

CGMS-XXVII JPN-WP-20

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Agenda Item: III/2

SATELLITE WINDS PRODUCTS PLANS WITH MTSAT

This paper provides information on the plans for the satellite winds products derived from MTSAT imagery.

SATELLITE WIND PRODUCTS PLANS with MTSAT

1 INTRODUCTION

MSC will partly change the way of producing satellite winds when MTSAT is put into operation, shortening the interval between images for wind tracking from 30-minute to 15-minute. It is expected that this change will bring an increase of the number of inferred wind vectors by about 20% more than the present product, as was shown in the WP presented at CGMS XXVI meeting (JMA, 1998). Some other plans for the satellite wind products with MTSAT are shown below.

2 LOW-LEVEL WINDS in the VICINITY of TYPHOONS

MSC has operationally derived low-level winds in the vicinity of typhoons for the last decade in addition to the global coverage of cloud motion winds and water vapor motion winds (See Figure1). The low level winds are produced when typhoons are within the area from 100E to 180E in the Northern hemisphere. They are utilized for typhoon analyses at the Forecast Division of JMA headquarter. They are presently it is produced once a day in the daytime for only one typhoon, but with MTSAT the application will be produced to four times a day for all observed typhoons. It is planned that the information on the low-level winds will be transmitted on LRIT to national Met Services that may be affected by the typhoons.

3 PLANS for SATELLITE WIND PRODUCTS

JMA has plans to transfer the software to produce satellite wind products from MSC's mainframe computer system to workstations.

It will enable JMA to develop algorithms which are able to efficiently high density wind vectors, improve matching accuracy, assign vector heights more effectively and disseminate products with quality flag on the BUFR code.

It is also planned to conduct a study of producing satellite winds from the new 3.7 μ m sensor's data.

4 REFERENCES

JMA, 1998: Satellite Wind Products by MTSAT. Report of the 26th Meeting of the Coordination Group for Meteorological Satellites held 6-10 July 1998 in Nikko, Japan. CGMS publications. A77-A80.

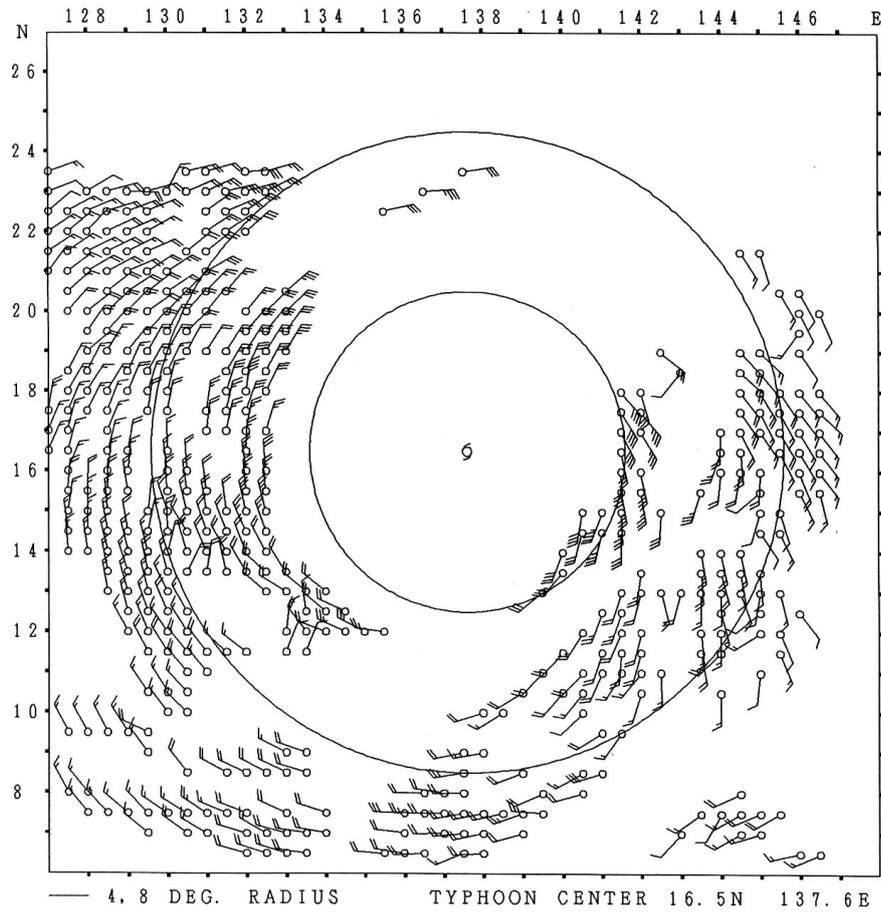


Fig.1 Low-level winds in the vicinity of a typhoon.
 6 is the typhoon center and radiuses of two circles
 are 4 and 8 longitude degrees respectively. Three
 visible images at 15-minute intervals are used for
 the calculation.