

INTRODUCTION

The last two decades have seen extensive developments in our understanding of the behaviour of the tropical atmosphere on many time scales. The importance of tropical ocean-atmosphere interactions for inter-annual (e.g. El Niño Southern Oscillation) variations over the globe can now be clearly seen; there is extensive evidence for the global importance of seasonal monsoon phenomena, and clear evidence relating tropical intra-seasonal (30-60 day) oscillations to mid-latitude blocking events. Also, of course, there are regular reminders of the ferocity of tropical cyclones when they become extra-tropical.

This year's ECMWF Seminar reviewed our current understanding of the behaviour of the tropical atmosphere on time scales of a few days to a few years and on spatial scales from synoptic-scale disturbances to global-scale oscillations. There was extensive discussion of the range of interactions between the tropics and extra-tropics on these time and space scales. The presentations contained many recent insights resulting from on-going observational theoretical and modelling studies of the World Climate Research Programme.

Particular attention was paid to the modelling of both synoptic and low-frequency phenomena in the tropics. There were stimulating presentations of important new developments resulting from studies of physical processes such as convection, radiation and air-sea exchanges. The resulting discussions were a lively feature of the Seminar, as we lack clear-cut answers to many important questions, and there is scope for vigorous debate.

The Proceedings of this and earlier Seminars constitute a valuable resource for young scientists beginning their work in many areas of atmospheric science. The enthusiasm and evident enjoyment of the Seminar by the attendees was expressed to all the speakers at the time. Here we record the sincere thanks of ECMWF and its member states to the many scientists from around the world who contributed so generously.