



CGMS-36, CMA-WP-05  
Prepared by CMA  
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## **Preliminary Consideration on FY-4 Frequency Network**

Summary of the Working Paper.

Program is being planned for FY-4s, the next generation of Chinese geostationary meteorological satellites to take place the FY-2s after 2015. Preliminarily, FY-4 frequency network is considered with respect to the requirement for the increased amount of data in transmission.

## Preliminary Consideration for FY-4 Frequency Network

### 1 INTRODUCTION

FY-4s is the new generation of Chinese meteorological Satellites to take over the FY-2s. FY-4 Program is being planned. Preliminary consideration on FY-4 frequency network is given with respect to the frequency requirement for the increased amount of data in transmission.

### 2 FY-4 FREQUENCY NETWORK

**Network name:** FY-4 Series Geostationary Meteorological Satellites

**Launch of first satellite:** ~ 2015

**General objective:** 1) Collect atmospheric and surface condition parameters such as vertical temperature and moisture profiles, sea surface temperature, clouds, occurrence of lightning, and aerosol using instruments sensing in visible, near-IR and thermal IR frequencies, and 2) DCP.

**Orbit:** Geostationary;

**Locations:** 86.5E, 105E, and 123.5E. Additional locations are being considered.

**Number of satellites:** 7

**Main ground stations:** Beijing (primary), Urumuqi(TARS), Grangzhou(TARS), and Melbourne(TARS, backup)

**Raw data transmission (downlink):** K<sub>a</sub> band 18.1-18.4GHz, or x-band 7350-7550 MHz

**Data broadcast system:** 8175-8215MHz (data uplink)  
1670-1698MHz (data downlink)  
1697.6MHz (LRIT uplink)  
1674-1696MHz (LRIT broadcast)

**DCPS:** domestic channel: 401.1-401.4MHz (uplink)  
International channel: 402.0-4.2.1MHz (uplink)  
1670-1675MHz (downlink)

**Telemetry and command:** 2025-2110MHz (Uplink), 2200-2290MHz (downlink)