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# STATUS OF THE FUTURE CNSA EARTH OBSERVATION MISSIONS

CGMS is informed of the status of the future China National Space Administration Earth Observation missions. It includes FY-3, CBERS 03/04, HY-2 and HJ-1. FY-3 and HJ-1 will be launched in 2008; others will continue to be developed under their plan. This paper will be introduced status of satellites in developing.

# STATUS OF THE FUTURE CNSA EARTH OBSERVATION MISSIONS

## 1. – INTRODUCTION

CNSA is still stressing on the coordinating satellite technology improvement with satellite operating. The new Earth observation missions are developing, including FY-3 satellite, CBERS03/04, HJ-1 satellites and HY-2.Some new technologies are developed for solving the problem in satellite remote sensing field. CNSA's future Earth observation missions is introduced briefly as follows:

## 2. - STATUS OF THE CBERS03／04 MISSIONS

The mission objectives of CBERS03/04 are the same with CBERS01/02. They keep down 20-meter multi-spectral data which enables the stability of CBERS01/02 observation data. And increase 5 meters panchromatic data, 10 meters multi-spectral data, and 40meter infrared multi-spectral data. The resolution of Wide-Field Imager improves to 73 meters owning four spectrum bands and 866 km of scanning width. CBERS03 will be launched around 2010

## 3、STATUS OF THE HJ-1 MISSION

HJ-1 are the part of environment and disaster montoring small satellite constellation, it is comprised of two optical satellites (HJ-1A/B) and one S-band SAR satellite, Which is being developed in phase D and will be launched in 2008. HJ-1A/B will obtain 1-2 days revisit period with 30 meters resolution.

## 4, STATUS OF THE HY-2 MISSION

CNSA starts and implements Ocean Dynamics environmental satellite program (HY-2) in 2007, its mission is monitoring and detecting marine Dynamics status, including ocean surface wind, ocean surface height, the effective wave height, ocean gravity field, ocean circulation ,sea surface temperature and other important parameters for oceanic scientific research. It provides satellite remote sensing information for marine environmental forecasting and global climate change research. It equipped with Microwave Radar Altimeter， Microwave scatter meter and Microwave Radiometer.

Altimeter, which owns Ku, C dual-band,can have land and sea ice measurements at the same time. scatter is a single frequency, dual-feed, dual-beam, dual-polarization mode with T-conical scanning. Radiometer, which has multi-channels, can measure surface radiation temperature and the wind speed which up to 50m / s.

HY-2 is developing in phase B now. we hope to cooperate with other same type oceanic satellites for the realization of complementary data, inter-l calibration and data sharing.

## 5、NEW TECHNOLOGY DEVELOPMENT PLAN

FY-4 satellite is being developed by CNSA and CMA. At the same time, CNSA discussed geostationary orbit microwave development with WMO, CMA

jointly. To improve the quantitative observation application level, DPC (Multi-polarization angle remote sensing system, Directional polarization Camera) prototype system has been developed, its major target is aerosol monitoring, it can improve the accuracy of atmospheric aerosol within kilometer-scale, detect the particle size distribution of aerosols, clouds phase and so on. Short-wave infrared technology is used to solve the problem of land aerosol gas decoupling inversion. experts are developing new ways of atmospheric composition detection, laser active remote sensing and rainfall monitoring. These studies will support CNSA to start the corresponding space program. We hope to carry out some common space program co-operation with CGMS members in the future.