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Discussed in WGII

## **KMA ACTIVITIES FOR ASIA-PACIFIC RARS**

This document reports on the status of receiving, processing, utilizing of AOTVS in KMA, and the data exchanging in the program of Asia-Pacific RARS (Regional ATOVS Re-transmission Services).

## KMA Activities for Asia-Pacific RARS

### 1 Current status of ATOVS data receiving, processing, and utilizing

Current status of ATOVS data in terms of receiving, processing and utilizing are summarized as follows.

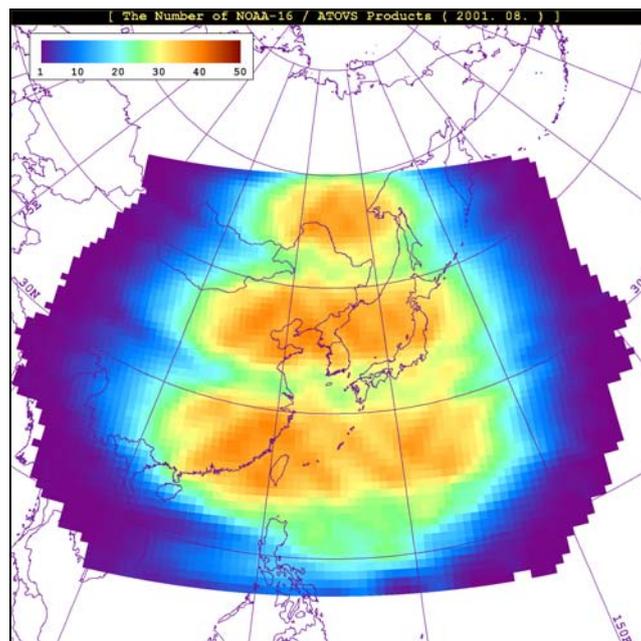
- The NOAA-16 ATOVS data had been received and processed for the purpose of test and research from 2001 to 2004.
- From 2004 to 2005, NOAA-16 ATOVS data have been used for daily forecast and numerical weather prediction model operationally
- Currently ATOVS of NOAA-17 &18 data are being processed and used operationally

(1) Station : KMA headquarter, Seoul (37.48N, 126.92E, Altitude 31 m)

(2) Data acquisition and processing

- HRPT data are received and processed at KMA
- AAPP version5.2 and IAPP version2.1

(3) Coverage : Figure 1 shows the coverage of available received data during a month.



## (4) Satellite status used

- NOAA-12, 15, 17, 18
- AVHRR : all
- ATOVS : NOAA-17, 18

## (5) Frequency of acquisition

- 2 satellite x 4 times in max = 8 times a day

## (6) Processing Sensors and Data level

	Processing	Level	Resolution
AMSU-A	AAPP	1a,1b,1c,1d	50km
AMSU-B	AAPP	1a,1b,1c,1d	16.3km
HIRS	AAPP	1a,1b,1c,1d	18.3 & 20.3km (10km for NOAA-18)

## (7) Processing time

- Reception time : about 15 min.
- AAPP Processing time : within 5 min.
- IAPP Processing time : within 5 min.

## (8) File size

	L1b	L1c	L1d
AMSU-A	0.2-0.3 Mb	0.3 Mb	
AMSU-B	0.8 Mb	1.3 Mb	
HIRS	0.5-0.6 Mb	0.8 Mb	
Total	1.5-1.7 Mb	2.4 Mb	2Mb

## (9) ATOVS utilization

- ATOVS data are currently used for Numerical Weather Prediction model as well as Weather Analysis.
- SATEM (satellite temperature and humidity sounding) data achieved via GTS are used operationally for Global Spectral Model of Numerical Weather Prediction also.

## 2 Status and Plan for ATOVS Data exchange between KMA and JMA

### (1) Background and history

- It was discussed at APSDEU-6 that ATOVS data would be exchange in Asia-Pacific area.
- It was decided that Tokyo and Beijing would be the intra-regional data centres.
- First exchange test within A-P area would have been finished till the end of 2005.
- KMA has started the detailed discussion to implant RARS system with JMA since May 2006.
- Format and telecommunication method for ATOVS data exchange was finalized according to the discussion with JMA.
- KMA prepared the encoding and decoding program for ATOVS data during June 2006.
- KMA debugged errors in BUFR data to be ready for data exchange from July to early August 2006.
- KMA finished to produce ATOVS BUFR data to be exchanged with JMA by August 2006.

### (2) Current Status

- Data to be exchanged : ATOVS AAPP L1C (HIRS, AMSU-A, AMSU-B)
- Data format : Compressed BUFR
- Telecommunication : GTS between Seoul and Tokyo
- Data from Seoul to Tokyo : 1 HRPT station (Seoul)
- Data from Tokyo to Seoul : 9 HRPT station (2 Japan, 3 China, 4 Australia)
- First test exchange on 15 September between Seoul and Tokyo was successful.
- Routine exchange between Seoul and Tokyo is performed since 20 September 2006.

### (3) Future Plan

- Exchanged ATOVS data would be used for regional NWP model to improve weather forecast.