CBERS-2B

Updates on International Ground Stations

INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

CBERS-2B Cameras

CBERS-2B was successfully launched on September 19, 2007

Wide Field Imager Camera – WFI (258m)

CCD Camera (20 m)

High Resolution Camera – HRC (2.7 m):
Not for distribution by international ground stations

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São Paulo, Brazil, International Airport (HRC + CCD)

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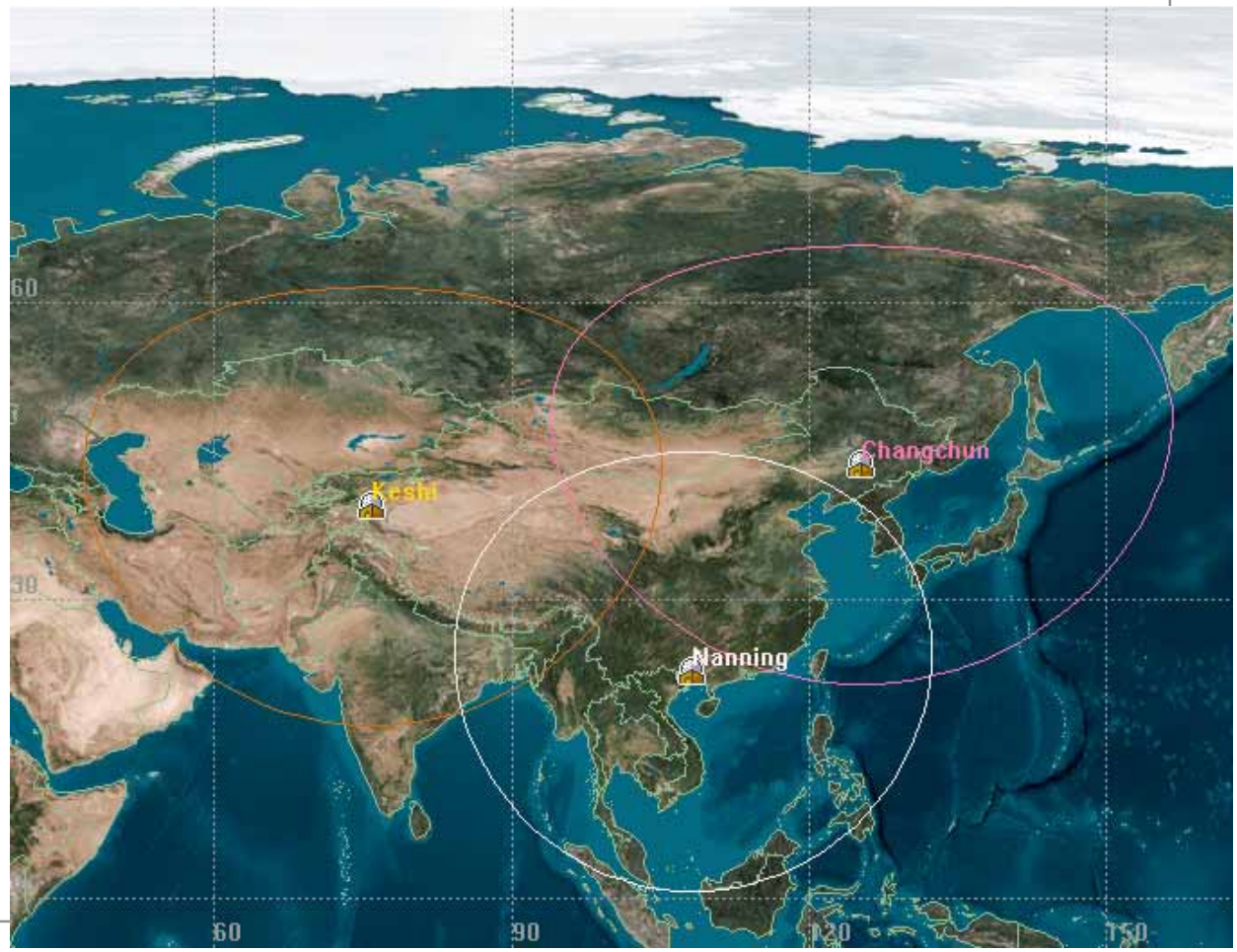
Chinese Ground stations – TT&C

Ground stations to monitor and control the satellites

Changchun
Nanning
Keshi



Brazilian TT&C stations

Brazil

- Cuiabá
- Alcântara

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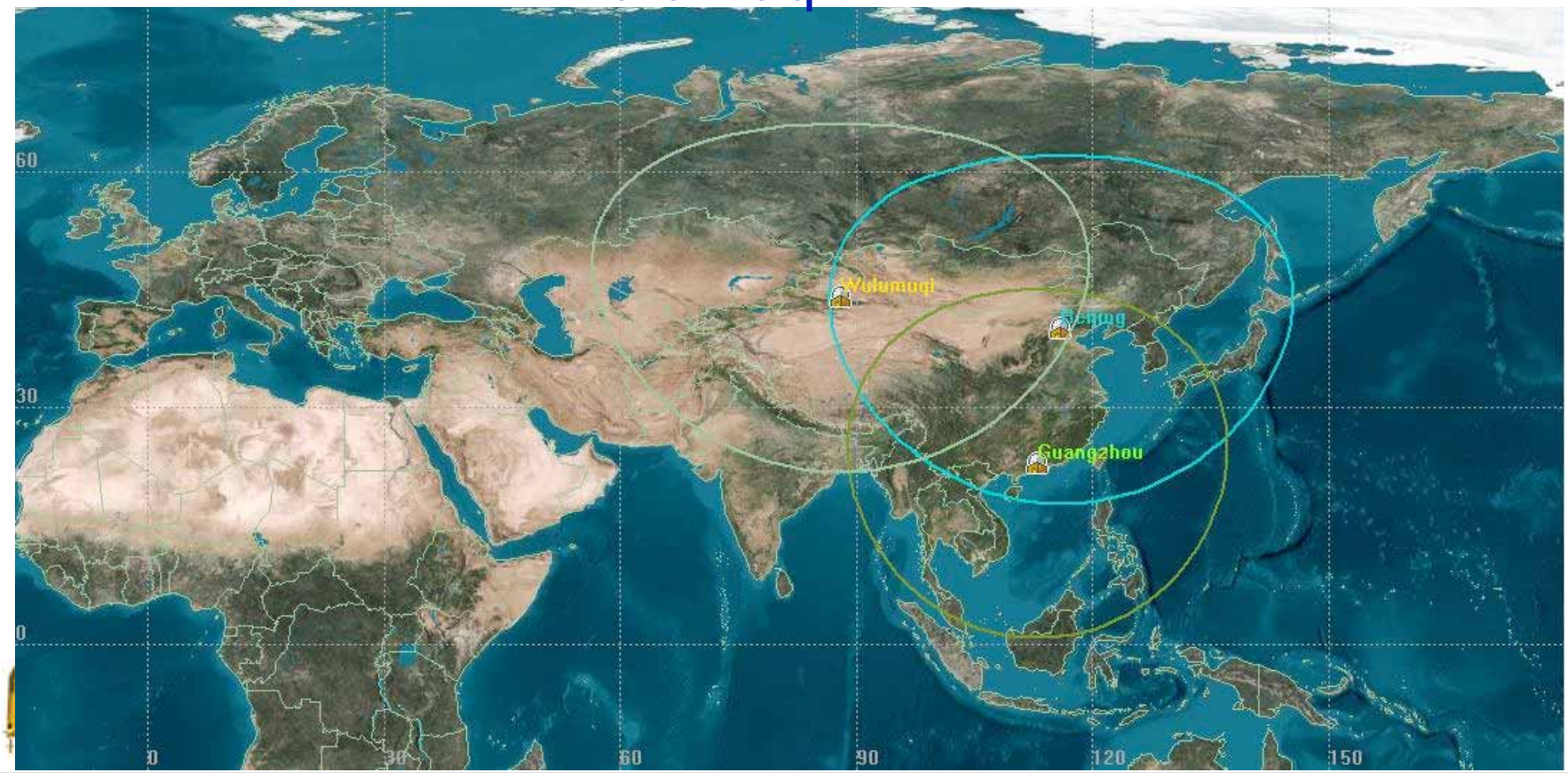
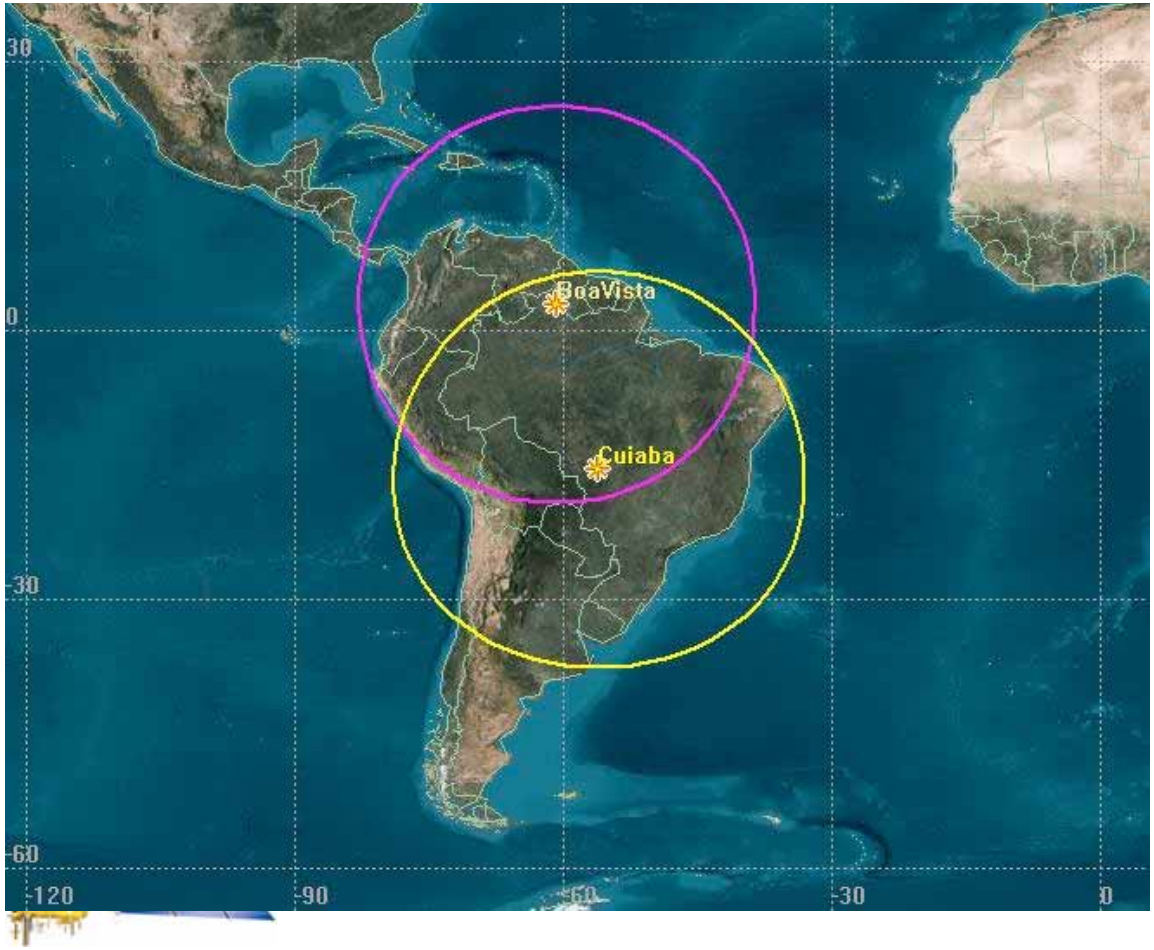
Chinese Image Receiving Stations

Beijing
Nanning
Wulumuqi



Brazilian Image Receiving Stations (CBERS for Caribe)



Cuiabá

Boa Vista (planned)

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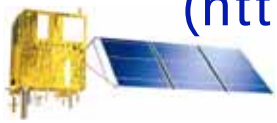
Brazilian Image Receiving Stations

Cuiabá

– 11.8 m Viasat antenna (36 dB/K)
– 10 m Viasat antenna (34 dB/K)
– one Cortex HDR programmable demodulator with two demodulators
– both ground stations will be upgraded in 2009. 4 programmable demodulators with two demodulators each
– Hi speed internet connection to download raw data to the Data Center in Cachoeira Paulista
– Ground stations do not generate data products
– Free worldwide data distribution through the internet (http://www.dgi.inpe.br/CDSR)



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Brazilian Image Receiving Stations

Boa Vista

– new system yet to be developed

– 32 dB/K system

– antenna size between 5 and 7 meters

– two programmable demodulators with two demodulators each

– RHC and LHC capable

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CBERS for Africa

During the GEO Ministerial Meeting in Cape Town, in October, 2007, the Brazilian and the Chinese governments agreed to establish a network of ground stations to cover Africa and to make the free distribution of image products to the African countries

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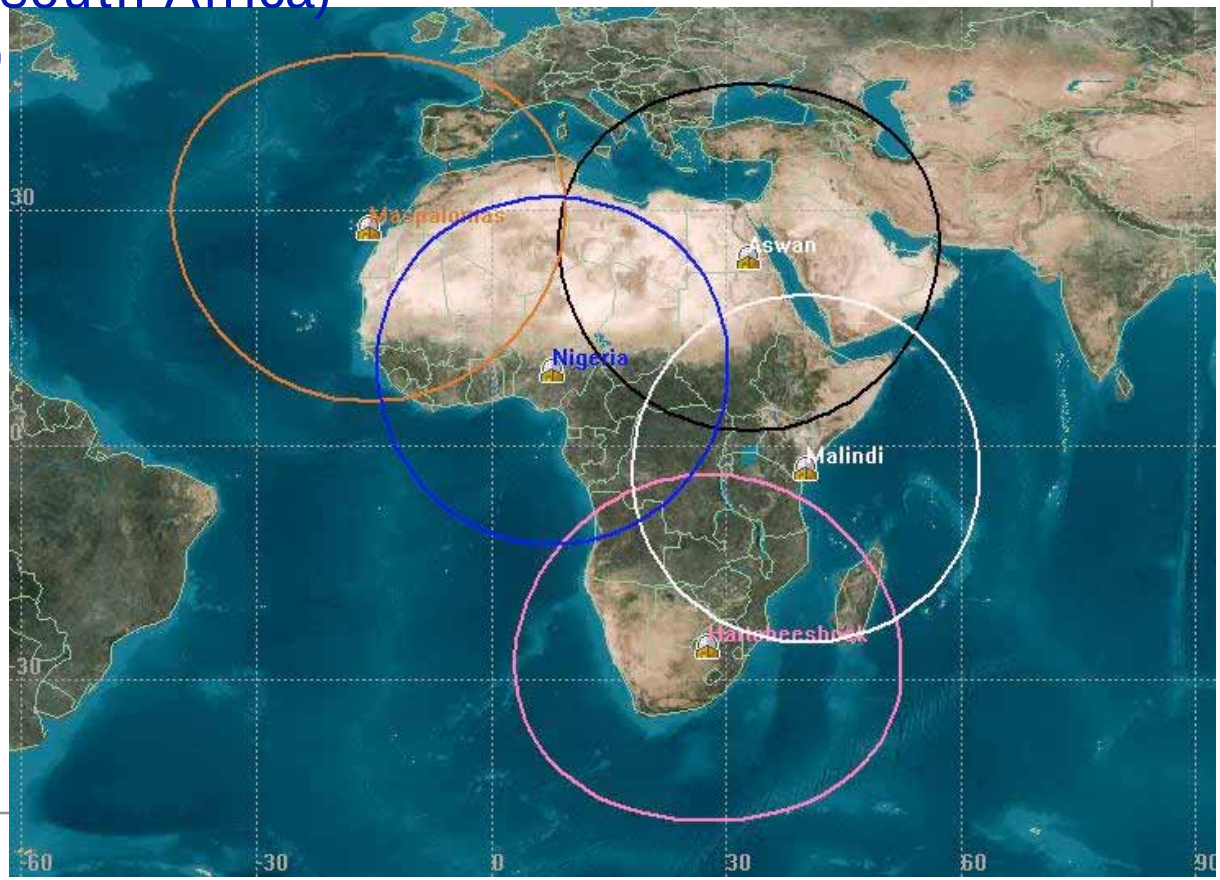
CBERS for Africa

Five Ground stations were identified:

Maspalomas (INTA – Spain (Canary Islands)
Hartebeeshoek (SCIR - South Africa)
Aswan (NARSS – Egypt)
Jos (NASRDA – Nigeria)
Malindi (ASI – Kenya)



CBERS for Africa - status

Maspalomas

1. Brazil will support this ground station.
2. Trial reception of CBERS-2B was sucessfully performed.
3. Ingest and processing software was installed in the ground station computers.
4. Antenna system is not yet operational.
5. MOU was approved by the parties and it will be signed in the end of october 2008.

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CBERS for Africa - status

Hartebeeshoek

1. China will support this ground station.
2. Trial reception was performed three times by a Brazilian team.
3. Antenna system to be received in 2008 from IN-SNEC.
4. MOU will be signed in the end of october 2008.

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CBERS for Africa

Aswan

1. Brazilian team has been to Aswan in May, 2008.
2. Ground station had problems, so trial reception could not be performed.
3. New trial reception scheduled for 18th October, 2008.

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CBERS for Africa

Jos and Malindi

- INPE has been in touch with them about the CBERS for Africa program. They showed great interest in participating.

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International Ground Stations

- Satellite Limitations
  - INPE is evaluating the power and thermal limitations of CBERS-2B in order to define precisely which international ground stations can be supported.
- Interested ground stations, so far
  - EROS Data Center (Sioux Falls, USA)
  - ESA (??)
  - Cordoba (CONAE, Argentina)
  - Chetumal (Mexico)
  - Polar stations

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Data Distribution

International ground stations are firmly recommended to use the free data distribution policy

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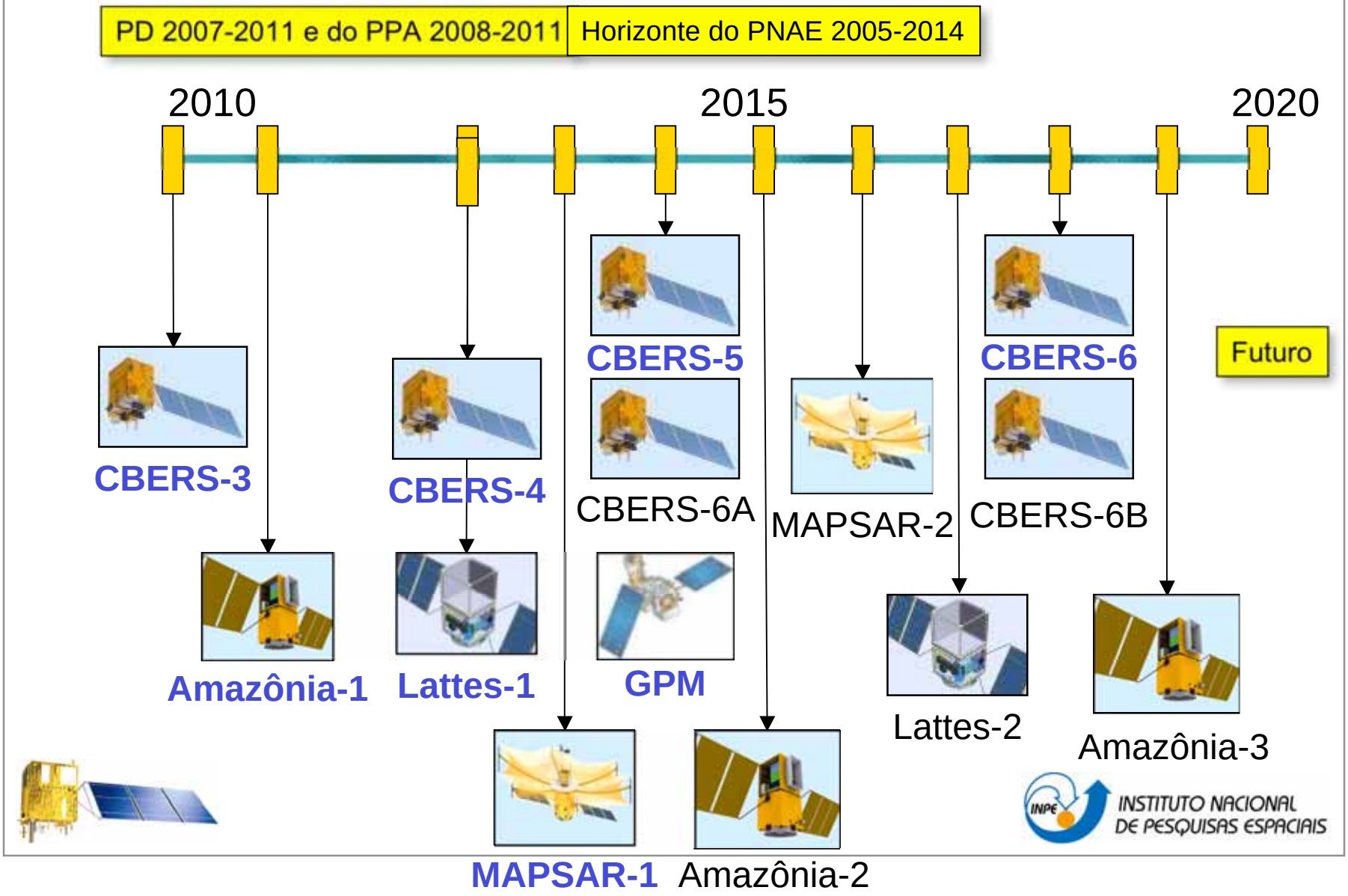
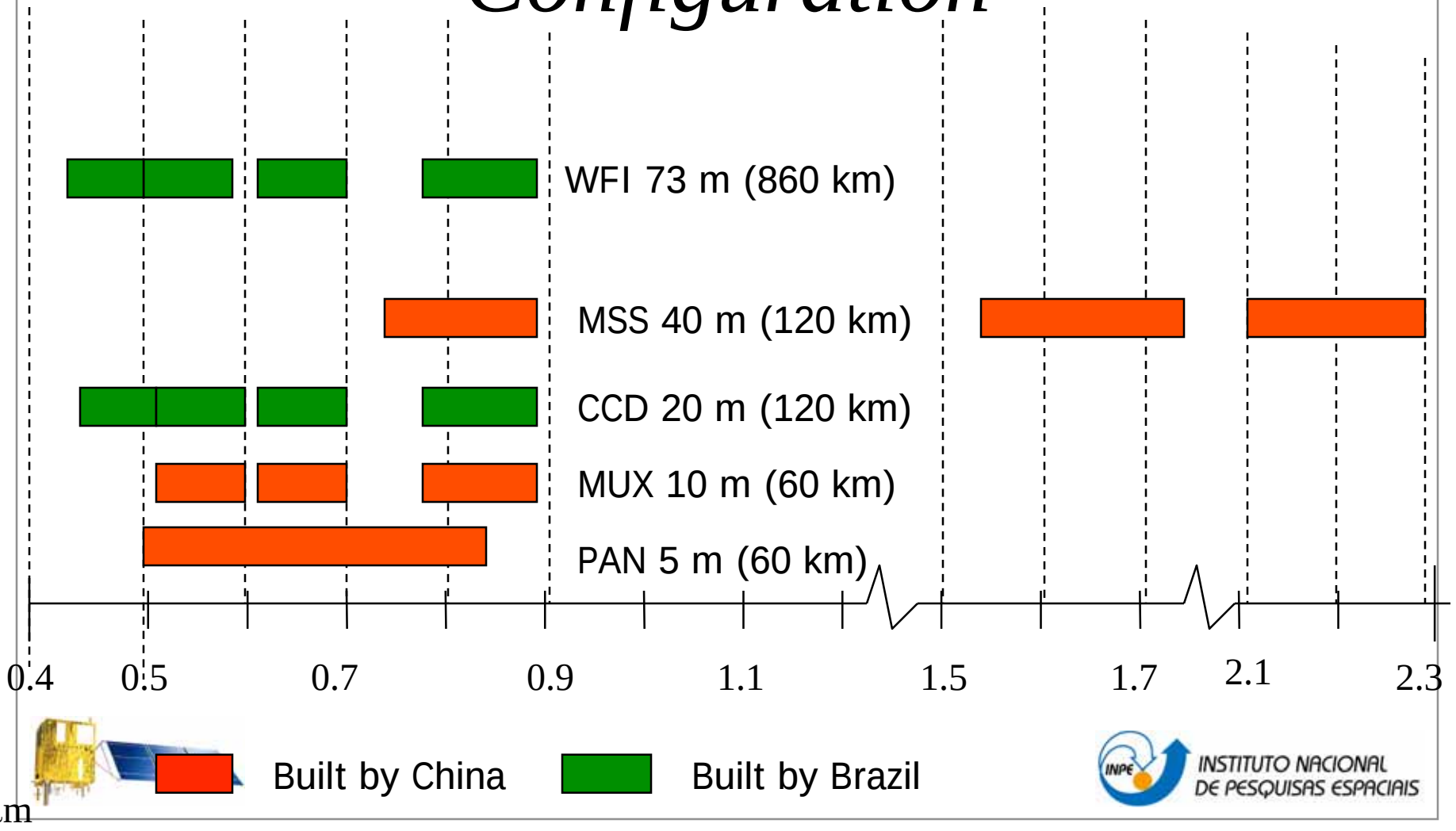
Plan 2020: Brazil as a Global EO



CBERS 3 – 4 Sensor Configuration



Built by China

Built by Brazil

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Thanks!

CBERS

International Ground Stations

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