Synoptic meteorology in China

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1. China made rapid progress in the field of meteorology as in so many other fields, since 1949. Meteorological stations grew from about 100 to over 2500. Simultaneously large number of radar stations and satellite data reception stations were also established. Increasing use was made of computers in weather analysis and forecasting. There was an equally impressive growth in the numbers of graduate and post-graduate meteorologists engaged in meteorological research. Meteorological research carried out during a period of 3 to 4 decades seems to have resulted in substantial improvements in weather forecasting in China. The book under review is an attempt to present the state of synoptic meteorology in China.

2. The book is divided into 10 chapters. The first chapter deals with the topography of China and general climatological features of that country. The winter weather including cold outbreaks are dealt with in chapter 2, while Spring weather including cyclones is dealt in chapter 3. The rainy season in China is described in chapters 4 and 5. Included in these chapters are discussion of the Asian summer monsoon and weather processes of Mei-yu. Indian meteorologists interested in summer monsoon processes over India will find these chapters interesting particularly to get a continental view of the summer monsoon systems.

3. Chapters 6 and 7 deal with important changes in the strength and position of the sub-tropical high and the weather systems over the Tibetan plateau. These chapters contain valuable information regarding the processes which link the middle latitude systems and the systems of the sub-tropics. The discussion presented on the part played by long waves on the weather over Tibet holds many clues on their influence on the winter weather over the Indian subcontinent. With the description and data presented in this book, it is much easier to correlate our own findings on the influence of long waves on winter weather over Pakistan and north India. Lack of sufficient knowledge of weather processes over the Tibetan plateau hampered earlier attempts to get a broader view of the interaction between the middle latitude features like the long waves and Indian weather.

4. The material contained in chapters 6 and 7 have enabled the reviewer to interpret his own research findings on winter weather and summer monsoon in a broader perspective. However, the references given at the end of these two chapters and of other chapters in general, do not cover sufficiently the research work done outside China. Many significant contributions made by Indian meteorologists on the topics dealt with do not find a place in this book. This is a deficiency of the book.

5. Chapter 8 deals with typhoons and chapter 9 with other tropical systems like ITCZ, subtropical cyclone etc. The final chapter 10 deals with autumn weather over China.

6. This book contains very useful information and data which will help Indian synoptic meteorologists appreciate and understand the linkages between the weather systems of the higher latitudes and those affecting India both in winter and summer, particularly the influence of the long waves. The reviewer was left with the impression that there is need for collaborative studies by Chinese and Indian meteorologists on the influence of the Tibetan plateau and the Himalayas on the weather systems of the two countries pooling together the data and rich research experience of the scientists of these two countries. Such an effort will not only enrich the knowledge of scientists of both the countries but may also result in good methods of medium and long range prediction of rain spells over India and China in winter and summer. The relation between the conditions over Tibet and the phases of the summer monsoon over India can be studied with such a collaborative effort. This book will be useful to research scholars as well as practising meteorologists in India who are dealing with prediction of winter rains over north and central India and summer monsoon rain.

7. Addition of map showing orography of China and another showing the network of meteorological observatories in China would have been very helpful to non-Chinese meteorologists. In the later editions of the book it will be useful if atleast a few of the latitude and longitudes shown in the maps presented in the book are marked with their numerical value. This will help meteorologists who would like to conduct comparative studies.

8. The book under review will be a very useful addition to any meteorological library.

— P. S. PANT