

[1]郑腾飞,郭建茂,尹继福,等.基于DFA法的江苏省极端降水时空分布特征研究[J].自然灾害学报,2012,04:76-83.

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## 基于DFA法的江苏省极端降水时空分布特征研究(PDF)

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摘要: 为进一步掌握江苏省极端降水的时空分布特征,基于该省1961-2010年均一性较好的逐日降水数据,利用去趋势波动分析法确定了全省13个站点的极端降水阈值,并通过Morlet小波及Mann-Kendall法分析了江苏省极端降水频数的振荡周期及其突变。结果表明,江苏省极端降水年频数和夏季极端降水均呈现8-10 a的变化周期,且1998年和2006年分别为其突变增加年,而秋季极端降水主要呈2-3 a与5-7 a的变化周期;极端降水与降水总量的空间分布具有较好的一致性,均呈南部大、北部小的特征。

Abstract: In order to grasp the spatiotemporal distribution characteristics of extreme precipitations in Jiangsu Province, the threshold of extreme precipitations was determined by detrended fluctuation analysis (DFA) based on the database of daily precipitation over Jiangsu Province from 1961 to 2010, and the oscillatory period of extreme precipitation frequency and its abrupt change were analyzed using wavelet analysis and Mann-Kendall test respectively. It shows that the annual frequency of extreme precipitations and extreme precipitations in summers in Jiangsu Province both demonstrate oscillation characteristics with

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[本期目录/Table of Contents](#)

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periods of 8-10 years, and the abrupt change mainly happened in 1998 and 2006, while the change period of extreme precipitation during autumns is 2-3 years or 5-7 years. The spatial distribution of extreme precipitations and total precipitation have good consistency, both illustrate higher frequencies in the south, and lower frequencies but concentrated in the north of Jiangsu Province.

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#### 参考文献/REFERENCES

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