

# GMS Monthly Operations Report

## December 2002

### 1. Events of Special Operation

#### 1.1 Eclipse Operation

No Eclipse Operation.

#### 1.2 Solar-interference Operation

No Solar-interference Operation.

#### 1.3 Typhoon Special Observation

On 4 December, from 6 to 11 December, the fifteen minutes interval observations were performed for the extraction of Atmospheric Motion Vector around typhoons.

#### 1.4 System Maintenance

System maintenance, which affects GMS operation, was performed on 5, 16, 17 and 19 December.

#### 1.5 VISSR Expanded Frame Operation

VISSR Expanded Frame Operation was performed on 3, 9, 17, 24 and 31 December in order to prevent the lubricant buildup of VISSR. This operation has no influence on the GMS operation schedule.

### 2. Image Observations and Dissemination

#### 2.1 Image Observations and Stretched VISSR (S-VISSR) Dissemination

VISSR image observations and S-VISSR dissemination were satisfactory as scheduled except for the cancelled observations during this month. The following table shows performance and summary of image observation and S-VISSR dissemination.

Performance of Image Observations and S-VISSR Dissemination

GMS-5	Observations	S-VISSR Dissemination	Remarks
Scheduled	868	868	
Performed	856	868	
Performance in %	98.6	100	

Summary of Cancelled S-VISSR Dissemination

Date	Cancelled	Reasons
	None	

Summary of Cancelled Observations

Date	Cancelled	Reasons
5 December	V01,V02,V03,V04,V05	maintenance of ground subsystem
16 December	V01,V02,V03,V04	maintenance of ground subsystem
17 December	V01,V02	maintenance of ground subsystem
23 December	V05	trouble of ground subsystem

## 2.2 WEFAX Dissemination

WEFAX dissemination was satisfactory except for the cancelled observations during this month. The following table shows performance and summary of WEFAX dissemination.

WEFAX Dissemination Performance

GMS-5	Disseminated	Remarks
Scheduled	2596	
Performed	2540	
Performance in %	97.8	

Summary of Cancelled WEFAX Dissemination

Date	Cancelled	Reasons
5 December	H/I-01,02,03,04,H-05 A/B/C/D-03 K/L/M/N-00	maintenance of ground subsystem
10 December	H/I-07	Attitude maneuver and Spin rate maneuver
12 December	H/J-10	East-West maneuver
16 December	H/I-01,02,03,04 A/B/C/D-00,03 K/L/M/N-00	maintenance of ground subsystem
17 December	H/I-01,02 A/B/C/D-00 K/L/M/N-00	maintenance of ground subsystem
23 December	H-05	trouble of ground subsystem
25 December	L/M-00	trouble of ground subsystem

### 3. Data Collection System

#### 3.1 International Data Collection System (IDCS)

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

Reception and Dissemination of Messages

IDCP channel	Number of IDCPs <sup>a)</sup>	Received messages	Format errors <sup>b)</sup>	Non WMO code <sup>c)</sup>	Disseminated messages to the GTS
I06	14	0	0	0	0
I07	22	214	13	0	201
I10	3	0	0	0	0
I14	2	224	1	0	223
I15	7	91	0	0	91
I16	5	0	0	0	0
I18 (ASDAR)	10	506	124	0	382
I20	3	0	0	0	0
Total	66	1035	138	0	897

a) Number of DCPs registered on GMS-5 IDCS as of 30 November 2002.

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

c) The messages were none or unsuited to the WMO codes and "DATA BUFFER EMPTY" or "NO MESSAGE was detected by the DCP data processing software at MSC

#### 3.2 Interference on IDCP Channels

The following table shows the interference on GMS International Data Collection System(IDCS) channels.

Interference on GMS IDCS Channels (December 2002)

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

ch.	12	13	14	15	16	17	18	19	20	21	22
						W					

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

S: severe interference

W: weak interference

#### 4. Satellite System Status

##### 4.1 Satellite Status

GMS-5 was located at 140 degree East and continued to provide its operational services.

##### 4.2 Maneuver

Attitude control maneuver and Spin rate control maneuver was performed on 10 December. East and West control maneuver was performed on 12 December.

##### 4.3 Orbit and Attitude Elements of GMS-5

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

Epoch 00:00:00 UTC, 09 January 2003

	Element	Unit	Value
Orbit	Semi-major axis (a)	Km	42165.12670
	Eccentricity (e)	-	0.00007453
	Inclination (I)	Degree	1.68628
	Right ascension of ascending node ( $\Omega$ )	Degree	83.02455
	Argument of perigee ( $\omega$ )	Degree	81.11036
	Mean anomaly (M)	Degree	84.24324
Attitude	Right ascension ( $\alpha$ )	Degree	172.00823
	Declination ( $\delta$ )	Degree	-88.25882

#### 5. Ground System Status

On 5 December, WEFAX(H/I-01, K/L/M/N-00, H/I-02, WEFAX MANAM, H/I-03, A/B/C/D-03, H/I-04, H-05), DCP communications (from 00:30UTC to 04:30UTC) were canceled due to the maintenance of electric source at DPC/MSC.

On 16 December, WEFAX(A/B/C/D-00, H/I-01, K/L/M/N-00, H/I-02, WEFAX MANAM, H/I-03, A/B/C/D-03, H/I-04), DCP communications (from 00:30UTC to 04:15UTC), On 17 December, WEFAX(A/B/C/D-00, H/I-01, K/L/M/N-00, H/I-02, WEFAX MANAM), DCP communications (from 00:30UTC to 04:55UTC), On 19 December, DCP communications (from 00:30UTC to 04:55UTC) were canceled due to the maintenance of Microwave-Link between CDAS/MSC and DPC/MSC.

The operation for the ground system was satisfactory except for above maintenance.

#### 6. Others

On 23 December, WEFAX(H-05) was canceled due to trouble of ground subsystem at DPC/MSC. On 25 December, WEFAX(L/M-00) were canceled due to trouble of ground subsystem at CDAS/MSC.