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

(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

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:

vears

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

Dimensions: 20.0# x 18.4# x 12.8#

6.450 lb

(11,023 lb fully fueled at launch)





