

SHAPE VARIATIONS OF TIANXING RIVER ISLAND IN YANGTZE RIVER FROM 1947 TO 1999 AND ITS SIGNIFICANCE OF STUDIES ON GEOCHRONOLOGY

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Tianxing river island, which is located the center of Wuhan city—the capital of Hubei province and one of the biggest cities in China, lies in the middle-lower reaches of Yangtze River. The area of the island covers 17km² with about 3800 residents. By means of geological survey and remote image analysis, as well as historical inquisition, a series of variation parameters of the island with time in length, width, highness, area and shape were obtained quantitatively. Furthermore the relationships between time and the migration of the island from south to north, the correlation of growth and shrink between its head and end of island were investigated. Based on the parameters and migration characters, several evolution stages of the island were divided, and corresponded to distinct flood stages. The studies supply us quantitative data about the island evolution. According to the data, accuracy ages of sediments distributed in the island were calibrated. The further work is focused on the investigations of the sediment characters, including magnetic parameters, trace elements, radioactive contamination and pollution indicating organism, as well as the correlation between the features and the ages of them. On the basis of the researches, age criteria (a group of parameter columns or curves) can be established to determine regional modern sediment ages.