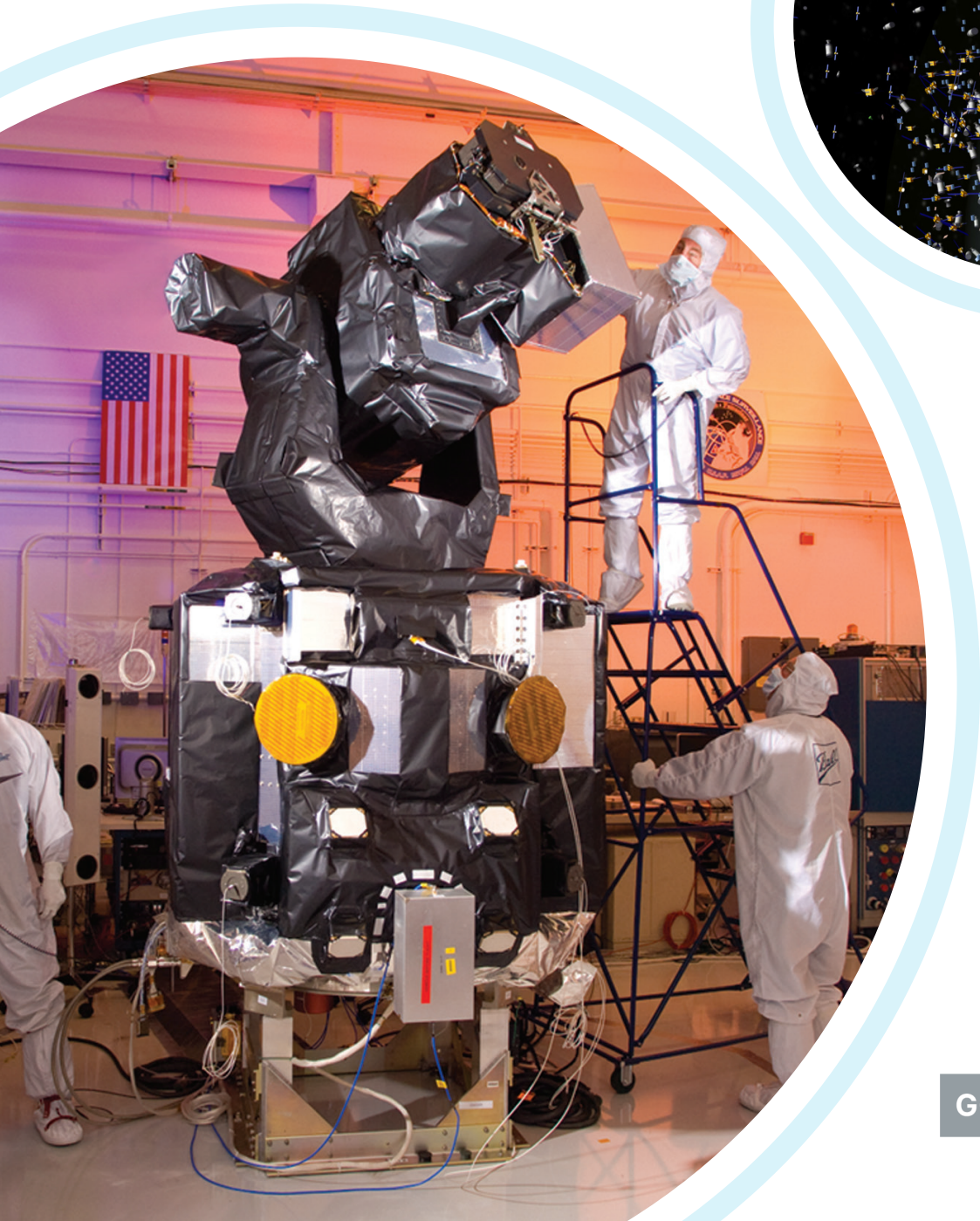


SBSS



Space Based Space Surveillance

As near-Earth orbit becomes increasingly contested and congested, Ball Aerospace is committed to protecting the nation's valuable space assets. Our state-of-the-art SBSS Block 10 space vehicle plays a critical role in helping the U.S. Space Force achieve full Space Situational Awareness.



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Overview

The SBSS Block 10 space vehicle detects and tracks space objects and spacecraft without interference from weather, atmosphere or time of day, allowing the U.S. Space Force to quickly identify threats that might harm U.S. and allied assets. With the SBSS Block 10, we provide a watchful eye in space so the Space Force can take evasive action when necessary.

SBSS has made more than 28 million observations of space objects and spacecraft since its launch in 2010. Managed by Space Systems Command (formerly Space and Missile Systems Center), SBSS significantly enhances the Air Force Space Surveillance Network. The Space Delta 9's 1st Space Operations Squadron maintains Satellite Control Authority of the spacecraft.

Our Role

As a member of the Boeing SBSS team, we developed, designed, manufactured, integrated and tested the SBSS spacecraft. Built on a Ball Configurable Platform (BCP)-Medium, the SBSS bus draws on our family of proven, customizable spacecraft.

We also developed SBSS's extremely agile, two-axis gimballed sensor, which allows for highly accurate determination of space objects with state-of-the-art pointing stability and agility.

Since the spacecraft's launch, we have continued to provide mission operations support, working closely with our industry and Space Force customers to ensure the continued success of the spacecraft. In March 2016, SBSS reached its mean mission life of 5.5 years. The spacecraft is still performing at optimal levels and will continue to provide critical space situational data into the future.

SBSS Block 10 is another example of how our low-risk, build-to-print solutions allow our customers to go with confidence.

Quick Facts

- SBSS makes an average of 15,000 observations per day
- The spacecraft orbits the Earth from an altitude of 390 miles
- SBSS can detect objects as small as a 1-meter cube from more than 22,000 miles away
- The payload's two-axis beryllium gimbal allows operators to quickly move the visible sensor between targets without repositioning the entire spacecraft

Spacecraft

- Launch Mass: <1100 kg
- Power: <1100 W

Payload

- 30-cm three mirror anastigmat telescope
- 2.4 megapixel focal plane
- Viewing Angle: Three Pi steradian



Testing of the SBSS gimbal at Ball Aerospace



Ball Aerospace

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