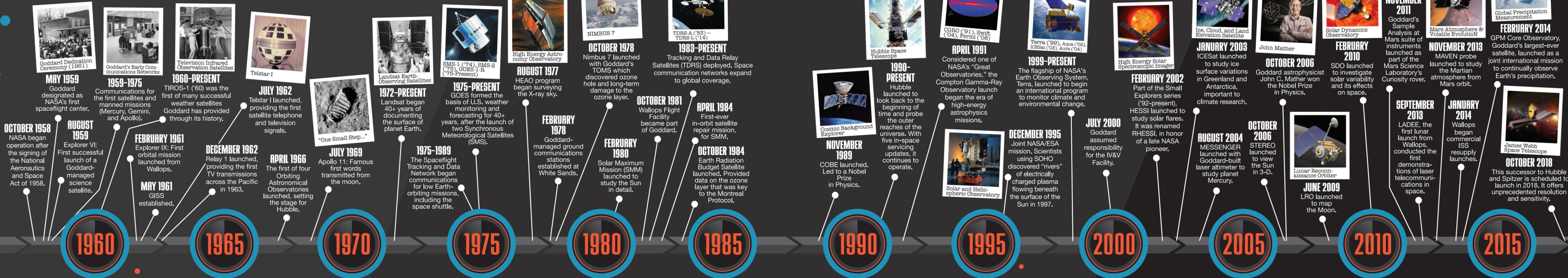


Goddard: Past and Present



Goddard is a unique national resource with a rich history and promising future. Named for American rocketry pioneer, Dr. Robert H. Goddard, the center was established in 1959 as NASA's first spaceflight complex. Goddard's Wallops Flight Facility was established in 1945 to support the National Advisory Committee for Aeronautics (NACA), NASA's predecessor, and joined Goddard in 1981.

Goddard's heritage as an "all-purpose" space center with end-to-end capabilities has resulted in a broad, robust program of scientific research and space systems development. Goddard's missions—which study and explore the Earth, our Sun and solar system, planets orbiting distant stars, and the cosmos—are key to NASA's aim to expand horizons, increase knowledge, and improve lives. Together with our partners in other NASA centers, government agencies, academic institutions, and industry, we continue to unlock the mysteries of our world and reap scientific breakthroughs.

Today, Goddard continues to advance space exploration and scientific discovery, pushing the frontiers of science and engineering to address three fundamental questions:

- Why are we here?**
We seek to understand of the origins of life itself. Through planetary science missions such as the Mars Atmosphere and Volatile Evolution mission (MAVEN) and (the Origins Spectral Interpretation Resource Identification Security—Regolith Explorer (OSIRIS-REx), we gain insight into how planets formed and life began by studying asteroids and other solar system bodies as well as the atmosphere, climate, liquid water, and habitability of Mars.
- How do we survive and thrive?**
We strive to further our understanding of the changing Earth system and how our lives are influenced by the Sun. This is accomplished through Earth science missions such as the Global Precipitation Measurement

- (GPM) mission; the Ice, Cloud, and land Elevation Satellite (ICE-Sat) series; the Geostationary Operational Environmental Satellite (GOES) series, the Landsat Data Continuity Mission (Landsat-8); the Suomi National Polar-orbiting Partnership (Suomi NPP) mission; and the Joint Polar Satellite System (JPSS). Goddard's work in Earth science provides global precipitation maps to study global climate and improve the forecasting of extreme events, improves observations of Earth's environment that directly affect public safety, and extends long-term climate and short-term weather observations.

We study how to live with a star, our Sun, by conducting space weather research and learning how our closest star affects our near-space environment. Goddard is involved in multiple heliophysics missions including the Solar Dynamics Observatory (SDO), the Magnetospheric Multiscale (MMS) mission, and Solar Probe Plus. Understanding and predicting space weather effects, which can impact space-based assets and ground-based technology, benefits the Nation and the world.

What is out there?
We seek to better understand the greater cosmos and our place within through numerous astrophysics missions, including the Hubble Space Telescope, the James Webb Space Telescope, the ASTRO-H X-ray observation satellite, the Transiting Exoplanet Survey Satellite (TESS), and the Swift Gamma-ray Burst Explorer. These missions are transforming our knowledge of the universe by observing the most distant stars and galaxies, studying formation of solar systems, examining high-energy phenomena in the universe, and surveying the entire sky for planets orbiting other stars. Goddard's work in astrophysics science probes the origin and evolution of cosmic objects and the universe; examines distant planets for life; and explores the mysterious nature of black holes, dark matter, and dark energy.