

## GMS Monthly Operations Report

**December 2001**

### 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

From 6 to 8 December and from 17 to 25 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 19 December.

#### 1.5 VISSR Expanded Frame Operation

VISSR Expanded Frame Operation was performed on 5,11,18 and 24 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	Remarks
Scheduled	868	
Performed	865	
Performance in %	99.7	

Summary of Cancelled Observations and S-VISSR Dissemination

Date	Cancelled	Reasons
15 December	V09 V10	Lunar eclipse
19 December	V07	Maintenance 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	2592	
Performed	2577	
Performance in %	99.4	

Summary of Cancelled WEFAX Dissemination

Date	Cancelled	Reasons
4 December	H/I-07	Attitude maneuver
14 December	H-05	Trouble of ground Subsystem
15 December	H/J-09,A/B/C/D-09 H/J-10	Lunar eclipse
19 December	H/I-07	Maintenance of ground subsystem
25 December	H/I-07	East- west maneuver

## 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 <sup>a)</sup>	Registered <sup>b)</sup>	Received messages	Format errors <sup>b)</sup>	Non WMO code <sup>c)</sup>	Disseminated messages to the GTS
SHIP including ASAP	I06	78	207	0	0	207
	I07	85	154	4	0	150
	I14	32	0	0	0	0
	I15	39	74	0	0	74
	I16	68	0	0	0	0
ASDAR	I18	22	375	52	0	323
Total		324	810	56	0	754

a) Number of IDCPs registered on GMS-5 IDCS as of 31 December 2001

b) 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.

c) Format error was caused by the radio telecommunication interference

### 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 2001)

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

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

Ch.	23	24	25	26	27	28	29	30	31	32	33
							W			S	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 maneuver was performed on 4 December. East-west maneuver was performed on 25 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, 7 January 2002

	Element	Unit	Value
Orbit	Semi-major axis (a)	Km	42164.46567
	Eccentricity (e)	-	0.00004986
	Inclination (I)	degree	0.82536
	Right ascension of ascending node ( $\Omega$ )	degree	76.69974
	Argument of perigee ( $\omega$ )	degree	269.02070
	Mean anomaly (M)	degree	260.80089
Attitude	Right ascension ( $\alpha$ )	degree	165.24176
	Declination ( $\delta$ )	degree	- 89.10088

#### 5. Ground System Status

##### 5.1 Ground System Status

On 14 December, the software trouble of computer system at DPC/MSC occurred and H-05 dissemination lacked.

On 19 December, the maintenance of computer system at CDAS/MSC was performed and H/I-07 dissemination were cancelled.

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

6. Others

On 15 December, the Lunar Eclipse occurred from 0836UTC to 0943UTC. V09 and V10 observations were cancelled.