

# MTSAT Monthly Operations Report

## November 2010

### 1. Special operation events

#### 1.1 Eclipse operation

There was no Eclipse Operation of MTSAT-1R.

#### 1.2 Solar-interference operation

There was no Solar-interference Operation of MTSAT-1R.

### 2. Imagery dissemination

#### 2.1 High Rate Information Transmission (HRIT) imagery via MTSAT-1R

HRIT dissemination via MTSAT-1R was performed according to the regular schedule.

The following tables show the performance of HRIT dissemination and a summary of canceled HRIT dissemination during November 2010.

Performance of HRIT dissemination via MTSAT-1R

|                  | HRIT   | Remarks |
|------------------|--------|---------|
| Scheduled        | 1679   |         |
| Performed        | 1679   |         |
| Performance in % | 100.00 |         |

Summary of canceled HRIT dissemination via MTSAT-1R

| Date | HRIT | Reasons |
|------|------|---------|
|      | None |         |

## 2.2 Low Rate Information transmission (LRIT) imagery via MTSAT-1R

LRIT dissemination via MTSAT-1R was performed according to the regular schedule. The following tables show the performance of LRIT dissemination and a summary of canceled LRIT dissemination during November 2010.

Performance of LRIT dissemination via MTSAT-1R

|                  | LRIT  | Remarks |
|------------------|-------|---------|
| Scheduled        | 2876  |         |
| Performed        | 2875  |         |
| Performance in % | 99.97 |         |

Summary of canceled LRIT dissemination via MTSAT-1R

| Date        | LRIT   | Reasons                           |
|-------------|--------|-----------------------------------|
| November 24 | PS-N08 | Failure of a communication system |

## 2.3 HRIT imagery via landline

HRIT dissemination via landline was performed according to the regular schedule. The following tables show the performance of its dissemination and a summary of canceled HRIT dissemination during November 2010.

Performance of HRIT dissemination via landline

|                  | HRIT  | Remarks |
|------------------|-------|---------|
| Scheduled        | 11995 |         |
| Performed        | 11985 |         |
| Performance in % | 99.92 |         |

Summary of canceled HRIT dissemination via landline

| Date        | HRIT      | Reasons                           |
|-------------|-----------|-----------------------------------|
| November 16 | N17, N17W | Failure of a communication system |

### 3. Data Collection System

#### 3.1 International Data Collection System (IDCS)

The following table shows the status of reception and dissemination of International Data Collection Platform (IDCP) messages that were received in MTSAT-1R's area of responsibility.

Reception and dissemination of IDCP messages

| IDCP channels | Numbers of IDCPs <sup>a)</sup> | Received messages | Error messages <sup>b)</sup> | Messages disseminated to the GTS |
|---------------|--------------------------------|-------------------|------------------------------|----------------------------------|
| I06           | 0                              | 0                 | 0                            | 0                                |
| I07           | 0                              | 0                 | 0                            | 0                                |
| I12           | 3                              | 0                 | 0                            | 0                                |
| I14           | 0                              | 0                 | 0                            | 0                                |
| I15           | 2                              | 0                 | 0                            | 0                                |
| I16           | 4                              | 0                 | 0                            | 0                                |
| I18           | 0                              | 0                 | 0                            | 0                                |
| I20           | 2                              | 0                 | 0                            | 0                                |
| Total         | 11                             | 0                 | 0                            | 0                                |

a) IDCP numbers are those registered in MTSAT-DCS as of November 1, 2010.

b) No message, or message unsuitable for WMO codes.

#### 3.2 Interference on IDCP channels

The following table shows interference on MTSAT International Data Collection System (IDCS) channels that occurred during November 2010.

Interference on MTSAT IDCS Channels (November 2010)

|              |    |    |    |    |    |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|----|----|----|----|----|
| Channel      | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 |
| Interference |    |    |    |    |    |    |    |    |    |    |    |
| Channel      | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| Interference |    |    |    |    |    |    |    |    |    |    |    |
| Channel      | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| Interference |    |    |    |    |    |    |    |    |    |    | H  |

Note - W: weak interference / H: harmful interference

#### 4. Satellite system status

##### 4.1 Satellite status

MTSAT-1R located at longitude 140 east is performing the observation operation instead of MTSAT-2 because of a ground system maintenance. In addition, MTSAT-1R is operating telecommunication services such as data dissemination and DCP data relay. MTSAT-2 is on standby at longitude 145 east in this period.

##### 4.2 Maneuver

- 1) An east-west station-keeping maneuver of MTSAT-1R was carried out from 08:14 UTC on November 4, 2010.
- 2) A north-south station-keeping maneuver of MTSAT-1R was carried out from 03:56 UTC on November 8, 2010.
- 3) An east-west station-keeping maneuver of MTSAT-1R was carried out from 07:14 UTC on November 16, 2010.

##### 4.3 Orbit elements of MTSAT-1R

The orbit elements of MTSAT-1R are shown in the following table.

Epoch 08:00:0.00 UTC on December 4, 2010

|       | Element  | Unit   | Value        |
|-------|--|--------|--------------|
| Orbit | Semi-major axis (a)                            | km     | 42163.795244 |
|       | Eccentricity (e)                               | -      | 0.000192077  |
|       | Inclination (I)                                | Degree | 0.058807     |
|       | Right ascension of ascending node ( $\Omega$ ) | Degree | 156.068122   |
|       | Argument of perigee ( $\omega$ )               | Degree | 82.723525    |
|       | Mean anomaly (M)                               | Degree | 94.304509    |