

论文

全球变暖情景下中国气温分区的未来变化

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摘要 利用SRES A2情景下IPCC AR4的13个模式资料, 结合我国月平均温度观测资料对当前和未来我国气温的分区进行对比研究。结果表明: 1961-1990、2021-2050年和2071-2097年三个时段年平均气温分区在我国西部变化不大, 而在我国东部发生了显著变化。1961-1990年我国东部被华北分区带分为南、北两个区; 2021-2050年由于1961-1990年间的华北分区带北移, 而在两广以北同时出现另一分区带, 使得该时段我国东部分成东北区、华北和华中区以及华南区三个区, 在2071-2097年北方分区带消失, 而南方的分区带北移至长江一带, 使得该时段我国东部仍可分为南、北两区。通过比较三个时段不同分区年平均温度时间变化发现, 导致分区变化的原因主要是由于在不同时段各分区年平均温度的变率和增温幅度不一致所致。

关键词 [中国气温分区](#) [气温变化](#) [未来情景](#)

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Future changes of air temperature division in China under global warming

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Abstract Based on 13 models of IPCC AR4 under SRES A2 scenario and monthly mean air temperature from 1961 to 1990 in China, current and future divisions of air temperature were evaluated. The results indicate that the divisions based on annual mean air temperature are similar in western China during three periods (from 1961 to 1990, from 2021 to 2050 and from 2071 to 2097), while the divisions are remarkably different in eastern China. The eastern China is divided into southern and northern districts by North China division belt during 1961-1990. North China division belt moves northward during 2021-2050, and it results in the appearance of another division belt in north of Guangdong province and Guangxi province. As a result, eastern China would be divided into three divisions, i.e. northeast division, North China and central China division, South China division. North division belt disappears during 2071-2097 and south division belt moves northward to Yangtze River, so eastern China is still divided into southern and northern divisions. The division changes result from the difference of annual mean air temperature variability and range according to the time changes of annual mean air temperature during the different periods of various divisions.

Key words [Air temperature division in China](#) [Air temperature change](#) [Scenario](#)

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