气象与环境学报 2008 24 (02): 10-13 ISSN: 1673-503X CN: 21-1531/P

论文

近百年丹东气温变化特征分析

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收稿日期 2007-11-29 修回日期 2008-1-17 网络版发布日期 接受日期

摘要 对1906—2005年丹东气温资料序列进行分析,得到近百年丹东气温变化特征。结果表明:在近百年丹东逐月平均气温变化趋势中,除夏季7月和8月呈线性递减趋势外,其他月份均呈线性递增趋势。在近百年丹东年代际和年际变化中,逐年代平均气温线性递增率为1.13℃/100 a,逐年演变过程中的年平均递增率为0.12℃/10 a。在各季的平均气温变化中,冬季(12月—翌年2月)线性增温最显著,平均线性递增率为0.30℃/10 a;春季(3—5月)次之,线性增长率均为0.12℃/10 a;秋季(9—11月)平均气温线性增温最小,线性增长率为0.06℃/10 a;夏季除6月几乎没有变化外,7—8月均呈递减趋势,整个夏季(6—8月)总线性增减率为0.03℃/10 a。近20 a年线性增暖趋势异常显著,逐年线性递增趋势为0.36℃/10 a。

关键词 气温 变化特征 气候变暖 趋势分析

分类号

Characteristics of air temperature change in Dandong during recent 100 years

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Abstract Based on air temperature data in Dandong from 1906 to 2005,the characteristics of air temperature changes were analyzed.The results indicate that monthly mean air temperatures in July and August are linearly increasing,while those in other months are linearly decreasing.The linear ratio of mean air temperature at inter-decadal level is about 1.13 ℃/100 a,and that at inter-annual level is about 0.12 ℃/10 a.The warming trend is the most obvious in winter(from December to February) with 0.30 ℃/10 a,followed in spring(from March to May) with 0.12 ℃/10 a and in autumn(from September to November) with 0.06 ℃/10 a.In summer,mean air temperature changes are small in June,while decrease in July and August.The trend ratio of summer is about 0.03 ℃/10 a.The warming trend is abnormally significant during recent 20 years,and the trend ratio is about 0.36 ℃/10 a.

Key words Air temperature Change characteristics Climate warming Tendency analysis

DOI:

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