

STATUS OF MULTI-FUNCTIONAL TRANSPORT SATELLITE (MTSAT)

In response to CGMS Permanent Actions 1, 2 and 9

This paper reports on the status of MTSAT-1R and MTSAT-2, including the International Data Collection System (IDCS) of MTSAT-1R.

No significant spacecraft anomalies occurred on the MTSATs during the reporting period.

Maintenance was performed on MTSAT-1R for around 27 hours at the beginning of June 2007. During this period, MTSAT-2 successfully conducted back-up observation for MTSAT-1R.

The IDCS of MTSAT-1R has been functioning properly since the satellite began operation. As of the end of September 2007, 13 IDCPs were registered on 5 out of 33 MTSAT-IDCS channels.

MTSAT-2 has been on standby in a geostationary orbit since 4 September 2006. JMA is planning to conduct rapid scanning using MTSAT-2 in summer 2008 as part of the THORPEX regional campaign.

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1 INTRODUCTION

The Multi-functional Transport Satellite (MTSAT-1R), launched on 26 February 2005, has been operating in a geostationary orbit at 140 degrees east since 28 June 2005. MTSAT-2, launched on 18 February 2006, has been on standby in a geostationary orbit at 145 degrees east since 4 September 2006. The current status of the two satellites is outlined below.

2 CURRENT MTSAT STATUS

2.1 MTSAT-1R

No significant spacecraft anomalies have occurred since CGMS-34. MTSAT-1R has been observing 24 full disk images, 24 northern hemisphere images and eight southern hemisphere images a day. MTSAT-1R's operational information is available at <http://mscweb.kishou.go.jp/operation/index.htm>.

2.1.1 Data dissemination

JMA has been providing a direct broadcast service of HRIT/HiRID to Medium-scale Data Utilization Stations (MDUSs) and LRIT/WEFAX to Small-scale Data Utilization Stations (SDUSs) using MTSAT-1R since its operation started.

Of the above broadcast services, HiRID and WEFAX (provided as a transition measure for users of S-VISSR and/or WEFAX imagery) will be discontinued on 12 March 2008. More detailed information is available at <http://www.jma.go.jp/jma/jma-eng/satellite/NEWS/discon2.html>.

Since 6 March 2007, JMA has been disseminating MTSAT-1R imagery data (HRIT) for all channels and all observations via the Internet to the National Meteorological and Hydrological Services (NMHSs) registered to JMA. In addition, JMA is planning to start providing compact JPEG imagery via the Internet by around the end of 2007.

On 31 August 2007, MTSAT-1R imagery became available through the Sentinel Asia website (<http://dmss.tks.jaxa.jp/sentinel/>) as a result of coordinated efforts by JMA and the Japan Aerospace Exploration Agency (JAXA). Sentinel Asia is an Internet-based Web-GIS disaster management support system for the Asia-Pacific region. MTSAT-1R imagery can be browsed freely and superimposed with other information such as TRMM precipitation estimated by the International Flood Network (IF-NET) and MODIS hotspot data.

2.1.2 International Data Collection System (IDCS)

MTSAT-1R's International Data Collection System (IDCS) has been functioning properly since the satellite started operation. Although harmful interference was frequently observed on IDCS channel 33 from August 2006 through July 2007, there

was no negative impact on IDCS operation since no International Data Collection Platform (IDCP) is registered on the channel.

The IDCPs of the Aircraft to Satellite Data Relay programme (ASDAR) were deregistered from MTSAT-IDCS on 27 March 2007 in accordance with the termination of the program (related to the completion of Action 34.16). The NOAA GOES Shipboard Environmental (data) Acquisition System (SEAS) project has also been confirmed as complete, and the IDCPs related to the project were deregistered from MTSAT-IDCS on 27 April 2007. As of the end of September 2007, 13 IDCPs are registered on 5 out of 33 MTSAT-IDCS channels. Further information regarding MTSAT-IDCS is available under "Monthly Operations Reports" on the Meteorological Satellite Center (MSC) website at http://mscweb.kishou.go.jp/operation/opr_report.htm.

2.2 MTSAT-2

MTSAT-2, the follow-on satellite to MTSAT-1R, was launched on 18 February 2006. MTSAT-2 has been on standby in orbit above the equator at 145 degrees east since 4 September 2006. JMA obtains images from MTSAT-2 to check and review its observation capability several times a year.

2.2.1 Back-up operation for MTSAT-1R maintenance

Maintenance of MTSAT-1R was performed for around 27 hours at the beginning of June 2007 to recover the cooling capability of the imager's active cooler on board the satellite. During this maintenance, MTSAT-2 successfully conducted back-up observation for MTSAT-1R, while JMA continued direct dissemination of all the image data observed using MTSAT-2 through MTSAT-1R.

2.2.2 Future Plans for MTSAT-2

The meteorological mission of MTSAT-2 will become operational in around 2010, when it will succeed MTSAT-1R and remain in operation until around 2015. JMA is planning to conduct a special observation in summer 2008 using the rapid-scanning function of MTSAT-2 as part of the THORPEX Pacific Asian Regional Campaign (T-PARC).