Hubble Space Telescope
Servicing Mission 3B
Media Reference Guide

Special thanks to everyone who helped pull this book together.

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Prepared by Lockheed Martin for
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Who Was Edwin P. Hubble?

Photo courtesy of the Carnegie Institution of Washington

Edwin Hubble (1889–1953) at the 48-inch Schmidt telescope on Palomar Mountain

One of the great pioneers of modern astronomy, the American astronomer Edwin Powell Hubble (1889–1953), started out by getting a law degree and serving in World War I. However, after practicing law for one year, he decided to "chuck law for astronomy and I knew that, even if I were second rate or third rate, it was astronomy that mattered."

He completed a Ph.D. thesis on the Photographic Investigation of Faint Nebulae at the University of Chicago and then continued his work at Mount Wilson Observatory, studying the faint patches of luminous "fog" or nebulae in the night sky.

Using the largest telescope of its day, a 2.5-m reflector, he studied Andromeda and a number of other nebulae and proved that they were other star systems (galaxies) similar to our own Milky Way.

He devised the classification scheme for galaxies that is still in use today, and obtained extensive evidence that the laws of physics outside the Galaxy are the same as on Earth—in his own words: "verifying the principle of the uniformity of nature."

In 1929, Hubble analyzed the speeds of recession of a number of galaxies and showed that the speed at which a galaxy moves away from us is proportional to its distance (Hubble's Law). This discovery of the expanding universe marked the birth of the "Big Bang Theory" and is one of the greatest triumphs of 20th-century astronomy.

In fact, Hubble's remarkable discovery could have been predicted some 10 years earlier by none other than Albert Einstein. In 1917, Einstein applied his newly developed General Theory of Relativity to the problem of the universe as a whole. Einstein was very disturbed to discover that his theory predicted that the universe could not be static, but had to either expand or contract. Einstein found this prediction so unbelievable that he went back and modified his original theory in order to avoid this problem. Upon learning of Hubble's discoveries, Einstein later referred to this as "the biggest blunder of my life."

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Another Step in Our Journey to the Stars

Throughout history, humankind has expanded its knowledge of the universe by studying the stars. Great scientists such as Nicholaus Copernicus, Galileo Galilei, Johannes Kepler, Issac Newton, Edwin Hubble and Albert Einstein contributed significantly to our understanding of the universe.

The launch of the Hubble Space Telescope in 1990 signified another great step toward unraveling the mysteries of space. Spectacular discoveries such as massive black holes at the center of galaxies, the existence of precursor planetary systems like our own, and the quantity and distribution of cold dark matter are just a few examples of the Telescope's findings.

With NASA's Servicing Mission 3B, we continue to carry the quest for knowledge in the 21st century.

About the Inside Covers

Three-dimensional computer models illustrate tasks that the STS-109 crew will perform in orbit during Servicing Mission 3B. The models enable engineers to study task feasibility and to confirm that astronauts can safely reach and service components and locations on the spacecraft. These dimensionally accurate, visually correct images help the extravehicular activity servicing team prepare to install new components and upgrade functional systems on the Telescope.

The Hubble Space Telescope (often referred to as HST or Hubble) is a space telescope that was launched into low Earth orbit in 1990 and remains in operation. It was not the first space telescope but it is one of the largest and most versatile, well known both as a vital research tool and as a public relations boon for astronomy. The Hubble telescope is named after astronomer Edwin Hubble and is one of NASA's Great Observatories, along with the Compton Gamma Ray Observatory, the Chandra X-ray The NASA/ESA Hubble Space Telescope has once again captured comet 2I/Borisov streaking through our solar system on its way back into interstellar space. At a breathtaking speed of over 175 000 kilometres per hour, Borisov is one of the fastest comets ever seen. It is only the second interstellar object known to have passed through the Solar System. heic1921 â€" Science Release. Hubble Studies Gamma-Ray Burst with the Highest Energy Ever Seen. The Hubble Space Telescope as seen from the departing Space Shuttle Atlantis, flying Servicing Mission 4 (STS-125), the sixth and final Hubble mission. Mission type. Astronomy.Â âœª Hubble Telescope Captures Star Nearing Its End. âœª Repairing the Hubble Space Telescope. âœª Why is the James Webb Space Telescope taking so long? âœª Hubble - Zoom In (HD). âœª Hubble Space Telescope - Facts for Kids | Educational Videos by Mocomi. Transcription. Contents.