



Committee on Earth Observation Satellites

# GOES-R

America's Next-Generation Geostationary Weather Satellite

Charles Wooldridge

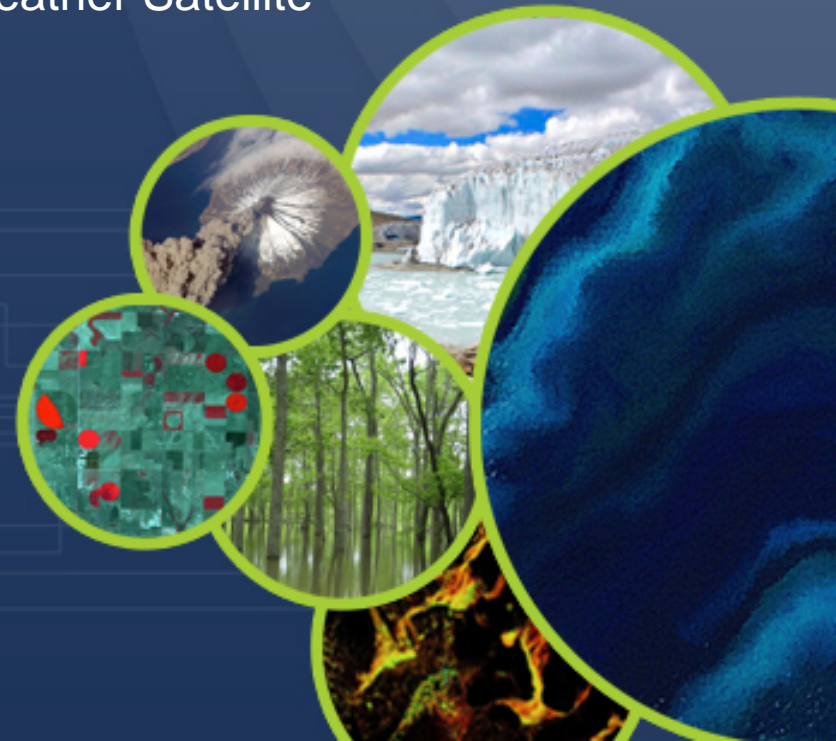
NOAA

CEOS Plenary 2016

Agenda Item #9.1

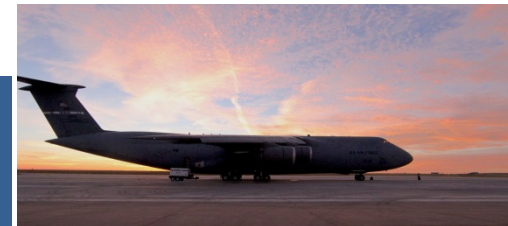
Brisbane, Australia

1<sup>st</sup> – 2<sup>nd</sup> November 2016

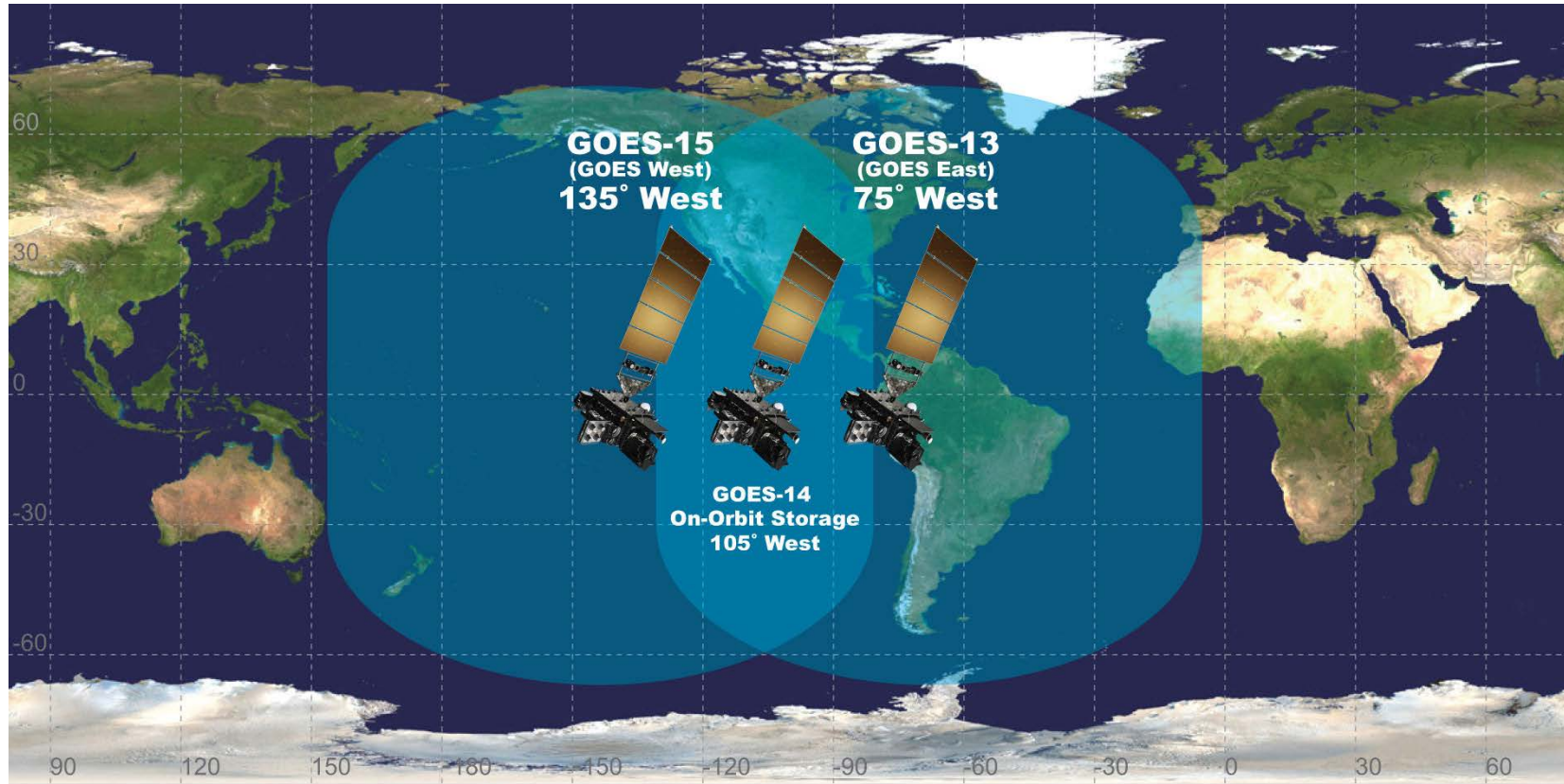


# GOES-R ROAD TO LAUNCH

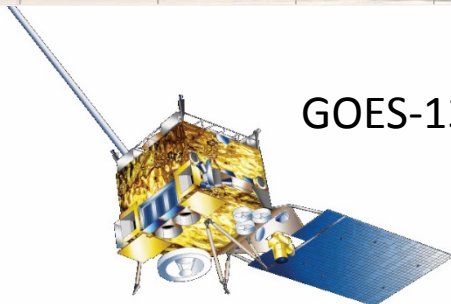
- Flown from Colorado to Florida, August 22, 2016
- Currently in pre-launch preparations
- Launching from Cape Canaveral Air Force Station, Florida
- Lift-off is scheduled for 16 Nov 2016, 4:42 pm
- Will be carried to space aboard a United Launch Alliance Atlas V 541 rocket
- Will orbit 22,236 miles above Earth



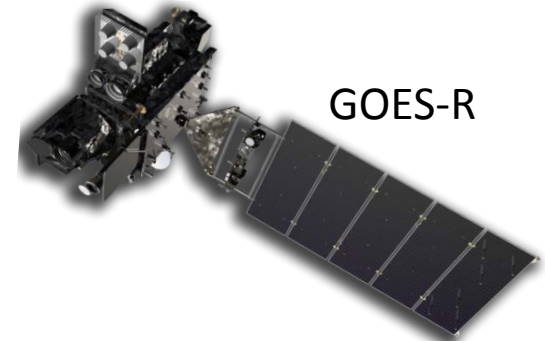
# THE GOES FLEET CONFIGURATION



GOES-15



GOES-13



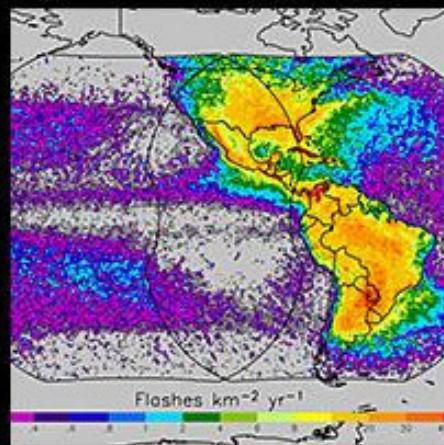
GOES-R

# The GOES-R Mission

- **GOES-R will provide:**
  - Continuous imagery and atmospheric measurements of Earth's Western Hemisphere in near real-time,
  - Total lightning data,
  - And space weather monitoring.



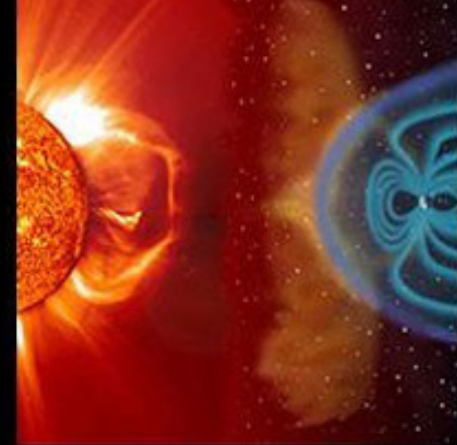
Visual and Infrared Imagery



Lightning Mapping



Solar Imaging



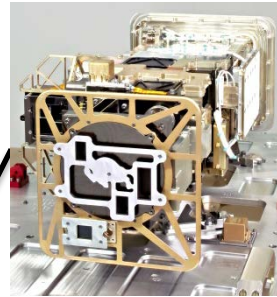
Space Weather Monitoring

# THE SPACECRAFT

Solar Ultraviolet Imager (SUVI)



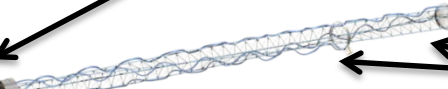
Extreme Ultraviolet and X-Ray Irradiance Sensor (EXIS)



Space Environment In Situ Suite (SEISS)



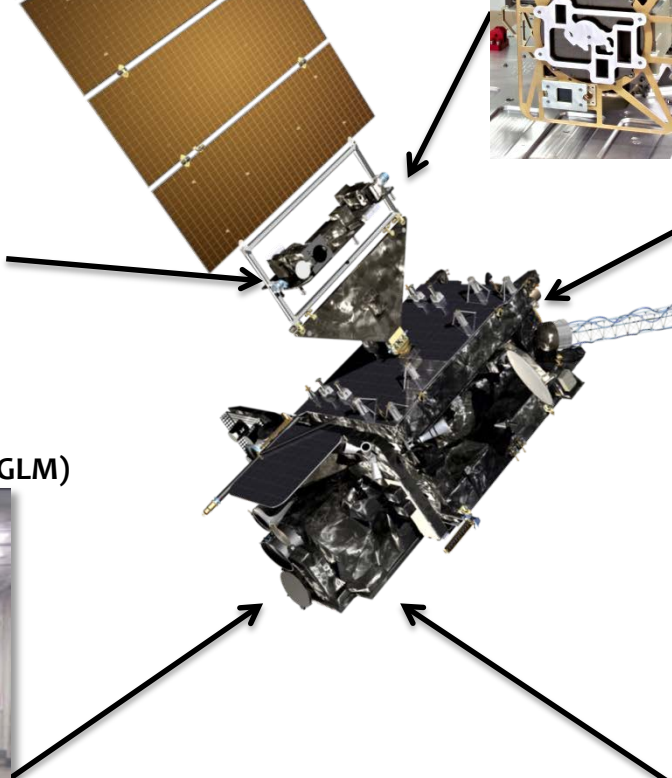
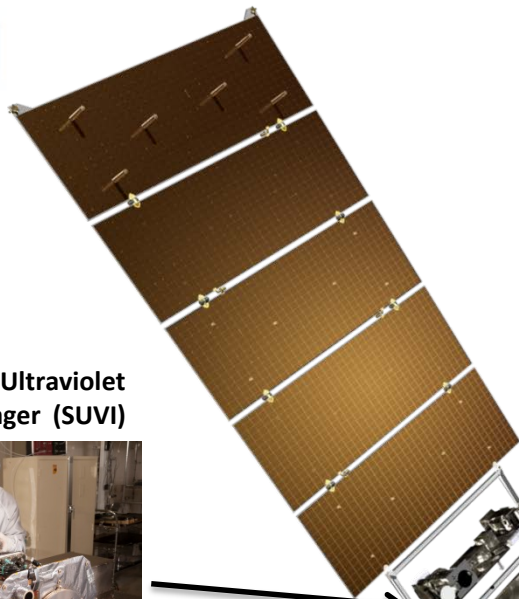
Magnetometer



Advanced Baseline Imager (ABI)



Geostationary Lightning Mapper (GLM)





# WHY GOES-R IS A GAME CHANGER FOR NOAA:

- Improved hurricane track and intensity forecasts
- Increased thunderstorm and tornado warning lead time
- Improved aviation flight route planning
- Improved air quality warnings
- Better data for long-term climate variability studies
- Better fire detection and intensity estimation
- Better detection of heavy rainfall and flash flooding risk
- Better monitoring of space weather to improve geomagnetic storm forecasting
- As well as, continued participation SARSAT rescues

And the list goes on!

# 3 TIMES MORE DATA 4 TIMES GREATER CLARITY 5 TIMES FASTER

## 3X MORE CHANNELS



Improves every product from current GOES Imager and will offer new products for severe weather forecasting, fire and smoke monitoring, volcanic ash advisories, and more.

## 4X BETTER RESOLUTION



The GOES-R series of satellites will offer images with greater clarity and 4x better resolution than earlier GOES satellites.

## 5X FASTER SCANS



Faster scans every 30 seconds of severe weather events and can scan the entire full disk of the Earth 5x faster than before.

GOES  
2005

