

研究短论

## 对中国东部夏季降水有重要影响的一种东亚遥相关型

濮冰<sup>1</sup> 王绍武<sup>1</sup> 朱锦红<sup>1,2</sup>

1 北京大学物理学院大气科学系 北京大学物理学院大气科学系 2 Illinois State Water Survey, University of Illinois at Urbana-Champaign, Illinois, USA

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**摘要** 利用重建的1880-1950年500 hPa高度场资料和1951-2004年的NCEP/NCAR再分析资料, 分析了年际尺度上东亚地区夏季大气环流变化特征。结果表明: 夏季在东亚沿岸存在一个明显的自北向南的正-负-正环流模态, 即鄂霍次克海阻塞高压与副热带高压存在一种同向变化、而它们之间区域的高度场为反向变化的遥相关关系; 同时分析了这种大气环流模态与1880-2004年中国东部地区夏季降水的关系。在年际尺度上, 正-负-正的环流模态与长江中下游地区和东北的降水有很好的正相关, 当夏季的环流处在阻塞高压偏强, 且副热带高压偏南偏强、日本及其以东地区上空高度场偏低时, 中国长江中下游地区和东北降水偏多。

**关键词** [东亚大气环流](#) [夏季降水](#) [年际变化](#)

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## An East Asian Teleconnection Mode in Relation to Summer Precipitation in Eastern China

**Abstract** Using the reconstructed 500 hPa geopotential height data in 1880-1950 and the 500 hPa geopotential height reanalysis data from NCEP/NCAR in 1951-2004, the characteristics of the atmospheric circulation in East Asia on the interannual scale were analyzed. A prominent meridional teleconnection mode of 500 hPa positive-negative-positive height anomaly (P-N-P) from north to south was found along the east-coast of East Asia in summer. The mode reflects the in-phase variations in Okhotsk blocking high and west Pacific subtropical high. The relationship of the circulation mode with the summer precipitation in eastern China was also studied. The results show that the P-N-P anomaly circulation mode correlates well with the precipitation in the middle and lower reaches of the Yangtze River and Northeast China on the interannual scale. When the blocking high becomes stronger, and the subtropical high locates southward and is stronger than normal, the precipitation in the middle and lower reaches of the Yangtze River and Northeast China is above normal.

**Key words** [Circulation in East Asia](#) [summer precipitation](#) [interannual variation](#)

DOI

通讯作者 濮冰 [puice323@163.com](mailto:puice323@163.com)

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