气候变化研究进展 2006 02 (00): 50-53 ISSN: 1673-1719 CN: 11-5368/P

Letters

Statistical Analyses of Climate Change Scenarios over China in the 21st Century

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收稿日期 2006-1-26 修回日期 网络版发布日期: 2006-8-31

摘要

关键词 regional climate model climate change scenarios statistical analyses surface air maximum/minimum temperature precipitation

分类号

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Abstract The changes of surface air temperature and precipitation in the three time-slices of the 21st century under SRES A2, B2 scenarios is firstly analyzed using the regional climate model system-PRECIS, then followed by analysis on the possible change trend of surface air temperature and precipitation under B2 scenario over China. It is shown that the future extreme maximum temperature and precipitation events would increase, while the future extreme minimum temperature events would decrease during 2071-2100 under B2 scenario over China relative to baseline (1961-1990) average. It can be seen that the temperature in Northeast China, North China, and Northwest China would increase, while the precipitation would decrease under B2 scenario in 2071-2100, the climate would obviously become warmer and drier over these three regions in the northern part of China; and the precipitation over Central China, East China, and South China would increase largely in summer, while not so much in winter, especially the precipitation in South China in winter would obviously decrease. It means that both the flooding in summer and drought in winter would be enhanced over these three regions in the southern part of China.

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DOI

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