

## VARIATIONS OF METEOROLOGICAL FACTORS CONCERNING ICE AND COMPREHENSIVE ASSESSMENT IN SOUTHWEST

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**Abstract:**The configuration of main meteorological element based on Fuzzy information distribution method of probability by using daily meteorological elements data for the period of 1960-2009 from 96 stations in Southwest China, to the number of icing consecutive days mainly constructing icing comprehensive evaluation index

### 1. Introduction

According to The Ground meteorological observation norms[1], rime, glaze, snow slush and rime mixed with glaze are called ice cover. The rime and glaze attached to wire is wire icing. We analyse the configuration of main meteorological element by using daily meteorological elements in recent 50 years. Based on the researching for the spatial distribution of meteorological elements in icing age in recent 50 years , we grade the zones of different icing ,support the distribution of power transmission line.

### 2. RESULTS and discussion



Fig 4. Spatial distribution of mean icing intensity (risk) in recent 50 years in Southwest China

The results show that when satisfy the conditions that daily maximum temperature in the context of -10°C and 1 °C ,relative humidity greater than 80%, sunshine duration less than or equal 2 at the same time , the probability of formation ice will increase. The most

severe icing area is at the border of Yunnan, Guizhou, Sichuan and Yunnan-Guizhou Plateau.

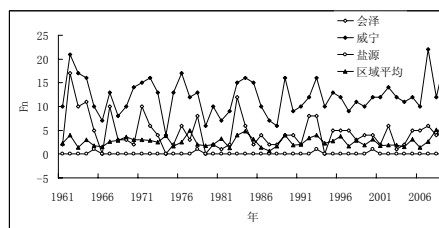


Fig 6. Representative stations interannual variability of icing intensity in recent 50 years in January

There is obvious interdecadal variability in annual icing intensity in Southwest China. At the year of 1962、1969、1976、1984、2005 and 2008 ,the icing intensity (risk) in Southwest China is high.

### 3. Conclusion

At elevations in the context of 800 meters and 3500 meters high , the probability of the three icing conditions will be greater than other areas. The icing intensity (risk) will be increasing .

[1] China Meteorological Administration. Standard meteorological observation [M] .Meteorological Press.

[2] SHU Li-chun,WANG Xiao-feng,JJIANG Xing-liang. Analysis of Categorizing Icing Zones along Transmission Lines[J]. Electric Power Construction, 30:44-46.