



International Civil Aviation Organization

**Eight Meeting of the Communications/Navigation/Surveillance and
Meteorology Sub-Group (CNS/MET SG/8) of APANPIRG**

Bangkok, Thailand, 12-16 July 2004

**Agenda Item 10: Review of the implementation of ICAO warning systems
2) Tropical cyclone watch**

RECENT DEVELOPMENT OF TCAC TOKYO

(Presented by Japan)

SUMMARY

This paper provides information on recent development of TCAC Tokyo

1. INTRODUCTION

1.1 Tropical Cyclone Advisory Center (TCAC) Tokyo of the Japan Meteorological Agency (JMA) started its operations in 1993, and has been providing meteorological watch offices, *inter alia*, with information on analyses and forecasts of tropical cyclones (TC) in the western North Pacific and the South China Sea.

2. IMPROVEMENT OF TRACK FORECASTS

2.1 Operational track forecasts for 21 TCs which attained Tropical Storm intensity or higher in 2003 were verified against the best track data prepared by JMA. The annual mean error of 24-hour forecasts of the center position was 120km, which was 18km smaller than that of 2002 and the smallest since TCAC Tokyo started its operations (See Fig.1).

2.2 This improvement is mainly explained by the improvement of the numerical weather analysis and prediction system of JMA as follows:

- (a) Initial field of the numerical prediction models was improved with direct assimilation of ATOVS radiance data and QuickSCAT sea surface winds.
- (b) The physical parameterization processes of Global Spectral Model and Typhoon Model were upgraded.

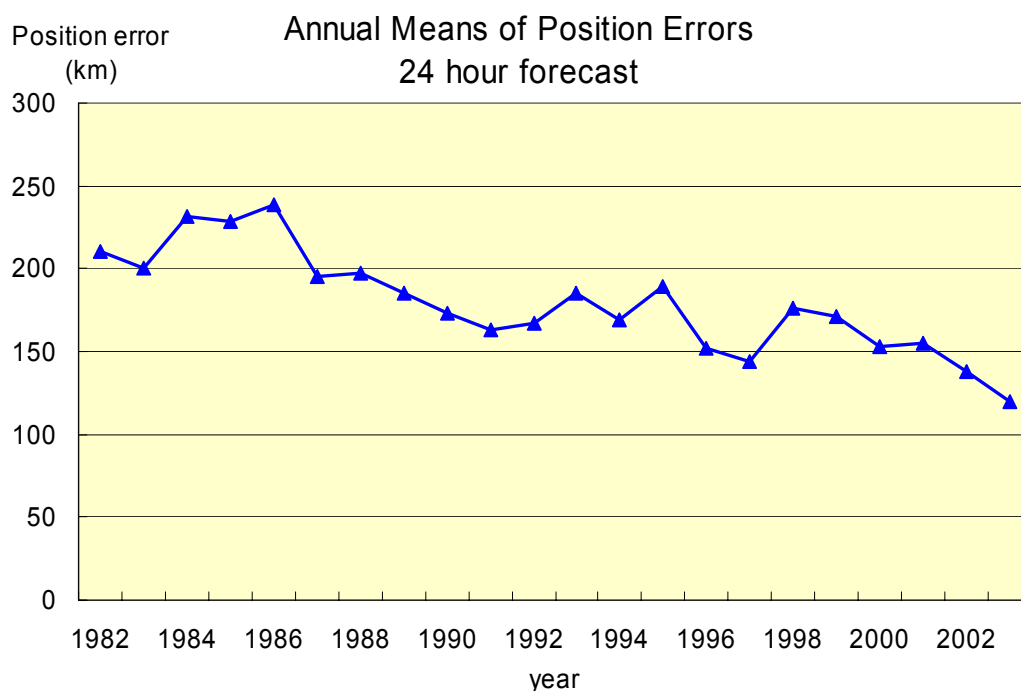


Fig. 1 Annual mean of 24- hour forecast position errors.

3. BACKUP OPERATIONS OF GMS-5 WITH GOES-9

3.1 The backup operations of Geostationary Meteorological Satellite 5 (GMS-5) of Japan with Geostationary Operational Environmental Satellite 9 (GOES-9) of the United States, started May 2003, are continuing successfully, enabling uninterrupted monitoring of TCs. The backup operations will continue until the start of the operations of Multi-functional Transport Satellite 1R (MTSAT-1R).

4. TC ADVISORIES AND WARNINGS FOR AVIATION

4.1 CNS/MET SG/7 of APANPIRG, held in July 2003, discussed on the format of Tropical Cyclone Advisory messages of TCAC Tokyo, and advised that only the alphabetical name, without further information on intensity and number, should be used for the "TC:" line of TCAs.

4.2 On 5 July 2004, TCAC Tokyo changed the format of TCA messages following the advice.

4.3 TCAC Tokyo is studying the operational procedure for issuing 18 hour forecast, for which the content of current TCAs is "NIL". However, it cannot produce the forecast at present.

5. ACTION BY THE MEETING

5.1 The Meeting is invited to note the information provided in this paper.
