

# CAPELLA-GR

## GOES-16/17 GROUND STATION

High performance systems designed to meet the increased data volume of the next generation of GOES satellites



# Capella-GR is the industry leading GOES-16/17 ground station

EEC has installed over 25 Capella-GR GOES-16/17 direct receive ground stations worldwide since 2016

EEC's Capella-GR ground station provides meteorologists, oceanographers, government and military agencies, and research organizations with the tools they need to observe, collect, and process data from all GOES-R satellites, depending on their location and the system configuration that fits their specific needs.

EEC's TeleSpace Capella-GR ground station is a high-performance, turnkey system that receives and processes data from the GOES-R Series of Meteorological Satellites. PROTEUS is a multi-platform satellite image display and analysis application. It includes extensive image analysis functions and has been enhanced with extra functionality to make it particularly suitable for the analysis of remote sensing data. Our Capella-GR Processing and Acquisition Software suites is used in conjunction with the Capella-GR ground station and PROTEUS to collect, process and visualize Level-1b data and Level-2 satellite data products.

## NASA & US NAVY-SELECTED SYSTEM

- The NASA Marshall Space Flight Center selected EEC TeleSpace 6.5m Capella-GR as its GOES-R direct reception satellite groundstation
- EEC TeleSpace has installed its 4.5m and a 6.5m Capella-GR GOES-R groundstations at The United States Naval Research Laboratory - Monterey, CA USA
- Dirección Meteorológica de Chile selected the 4.5m Capella-GR GOES-R groundstations for their direct reception stations at their four regional centers

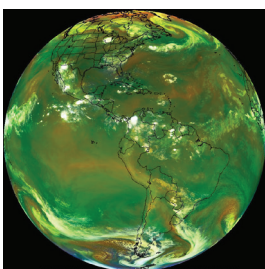
## CAPELLA-GR ADVANTAGES

- Three antenna sizes: 3.7m, 4.5m & 6.5m
- Powerful processing system to handle the dramatic increase in data over the current GOES series
- 42 inch display coupled with PROTEUS satellite data visualization and analysis software

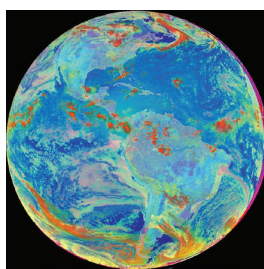
## APPLICATIONS

- Storm Detection and Tracking
- Fire Monitoring
- Air Quality
- Coastal And Ocean Monitoring
- Hurricane Forecasting
- Rainfall and Flood Monitoring
- Land Cover Observations
- Volcanic Ash Detection
- Lightning Detection
- Severe Thunderstorm Prediction

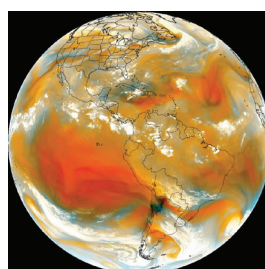
## PRODUCT EXAMPLES



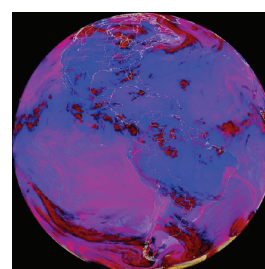
Air Mass RGB



Daytime Cloud Optical and Microphysical Properties



Differential Water Vapor RGB



Nighttime Microphysics RGB



Fire Temperature RGB



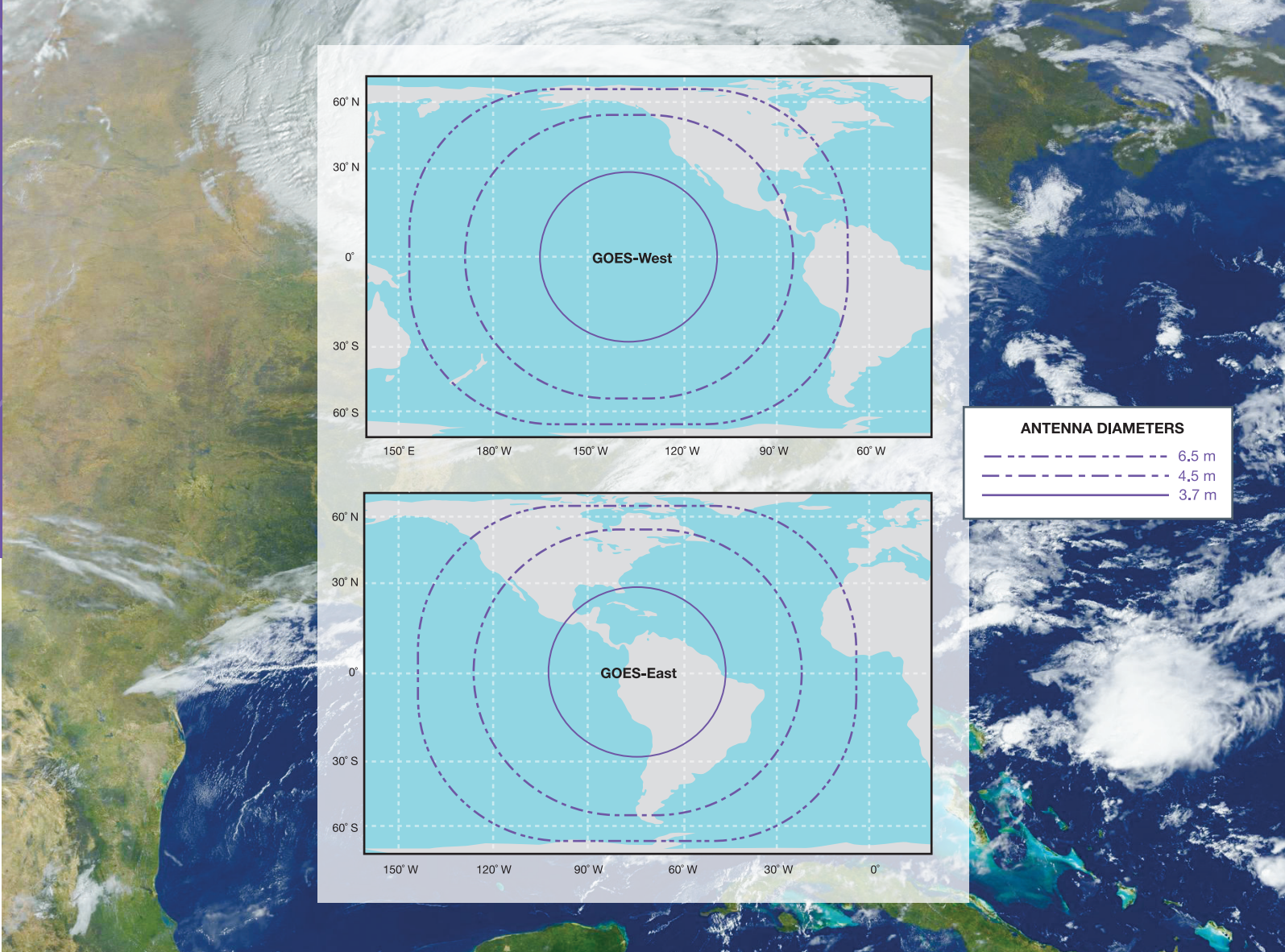
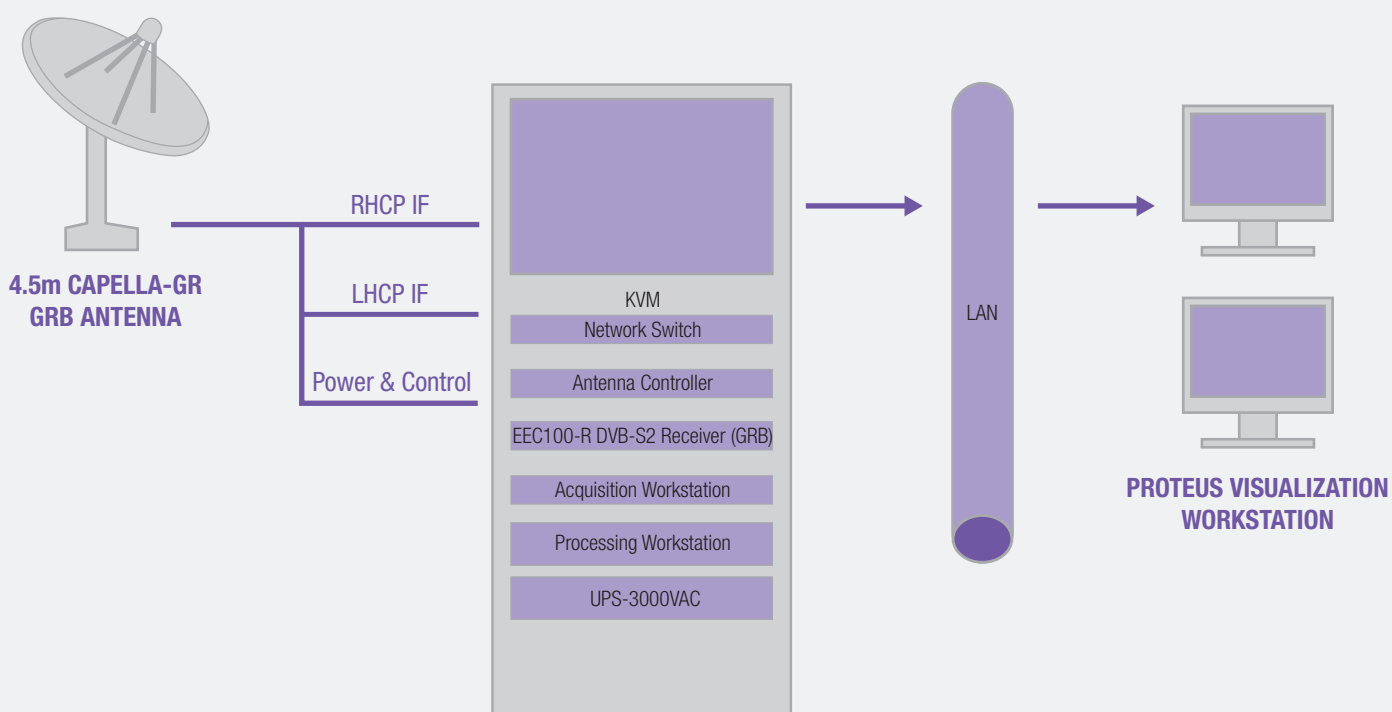


Image: NASA/NOAA GOES Project

EEC OFFERS THREE ANTENNA SIZES: 3.7m, 4.5m, 6.5m

## TYPICAL CAPELLA-GR CONFIGURATION



## A NEW GENERATION OF SATELLITE REQUIRES A NEW GENERATION OF GROUND STATION.

### CAPELLA-GR End-Product List

#### ABI - BASELINE PRODUCTS

Cloud & Moisture Imagery (KPP)  
Radiances\*  
Aerosol Detection (Including Smoke & Dust)  
Aerosol Optical Depth  
Volcanic Ash: Detection & Height  
Cloud Optical Depth  
Cloud Particle Size Distribution  
Cloud Top Phase  
Cloud Top Height  
Cloud Top Pressure  
Cloud Top Temperature  
Hurricane Intensity  
Rainfall Rate / QPE  
Legacy Vertical Moisture Profile  
Legacy Vertical Temperature Profile  
Derived Stability Indices  
Total Precipitable Water  
Clear Sky Masks  
Downward Shortwave Radiation : Surface  
Fire / Hot Spot Characterization  
Land Surface (Skin) Temperature  
Sea Surface Temperature  
Reflected Shortwave Radiation: TOA  
Snow Cover  
Derived Motion Winds

#### ABI - FUTURE PRODUCTS

Aerosol Particle Size  
Aircraft Icing Threat  
Cloud Type  
Ozone Total  
Visibility  
Cloud Ice Water Path  
Cloud Layers / Heights  
Cloud Liquid Water  
SO<sub>2</sub> Detection  
Low Cloud And Fog  
Upward Longwave Radiation: Surface  
Convective Initiation  
Enhanced "V" / Overshooting Top Detection  
Tropopause Folding Turbulence Prediction  
Upward Longwave Radiation : TOA  
Absorbed Shortwave Radiation: Surface  
Downward Longwave Radiation: Surface  
Flood / Standing Water  
Ice Cover  
Snow Depth (Over Plains)  
Surface Albedo  
Surface Emissivity  
Vegetation Fractions: Green  
Vegetation Index  
Currents  
Currents: Offshore

Sea And Lake Ice: Age  
Sea And Lake Ice: Concentration  
Sea And Lake Ice: Motion  
Probability Of Rainfall  
Rainfall Potential

#### SEISS

Energetic Heavy Ions\*  
Magnetosphere Electrons And Protons:  
Low Energy\*  
Magnetosphere Electrons And Protons:  
Medium & High Energy\*  
Solar & Galactic Protons

#### GLM

Lightning Detection: Events, Flashes & Groups\*

#### EXIS

Solar Flux: EUV\*  
Solar Flux: X-Ray\*

#### SUVI

Solar Imagery: UV\*

#### MAGNETOMETER

Geomagnetic Field\*

\* Included In GRB

Front Cover Image: NASA/NOAA GOES Project



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