

GMS Monthly Operations Report

January 2003

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 19 to 20 January, 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 27 January.

1.5 VISSR Expanded Frame Operation

VISSR Expanded Frame Operation was performed on 7, 14, 21 and 28 January 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 | 867 | 867 | |
| Performance in % | 99.9 | 99.9 | |

Summary of Cancelled Observations

| Date | Cancelled | Reasons |
|------------|-----------|------------------------------------|
| 27 January | V08 | maintenance of ground subsystem |

Summary of Cancelled S-VISSR Dissemination

| Date | Cancelled | Reasons |
|------------|-----------|---------------------------------|
| 27 January | V08 | 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 | 2602 | |
| Performed | 2596 | |
| Performance in % | 99.8 | |

Summary of Cancelled WEFAX Dissemination

| Date | Cancelled | Reasons |
|------------|--------------|---------------------------------|
| 27 January | H/I-02,07,08 | maintenance 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 ^{a)} | Received messages | Format errors ^{b)} | Non WMO code ^{c)} | Disseminated messages to the GTS |
|--------------|-------------------------------|-------------------|-----------------------------|----------------------------|----------------------------------|
| I06 | 14 | 58 | 2 | 0 | 56 |
| I07 | 22 | 38 | 0 | 0 | 38 |
| I10 | 3 | 0 | 0 | 0 | 0 |
| I14 | 2 | 0 | 0 | 0 | 0 |
| I15 | 7 | 0 | 0 | 0 | 0 |
| I16 | 5 | 0 | 0 | 0 | 0 |
| I18 (ASDAR) | 10 | 417 | 83 | 0 | 334 |
| I20 | 3 | 0 | 0 | 0 | 0 |
| Total | 66 | 513 | 85 | 0 | 428 |

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 (January 2003)

| | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|----|----|
| 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 | | 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

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, 13 February 2003

| | Element | Unit | Value |
|----------|--|--------|-------------|
| Orbit | Semi-major axis (a) | Km | 42164.17872 |
| | Eccentricity (e) | - | 0.00012822 |
| | Inclination (I) | Degree | 1.77457 |
| | Right ascension of ascending node (Ω) | Degree | 83.68386 |
| | Argument of perigee (ω) | Degree | 186.31521 |
| | Mean anomaly (M) | Degree | 12.60348 |
| Attitude | Right ascension (α) | Degree | 175.64281 |
| | Declination (δ) | Degree | -88.08855 |

5. Ground System Status

On 27 January, WEFAX(H/I-02, H/I-07, H/I-08) were canceled due to the maintenance of ground subsystem at CDAS/MSC.

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