

QUANTITATIVE ESTIMATION OF THE PALEO-CLIMATE BY COMPARISON OF NUMERICAL SIMULATION AND DATA BASE OF FOSSIL INFORMATION

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Estimation of climatic variation during the Earth's history has often been made on the geographical distribution of evidence of ice or other fossil climate indicators. However, the fossil climate indicators are often quite fragmental. Further, sampling points of fossil indicators do not have uniform distribution. In addition, latitudinal distribution of the terrestrial area are changing because of plate tectonics. All these circumstances bring about strongly biased set of sampling points, which in turn cause errors in the estimation of the paleo-climate. Thus, for more quantitative estimation of the paleo-climate, making a common ground for theory and observation of paleo-climate is need. For making a common ground for theory and observation of paleo-climate, we make two data set; one is a data base of the variable fossil information during the Phanerozoic. The other is the result of numerical simulation during the Phanerozoic. Comparison of numerical simulation and data base of fossil information can be used to distinguish local mountain glacier from global scale ice-sheets.