Meteorological Satellite Center
Japan Meteorological Agency

# GMS Monthly Operations Report

# July 2003

1. Events of Special Operation

1.1 Eclipse Operation

No Eclipse Operation.

1.2 Solar-interference Operation

No Solar-interference Operation.

1.3 System Maintenance

System maintenance, which affects GMS operation, was not performed this month.

2. Image Observations and Dissemination

2.1 S-VISSR type data disseminations

S-VISSR type data Disseminations were satisfactory as scheduled except for the cancelled 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 | 736 | |
| Performance in % | 98.9 | |

Summary of anomaly S-VISSR type data disseminations

| Date | Obs. Time | Remarks |
|---|---|---|
| 1 July | G10 | Lacked a data of Southern Hemisphere |
| 18 July | G00 | Lacked a data of Southern Hemisphere |
| 19 July | G12 | Lacked a data from lat. 5N to lat. 5S |

Summary of cancelled S-VISSR type data disseminations

| Date | Obs. Time | Reasons |
|---|---|---|
| 8 July | G16 | Missing GVAR data |
| 11 July | G19 | Missing GVAR data |
| 11 July | G20-G23 | Image data processing error at MSC |
| 12 July | G00 | |
| 19 July | G02 | Lacked a data from lat. 5N to lat. 5S<br>Trouble of data processing system at MSC |

2.2 WEFAX Dissemination

WEFAX broadcasting service was satisfactory except for the cancelled 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 | 2582 | |
| Performance in % | 99.2 | |

Summary of anomaly WEFAX disseminations

| Date | Product | Remarks |
|---|---|---|
| 18 July | A/B-12<br>M/N-12 | Lacked a data at south of equator |
| 19 July | A/B/C/D-12<br>K/L/M/N-12 | Lacked a data about equator |

Summary of Cancelled WEFAX Dissemination

| Date | Product | Reasons |
|---|---|---|
| 8 July | H/J-16 | Missing GVAR data |
| 11 July | H/J-19 | Missing GVAR data |
| 11 July | A/B/C/D-21 | Image data processing error at MSC |
| 12 July | A/B/C/D-00<br>K/L/M/N-00 | |
| 18 July | C/D-00<br>M/N-00 | Scan count error of GVAR data |
| 19 July | H/I-02 | Missing GVAR data |

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 | 126 | 0 | 0 | 126 |
| I10 | 3 | 0 | 0 | 0 | 0 |
| I14 | 3 | 0 | 0 | 0 | 0 |
| I15 | 7 | 111 | 0 | 0 | 111 |
| I16 | 5 | 0 | 0 | 0 | 0 |
| I18 (ASDAR) | 9 | 154 | 31 | 0 | 123 |
| I20 | 3 | 0 | 0 | 0 | 0 |
| Total | 66 | 391 | 31 | 0 | 360 |

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) cannels.

Interference on GMS IDCS Channels (Jul 2003)

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

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

| Ch. | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jul. | | | W | | | W | | | W | 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 7 July. East-west maneuver was performed on 28 July.

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, 14 August 2003

| | Element | Unit | Value |
|---|---|---|---|
| Orbit | Semi-major axis (a) | Km | 42163.89308 |
| | Eccentricity (e) | - | 0.00007269 |
| | Inclination (I) | Degree | 2.21936 |
| | Right ascension of ascending node (Ω) | Degree | 83.64301 |
| | Argument of perigee (ω) | Degree | 12.57083 |
| | Mean anomaly (M) | Degree | 5.99023 |
| Attitude | Right ascension (α) | Degree | 170.64086 |
| | Declination (δ) | Degree | -87.86769 |

5. Ground System Status

The operation for the ground system was satisfactory.