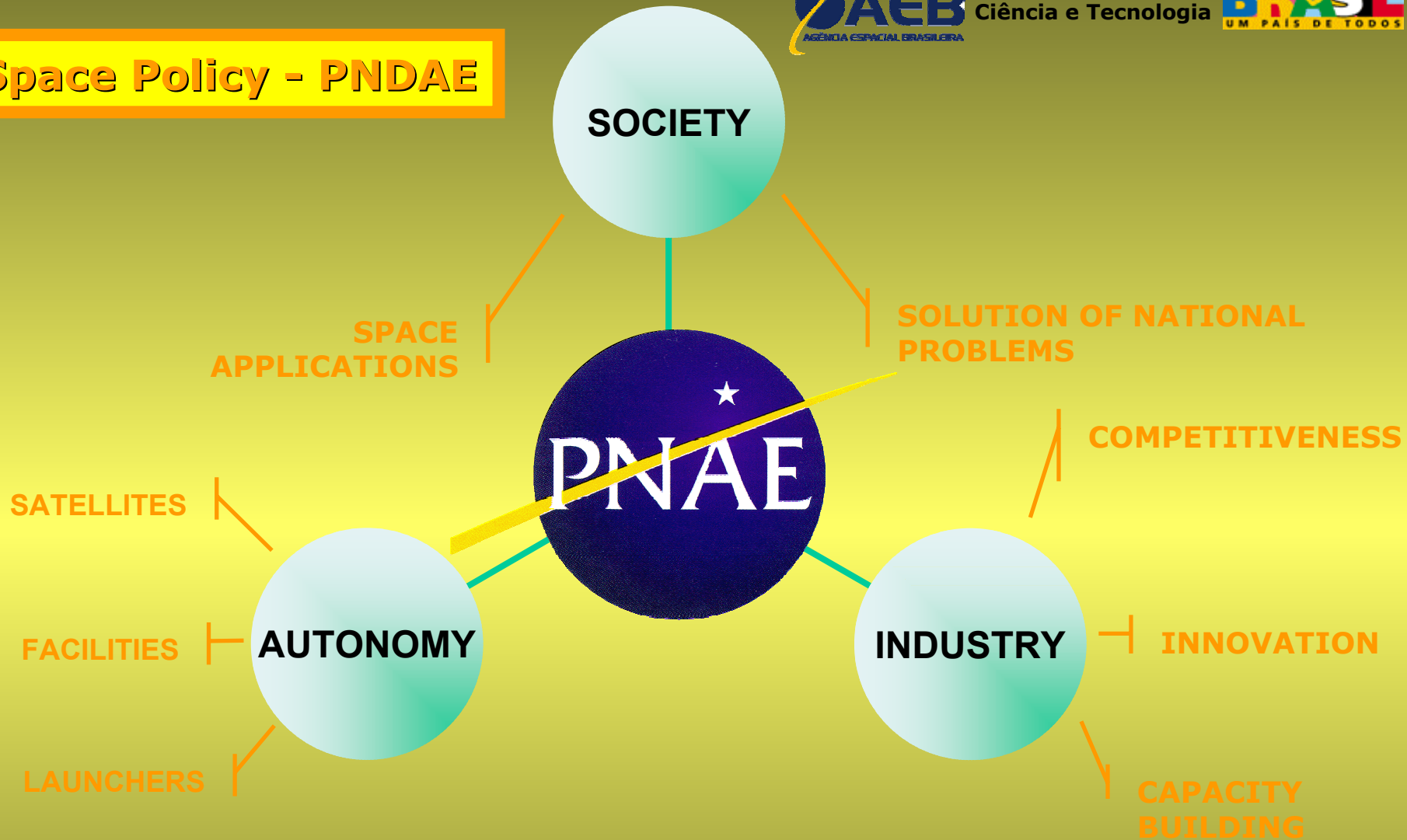


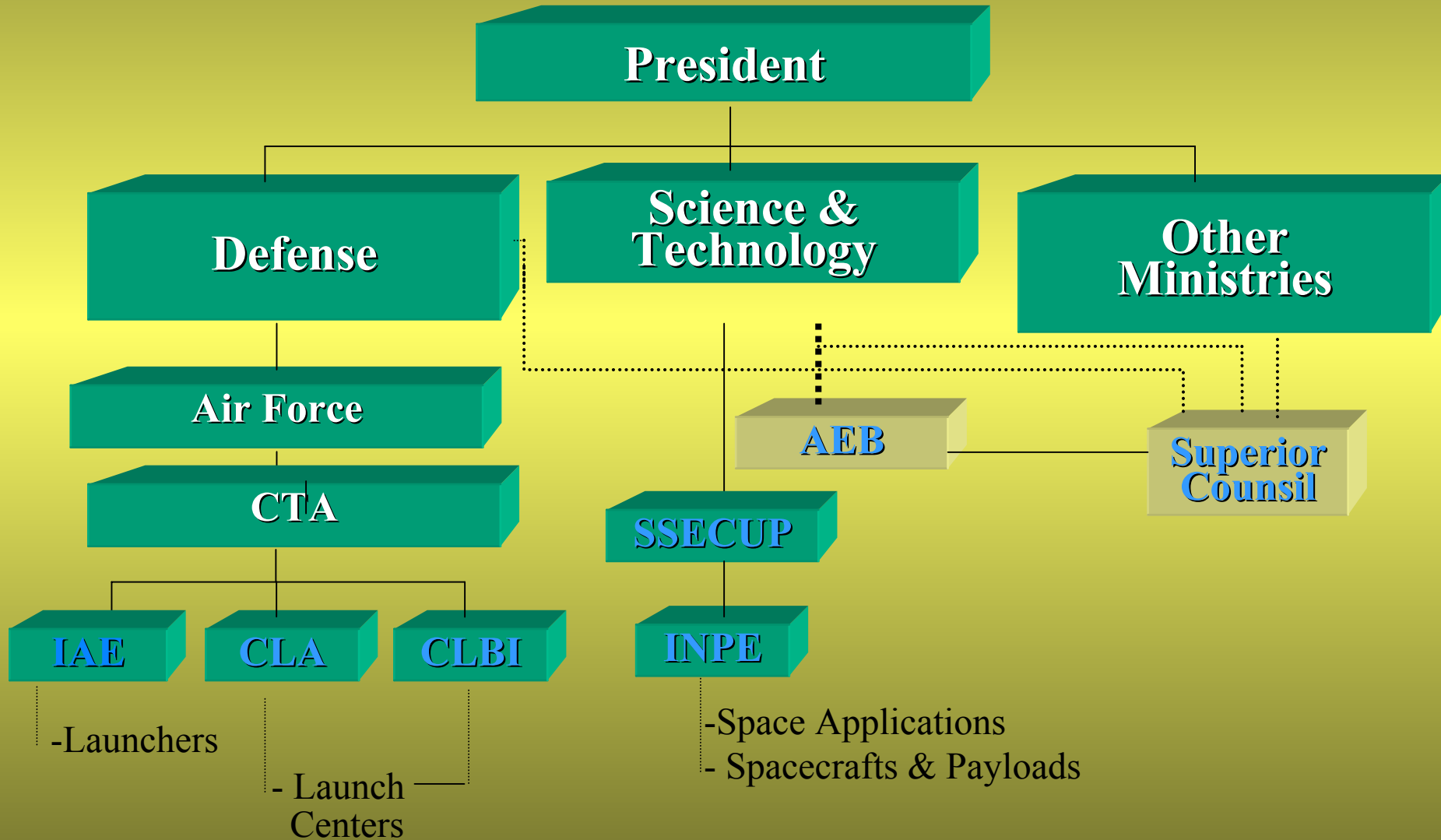


National Program for Space Activities 2005 - 2014

Space Policy - PNDAE



Main Actors - SINDAE



**Earth
Observation**

Science

Telecommunications

Meteorology

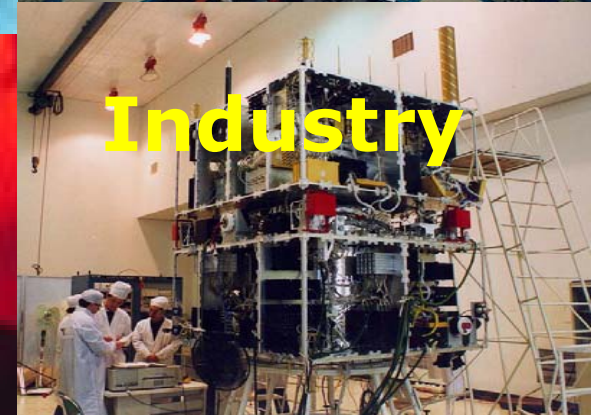


**Access to
Space**

Infrastructure

**R&D
HR**

Industry

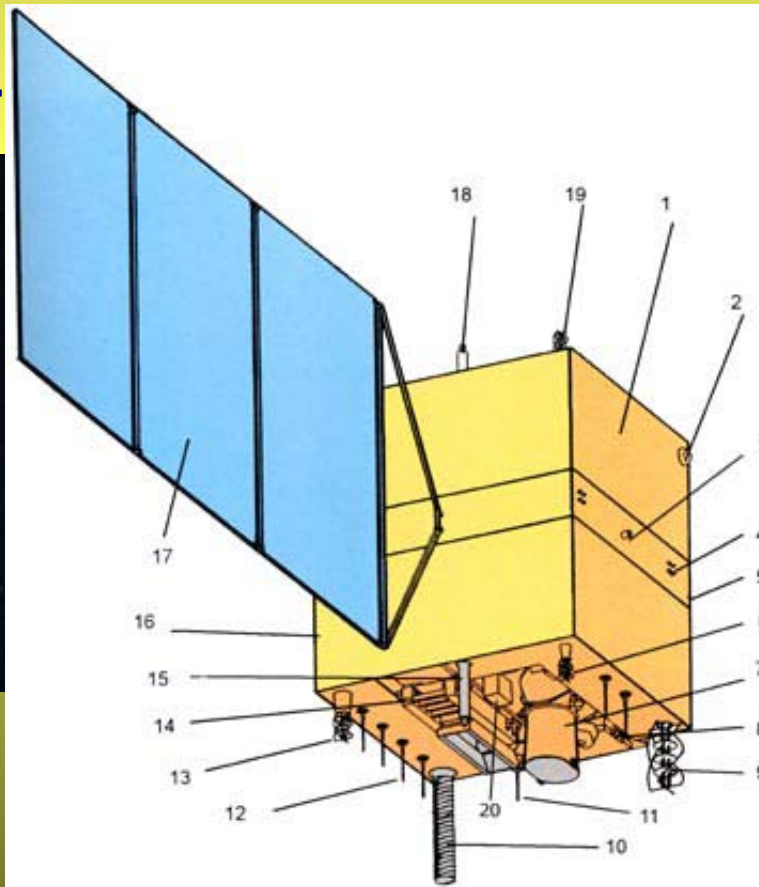


Earth Observation

Missions

CBERS Program

- **CBERS-2B**
- **CBERS 3 e 4**



- 1 - Módulo de Serviço
- 2 - Sensor de Presença do Sol
- 3 - Conjunto dos Propulsores de 20N
- 4 - Conjunto dos Propulsores de 1N
- 5 - Divisória Central
- 6 - Antena UHF de Recepção
- 7 - Câmera IRMSS
- 8 - Antena de Transmissão do IR
- 9 - Antena de Transmissão em VHF
- 10 - Antena UHF Tx/Rx
- 11 - Antena em Banda - S (DCS)
- 12 - Antena de Transmissão do CCD
- 13 - Antena de Transmissão em UHF
- 14 - Câmera CCD
- 15 - Antena em Banda-S (TT&C)
- 16 - Módulo de Carga Útil
- 17 - Painel Solar
- 18 - Antena em Banda-S (TT&C)
- 19 - Antena de Recepção em UHF
- 20 - Câmera Imageadora WFI

CBERS

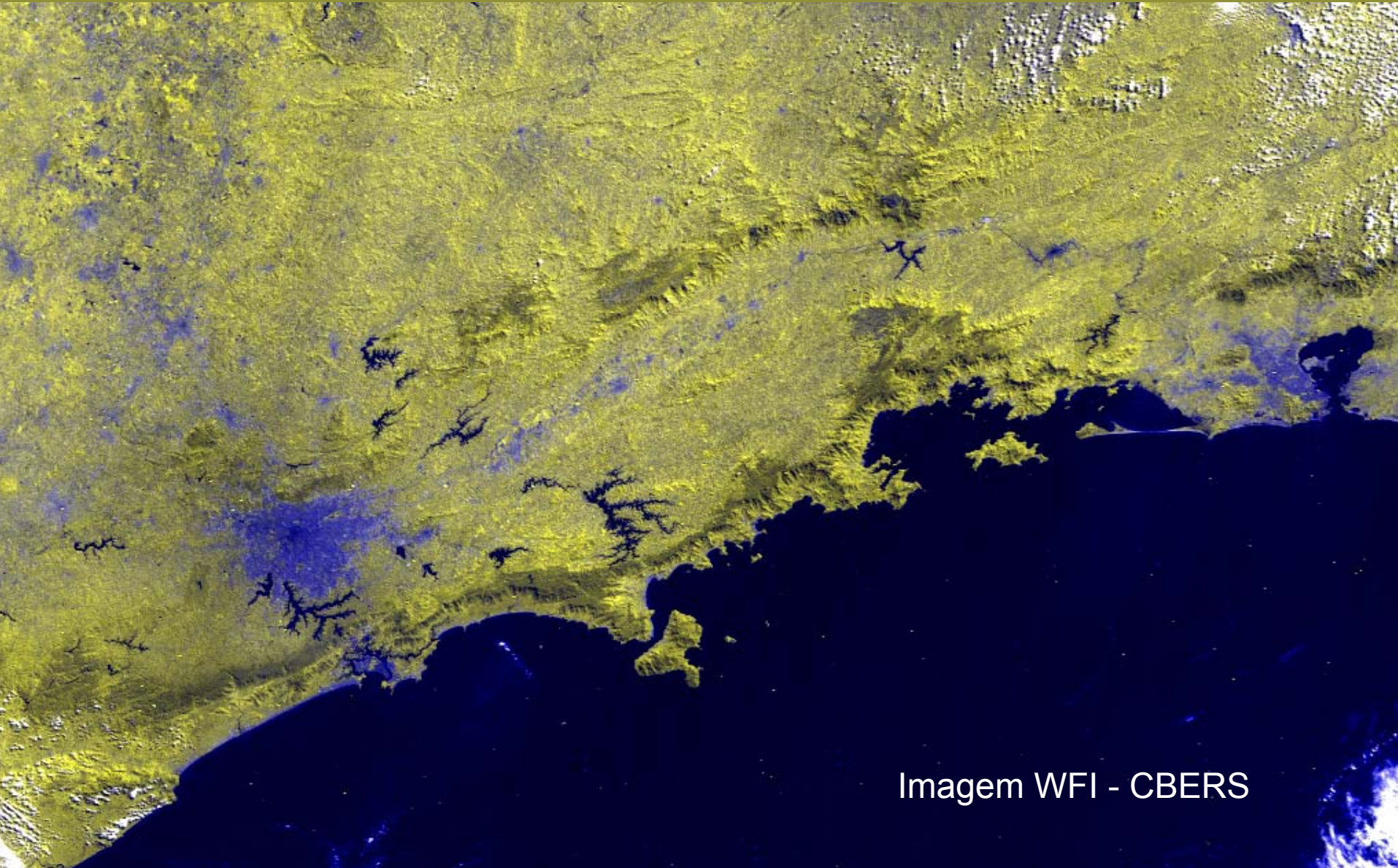


Imagem WFI - CBERS

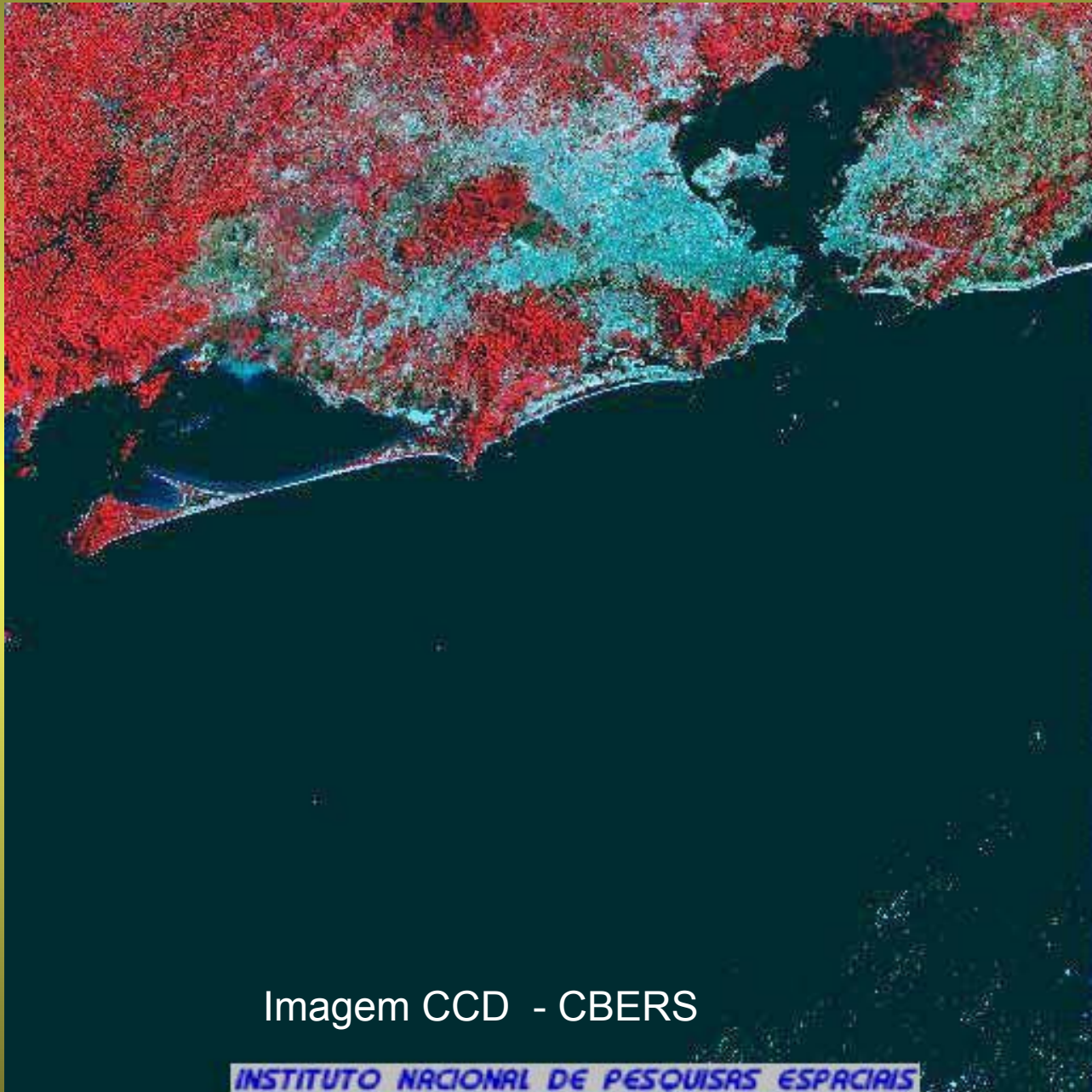


Imagem CCD - CBERS

Earth Observation

Missions

Data Collecting



SCD



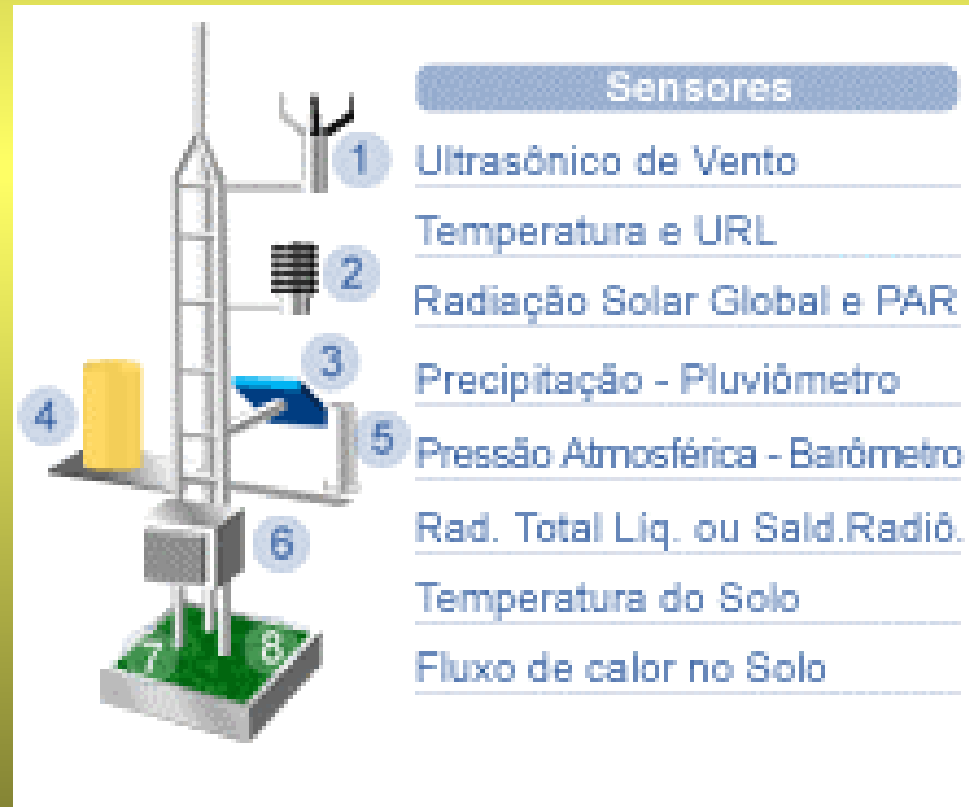
Earth Observation

Missions

Data Collecting



SCD



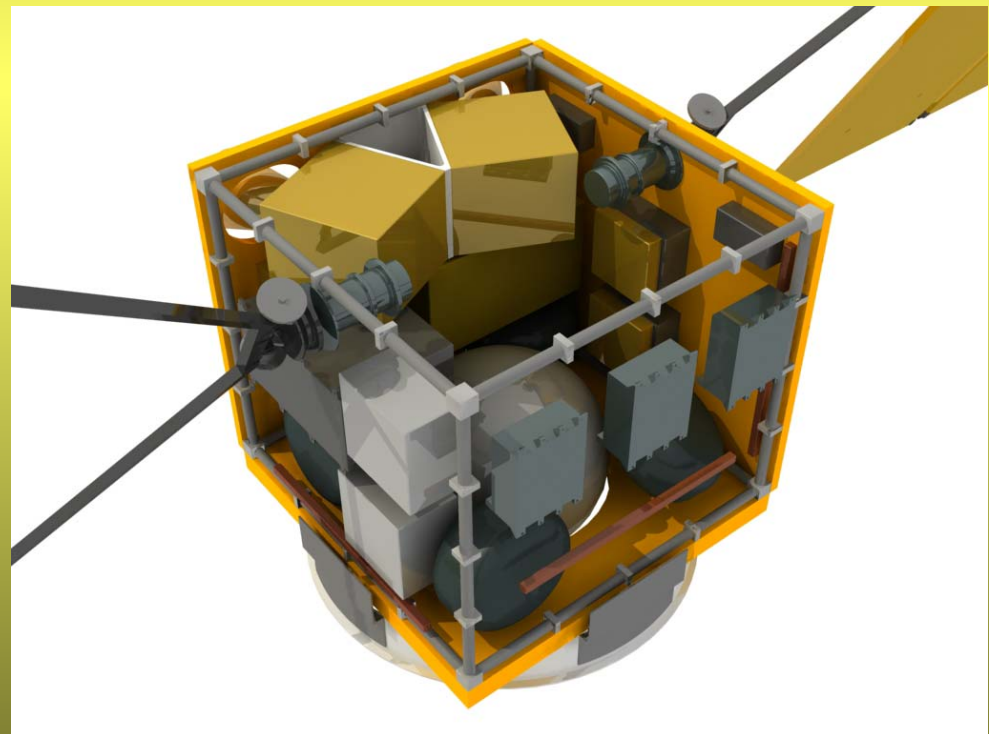
Earth Observation

Missions

Remote Sensing Satellites – SSR

- Optical
- Radar

Multi-Mission Platform



Earth Observation

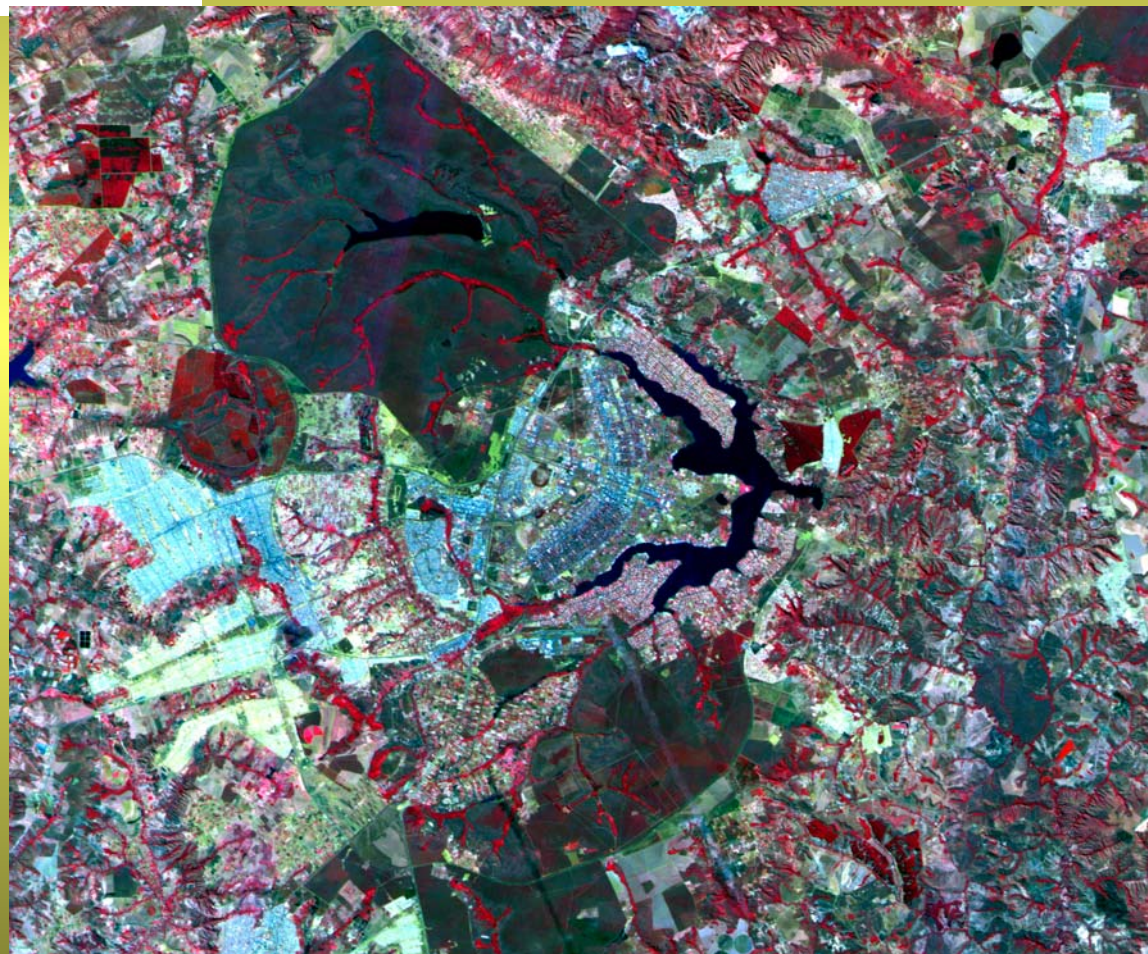
Actions

Integrated Space Data Center

Tools

- Spring
- TerraLib

CBERS Image Data Distribution Policy



Scientific and Technological Missions

Missions



Communications & Meteorology

Missions

Geostationary Satellite

- Government Comms
- Tele-justice
- Tele-medicine
- Tele-education
- CNS/ATM

Meteorological Payload on-board GEO satellite

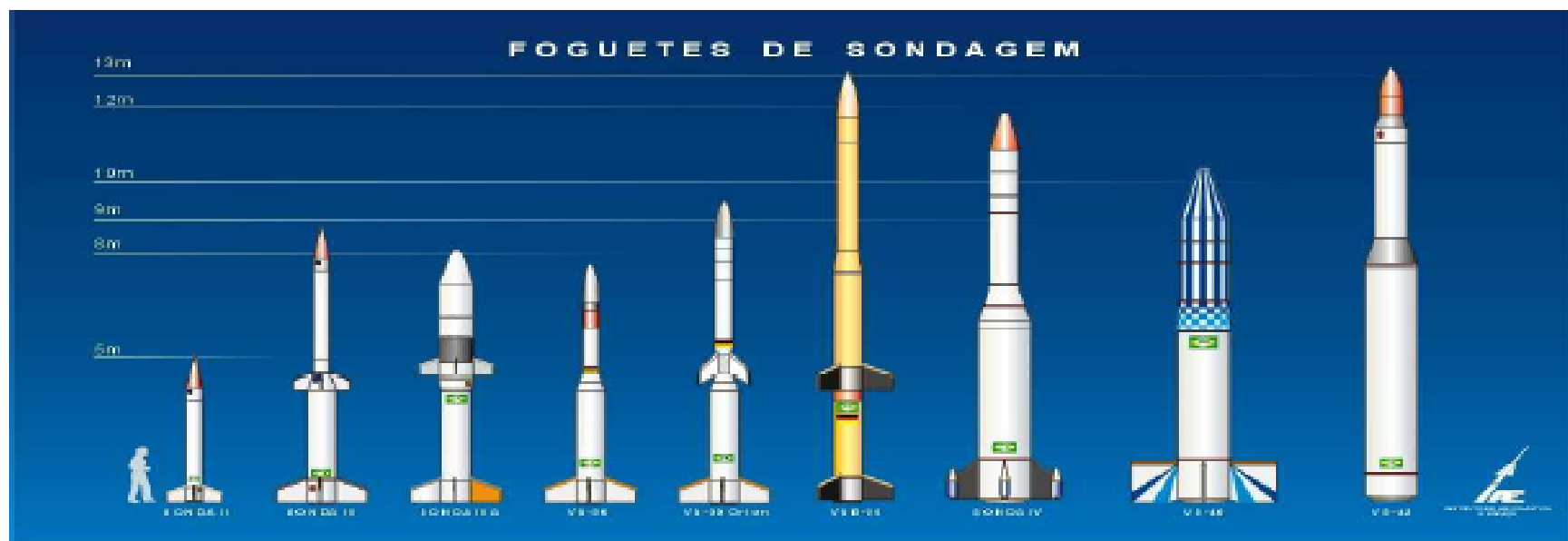
Brazilian participation in GPM – Global Precipitation Measurement Program



Access to Space

Missions

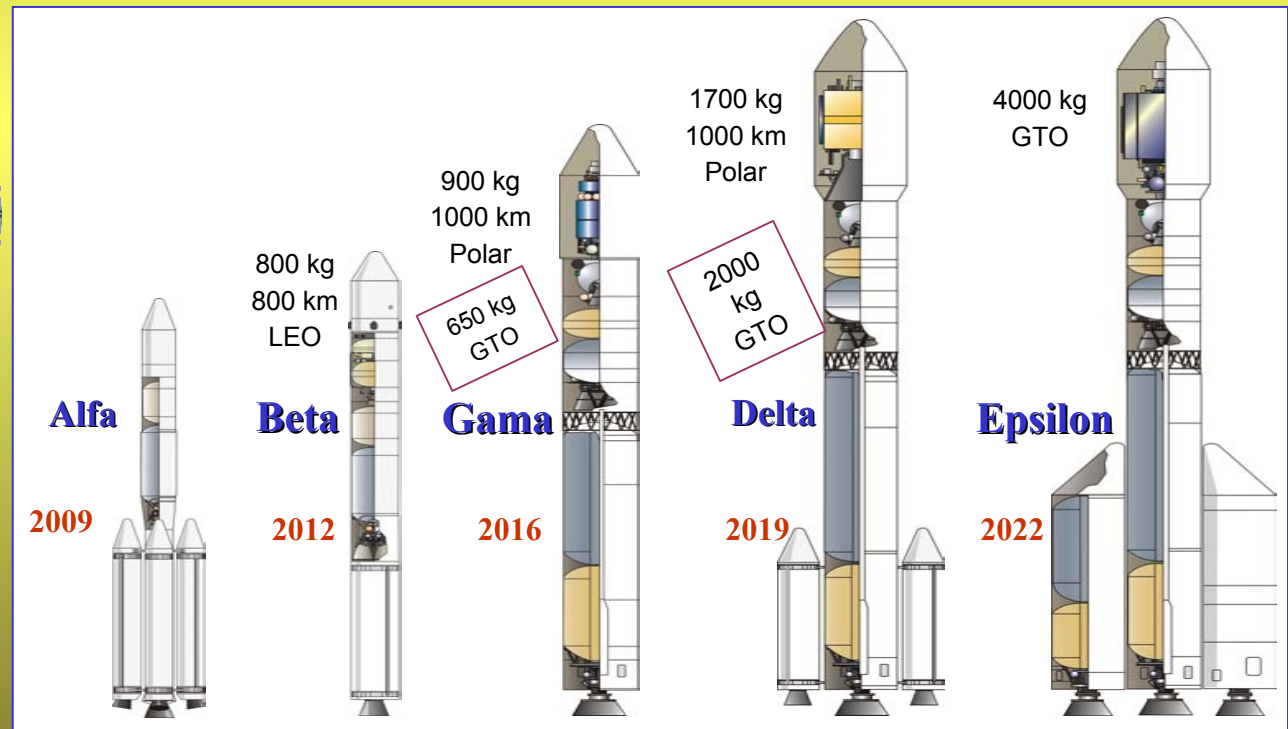
Sounding Rockets



Access to Space

Missions

Launchers



Facilities

Support to Satellite
Development and Operations

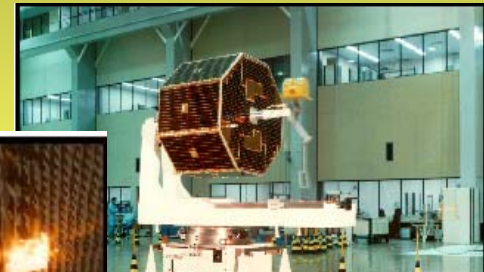
Ground Control Center



Facilities

Support to Satellite
Development and Operations

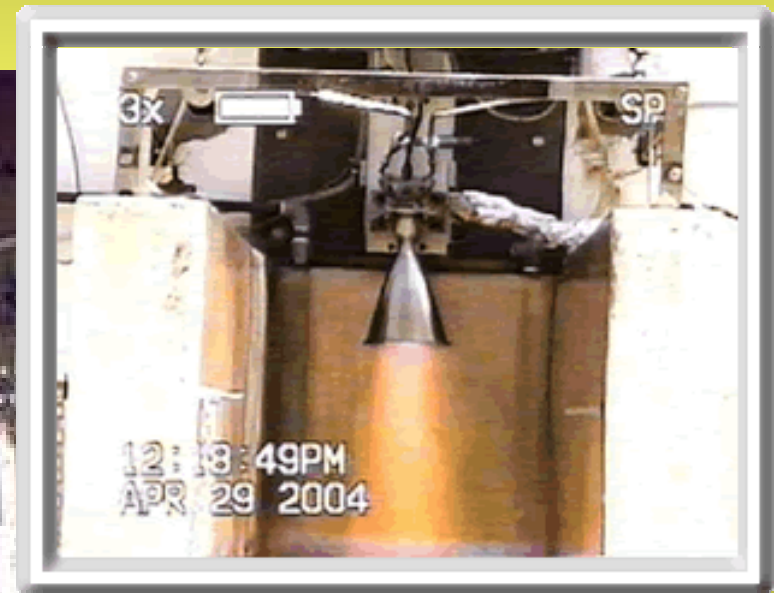
Integration and Test Lab - LIT



Facilities

Support to Satellite
Development and Operations

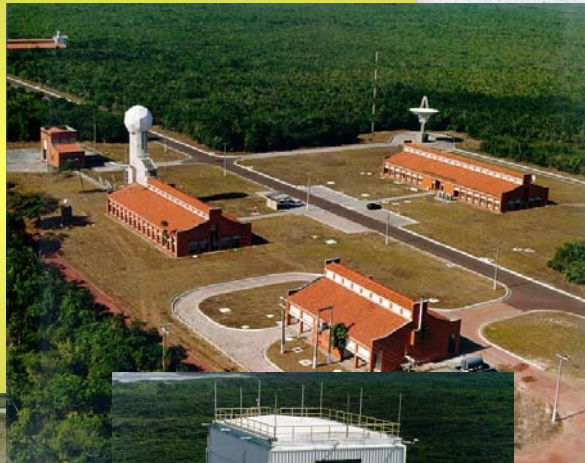
Propulsion and Combustion Lab



Facilities

Support to Launch Vehicles
Development and Operations

Alcantara Launch Complex



Alcantara Launch Center

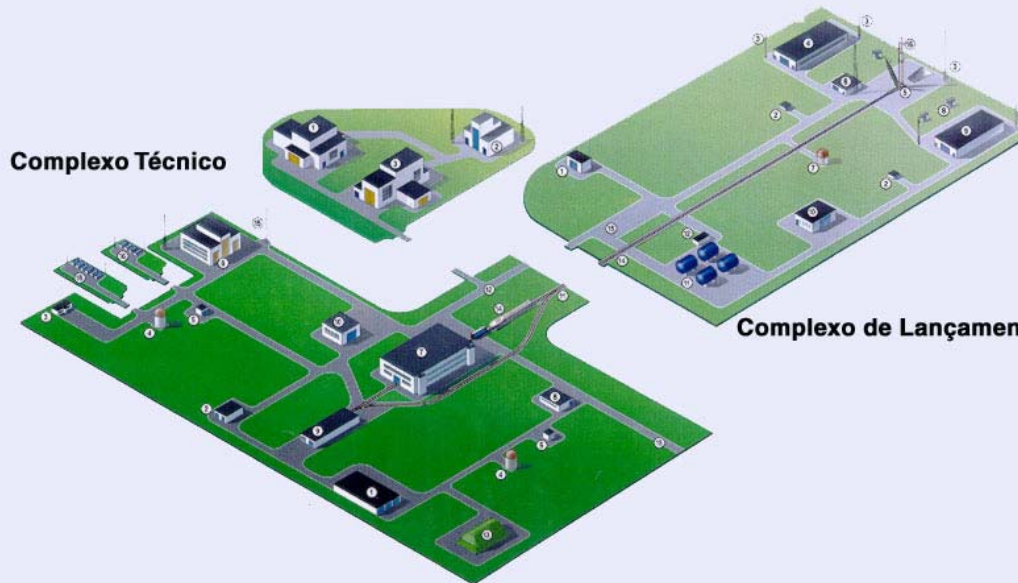


Alcântara

Facilities

Support to Launch Vehicles
Development and Operations

Alcantara Launch Complex



Research and Development

Actions

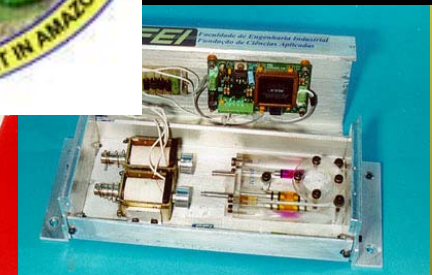
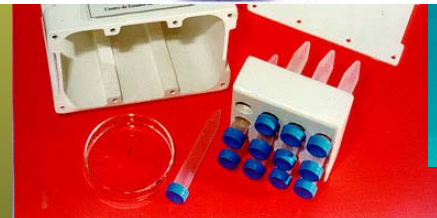
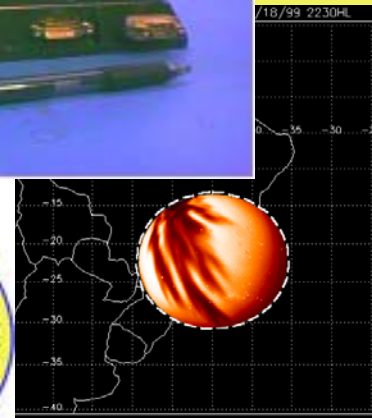
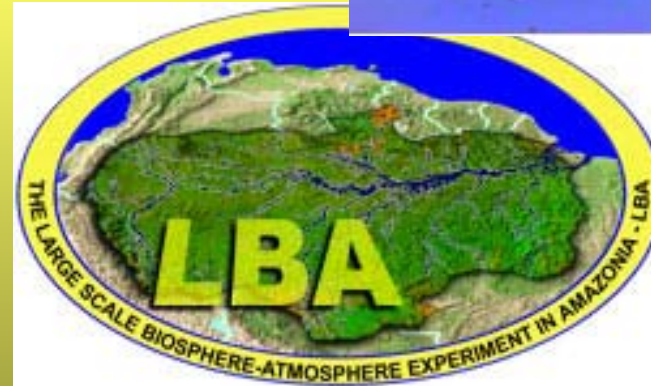
Critical Technologies

Space Science

Global Changes

Microgravity

Uniespaço Program



Cross-Cutting Issues

Actions

- **Standardization and Certification**
- **Education**





Thank you!