

GMS Monthly Operations Report

February 2005

1. Events of Special Operation

1.1 Eclipse Operation

Spring Eclipse Operation of GMS-5 began from February 16.

1.2 Solar-interference Operation

Solar-interference Operation of GMS-5 was performed from 20 to 27 in February.

1.3 System Maintenance

System maintenance that affects GMS operation was not performed.

3. Image Observations and Dissemination

3.1 S-VISSR type data disseminations

Spring Eclipse Operation of GOES-9 began from February 9. Therefore, S-VISSR type data disseminations were changed as follows:

G13 was changed into northern hemisphere data from 18 to 28 in February.

G14 and G15 were changed into northern hemisphere data from 9 to 22 and canceled from 23 to 28 in February.

Solar-interference Operation of MSC - GOES-9 link was performed from 25 to 28 in February. Therefore, S-VISSR type data dissemination was changed as follows:

G02 was canceled from 25 to 28 in February.

East-West Station Keeping Maneuver of GOES-9 was performed from 15 to 16 in February. Therefore, S-VISSR type data disseminations were changed as follows:

G00 was changed into the image without southern part from 30S latitude on February 16.

G01 was canceled on February 16.

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

Performance of S-VISSR type data disseminations

| | S-VISSR type data Disseminations | Remarks |
|------------------|-------------------------------------|---------|
| Scheduled | 656 | |
| Performed | 655 | |
| Performance in % | 99.8 | |

Summary of anomaly S-VISSR type data disseminations

| Date | Product | Remarks |
|-------------|---------|---|
| February 16 | 05UTC | The 0425UTC image was lost at 8S and southern latitude. |

Summary of canceled S-VISSR type data disseminations

| Date | Product | Reasons |
|-------------|---------|--|
| February 16 | 01UTC | East-West Station Keeping Maneuver of GOES-9 |

3.2 WEFAX Dissemination

Spring Eclipse Operation of GOES-9 began from February 9 and Spring Eclipse Operation of GMS-5 began from February 16. Therefore, the WEFAX disseminations were changed as follows:

C/D-15 were canceled from 9 to 15 in February.

H/J-14, H/J-15 and A/B/C/D-15 were canceled from 16 to 28 in February.

Solar-interference Operation of MSC - GOES-9 link was performed from 25 to 28 in February. Therefore, S-VISSR type data dissemination was changed as follows:

H/I-02 were canceled from 25 to 28 in February.

East-West Station Keeping Maneuver of GOES-9 was performed from 15 to 16 in February. Therefore, the S-VISSR type data disseminations were changed as follows:

C/D-00 and M/N-00 were changed into the image without southern part from 30S latitude on February 16.

H/I-01 were canceled on February 16.

Except for the scheduled cancellation, the data disseminations were performed according to the schedule. The following table shows the performance and summary of WEFAX disseminations.

Performance of WEFAX Disseminations

| | WEFAX Disseminations | Remarks |
|------------------|----------------------|---------|
| Scheduled | 2226 | |
| Performed | 2217 | |
| Performance in % | 99.6 | |

Summary of anomaly WEFAX disseminations

| Date | Product | Remarks |
|-------------|---------|---|
| February 16 | 14UTC | The 1325UTC image was disseminated unscheduled. |

Summary of Cancelled WEFAX Dissemination

| Date | Product | Reasons |
|-------------|---------------------|--|
| February 14 | 08UTC (H-08) | Ground system trouble in JMA |
| February 15 | 05UTC (H-05) | Ground system trouble in JMA |
| February 16 | 00UTC (K/L/M-00) | Ground system trouble in JMA |
| February 16 | 01UTC | East-West Station Keeping Maneuver of GOES-9 |
| February 23 | 04UTC | Ground system trouble in JMA |

4. Data Collection System

4.1 International Data Collection System (IDCS)

The following table shows the status of reception and dissemination of messages.

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 | 0 | 0 | 0 | 0 |
| I10 | 3 | 0 | 0 | 0 | 0 |
| I14 | 3 | 0 | 0 | 0 | 0 |
| I15 | 7 | 628 | 0 | 628 | 0 |
| I16 | 5 | 0 | 0 | 0 | 0 |
| I18 (ASDAR) | 8 | 286 | 46 | 0 | 240 |
| I20 | 3 | 0 | 0 | 0 | 0 |
| Total | 65 | 914 | 46 | 628 | 240 |

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

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

- c) The messages were none or 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 GMS International Data Collection System(IDCS) channels.

Interference on GMS IDCS Channels

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

| | | | | | | | | | | | |
|------|----|----|----|----|----|----|----|----|----|----|----|
| Ch. | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| Feb. | | | | | | | | | | | |

| | | | | | | | | | | | |
|------|----|----|----|----|----|----|----|----|----|----|----|
| Ch. | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| Feb. | | | | | | | | | | | S |

S: severe interference

W: weak interference

5. Satellite System Status

5.1 Satellite Status

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

5.2 Maneuver

East-West Station keeping maneuver of GMS-5 was performed on February 2.
Spin rate control maneuver of GMS-5 was performed on February 9.

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.