

Change of MTSAT-1R AMV BUFR dissemination in August 2009

JMA will start to disseminate the BUFR of MTSAT-1R's Atmospheric Motion Vectors (AMVs) at 03, 09, 15 and 21 UTC (hereafter referred as "hourly AMVs") to users from 03UTC 18 August 2009, in addition to AMVs at 00, 06, 12 and 18 UTC (i.e. 6-hourly AMVs). As shown in Table 1, hourly AMVs cover Northern Hemisphere, while 6-hourly AMVs cover both Northern and Southern Hemispheres.

MTSAT-1R's AMVs are computed from the three successive images (A, B and C) at an interval of 30 minutes for hourly AMVs, and 15 minutes for 6-hourly AMVs. There, two intermediate wind vectors, A-B and B-C, are derived, and then B-C is used as the final output. With the dissemination change, the image scan start and end times for deriving each intermediate vector are included in BUFR under the WMO guideline as shown in Table 2. In addition, the wind direction and speed of the vectors are stored in BUFR.

With respect to other information, the size of template image which is the image segment to track clouds/water vapor pattern is 16 pixels for 6-hourly AMVs, and 24 pixels for hourly AMVs, respectively. This information is stored in Table Reference "0 02 028" and "0 02 029" of BUFR. Further, with the dissemination change, AMVs with QI above 0.6 will be disseminated to users instead of ones with QI above 0.5.

Table 1: MTSAT-1R AMV dissemination time change on 18 August 2009.

	Dissemination Time (UTC)	Derivation Area
Until 00UTC 18 August 2009	00, 06, 12 and 18	60S-60N and 90E-170W
From 03UTC 18 August 2009	00, 03, 06, 09, 12, 15, 18 and 21	00, 06, 12 and 18UTC: 60S-60N and 90E-170W 03, 09, 15 and 21UTC: Equator- 60N and 90E-170W

Table 2: Image scan start and end times for deriving each intermediate wind vector, and the wind direction and speed of the vector.

Table Reference	Element Name	Value
0 08 021	Time significance	28 (: scan start time)
0 04 004	Hour	hour
0 04 005	Minute	minute
0 04 006	Second	second
0 08 021	Time significance	29 (: scan end time)
0 04 004	Hour	hour
0 04 005	Minute	minute
0 04 006	Second	second
0 11 001	Wind direction	wind direction (degree)
0 11 002	Wind speed	wind speed (m/s)