

Comparisons on *EVI* Spatial Variation and Causes Explration among Different Mountains in the Southwest Yunnan Province of China

HAO Chengyuan¹, ZHANG Yongling¹, WU Shaohong²

(1. College of Surveying & Land Infomation Engineering, Henan Polytechnic University, Jiaozuo 454000, China;

2. Institute of Geographic Sciences and Natural Resource Research, CAS, Beijing 100101, China)

Abstract In the southwest of Yunnan Province of China, there are Mt Laobie, Mt Bangma, Mt Wuliang and Mt Ailao, which influenced its climate and vegetation. It may be one of the main issues of mountain ecology in China. In this paper, moran coefficient (*MC*) was adopted to calculate the spatial autocorrelation degree, and semi-vari-
ance function was used for spatial variability and spatial heterogeneity analysis. The results indicate that the spatial differentiation patterns of main climatic factors have been consistent with the trend of mountains, showed higher au-
tocorrelation in south-north direction and lower in west-east direction. And all these indicate that the barrier function
was remarkable in the orientation of the mountains while the topographic corridor effect was rather obvious in the ex-
tension direction. The barrier function was stronger with more complicated structure resulted from directivity for Mt
Ailao and Mt Laobie while it was weaker for Mt Bangma and Mt Wuliang. All in all, the corridor-barrier functions
of vertical mountains were closely related to the trend and scale of each mountain.

Key words the combination of ranges and gorges; *EVI*; spatial variability; anisotropism; “corridor-barrier” func-
tions

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