Met O 875

HANDBOOK

OF

WEATHER FORECASTING

Meteorological Office 1975

PREFACE

The *Handbook of Weather Forecasting* was written mainly for distribution within the Meteorological Office to provide forecasters with a comprehensive reference book on techniques of forecasting and closely related aspects of meteorology. The work originally appeared in twenty separate chapters and was later issued, with amendments, in three loose-leaf volumes, a format which has been retained in this revised edition of twenty-four chapters.

An initial distribution of three binders, complete with spine titles and prelims (title-page, contents etc) will be made; individual chapters will carry their own detailed list of contents and figures, and will be issued as they become available. There is a sheet for recording amendments.

Units of the SI (Système International) are used, except that the millibar continues as the unit of pressure instead of the pascal (1 mb = 1 hPa), and, following the recommendation of the World Meteorological Organization the knot (the nautical mile per hour, symbol kn) is used as the unit of horizontal wind speed. In some cases, particularly in scales on maps and diagrams measurements in the horizontal are given both in metres and nautical miles (symbol n.mile), while measurements in the vertical, in deference to aviation usage, are given in metres and feet. (Since 1972 the UK has used the international nautical mile of 1852 metres (6076.12 feet) in place of the Admiralty nautical mile of 6080 feet (1853.18 metres)). A list of SI base units and commoner derived units will be found in Schedule 1 to Appendix P to Met.O. O.M. Geopotential is measured in geopotential metres (symbol gpm), (strictly, since 1972, 'standard' geopotential metres = 0.980665 dynamic metre).

The degree of precision used in converting from old units has depended largely on the context. For example 'a few thousand feet' becomes 'a thousand metres or so'; the '3000-foot wind' becomes the '1000-metre wind'; a 'range of about 10°F' is converted to a 'range of 5 deg'.

With quotations from so many sources a particular difficulty has been that of ensuring a uniformity in the use of abbreviations and symbols; an attempt has been made, however, to make each chapter consistent in itself.

CONTENTS