
香港中文大學衛星遙感地面接收站
Satellite Remote Sensing Receiving Station
The Chinese University of Hong Kong



Introduction

The Satellite Remote Sensing Receiving Station is an important facility of the Institute of Space and Earth Information Science of The Chinese University of Hong Kong. By capturing and processing satellite-sourced remote sensing data, the Station can provide useful information that is useful to Hong Kong, South China and neighbouring regions.

Important Functions

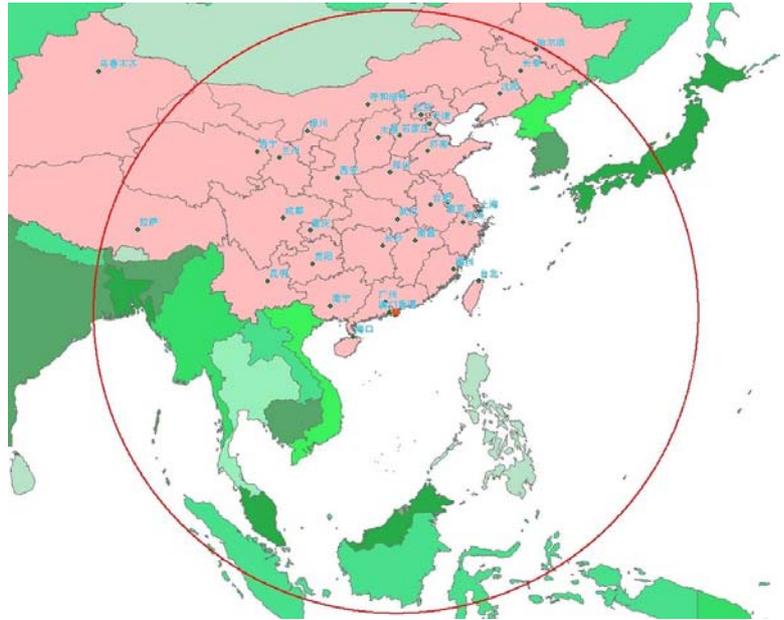
The Station will be useful in monitoring the environment and natural disasters including landslides, subsidence, earthquakes, tsunamis, floods and typhoons, thereby reducing the risk of civilian casualties and economic loss.

Location

The Station is located between New Asia College and United College at The Chinese University of Hong Kong. The Remote Control Room is located at Mong Man Wai Building.

Coverage

Our ground station covers over 2,500 km radius circular area from Hong Kong. It covers the whole South China, Indonesia in the South, Jilin province in the North, and Korea and the Southern part of Japan.



Reception Speed

6GB of raw data per minute. (i.e. covered image area of 10,000 sq km)

Ground Station main components

- Antenna: 9 meter high, diameter 7.5 m, weighted 4 tons, X band;
- Antenna control, signal demodulate, data acquisition, and real time image processing system;
- Image data backup and archive system;
- Antenna mask: diameter 12 m;
- Remote control room

Daily Operation Process

- Operator will order different mode of images from ESA;
- ESA arranges the image ordering and submit the signal emission task to ENVISAT;
- When the satellite reaches the dedicated track, it will emit microwave to the ground station;
- The ground station antenna will track the satellite, demodulate the signal and then acquire the information in the computer;
- Images will be stored into the computer storage system.

ENVISAT Satellite

ENVISAT was launched in 2002 by the European Space Agency, which is an advanced polar-orbiting Earth observation satellite. ENVISAT will pass by the ground station about 4 to 5 times per day. The ground station will have about 3-15 minutes to obtain information from the satellite each time.