

# GOES-U

## Satellite

NOAA's GOES-U satellite continuously monitors the Western Hemisphere's weather and environment, images the sun, and measures the near-Earth space environment. The mission is accomplished through seven highly-sophisticated instruments.

**Solar Array:** Converts energy from the sun into electricity to power the satellite, its instruments, computers, data processors, sensors and telecommunications equipment

**Goddard Magnetometer (GMAG):** Measures the magnetic field in the upper portion of the magnetosphere

**Space Environment In-Situ Suite (SEISS):** Monitors proton, electron and heavy ion fluxes in the magnetosphere

**Solar Ultraviolet Imager (SUVI):** Observes and characterizes complex active regions of the sun, solar flares and eruptions of solar filaments

**Antenna Wing Assembly:** Contains a number of communication subsystem antennas for data relay

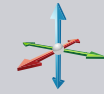
**Compact Coronagraph-1 (CCOR-1):** Images the outer layer of the sun's atmosphere to detect and characterize coronal mass ejections

**Extreme Ultraviolet and X-ray Irradiance Sensors (EXIS):** Detects solar flares and monitors solar irradiance that impacts the upper atmosphere

**Geostationary Lightning Mapper (GLM):** Measures total lightning (in-cloud, cloud-to-cloud and cloud-to-ground) activity continuously over the Americas and adjacent ocean regions

**Advanced Baseline Imager (ABI):** Primary instrument for imaging the Western Hemisphere's weather, ocean and environment

### KEY FACTS



Three-axis stabilized attitude control, ensuring a steady observational platform for the mission sensors

# 3

types of instruments:

- Earth-pointing: **ABI** and **GLM**
- Solar-pointing: **CCOR**, **EXIS**, and **SUVI**
- In-situ (near-Earth space environment): **GMAG** and **SEISS**

On-orbit life:

# 15

years

(10 years of on-orbit operation preceded by up to 5 years of on-orbit storage)



Dimensions:

**20.0 ft x 18.4 ft x 12.8 ft**



**6,450 lb**

(11,023 lb fully fueled at launch)



Incorporates a suite of transponder payloads providing communications relay services, including the Search and Rescue Satellite-Aided Tracking (SARSAT) system

