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TRANSLATED SUMMARY AND CONTENTS
APPEARING IN THE MONOGRAPH

PROBLEMS ON ENVIRONMENTAL ADAPTATION OF
ATMOSPHERIC MOTIONS

大气运动中的适应问题

by

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The Science Press, Peking, China. 1965. 126 p.

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SUMMARY

This monograph presents a comprehensive discussion of the problems on environmental adaptation of atmospheric motions. The main theme is to summarize research achievements in this field in China for the recent years in combination with investigations carried out by the authors. Due appraisal is given to related research activities in foreign countries in the proper perspective.

This monograph deals with energy dispersion and the propagation of several types of wave motion, and studies the generic characteristics of adaptive and evolutionary processes and the physical properties of environmental adaptation to geostrophic balance. After a discussion on the adaptive processes in a barotropic atmosphere - the most basic state of the atmosphere - the adaptive processes of geostrophic balance in a baroclinic atmosphere are then investigated. Furthermore, the authors also probe into problems on the environmental adaptation between the wind field and the pressure field for macroscale and microscale motions. Comments on problems for further investigations are also presented.

This monograph will be useful to research workers in meteorology, professional meteorologists, post-graduate scholars, college students and teachers in allied fields.

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