

## **Plan on the Multi-Functional Transport Satellites**

This paper reports on the plan on the Multi-Functional Transport Satellites (MTSAT-1R/2) including launch and service commencement of MTSAT-1R/2 as well as image data dissemination through the satellite.

## **Plan on the Multi-Functional Transport Satellites**

### **1. Launch Plan of MTSAT-1R/2**

After the launch failure of MTSAT on 15 November 1999, the Japan Meteorological Agency (JMA) settled on a new plan to launch MTSAT-1R as an immediate replacement of MTSAT and to launch a follow-on MTSAT-2. The manufacture of MTSAT-1R, the successor to GMS-5, was completed and the satellite is stored in Tanegashima Space Centre (TNSC). However, it is difficult to indicate the timing of the launch of MTSAT-1R at this moment, because of the failure of the launch of Japanese H-2A rocket in 2003. Though it is not decided when the H-2A rocket is reopened to be launched, revised launching schedule of the H-2A rockets will hopefully be announced in the middle of this year. Therefore, the new schedule of the launch of MTSAT-1R will be organized subsequently. Construction of MTSAT-2 has been progressing satisfactorily in preparation for launch in 2005.

### **2. Service Commencement Plan on MTSAT-1R/2**

MTSAT-1R will start the operation in 2005 after the in-orbit test. MTSAT-2 will start the meteorological mission in 2010 after stand-by operation in a geostationary orbit. The exact dates have not been specified for both above yet.

### **3. Image Data Dissemination Plan on MTSAT-1R/2**

Image data will be disseminated to two types of stations, Medium-scale Data Utilization Stations (MDUSs), and Small-scale Data Utilization Stations (SDUSs).

#### **1) Dissemination to SDUSs through MTSAT-1R**

The Low Rate Information Transmission (LRIT) service will be started in addition to WEFAX picture broadcasting service on the same radio frequency as WEFAX on a time-shared broadcasting schedule at the start of the service of MTSAT-1R. The WEFAX service will be ceased in a certain period. The transition period from WEFAX to LRIT is considered to be three years or so.

Considering wide popularization and rapid development of the Internet technology, particularly in a recent few years and on, JMA has decided to confine the broadcasting service from the MTSAT series exclusively to Earth image data and to make the best use of the Internet (e.g. RSMC Data Serving System of JMA) for distribution of the other kind of meteorological data such as the Grid Point Values (GPVs).

#### **2) Dissemination to MDUSs through MTSAT-1R**

The High Resolution Imager Data (HiRID), image data of 5km spatial resolution at sub-satellite point and 10bit quantization levels for IR channels, will be broadcasted in place of the S-VISSR data at the start of the service of MTSAT-1R, and besides, the High Rate Information Transmission (HRIT) service will also be started on the same radio frequency as HiRID on a time-shared broadcasting schedule at the start of the service of MTSAT-1R or after.

No transition period from S-VISSR to HiRID is planned due to an upper compatible format of HiRID with the S-VISSR data of GMS-5. HiRID service will be ceased in a certain period. The transition period from HiRID to HRIT is considered to be three years or so.

The launch, service and image data dissemination plan on MTSAT-1R/2 is shown in the Attachment.

Attachment

**Plan of Satellite operation and data dissemination (Draft)**

