



Research on the temporal-spatial differentiation of rainfall precipitation in NE China in recent 50 years

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By applying ArcGis8.3 as a key data processing platform and employing IDW(Inverse Distance weighted) spatial interpolation method, this paper analyzes the temporal-spatial differentiation of rainfall precipitation within a duration of 50 years (1951~2000) in NE China area. At the same time, Functional Spectral Analysis method and Spearman Rank Correlation Test method are used to reveal its trend and periodical feature. The results indicate that the multi-year annual precipitation in NE China is 489mm, successively decreasing from southeast area to northwest area, which is 635mm, 481mm, and 355mm, respectively, in the east, middle, and west region. The precipitation is all above 75 percent of multi-year annual precipitation in each region in flood stage from June to September, and the more inner land area, the more percentage of the precipitation among the four months. In the half century, the precipitation is the lowest in 70's, and while it becomes large in 80's and 90's in NE China. Another prominent feature of precipitation in NE China is its periodicals, with a period of 11 years in the east and west area, and 32 years in the central area.