

# MTSAT Monthly Operations Report

## December 2013

### 1. Special operation events

#### 1.1 Eclipse operation

There was no Eclipse Operation of both MTSAT-1R and MTSAT-2.

#### 1.2 Solar-interference operation

There was no Solar-interference Operation of both MTSAT-1R and MTSAT-2.

### 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 December 2013.

Performance of HRIT dissemination via MTSAT-1R

	HRIT	Remarks
Scheduled	1735	
Performed	1735	Observed by MTSAT-1R and MTSAT-2
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 December 2013.

Performance of LRIT dissemination via MTSAT-1R

	LRIT	Remarks
Scheduled	2976	
Performed	2976	Observed by MTSAT-1R and MTSAT-2
Performance in %	100.00	

Summary of canceled LRIT dissemination via MTSAT-1R

Date	LRIT	Reasons
	None	

## 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 December 2013.

Performance of HRIT dissemination via landline

	HRIT	Remarks
Scheduled	12395	
Performed	12395	Observed by MTSAT-1R and MTSAT-2
Performance in %	100.00	

Summary of canceled HRIT dissemination via landline

Date	HRIT	Reasons
	None	

### 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 December 1, 2013.

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 December 2013.

Interference on MTSAT IDCS Channels (December 2013)

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						W					
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 was performing the observation operation instead of MTSAT-2 because of the ground system maintenance from December 1 through December 19, and MTSAT-2 located at longitude 145 east restarted to perform the observation operation from December 19. In addition, MTSAT-1R was operating telecommunication services such as data dissemination and DCP data relay.

##### 4.2 Maneuver

- 1) An east-west station-keeping maneuver of MTSAT-1R was carried out from 10:14 UTC on December 13, 2013.
- 2) An east-west station-keeping maneuver of MTSAT-2 was carried out from 10:16 UTC on December 23, 2013.

##### 4.3 Orbit elements of MTSAT-1R/2

The orbit elements of MTSAT-1R/2 are shown in the following table.

Epoch 08:00:0.00 UTC on December 26, 2013 – MTSAT-1R

	Element	Unit	Value
Orbit	Semi-major axis (a)	km	42165.837706
	Eccentricity (e)	-	0.000357775
	Inclination (I)	Degree	0.035742
	Right ascension of ascending node ( $\Omega$ )	Degree	302.614508
	Argument of perigee ( $\omega$ )	Degree	21.048330
	Mean anomaly (M)	Degree	31.259395

Epoch 02:00:0.00 UTC on January 1, 2014 – MTSAT-2

	Element	Unit	Value
Orbit	Semi-major axis (a)	km	42166.989900
	Eccentricity (e)	-	0.000433691
	Inclination (I)	Degree	0.045400
	Right ascension of ascending node ( $\Omega$ )	Degree	288.317700
	Argument of perigee ( $\omega$ )	Degree	2.021149
	Mean anomaly (M)	Degree	345.337731