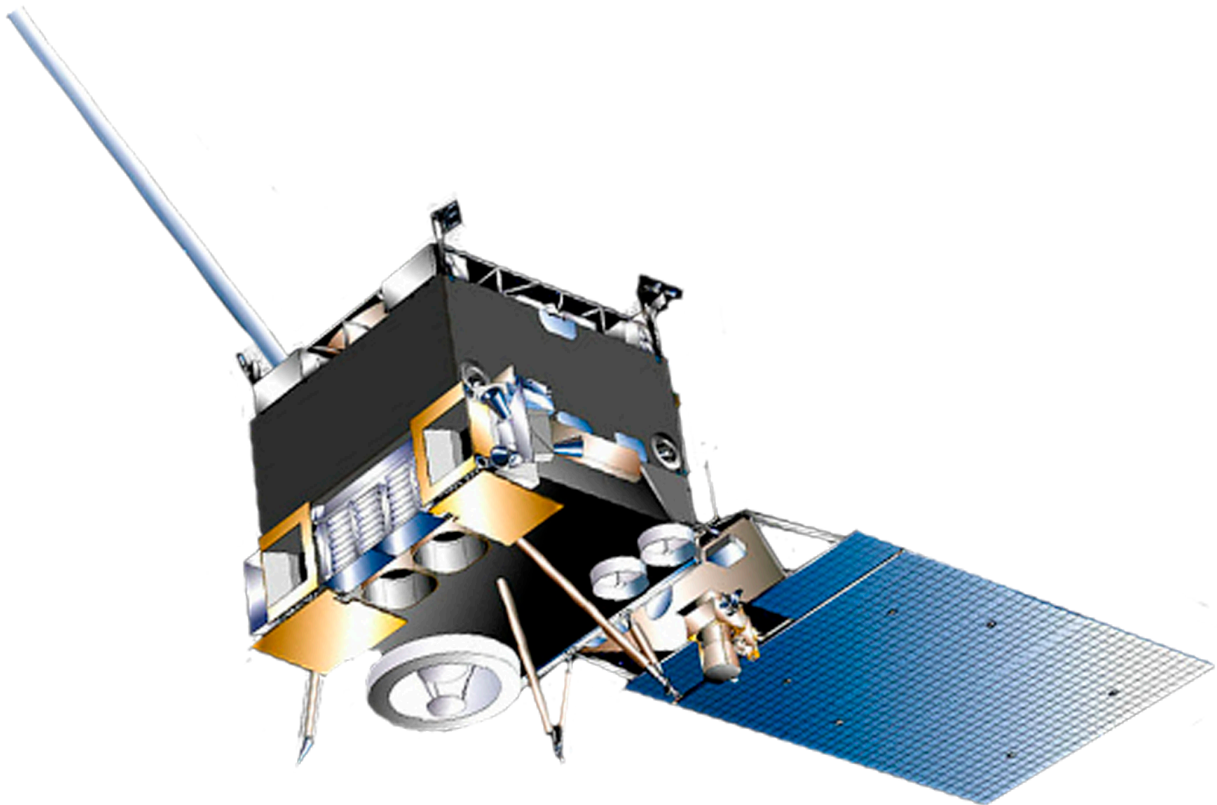


# UNITED STATES SPACE FORCE SPACE OPERATIONS COMMAND

## FACT SHEET

### THE EO/IR WEATHER SYSTEM – GEOSTATIONARY (EWS-G1)

**MISSION:** The EO/IR Weather System – Geostationary (EWS-G1), formerly Geostationary Operational Environmental Satellite (GOES)-13, satellite collects cloud imagery to enable fielded forces to perform environmental reconnaissance and cloud characterization over the Indian Ocean (IO) region. This information is critical to the preparation of operational and tactical level plans and courses of action in the IO Area of Responsibility (AOR). Data are instrumental for assessing and predicting feasibility of certain types of air and surface missions, anticipating effectiveness of platforms/weapons systems and munitions, determining optimal times and locations for conducting operations, and evaluating logistical, survivability, protection, and quality-of-life requirements.



**SPACECRAFT BUS SIZE – LENGTH = 4.2 M, WIDTH = 1.88 M**

**SPACECRAFT ON-ORBIT CONFIGURATION – LENGTH = 8.4 M, (SOLAR ARRAY TO SPACECRAFT BODY)**

**HEIGHT = 9.1 M (IMAGER PORT TO MAGNETOMETER BOOM)**

**DEPTH = 2.9 M**

**SPACECRAFT LAUNCH MASS – 3,209.5 KG, DRY MASS = 1,543 KG**



# THE EO/IR WEATHER SYSTEM – GEOSTATIONARY (EWS-G1)

## BACKGROUND

EWS-G1 is a weather satellite of the U.S. Space Force (USSF) and was part of NOAA's GOES NOP systems. On 14 April 2010, GOES-13 became the operational weather satellite for GOES-East. It was replaced by GOES-16 in 2017 and was placed in on-orbit storage.

## FEATURES

The EWS-G1 satellite is in a geostationary orbit at about 22K miles. The main weather sensor on EWS-G1 is an optical system, which provides continuous visual and infrared imagery of cloud cover over the IO area. EWS-G1 provides essential data over data-sparse and data-denied areas. Military weather forecasters can detect developing patterns of weather and track existing weather phenomena over remote areas, including the presence of fog, severe thunderstorms, dust and sandstorms, and tropical cyclones in the IO region.

The EWS-G1 satellite system collects and disseminates GOES Variable (GVAR) mission data to the Department of Defense (DoD) weather centers and theater tactical users. Conversion of GVAR mission data to processed mission data is accomplished by users using existing mission processing capability employed for the GOES-N Series (GOES NOP) satellites. The DoD weather centers provides processed mission

In 2017, a gap in SBEM coverage over the IO region occurred due to the impending loss of EUMETSAT Meteosat 7, and although the capability was partially replaced by Meteosat 8, a coverage gap continues in the eastern portion of that region. Because of this impending gap, the USAF approached NOAA concerning the possibility of leveraging their residual GOES-NOP capabilities until a long-term solution can be established. In November 2017, a Memorandum of Agreement (MOA) was signed covering cooperation on the GOES IO Relocation Plan which transferred the GOES-13 spacecraft to the USSF for ownership, operations and sustainment to cover the expected gap until a more long-term solution can be acquired. Satellite Control Authority (SCA) resides with Space Delta 2 (DEL 2) and is delegated to the 19th Space Defense Squadron, Operating Location-Alpha (OL-A), located at the NSOF, for oversight of the EWS-G1 satellite.

EWS-G sustainment is provided by the USSF Space Systems Command (SSC) at Los Angeles SFB, CA.

### General Characteristics

**Launch date:** May 24, 2006, 6:11 PM EDT

**Orbit height:** 22,236 mi

**Speed on orbit:** 1.908 miles/s

**Power:** 2,300 watts

**Manufacturer:** Boeing

**Rocket:** Delta IV

**Launch site:** Space Launch Complex

data, post-processed mission data, and internally generated weather products to downstream operational customers.

The primary control for the EWS-G1 satellite is through National Oceanic and Atmospheric Administration's (NOAA)'s Wallops Command and Data Acquisition Station (WCDAS) for Telemetry, Tracking, and Command (TT&C) services with backup TT&C provided by the NOAA Satellite Operations Facility (NSOF) located at Suitland, MD. EWS-G1 GVAR mission data are received and processed at the Remote Ground Station (RGS) at Dongara, Western Australia, and relayed to the WCDAS, NSOF, and DoD Weather Centers for data processing and product development.

For more information please visit <https://www.spoc.spaceforce.mil>

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