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## **FREQUENCY PLAN FOR COMS METEOROLOGICAL DATA**

This document provides a draft frequency plan for COMS meteorological data transmission and briefs the current status of frequency coordination.

## Frequency Plan for COMS Meteorological Data

### 1 Frequency Use between COMS and Ground Stations (MSC or User station)

COMS (Communication, Ocean, and Meteorological Satellite) Meteorological Imager (MI) has 5 channels in the range 0.55-12.5 $\mu$ m, 1 km resolution in 1 VIS channel, 4 km resolution in 4 IR channels, and observes the Earth with the repeat cycle of 27 minutes for full disk imaging (proportionally less for limited areas).

COMS MI raw data will be transmitted to the Meteorological Satellite Center (MSC) in Korea with 6 Mbps data rate for processing, storage, interpretation, and dissemination to domestic and foreign users.

After ground processing at MSC in Korea, processed meteorological data will be disseminated to the users via COMS bent-pipe repeating. HRIT will be uplinked from MSC using 13-Meter antenna to COMS. The HRIT will be broadcasted from COMS to user stations equipped with 3.7-Meter antenna with 3 Mbps data rate. LRIT will be uplinked from MSC using 13-Meter antenna to COMS. And LRIT will be broadcasted from COMS to user stations equipped with 1.2-Meter antenna with 256 kbps data rate. Table 1 summarizes the carrier information for COMS meteorological purpose.

Table 1 Carrier Information (draft) for COMS

Carrier Type	Center Frequency* (MHz)	Bandwidth (MHz)	Data rate
TC U/L	2091.765	-	-
TM D/L	2271.6	-	-
MI Data D/L	1680, 1687	6.0	6 Mbps
LRIT U/L	2037.64, 2066.34	1	256 kbps
LRIT D/L	1692.14	1	256 kbps
HRIT U/L	2040.9, 2061.6	5.2	3 Mbps
HRIT D/L	1687.4, 1695.4	5.2	3 Mbps

\* The frequency above may be confirmed taking into account the coordination results with the adjacent satellite networks.

### 2 ITU filing of COMS satellite networks

The Coordination Information for COMS satellite networks with two orbital locations, 116.2E and 128.2E were submitted to the ITU in August 2004. It is noted that one of two orbital locations will be used for the first generation COMS satellite and the other orbital location will be envisaged for the next generation of satellite fleet in the future.

Since there are many satellite networks to be coordinated with COMS satellite networks under the Radio Regulations, KMA/KARI had several meetings with the other Meteorological administrations for the coordination between COMS satellite networks and their satellite networks.