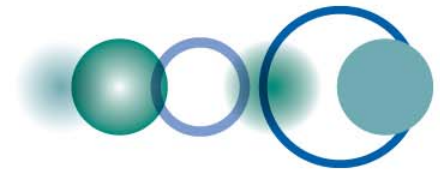


***CB-09-05-b***  
***CBERS***

**Task Lead (and POC): Julio Dalge (INPE, Brazil)**  
**Presenter: Hilcea Ferreira (INPE, Brazil)**



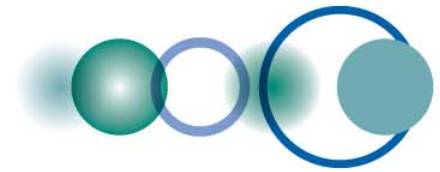
# Background and Objective

## Task Definition

**Establish and upgrade the capacity of ground stations with a footprint in Africa to receive, process, store and distribute CBERS (China-Brazil Earth Resources Satellite) imagery. Data will be distributed free of charge to all interested African countries within the footprint of the respective ground stations.**

## Main goal

**Set up a proper infrastructure for receiving CBERS images in the African continent.**



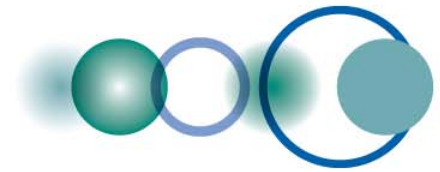
# Background and Objective

**Three ground stations have initially been selected:**

1. **Hartebeeshoek**, operated by CSIR (South Africa).  
South Africa/China/Brazil
2. **Aswan**, operated by NARSS (Egypt).  
Egypt/Brazil/China
3. **Maspalomas**, operated by INTA (Spain)  
Spain/Brazil/China

**Other possibilities, still requiring negotiation, include:**

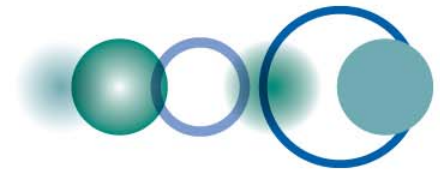
**Malindi in Kenya, operated by ASI (Italy)**  
**Libreville (Gabon)**



## Outputs planned

**Setting up ground stations for receiving CBERS images include the following tasks:**

- Tripartite agreements or memorandum of understanding between Brazil, China and the country or institution where the ground station will be set up;
- Brazil and China should provide all necessary computer infrastructure to receive and disseminate CBERS images from the ground stations;
- The institute in charge of the station should provide the support for operations;
- There should be no charges involved. Images should be received at no cost and then distributed to all African institutions under an open access data license.



# Milestones achieved to date

## Hartebeeshoek (South Africa)

- First operational reception: December 2008
- On -off reception until June 2009
- Three passes received between November 11 – 18, 2010

→ **70% of the data can be ordered currently through the catalogue (beta version) as L1A data only: <http://catalogue.sac.co.za/searchmap>**

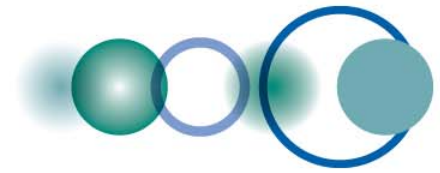
### Issues:

Unstable processing system

It takes approximately one day to process one pass of data

### Expectations:

1. Process all data to Level 1A by mid of June.
2. Process all useful data to Level 3 with automated processing chain
3. Publish the data on CSIR's catalogue
4. FTP the data to Eumetsat for distribution via Geonetcast.
5. Hope to do all of this before the meeting in China in November.



# Online Catalogue

Applications Places System ? SAC Catalogue - Mozilla Firefox  
 http://catalogue.sac.co.za/searchmap/60de9181-8106-4dbf-9f3d-7e6f5f39560e/

**Satellite Applications Center**  
 HOME SEARCH LOGOUT ABOUT CONTACT

Beta Version

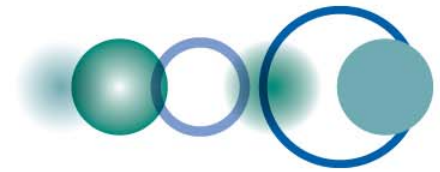
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Scene Id	Date	Row	Path						
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CBERS_2B_CCD1XS_20090206_075_130	20090206	130	075	0%					
CBERS_2B_CCD1XS_20090206_075_129	20090206	129	075	0%					
CBERS_2B_CCD1XS_20090206_075_128	20090206	128	075	0%					
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## Milestones achieved to date

### Aswan (Egypt)

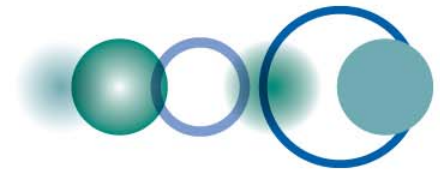
- Some tests have been performed in Aswan (Egypt). Some channel receiving problems have been identified and then fixed.
- Software is ready to be shipped.

### Maspalomas (Canary Islands)

- Image Catalog Working, but not public yet.

### Other Possibilities

- **June, 2009:** Brazilian delegation visits Libreville (Gabon) – besides the antenna, Gabon also demonstrates interest in creating a center for research and capacity building in remote sensing.
- **January 2010:**
  - Exploratory mission to Libreville – where the antenna will be installed
  - Tripartite agreement: Brazil/France/Gabon (under negotiation)
- **May 2010:**
  - Malindi (Kenya): ASI and INPE will start the process of a MOU.



## **China-Brazil Earth Resource Satellite announces the end of CBERS-2B operations - May 12, 2010**

After providing thousands of Brazilian and Chinese images, besides some others from South America and Africa, the CBERS-2B had its life ended by the CBERS Joint Committee Programme (JPC). A meeting with the JPC was held on Monday - May, 12, at the National Institute for Space Research (INPE) in São José dos Campos (SP).

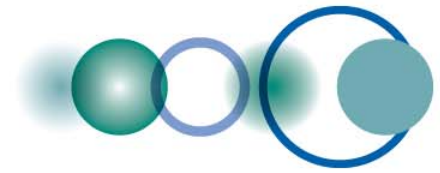
Launched on September 19th, 2007, CBERS-2B exceeded its designed life expectancy of two years. Approximately 270,000 satellite images were freely distributed to Brazilian users and more 60,000 to users from 40 different countries.

Since March, Brazilian and Chinese technicians have been trying to restore the normal operation of CBERS-2B. In middle April, the Brazilian and Chinese control centers failed to making contact with the CBERS-2B: the satellite has sent intermittent signals that indicated a lack of energy. As the chances of restoring normal operation are minimal, the Chinese Agency of Space Technology (CAST) and INPE, decided to put an end to the CBERS-2B lifetime.

The next satellite of the CBERS programme is the CBERS-3, which has its launching scheduled for the second half of 2011.

The closure operation of the CBERS-2B reduces the number of images used in programs for monitoring deforestation in the Amazonia. However, the continuity of these programs is guaranteed by using images of the U.S. TERRA/MODIS satellites and Landsat-5, and by the Indian ResourceSat.





# CBERS as a global satellite