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## 内蒙古地区雷暴活动特征分析(PDF)

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Title: Analysis of characteristics of thunderstorm activity in Inner Mongolia

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摘要: 基于1971-2007年内蒙古115个气象站的逐日雷暴观测资料,运用数理统计和经验正交函数分解(EOF)等方法,对内蒙古地区雷暴的时空分布特征和变化规律进行了分析。结果表明:内蒙古年平均雷暴日数为28.6d,呈东南多西北少的特征;37a来雷暴日数在波动中呈减少趋势,下降幅度为2.09d/10a,但东胜地区年平均雷暴日数有增加的趋势;全年中6-8月为雷暴集中期,出现3个或4个雷暴中心,活动区集中在110° E以东区域;通过EOF分解将内蒙古雷暴异常划分为全区一致型、东南—西北型、纬向型、经向型等4种类型;初步分析认为,内蒙古地区水汽的减少是雷暴减少的主要原因。

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Abstract: Using the observational thunderstorm data of 115 stations in Inner Mongolia from 1971 to 2007, the spatiotemporal distribution characteristics and its change law of thunderstorm were studied by means of mathematical statistics and analysis of empirical orthogonal function(EOF).The results show that the mean annual thunderstorm days of whole autonomous region are 28.6d;the annual-average thunderstorm days are less in the north-west region but more in the south-east region,and interannual thunderstorm variability is obvious.The annual number of thunderstorm days has a decreasing trend of 2.09d/10a,but has an increasing trend in Dongsheng area.The seasonal variation of thunderstorm in Inner Mongolia is obvious.The thunderstorm concentrates within the period from June to August and has three or four active centers.The main active area of thunderstorms concentrates on the area to the east of 110° E.The analysis of EOF shows that the abnormal features of spatial distribution of thunderstorm in Inner Mongolia is comprised in several types:types of entire area,southeast-northwest,latitude and longitude directions.Preliminary analysis shows that water vapor reduction is the main reason for the reduction of thunderstorms.

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