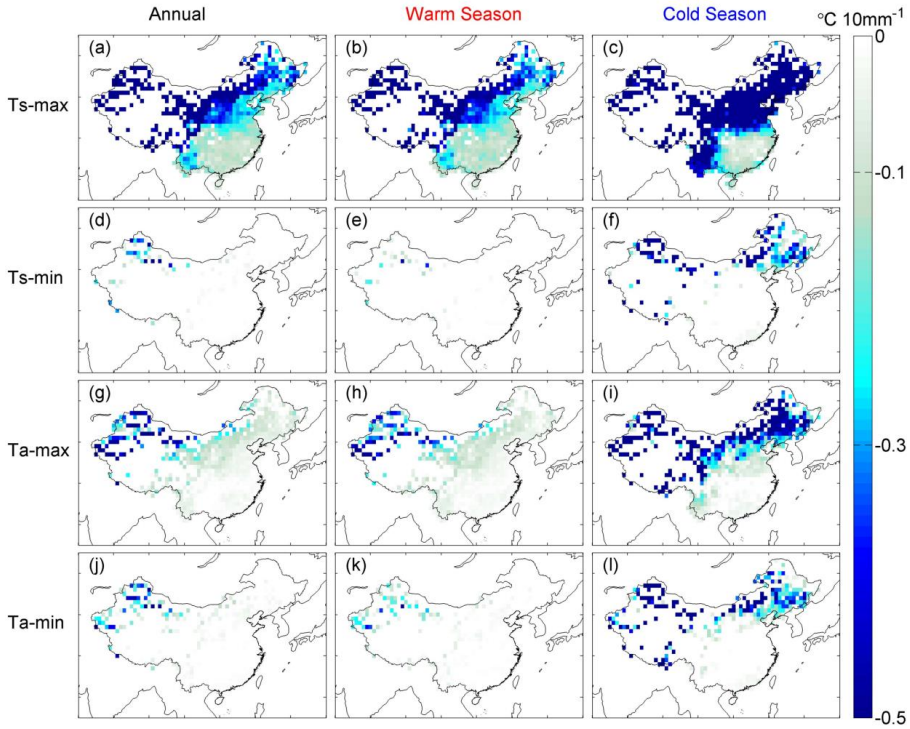
48 Figs. S6 the corresponding significant test of trends of SSR (see Figs 7a-c) and

49 precipitation (see Figs 10a-c) in China during 1960-2003.



Figs. S7. The partial correlation coefficients (PCs) between the precipitation and the temperatures on annual, warm, and cold seasonal scales. The PCs are the linear partial correlation coefficients calculated based on the monthly anomalies of the precipitation and temperatures, taking SSR as a control variable.



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56 Figs. S8. Maps of the sensitivity of the temperatures to precipitation variation on annual,

57 warm, and cold seasonal scales.

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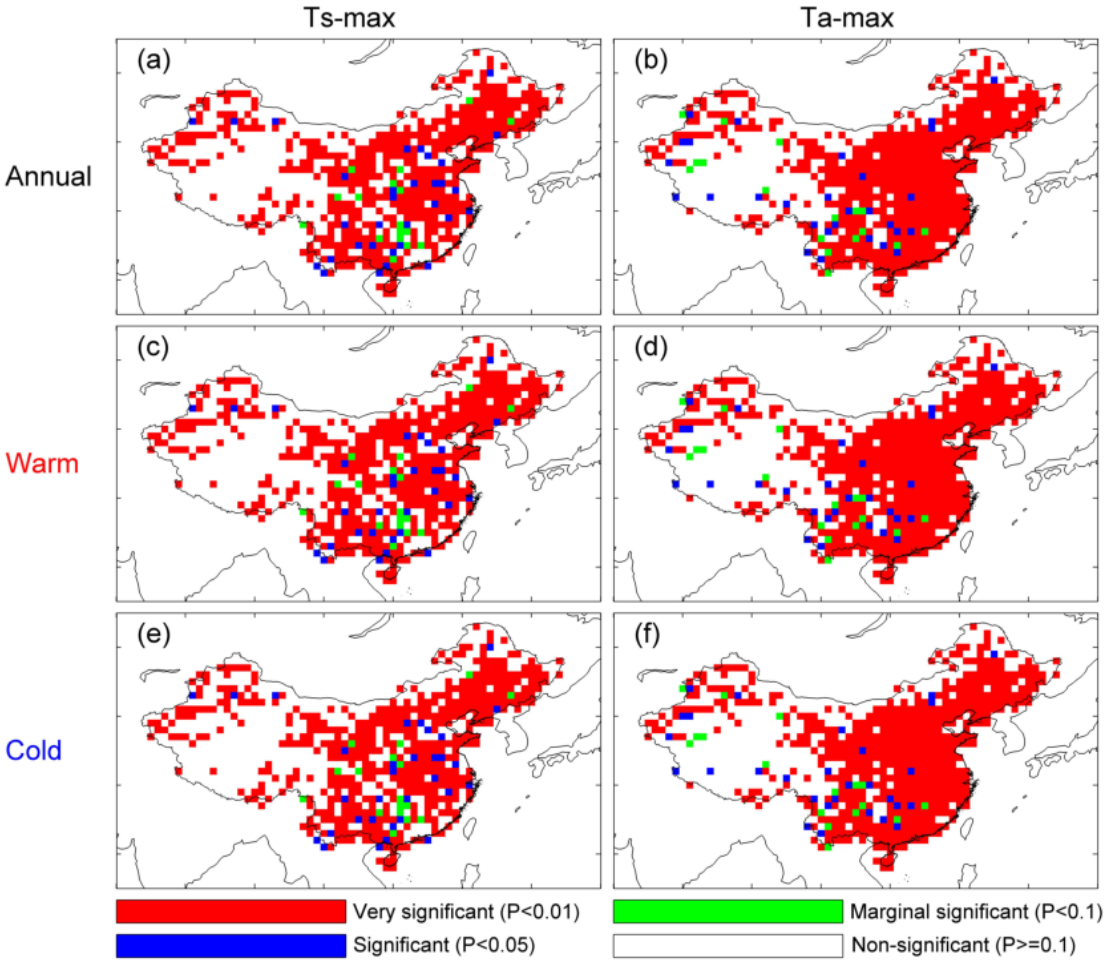

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60 Figs. S9 the corresponding significant test of trends of $T_{s\text{-}max}$ and $T_{a\text{-}max}$ after adjusting

61 the impact of SSR and precipitation (see Figs 11) in China during 1960-2003.

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