



# Status of current satellite reception and planning to receive GOES-R

Chilean Weather Office

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Office

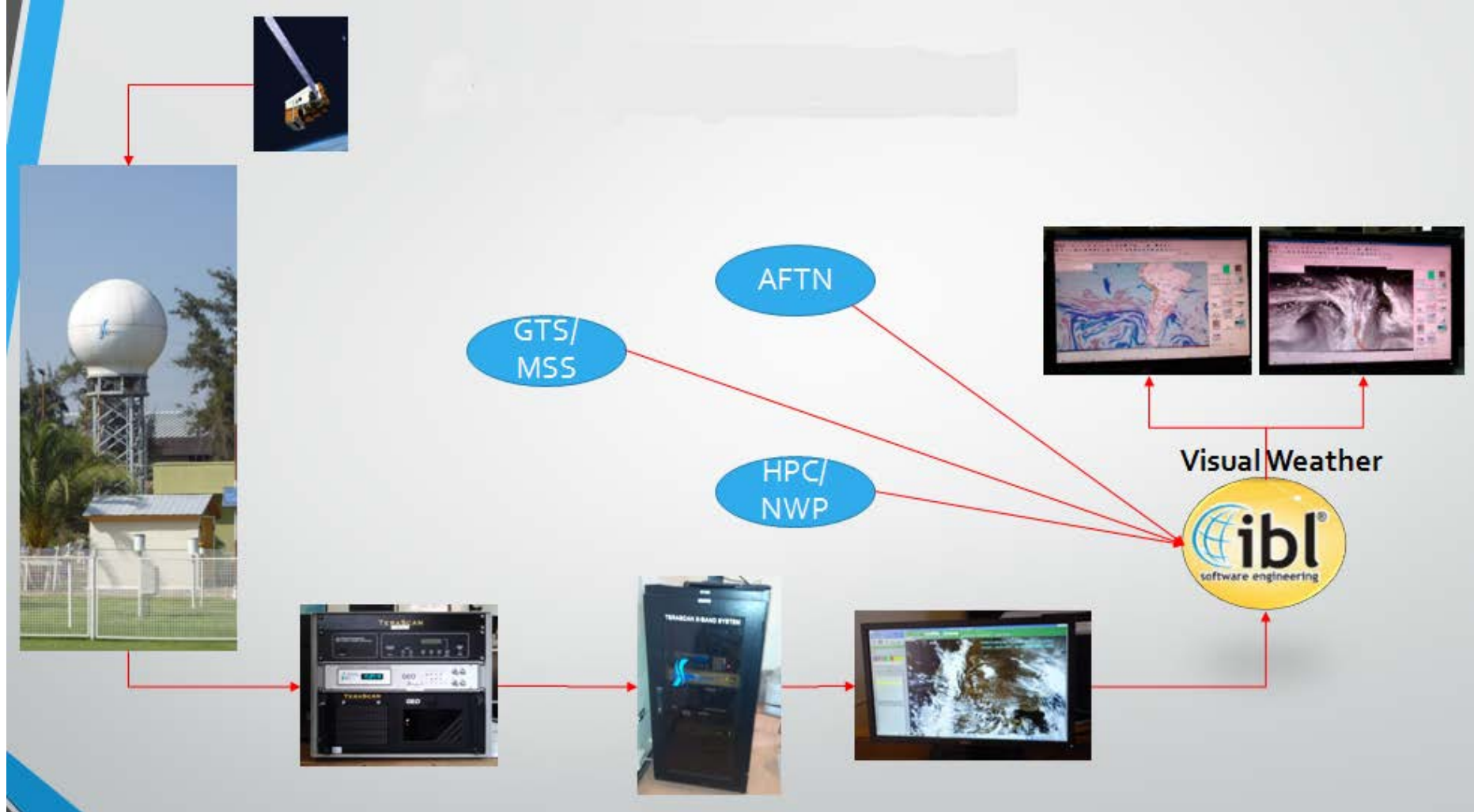
# Outline

- Status of satellite data reception in Chile
- Status of planning to receive new data (GOES-R and others)
- Applications with satellite data involvement
- Needs for capacity building and training

# Current status, satellite info CHILE



# RIS description (Red Integrada Satelital)



- Figure adapted from Alcafuz, 2014.
- System was configured mainly for operative purposes.

# Summary of current system

- Storage:
  - Network Attached Storage (NAS) of **12.9 TB**, used for saving MODIS raw data.
  - Storage in Data Cartridge LTO-6, **6.25 TB**, each one, used for saving MODIS and NOAA data in NetCDF format (Level 1 and Level 2 products for MODIS), from last june.

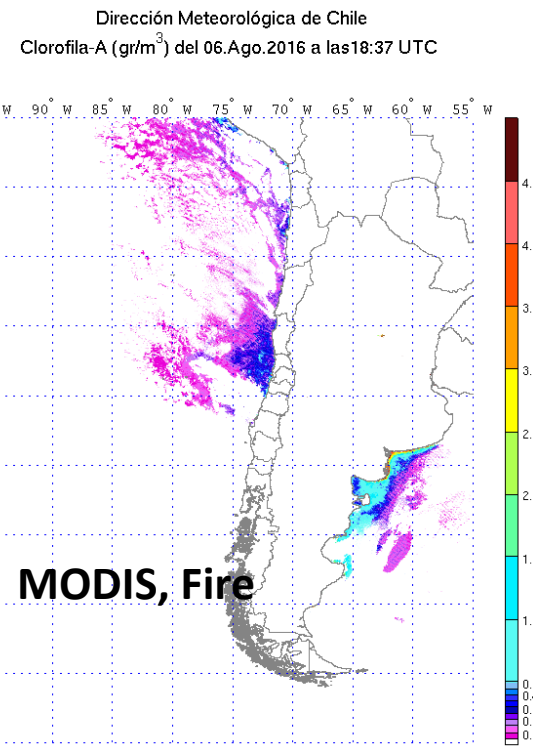
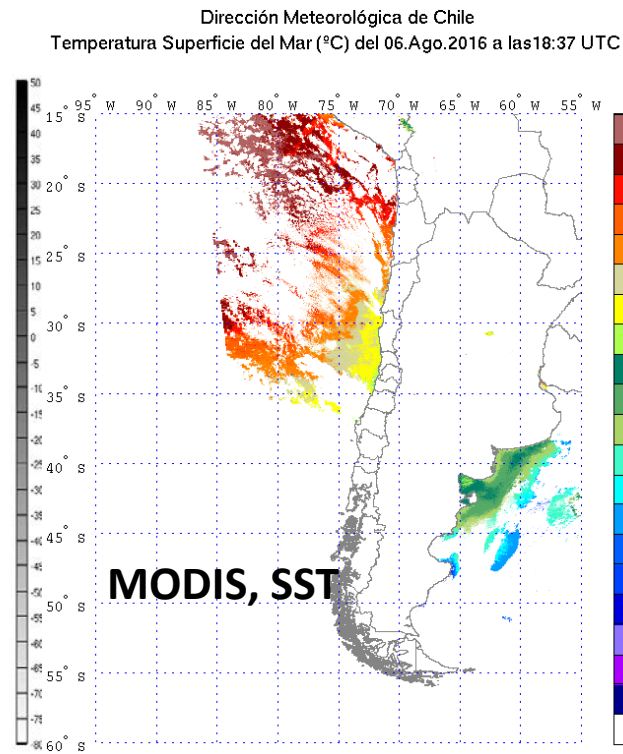
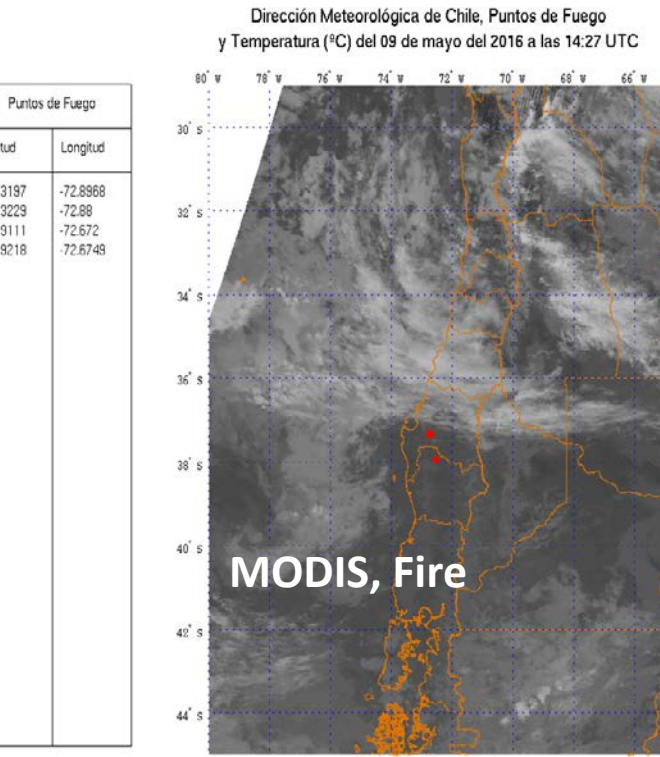
# Summary of current system

- Current bandwidth in chilean stations:

Location	Bandwith (Mbits/s)
Antofagasta	7.3
Santiago	95
Puerto Montt	3.7
Punta Arenas	0.6
King George Island	0.44
Eastern Island	0.9

# Current applications of Satellite data

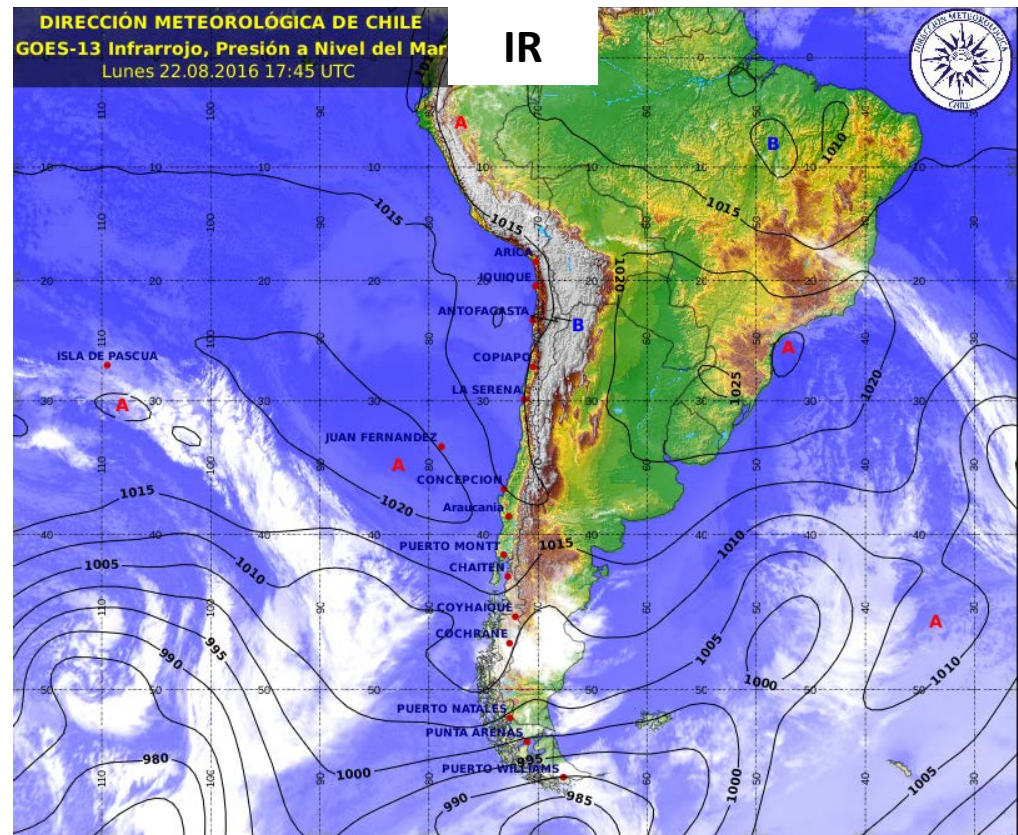
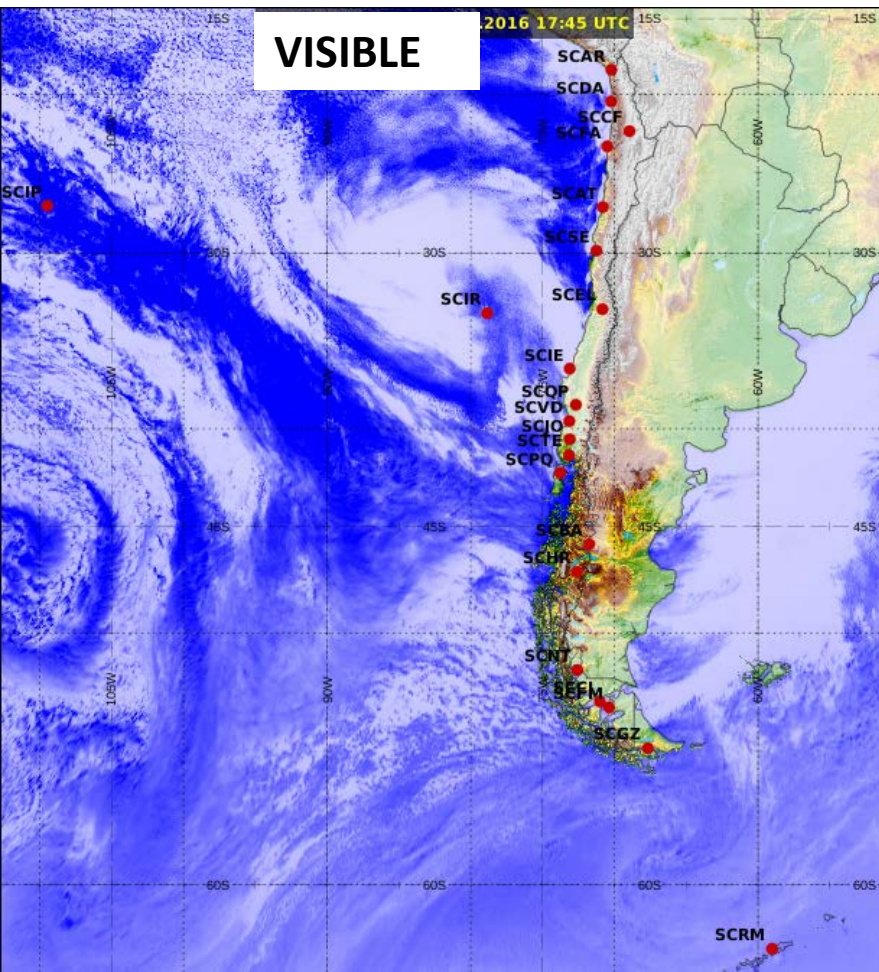
- Some MODIS products are currently showed in meteo Chile webpage. These only consider images.





# Current applications of Satellite data

- GOES images also are currently showed.

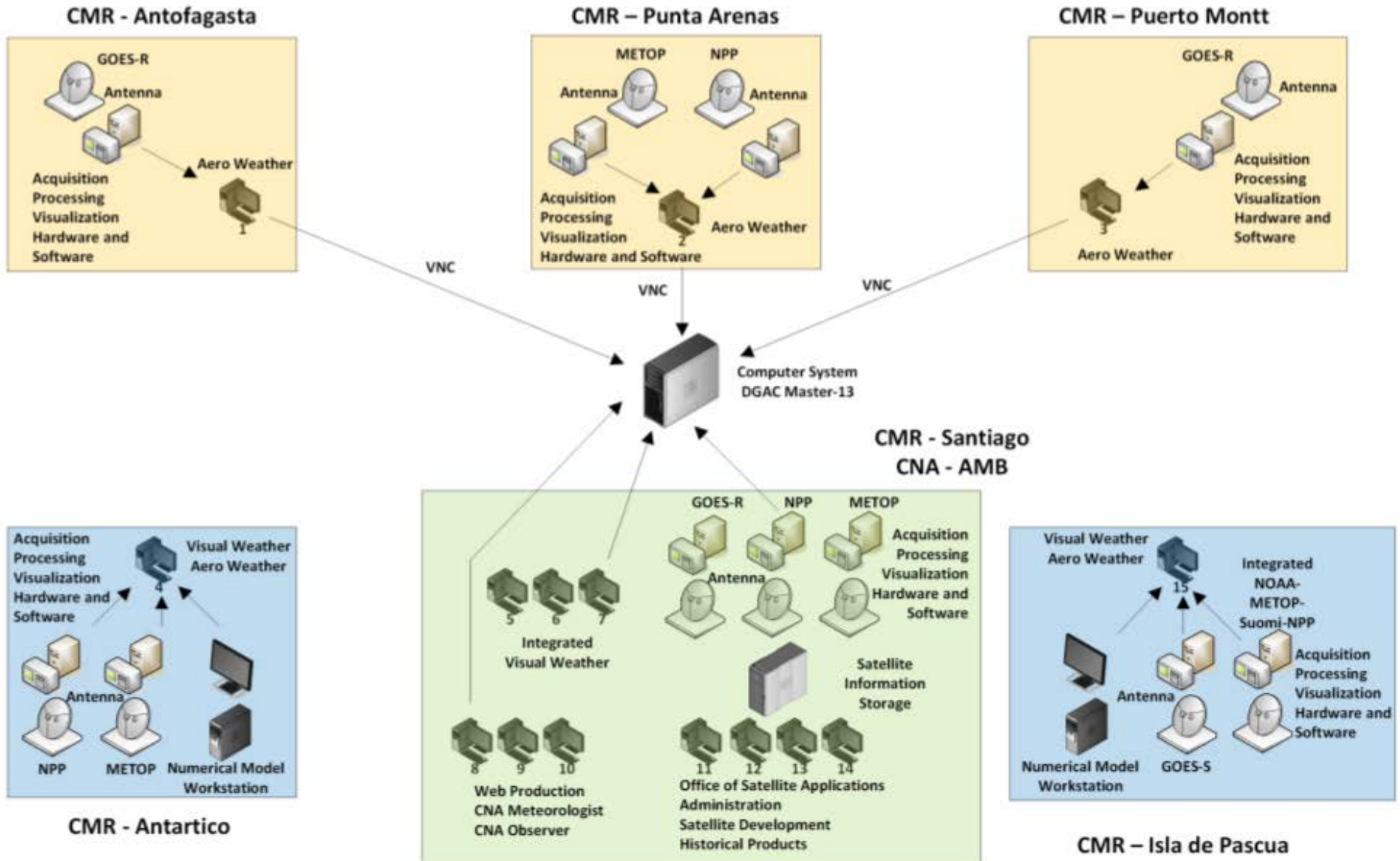




# Status of planning to receive new data

- In 2015, Chilean weather service conducted an open tender for the renovation of RIS, due to imminent beginning of both GOES-R and JPSS era.
- This renovation considers equipment such as antennas, workstation and storage capacity.
- Finally, **Enterprise Electronics Corporation (EEC)** won the project and they will start to execute it in first half of 2017 in all sites mentioned before.

# Renovation project scheme



# i.e: List of equipment to receive in Santiago

## DMC-CNA & CNA-AMB Santiago

Item	Quantity
EEC100-L NOAA HRPT, METOP AHRPT Receiver Kit and EEC100-R Aqua, Terra, NPP Receiver and IF Cable Kit	1
Acquisition Workstation - for Satellite Data Ingest for NOAA, METOP	1
Acquisition Workstation - for Satellite Data Ingest for NPP, Aqua, Terra	1
Oberon-X Acquisition Software - permanent license	1
Oberon-L Acquisition Software - permanent license	1
Data Processing Workstation Kit includes High Speed Data Processing Workstation and LT0-6 Tape Drive, to process NPP, Aqua, Terra	1
Data Processing Workstation Kit includes Data Processing Workstation to process METOP & NOAA and LT0-6 Tape Drive	1
OBERON-X Processing Software - permanent license	1
OBERON-L Processing Software - permanent license	1
Visualization Workstations	3
Proteus Visualization & Analysis Software - permanent license	3
19" inch soundproof acoustic rack kit which includes 1GB network switch, KVM switch, 20-inch rackmounted LCD, cables	2
32 inch LCD	14
1500 VAC UPS Kit	22
Color Laser Printers	3
Workstations	10
IBL Services Includes: - AeroWeather & Visual Weather - license transfer to 1 workstation at Santiago Airport Control Tower and Visual Weather License transfer to 3 workstations at DMC Main Building and IBL Interchange Format Integration for GOES-R	1
Installation includes Installation Services, Site Preparation, Site Acceptance Test, also includes Travel & Hotel Expenses for EEC Installation Engineers.	1
60 TB NAS	1
3000 VAC UPS Kit	2
Capella-GR Antenna which includes 4.5m Reflector, Fixed Pedestal, Dual Polarity Feed/LNA/Dual Channel Down Converter, EEC100-R GOES-R DVB-S2 Receiver Kit, EEC100-L GOES GVAR Receiver, RF Cable Kit, Antenna Controller, Installation & Maintenance Tool Kit	1
Acquisition Workstation - for Satellite Data Ingest for GOES-R data	1
High Speed Data Processing Workstation for GOES-R data	1
Configuration of 1 Workstation to produce Level1-B NETCDF files from data stored on LTO-6 tape from METOP, GOES, NPP	1

- New system will be able to receive both current GOES and new GOES-R when this starts to send information.

# Next Challenges (implementation)

- The correct implementation of new system, considering some difficult places for working in that. i.e Antarctic or Eastern Island.
- Solving problems related with bandwidth when GOES-R starts, specially in those places with restricted connection.

# Next Challenges (products)

- Increase the stock of products available for both internal and external users.
- For offering a wide range of satellite products, **expertise in software will be necessary for handling this data** (NCL, IDV, etc).



# Final

- Promote inside institution the use of this data in areas such as agrometeorology, radiation studies, seasonal forecast, data assimilation, operative nowcasting, etc.
- Work hard for getting the most benefit possible of satellite data... we don't want to have a white elephant...

Questions, comments and suggestions  
are very welcome!

Thank you

