

GMS Monthly Operations Report

May 2005

1. MTSAT-1R information

JMA started test dissemination of imagery obtained with MTSAT-1R via the satellite on May 31. During the test period, the following dissemination of imagery was made via MTSAT-1R:

HRIT, HiRID and LRIT containing imagery obtained with MTSAT-1R, and WEFAX containing imagery obtained with GOES-9.

Furthermore, on May 31, distribution of HRIT product (IR1 only) containing imagery obtained with MTSAT-1R was started to the registered National Meteorological and Hydrological Services (NMHSs) via the landline from JMA.

2. Events of special operation

2.1 Eclipse Operation

There was no Eclipse Operation of GMS-5.

2.2 Solar-interference Operation

There was no Solar-interference Operation of GMS-5.

2.3 System maintenance

There was no system maintenance that affects GMS operation.

3. Image observations and dissemination

3.1 S-VISSR type data dissemination

Except for the scheduled cancellation, data dissemination was performed according to the schedule. The following table shows the performance and summary of the S-VISSR type data dissemination.

Performance of S-VISSR type data dissemination

	S-VISSR type data dissemination	Remarks
Scheduled	744	
Performed	742	
Performance in %	99.7	

Summary of anomalous S-VISSR type data dissemination

Date	Product	Remarks
May 2	03UTC	The 0225UTC image was lost at 7N and northward
May 5	02UTC	The 0125UTC image was lost from 51N to 55N
May 7	09UTC	The 0825UTC image was lost from 9N to 34N
May 10	21UTC	The 2025UTC image was lost at 43S and northward

Summary of canceled S-VISSR type data dissemination

Date	Product	Reasons
May 20	16UTC	Ground system trouble at MSC
May 26	05UTC	Ground system trouble at MSC

3.2 WEFAX dissemination

Except for the scheduled cancellation, data dissemination was preformed according to the schedule. The following table shows the performance and summary of WEFAX dissemination.

Performance of WEFAX dissemination

	WEFAX dissemination	Remarks
Scheduled	2728	
Performed	2723	
Performance in %	99.8	

Summary of anomalous WEFAX dissemination

Date	Product	Remarks
May 2	03UTC	All of H/I-03 and A/B-03 images were lost
		C/D-03 images were lost from 7N and northward
May 5	02UTC	H/I-02 images were lost from 51N to 55N
May 7	09UTC	H/I-09 and A/B-09 images were lost from 9N to 34N
May 10	21UTC	C/D-21 images were lost from 43S and southward

Summary of cancelled WEFAX dissemination

Date	Product	Reasons
May 23	02UTC (H-02)	Ground system trouble at MSC
May 25	05UTC	Ground system trouble at MSC
May 31	31UTC	Ground system trouble at MSC

4. Data Collection System

4.1 International Data Collection System (IDCS)

The following table shows the IDCP messages received at MSC and disseminated through the GTS.

Reception and dissemination of messages

IDCP channel	Number of IDCPs ^{a)}	Received messages	Format errors ^{b)}	Non WMO codes ^{c)}	Disseminated messages to the GTS
I06	14	0	0	0	0
I07	22	0	0	0	0
I10	3	0	0	0	0
I14	3	0	0	0	0
I15	7	744	0	744	0
I16	5	0	0	0	0
I18 (ASDAR)	7	406	48	0	358
I20	3	0	0	0	0
Total	64	1150	48	744	358

a) Number of DCPs registered to GMS-5 IDCS as of March 1, 2005.

b) Format error was caused by the radio telecommunication interference.

c) There was no message, or the message was unsuited to the WMO codes.

The DCP data processing software at MSC detected "DATA BUFFER EMPTY" or "NO MESSAGE."

4.2 Interference on IDCP channels

The following table shows the interference on MTSAT-1R International Data Collection System(IDCS) channels.

Interference on MTSAT-1R IDCS channels

Ch.	1	2	3	4	5	6	7	8	9	10	11
May	W	S									

Ch.	12	13	14	15	16	17	18	19	20	21	22
May											

Ch.	23	24	25	26	27	28	29	30	31	32	33
May			W	W							S

S: severe interference

W: weak interference

5. Satellite system status

5.1 Satellite status

MTSAT-1R was located at 140 degrees east, and continued dissemination of WEFAX imagery obtained with GOES-9.

GMS-5 was being stored in orbit as a standby satellite.

5.2 Maneuver

The North-South Station-Keeping maneuver of MTSAT-1R was performed at 1416 UTC on May 21, and the East-West Station-Keeping maneuver of MTSAT-1R was performed at 0114 UTC on May 28.

In order to locate GMS-5 into the geostationary orbit at 120 degree east, the orbital maneuver was performed on May 13 and 19.

The attitude and spin rate control maneuver of GMS-5 was performed on May 25.

5.3 Orbit and attitude elements of GMS-5

The orbit and attitude elements of GMS-5 are shown in the following table.

Epoch 00:00:00 UTC, June 7, 2005

	Element	Unit	Value
Orbit	Semi-major axis (a)	km	42168.16573
	Eccentricity (e)	-	0.00000471
	Inclination (I)	Degree	3.83918
	Right ascension of ascending node (Ω)	Degree	78.24664
	Argument of perigee (ω)	Degree	342.55168
	Mean anomaly (M)	Degree	314.54197
Attitude	Right ascension (α)	Degree	169.17116
	Declination (δ)	Degree	-86.15511

6. Ground system status

Ground system operations were performed successfully.