



MINISTÉRIO DA CIÊNCIA E TECNOLOGIA
INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

INPE

Agency Report



Outline

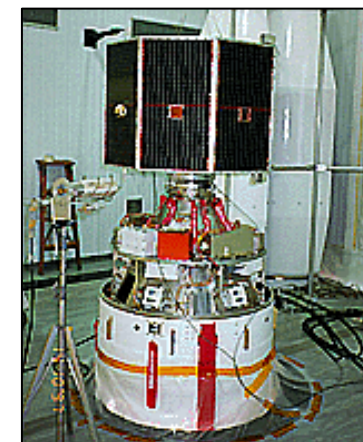
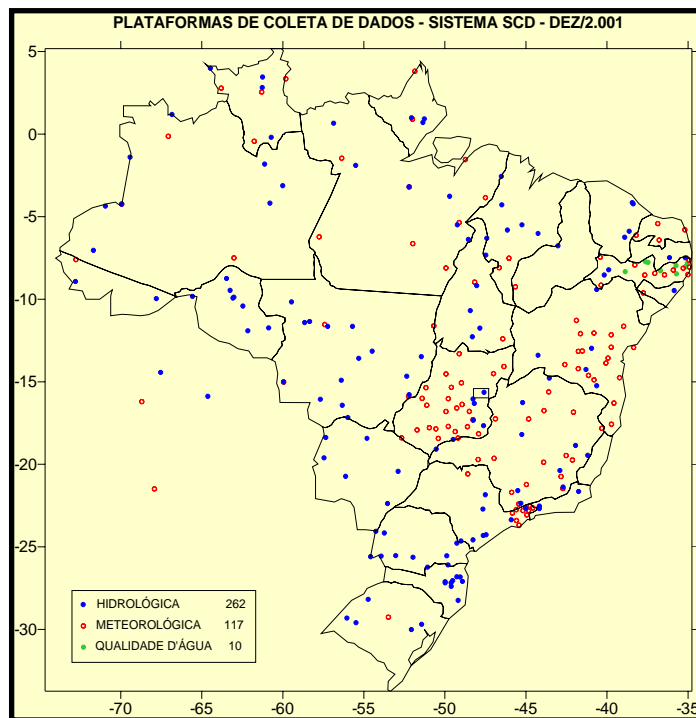
- Satellites
- Planned INPE's Launching Schedule
- INPE's Facilities and Satellite Reception Station



■ INPE SATELLITES

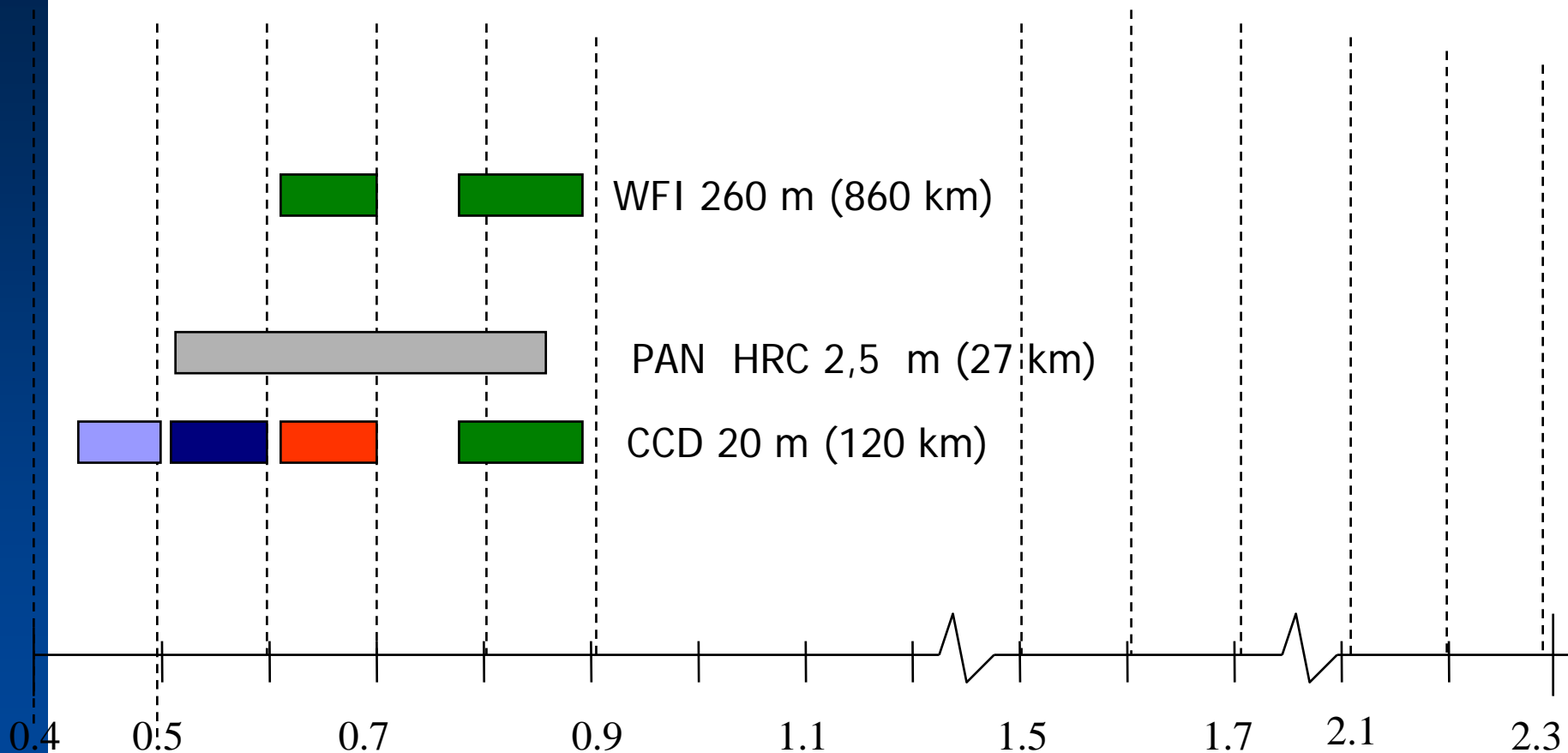
Data Collecting Satellites – SCD 1 & SCD 2

The satellites SCD 1 & SCD 2 operate the Brazilian Data Collecting System – for collecting environmental data through data collecting platforms scattered around the country.





CBERS-2B Sensor Configuration



Successfully launched 19 September

Assembly of CBERS-2B at INPE



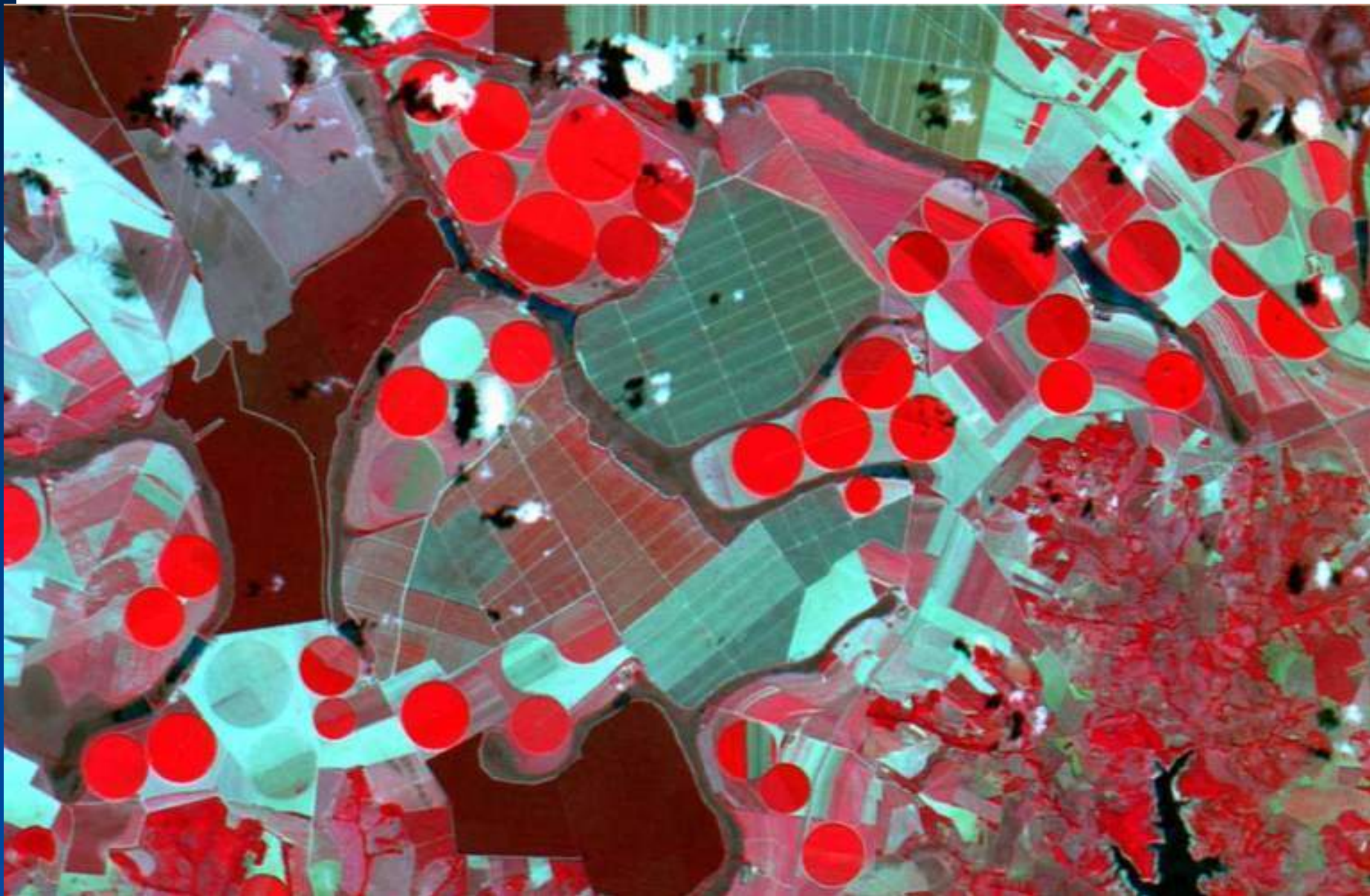


Distribution of CBERS Imagery (01/05/04 a 01/03/06)

Number of scenes distributed (145 Mb/image)	300.000
Institutions	5.200
Scenes per week	2.170
Average required time	10 min

- **Brasil and China agreed to grant a no-access fee of CBERS2-B to African countries (direct downlink, real time).**
- **South Africa and Spain will use their ground stations to receive, process and distribute CBERS data.**

CBERS-2 CCD, Minas Gerais, Brazil

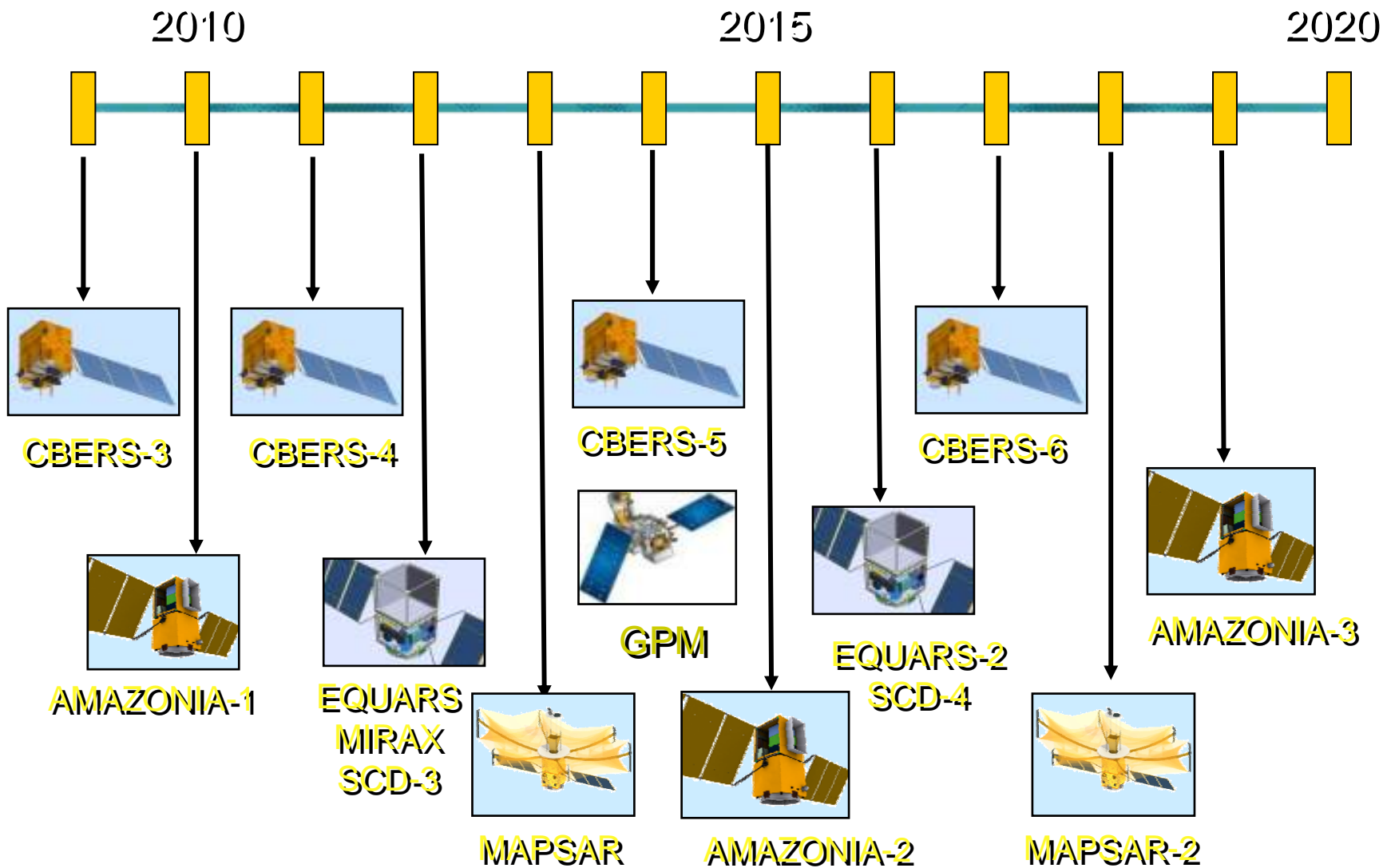




■ Planned INPE's Launching Schedule

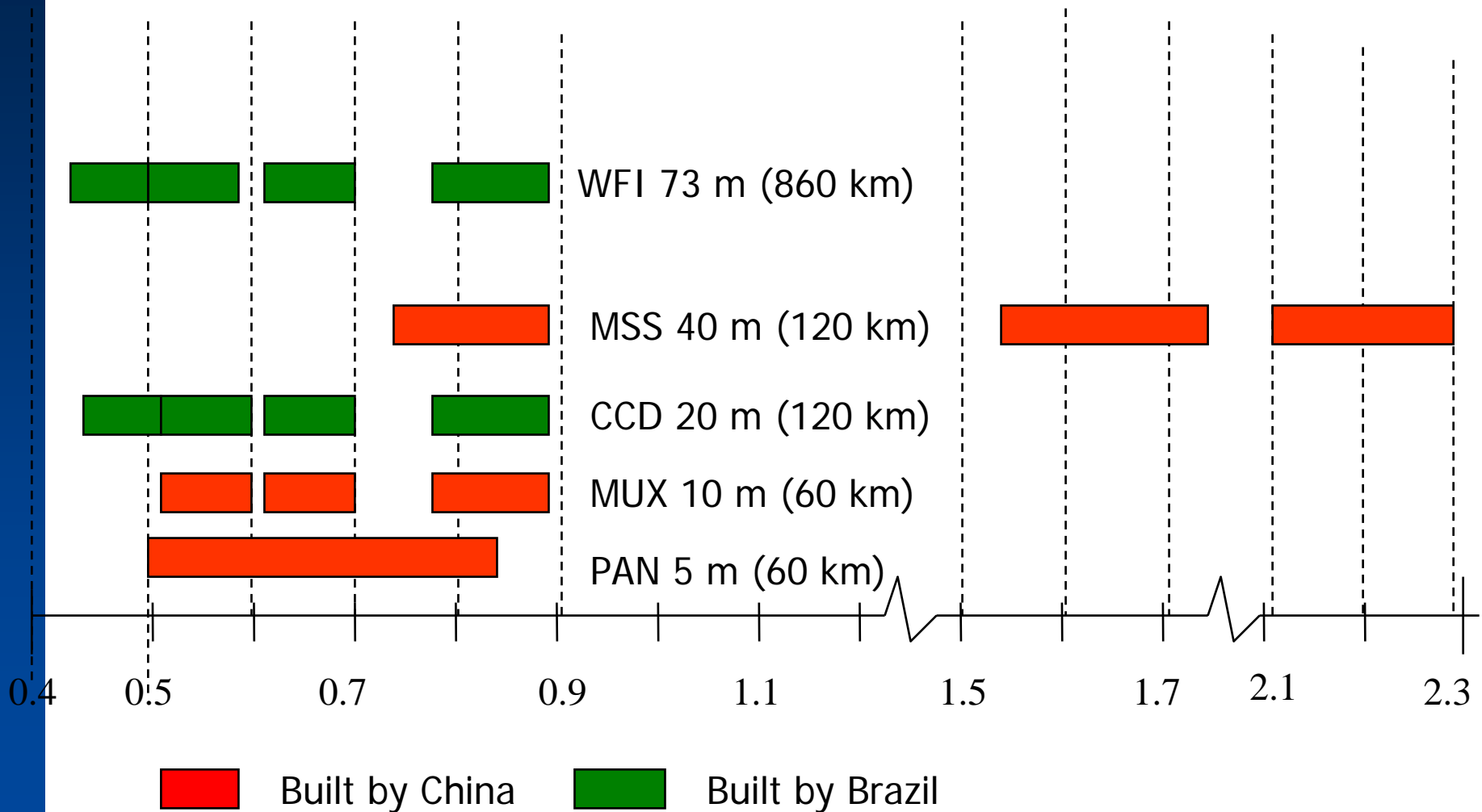


PLANNED INPE's LAUNCHING SCHEDULE





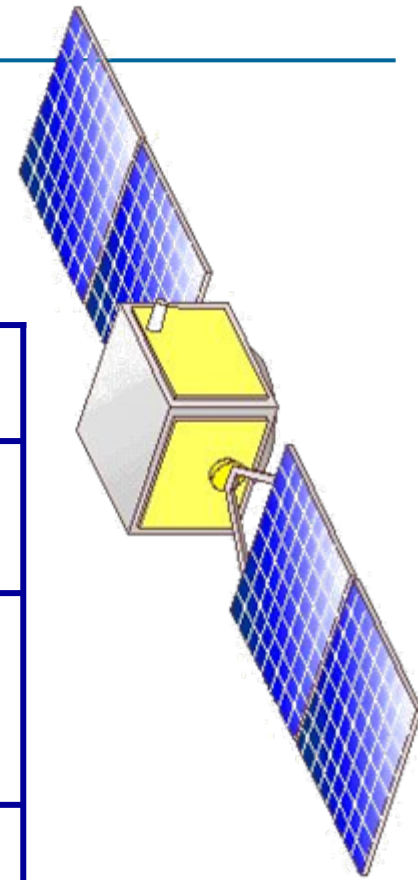
CBERS 3 – 4 Sensor Configuration



μm



Multi-Mission Platform



Mass	185 Kg
Power Consumption	150W
Available power for the payload	180W (80W during eclipse)
Orbit inclination	0 a 90
Orbit altitude	400 Km a 1500 Km
Stabilisation	3 axis



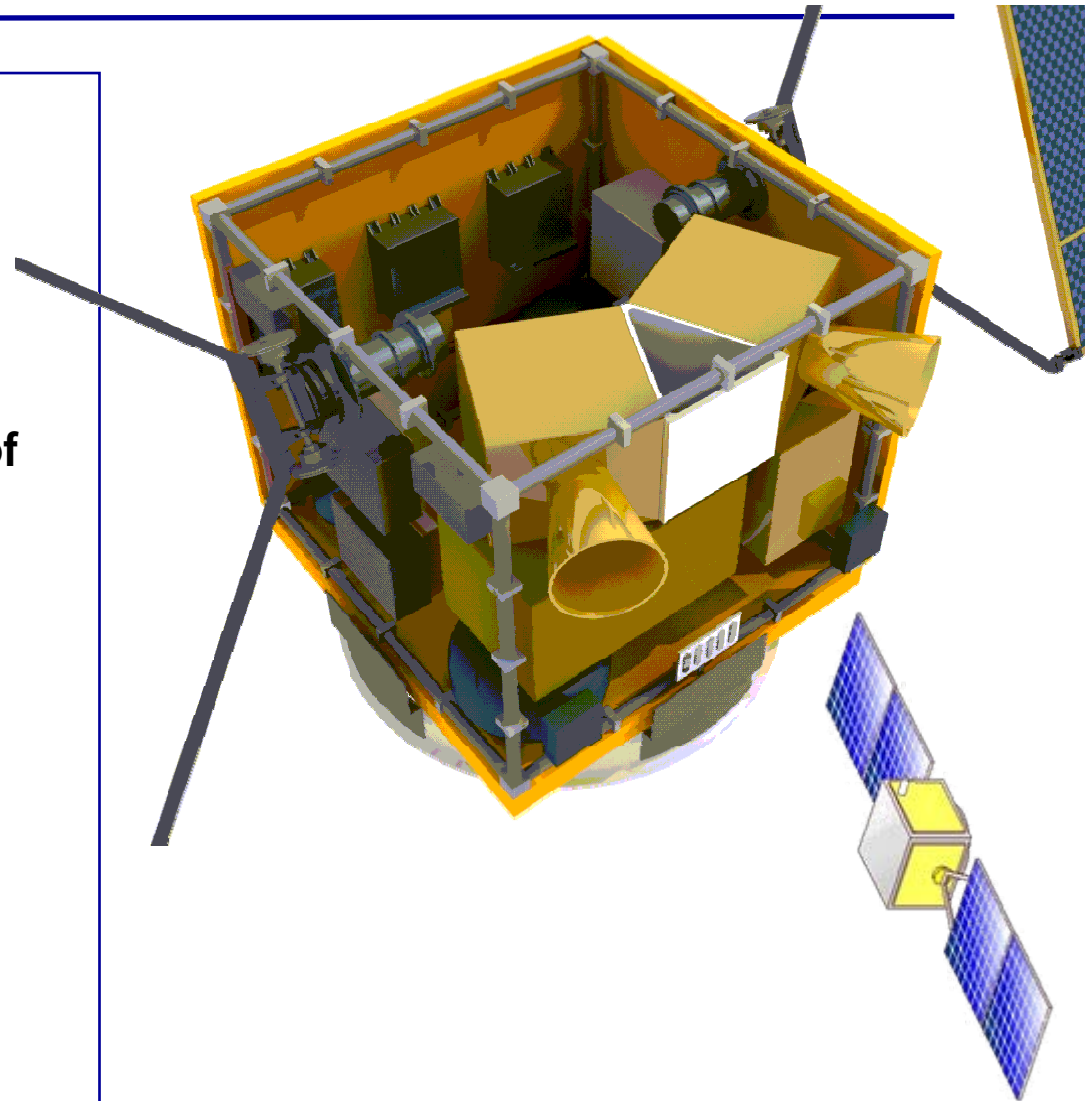
Remote Sensing Satellite – AMAZON 1

- **PMM equipped with CCD camera and a data collecting transponder.**

- **Polar orbit.**

- **Main applications:**

- **Agriculture – Surveying of cultivated areas and productivity estimates;**
- **Water resources – monitoring of pollution in coastal areas;**
- **Disaster management.**



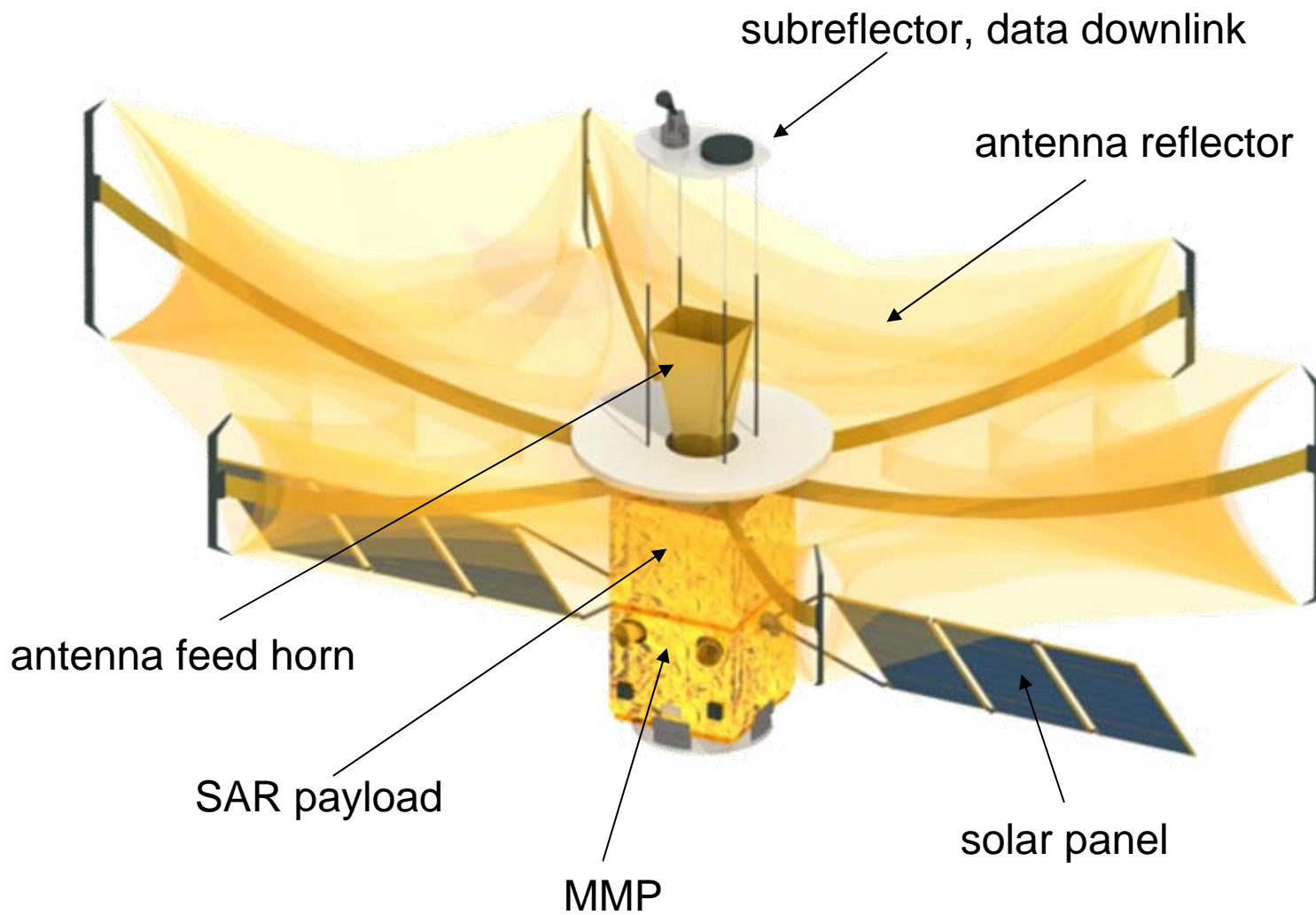


AMAZON-1 optical payload

	AWFI
Spectral bands (μm)	0,45-0,52 B 0,52-0,59 G 0,63-0,69 R 0,77-0,89 NIR
Spatial resolution (m)	40
Swath (km)	800
Revisit period (days)	5



MAPSAR



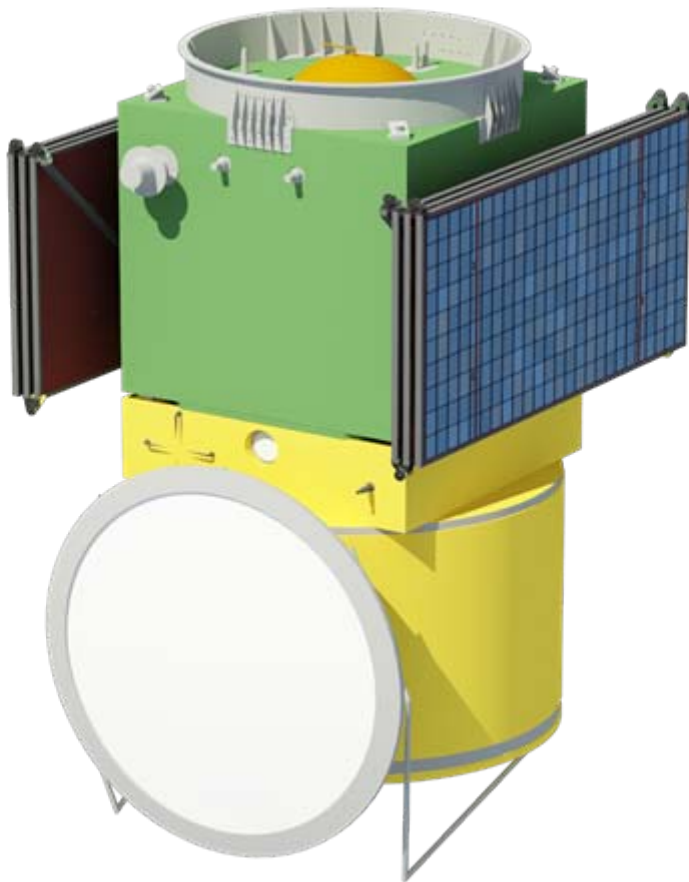


MAPSAR payload

Parameters

Frequency	L band
Polarization	single, dual and quad polarization
Incidence interval	20° – 45°
Spatial resolution	3 – 20 m
Swath	20 – 55 km
Orbit	sun-synchronous
Coverage	global
Look direction	ascending/descending and left/right
Revisit period	weekly
Access to data	near real time
Add. requirements	Interferometry and stereoscopy

GPM-Tropical



**LAUNCHING
CONFIGURATION**

LIGHTNING DETECTOR

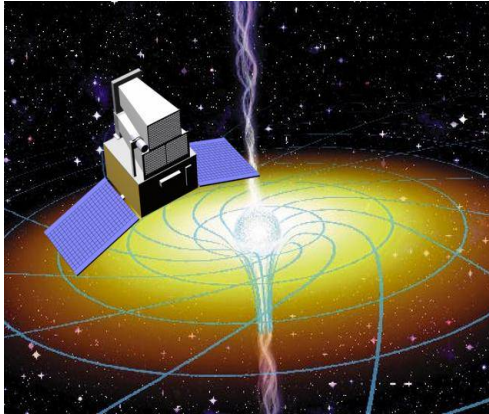
MICROWAVE RADIOMETER



Proposed GPM-Tropical - Satellite

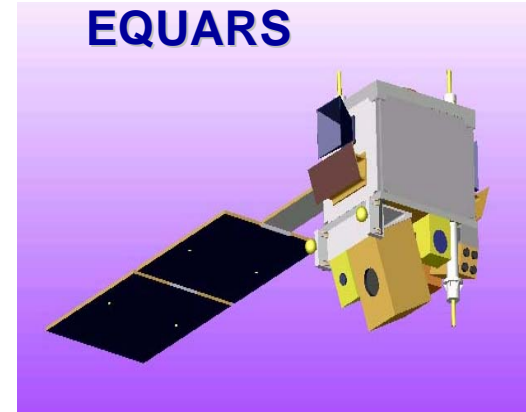
- Passive Microwave Sensor, Conical Scanning of the type of GMI or MASDRAS
- Lighting Detector
- Equatorial orbit

MIRAX



Monitoring of the nucleus of our Galaxy in the X-ray region of the spectrum.

EQUARS

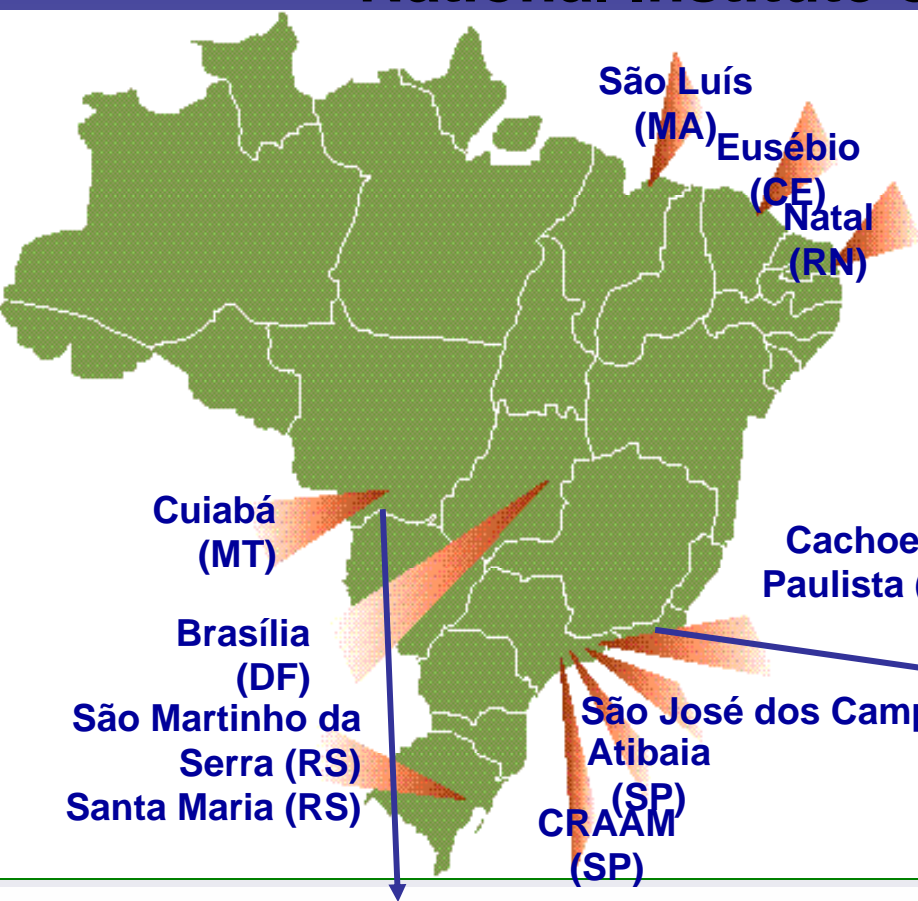


Monitoring of the Atmosphere and Ionosphere in the Equatorial Region



■ INPE's Facilities and Satellite Reception Station and Products

Ministry of Science and Technology- MCT National Institute of Space Research - INPE



INPE Satellite Reception Stations



NOAA/HRPT



AQUA-MODIS/AIRS/AMSU/AMSR

TERRA-MODIS

EUMETCast/

MSG -HRIT SEVIRI

— CUIABÁ
— CACH. PAULISTA



NOAA/HRPT



NOAA/HRPT



Geonetcast



GOES/GVAR

To be installed this year – ENVISAT and METOP



Remote sensing Data and Products

Satélites Meteorológicos - Mozilla Firefox

Arquivo Editar Exibir Histórico Favoritos Ferramentas Ajuda

http://satelite.cptec.inpe.br/

Guia rápido Últimas notícias

Ministério da Ciência e Tecnologia

Satélites Meteorológicos

Divisão de Satélites e Sistemas Ambientais

Cptec Tempo Clima Previsões Numéricas Satélite Ondas Energias Dados Observacionais Pesquisa & Desenvolvimento Pós Graduação English

Produtos	
Aerossóis - Novo	
Atraso Zenital Troposférico	
Classificação de Nuvens	
Coleta de Dados	
Descargas Elétricas	
Índice de Vegetação (NDVI)	
Índice Ultravioleta	
Monitoramento de Secas	
Nevoeiros	
Produtos MODIS	
Precipitação Satélite	
Precipitação Radar	
Queimadas	
Radiação Solar e Terrestre	
Sist. Convectivos - Tempestades	
Sondagens da Atmosfera	
Temperatura de Brilho	
Temperatura da Superfície do Mar	
Temp. Superfície Continental - Novo	
Vento na Troposfera	

Imagem GOES atualizada a cada 15min.

IIPE/CPTEC/DSA IOAA CPTEC 200706042015

Animação
Clique e visualize América do Sul ~500 Kb

América do Sul Centro Oeste Norte Nordeste Sudeste Sul

SIGMA
Sistema de Informações Geográficas Aplicado ao Meio Ambiente.

Pesquisa & Desenvolvimento DSA

Validações e Informações - Produtos DSA

Equipe DSA

GOES-10 + MSG 3/3hs

ATENÇÃO - Informações

GOES-10 - Saiba mais

Novidades

Workshop Internacional de Satélites Meteorológicos para Usuários Sul-Americanos
Laboratório Virtual para Treinamento em Satélite e Utilização de Dados
Curso On-line - O Uso de Produtos de Satélite (GOES-10, MSG e NOAA) **Novo**

Imagens de Satélites

Animações	Atuais e anteriores
- GOES	- GOES
- MSG	- MSG
	- NOAA's
Atendimento	- AQUA/TERRA

Aplicações

Desastres Naturais Meteorologia para a Agricultura Saúde Meio e Ambiente OCEANO Tempo

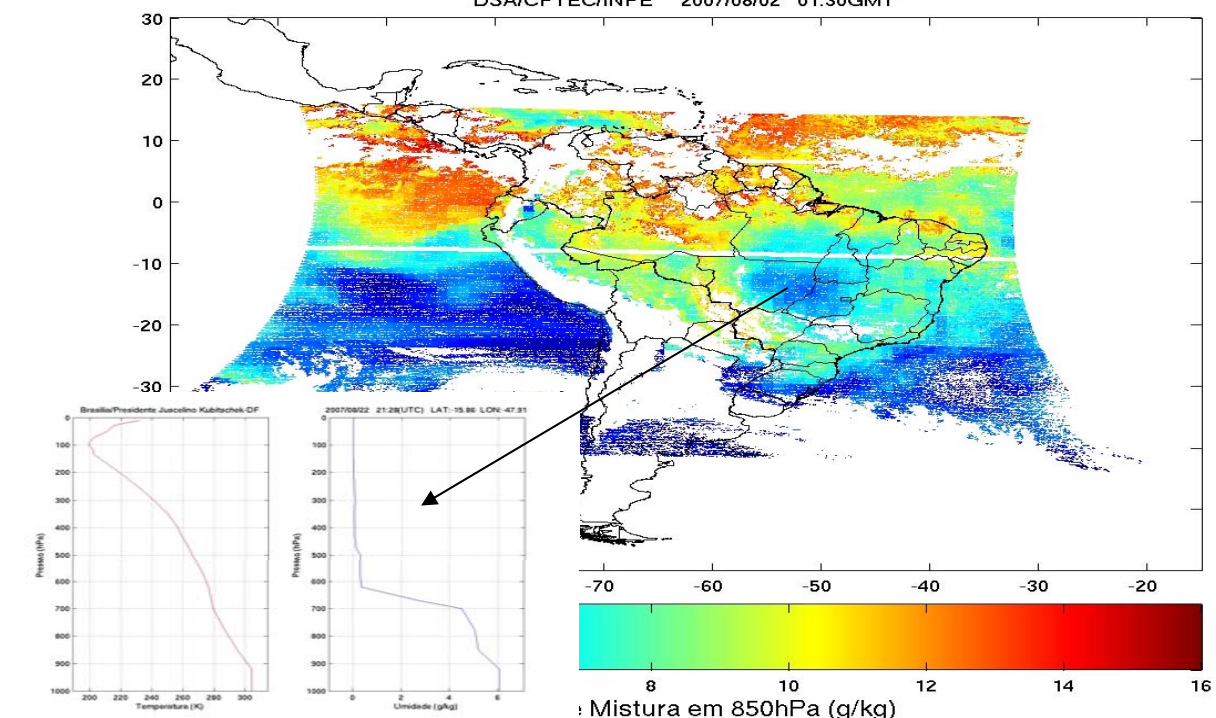
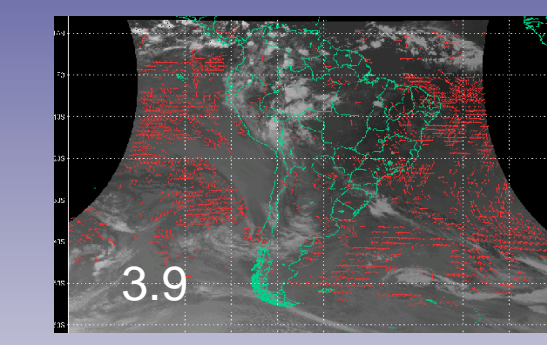
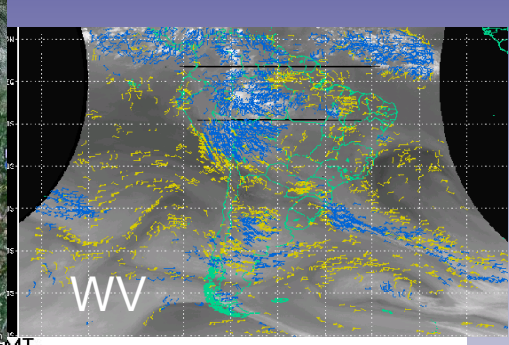
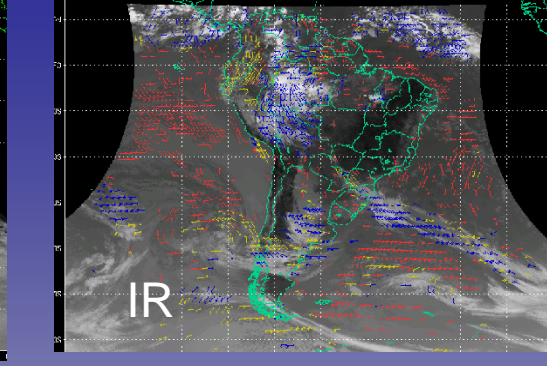
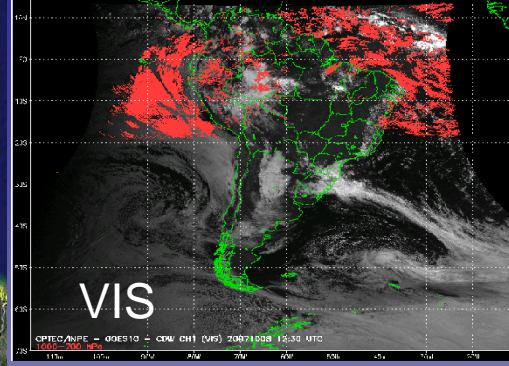
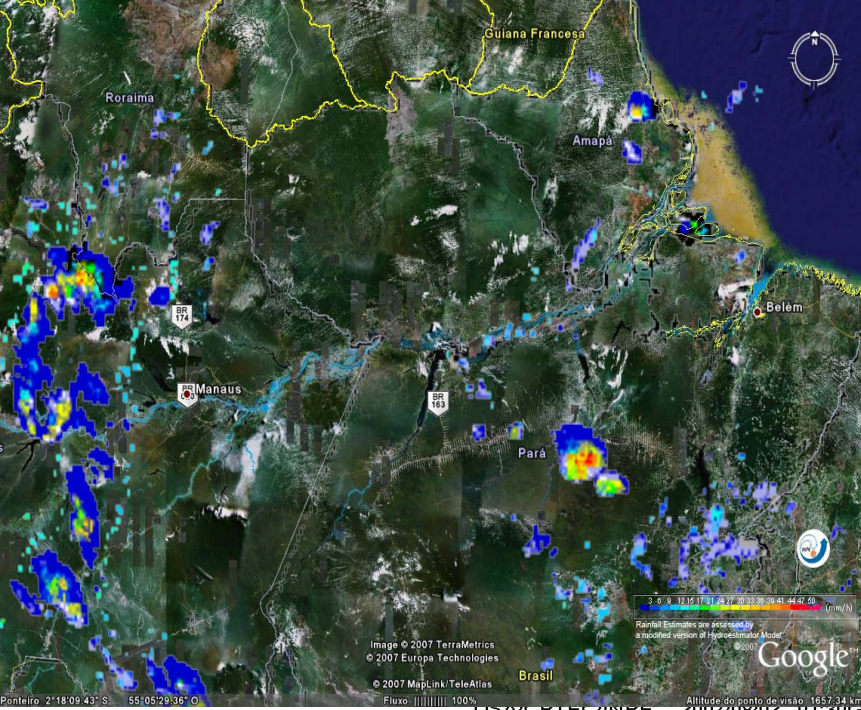
Produtos de destaque da Estação

UV Descargas Elétricas Precipor Satélite Radiação Solar Vento

Atenção: Imagens no horário GMT

Operação-1 Webmail

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satelite@cptec.inpe.br



GOES-10 Products



Thank You