

# CHAPTER 6 FUTURE AIR NAVIGATION SYSTEMS

## AERONAUTICAL SATELLITE SYSTEM

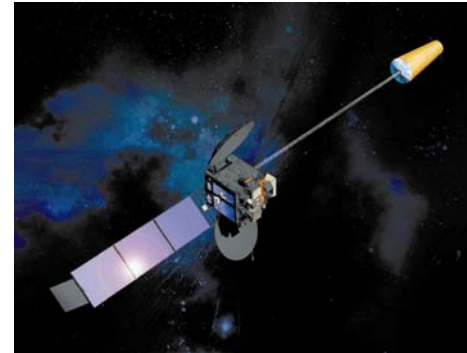
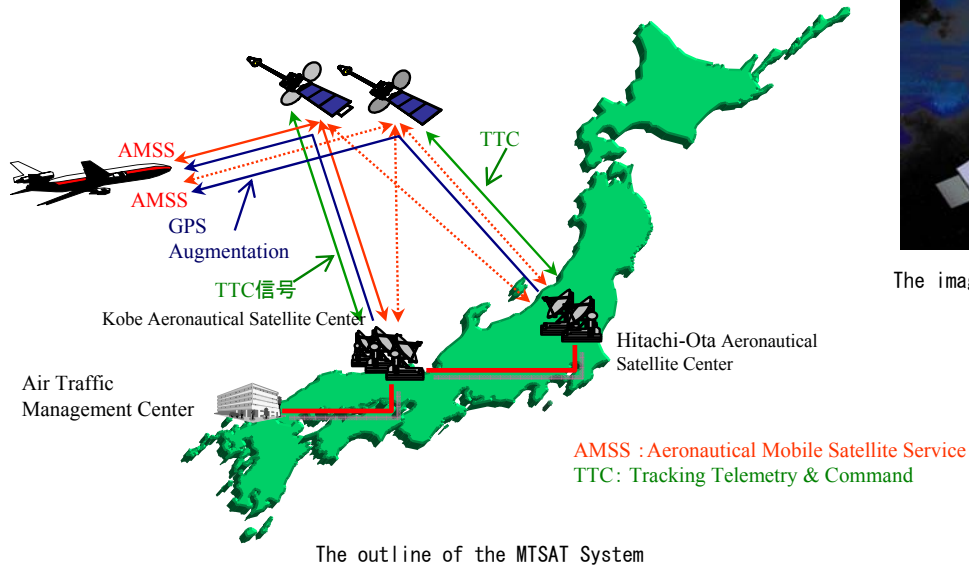
### 1. The composition of Airtraffic satellite system

The MTSAT (Multi-functional Transport Satellite) will be the central core of the Future Air Navigation Systems for Japan, being a multi-purpose satellite having both the aeronautical mission to support the air traffic control and the meteorological mission for weather observations.

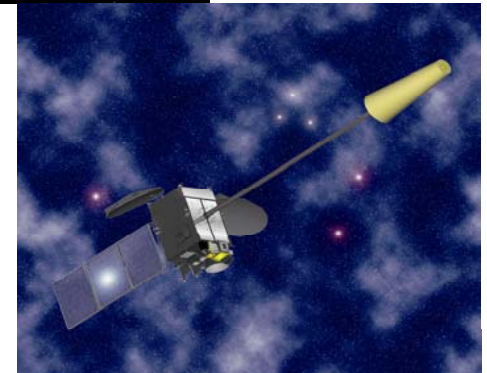
Because higher reliability, integrity, and operational continuity are the basic requirements for the aeronautical satellite system to be utilized in the ATC operation, the system is configured as to have dual satellites as well as dual ground facilities in order to give sufficient redundancy for the maintaining the operational continuity of the ATC operation even in the occasion of any disturbances to the satellite or ground facility disasters such as caused by an earthquake, etc.

With this highly reliable system configuration, the ATC communications can be instantly switched to use the redundant system when a problem is detected within the satellite.

The MTSAT-1R satellite has been launched in the fiscal year 2004, and the MTSAT-2 has been launched in the fiscal year 2005; the ground facilities are currently under implementation for the dual satellites operation.



The image of MTSAT-1R



The image of MTSAT-2