

GMS Monthly Operations Report

December 2003

1. Events of Special Operation

1.1 Eclipse Operation

There was no Eclipse Operation of GMS-5.

1.2 Solar-interference Operation

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

1.3 System Maintenance

System maintenance, which affects GMS operation, was performed on December 9,12.

2. Image Observations and Dissemination

2.1 S-VISSR type data disseminations

Due to GOES-9 North-South Station keeping maneuver on December 9, S-VISSR type data at 03UTC and 04UTC disseminations were canceled and S-VISSR type data from 05UTC to 07UTC disseminations were changed into northern hemisphere images.

Due to GOES-9 East-West Station keeping maneuver on December 19, S-VISSR type data at 13UTC and 14UTC disseminations were canceled.

S-VISSR type data Disseminations were satisfactory as scheduled except for the canceled observations during this month. The following table shows performance and summary of S-VISSR type data disseminations.

Performance of S-VISSR type data disseminations

	S-VISSR type data Disseminations	Remarks
Scheduled	744	
Performed	739	
Performance in %	99.3	

Summary of anomaly S-VISSR type data disseminations

Date	Obs. Time	Remarks
December 9	05UTC	Northern hemisphere images
	06UTC	
	07UTC	
	13UTC	Lacked a data at south of lat. 14N
	21UTC	Lacked a data from lat. 8S to lat. 27S

Summary of canceled S-VISSR type data disseminations

Date	Obs. Time	Reasons
December 7	09UTC	Missing GVAR data
December 9	03UTC 04UTC	GOES-9 North-South Station keeping maneuver
December 19	13UTC 14UTC	GOES-9 East-West Station keeping maneuver

2.2 WEFAX Dissemination

Due to the GOES-9 North-South Station keeping maneuver and the maintenance of Microwave-Link between CDAS/MSC and DPC/MSC, on December 9, WEFAX(H/I-02, MANAM, H/I-03, A/B/C/D-03, H/I-04, H-05, C/D-06) broadcasting services were canceled.

Due to GOES-9 East-West Station keeping maneuver on December 19, WEFAX(H/J-13, H/J-14) broadcasting services were canceled.

WEFAX broadcasting service was satisfactory except for the canceled observations during this month. The following table shows performance and summary of WEFAX broadcasting service.

Performance of WEFAX Disseminations

GMS-5	Disseminated	Remarks
Scheduled	2604	
Performed	2578	
Performance in %	99.0	

Summary of anomaly WEFAX disseminations

Date	Product	Remarks
December 9	H/J-13	Lacked a data at south of lat. 14N
	C/D-21	Lacked a data from lat. 8S to lat. 27S

Summary of Cancelled WEFAX Dissemination

Date	Product	Reasons
December 7	H/J-09 A/B/C/D-09	Missing GVAR data
December 9	H/I-02,03,04, H-05 A/B/C/D-03 C/D-06	GOES-9 North-South Station keeping maneuver and the maintenance of Microwave-Link
December 16	H-17,H/J-18	Trouble of a ground subsystem
December 19	H/J-13,14	GOES-9 East-West Station keeping 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	Number of IDCPs ^{a)}	Received messages	Format errors ^{b)}	Non WMO code ^{c)}	Disseminated messages to the GTS
I06	14	0	0	0	0
I07	22	46	0	0	46
I10	3	0	0	0	0
I14	3	0	0	0	0
I15	7	138	0	0	138
I16	5	0	0	0	0
I18 (ASDAR)	9	208	58	0	150
I20	3	0	0	0	0
Total	66	392	58	0	334

a) Number of DCPs registered on GMS-5 IDCS as of 1 May 2003.

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 (Dec 2003)

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

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

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

S: severe interference

W: weak interference

4. Satellite System Status

4.1 Satellite Status

GMS-5 was located at longitude 140 degrees east and continued to provide its operational services.

4.2 Maneuver

Maneuver was not performed this month.

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, 15 January 2004

	Element	Unit	Value
Orbit	Semi-major axis (a)	Km	42167.67547
	Eccentricity (e)	-	0.00016534
	Inclination (I)	Degree	2.59269
	Right ascension of ascending node (Ω)	Degree	82.40103
	Argument of perigee (ω)	Degree	323.33953
	Mean anomaly (M)	Degree	208.00386
Attitude	Right ascension (α)	Degree	168.80151
	Declination (δ)	Degree	-87.36374

5. Ground System Status

On December 9, WEFAX (H/I-02, MANAM, H/I-03, A/B/C/D-03, H/I-04, H-05), DCP communications (from 01:30UTC to 05:40UTC), On December 12, DCP communications (from 00:30UTC to 04:45UTC) were canceled due to the maintenance of Microwave-Link between CDAS/MSD and DPC/MSD.

On December 16, WEFAX(H-17, H/J-18) were canceled and attributed to a HCCP (High-speed Communication Control Processor) error.