专题:大气变量的物理分解　　　最新目录 | 下期目录 | 过刊浏览 | 高级检索　　<< ◀◀ 前一篇 | 后一篇 ▶▶ >>

如何提高天气预报和气候预测的技巧？

钱维宏*

北京大学大气海洋科学系, 北京 100871

How to improve the skills of weather and climate predictions?

QIAN Wei-Hong*

Department of Atmospheric and Oceanic Sciences, Peking University, Beijing 100871, China

| 摘要 | 参考文献 | 相关文章 |

Download: PDF (421KB)　　HTML KB　Export: BibTeX or EndNote (RIS)　　Supporting Info

摘要 从理论上探讨如何提高天气预报和气候预测的技巧.气候包括以小时为基本单位的昼夜循环、以日为基本单位的年(季节)循环、年代际循环和世纪循环等时间尺度的变化.这些气候变化存在确定的外强迫,是可以被认识和预报的.相对气候昼夜循环和年(季节)循环的偏差是天气尺度扰动.天气尺度的瞬变大气扰动可引发极端天气事件.有技巧的天气预报正是要通过天气尺度大气扰动信号,提前几天甚至十几天,预报出极端天气事件的发生.相对气候年代际和世纪循环的偏差是气候异常,有技巧的气候预测正是要预报出这种异常.距平天气图会大大提高短期和中期—延伸期天气预报的技巧,距平数值预报模式的研制也会加快提高中期—延伸期天气预报和气候预测的技巧.

关键词 天气预报, 气候预测, 技巧, 距平天气图, 距平数值模式

Service

把本文推荐给朋友
加入我的书架
加入引用管理器
Email Alert
RSS

作者相关文章

钱维宏

Abstract： This paper describes theoretically how to improve the skills of weather and climate predictions. Climate includes daily and seasonal cycles as well as inter-decadal and centurial-scale periodic cycles. These regular climate changes are forced by decided factors, which can be identified and predicted. The departures of atmospheric variables from daily and seasonal cycles are regional-scale transient anomalies which could cause extreme weather events. The skill of weather prediction is to forecast extreme weather events by these anomalous precursors several days to weeks ahead. Climate anomalies are those departures from inter-decadal and centurial-scale periodic cycles. The skill of climate prediction is to find those precursors to indicate possible climate anomalies. Anomaly weather maps can be used to improve the prediction skill for short-middle and extended ranges. The anomaly model of numerical weather forecast can largely increase the skills of extended-range weather and climate predictions.

Keywords Weather forecast, Climate prediction, Skill, Anomaly weather map, Anomaly numerical model

链接本文:

http://118.145.16.227/geophy/CN/10.6038/j.issn.0001-5733.2012.05.010　　或　　http://118.145.16.227/geophy/CN/Y2012/V/I5/1532

查看全文　　下载PDF阅读器