

## **STATUS OF THE MULTI-FUNCTIONAL TRANSPORT SATELLITES**

This paper presents a summary of status of MTSAT-1R and MTSAT-2.

JMA has changed the operations in eclipse period since autumn 2006. JMA conducts observations even when images are expected to be partially chipped. This operation has decreased the number of cancelled observation during the eclipse period.

MTSAT-1R suffered a Loss of Lock (LOL) of Earth pointing and attitude control on 16 April 2006. The satellite recovered from LOL about four hours and the imager resumed observation 20 hours after the occurrence of the event. Afterwards, MTSAT-1R has been operated in stable condition.

MTSAT-2 has been on standby in orbit since 4 September 2006. JMA is considering the conduct of extra observation of the MTSAT-2 rapid scanning as a part of the THORPEX regional campaign.

## **STATUS OF THE MULTI-FUNCTIONAL TRANSPORT SATELLITES**

### **1 INTRODUCTION**

The Multi-functional Transport Satellite-1R (MTSAT-1R) launched on 26 February 2005 has been operated in the geostationary orbit at 140 degrees East since 28 June 2005. The Multi-functional Transport Satellite-2 (MTSAT-2) launched on 18 February 2006 went through the In-Orbit Test (IOT) and has been on standby in orbit at 145 degrees East since 4 September 2006. The current status of the two satellites is as follows.

### **2 CURRENT STATUS OF MTSAT**

#### **2.1 MTSAT-1R**

MTSAT-1R observes 24 full disk images, 24 northern hemisphere images, and 8 southern hemisphere images a day. The images are disseminated as HRIT/HiRID to the Medium-scale Data Utilization Stations (MDUSs) and as LRIT/WEFAX to the Small-scale Data Utilization Stations (SDUSs). The monthly percentage of successful direct broadcasting has been over 99% on all kinds of images since the start of the MTSAT-1R operation.

##### **2.1.1 Imaging in eclipse**

JMA has changed the operations in eclipse period since autumn 2006. In the eclipse period, some images are partially chipped around the sun invading the image frame in order to avoid solar light influence on the sensors. For this reason, JMA had cancelled all observations of which images were anticipated to be chipped in the past eclipse periods. Since this autumn eclipse period, JMA has conducted observations even when images are anticipated to be partially chipped. This operation has decreased the number of cancelled observations during the eclipse period.

##### **2.1.2 Anomaly report**

MTSAT-1R suffered a Loss of Lock (LOL) of Earth pointing and attitude control on 16 April 2006. The satellite recovered from LOL about four hours after the occurrence of the event. JAMI, the imager aboard MTSAT-1R, resumed observation 20 hours after the occurrence of the event, because the active cooler, which refrigerates infrared sensors, was inactivated in safe mode during LOL.

#### **2.2 MTSAT-2**

MTSAT-2, follow-on satellite to MTSAT-1R, was launched on 18 February 2006 from the Tanegashima Space Center. JMA obtained the first test images on 11 May 2006. These test images are available on the web page ([http://www.jma.go.jp/jma/jma-eng/satellite/NEWS/first\\_images2.html](http://www.jma.go.jp/jma/jma-eng/satellite/NEWS/first_images2.html)). JMA also

successfully obtained detailed images of typhoon structure by using the rapid repetition scanning function of MTSAT-2 on 15 May 2006 as a part of IOT. The details including animation file are available on the web page (<http://www.jma.go.jp/jma/jma-eng/satellite/NEWS/rapid.html>). MTSAT-2 has been put on standby in-orbit above the equator at 145 degrees East since 4 September 2006.

### **2.2.1 Future Operation Plan of MTSAT-2**

The meteorological mission of MTSAT-2 will become operational around from 2010, succeeding MTSAT-1R. In the standby period, JMA is considering the conduct of extra observation of the MTSAT-2 rapid scanning as a part of the THORPEX regional campaign in order to contribute to the investigations and understanding of mechanisms of typhoons and severe storms.