



GLAST

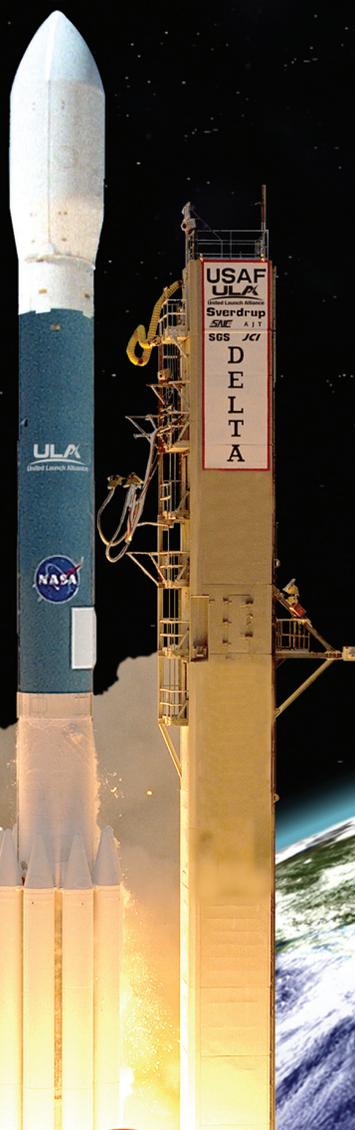
The Launch Services Program Presents GLAST...

GLAST, the Gamma-ray Large Area Space Telescope, is NASA's next-generation mission designed to explore the most energetic phenomena in our universe. The GLAST will be launched from Cape Canaveral Air Force Station, Florida by a Delta II 7920H-10 rocket.

The powerful space observatory will:

- explore the universe's ultimate frontier, where nature harnesses forces and energies far beyond anything possible on Earth.
- probe some of science's deepest questions, such as what our universe is made of, and search for new laws of physics.
- answer persistent questions across a broad range of topics, including supermassive black-hole systems, pulsars, and the origin of cosmic rays.
- help crack the mystery of stupendously powerful explosions known as gamma-ray bursts.

GLAST will open a wide window on the universe. Gamma rays are the highest-energy form of light, and the gamma-ray sky is spectacularly different from the one we perceive with our own eyes. With GLAST, physicists will be able to study subatomic particles at energies far greater than those seen in ground-based observatories.



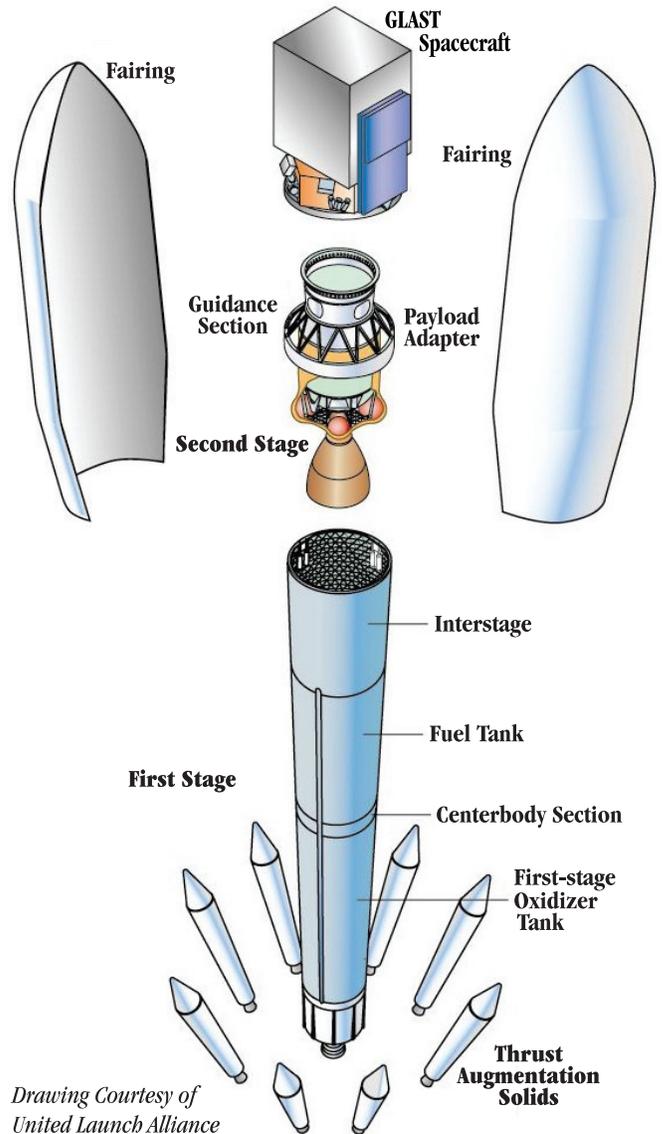
LSP

Launch Vehicle: Delta II 7920H-10
Launch Location: Cape Canaveral Air Force Station, FL
Launch Date: 2008

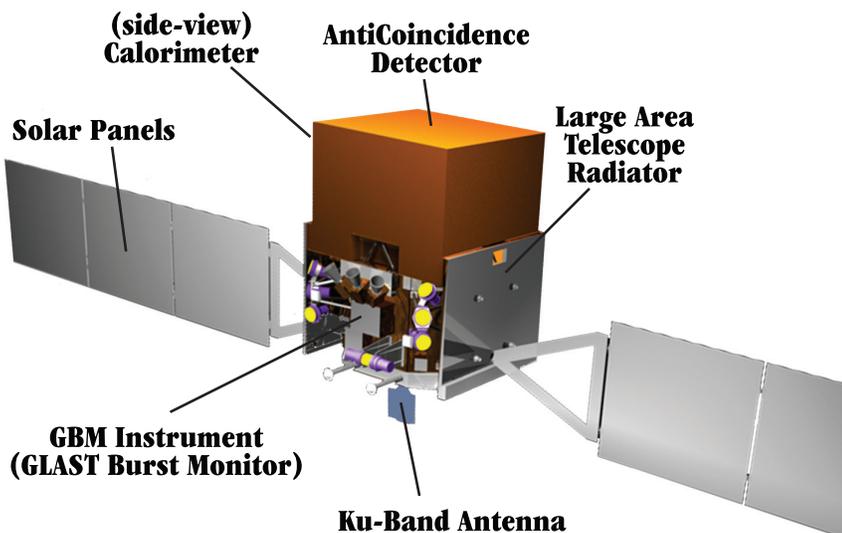
GLAST

The Gamma-ray Large Area Space Telescope (GLAST) spacecraft is scheduled to launch in 2008 from Cape Canaveral Air Force Station, Florida, by a Delta II 7920H-10 rocket to explore the extreme gamma ray Universe. The Delta II 7920H has nine graphite epoxy strap-on solid-rocket motors and the spacecraft is integrated in a 10-foot (3-meter)-diameter composite payload fairing to protect the spacecraft during its ascent through the Earth's atmosphere. Once launched, GLAST will reside in a low-earth circular orbit (nominal 565 kilometers altitude) (350 miles), at an inclination of approximately 24.7 degrees. At that altitude, the observatory will circle Earth every 90 minutes and GLAST will be able to view the entire sky in just two orbits, or about 3 hours. Once the spacecraft is launched into space, the KU-band antenna is deployed and the solar arrays are extended. The mission is being designed for a lifetime of 5 years, with a goal of 10 years of operations. From liftoff at the Space Launch Complex-17B to spacecraft separation is approximately 4500 seconds (75 minutes).

Drawing Courtesy of NASA/GLAST/Sonoma State University/Aurore Simonnet



Drawing Courtesy of United Launch Alliance



GLAST Spacecraft Definitions

Calorimeter - A detector that absorbs particles and photons, producing an electrical signal proportional to the total incident energy. It can be used to measure a gamma-ray's energy.

AntiCoincidence Detector - A system on a gamma-ray observatory that triggers when it detects an incoming charged particle (cosmic ray) that the telescope will not mistake for a gamma ray.

Large Area Telescope Radiator - Helps keep the large area telescope cool by radiating heat to space.

GLAST Burst Monitor Instrument - The instrument on GLAST that is specifically designed to detect gamma-ray bursts.

Ku-Band Antenna - Allows for downlink of high speed science data.

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