

纵向岭谷区参考作物腾发量变化的特点和趋势

Dynamic variation characteristics and tendency of reference crop evapotranspiration in the longitudinal range gorge region

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中文摘要:

以Penman Monteith方程分析了西南纵向岭谷区大理、元江、保山、昆明、景洪站46~48年的逐日 ET_0 及其余25个站1961~2000年逐月 ET_0 系列。研究表明:日最高温度是年内 ET_0 变化主导因素,年际变化主要受日照时数影响,个别站为最高气温或风速,短期 ET_0 变化与雾无直接关系。利用Mann-Kendall法对各站年际、年内分季节 ET_0 趋势检验,56.7%站点的年 ET_0 呈显著增加趋势,分布于澜沧江耿马-思茅-勐海一带以及横断山区维西、福贡等地。分季节逐日 ET_0 变化趋势为,昆明夏秋季显著下降,景洪冬春季显著增加,元江、保山、大理有增有减。降水量增加、气温升高,蒸发和日照时数减少,导致80%的站 ET_0 呈下降趋势,湿润指数普遍增加。

英文摘要:

Penman Monteith equation was used to compute daily ET_0 for five stations: Dali, Yuanjiang, Baoshan, Kunming, and Jinghong, based on the history meteorological data range from 46 to 48 years, and monthly ET_0 series of the other 25 meteorological stations from 1961 to 2000. The most important influence factor of daily ET_0 is daily maximum temperature. The key influence factor of yearly ET_0 is sunshine, but is wind speed and maximum temperature in some stations. And the fog is not relative with ET_0 . Then, Mann-Kendall method was used to test seasonal and yearly ET_0 series of five stations. Results indicate that yearly ET_0 series for 56.7% of weather stations increase significantly, which locates at Gengma, Simao, Menghai of Lancang River basin, and Weixi, Fugong of Hengduan Mountainous Area. Daily ET_0 in summer and autumn at Kunming station markedly decrease, while daily ET_0 in winter and spring at Jinghong station increase, but daily ET_0 at Yuanjiang, Baoshan, and Dali station changes irregularly. The change trend of main meteorological factors is that precipitation and temperature increase, evaporation and sunshine decrease, moisture index increase too, which make ET_0 series of 80% stations decrease observably.

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