

NASA releases Hubble memorable moments video

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In celebration of the 25 years since the Hubble Space Telescope's April 1990 launch, NASA is releasing the second in a series of videos showcasing moments in Hubble's history that were memorable for Goddard's engineers and flight operators.

"Hubble Memorable Moments: Brute Force," which was produced by NASA's Goddard Space Flight Center in Greenbelt, Maryland, describes repairing the Space Telescope Imaging Spectrograph on Hubble Servicing Mission 4 in May, 2009.

The Space Telescope Imaging Spectrograph, or STIS, was installed on Hubble during Servicing Mission 2 in 1997. A versatile instrument

taking measurements in the ultraviolet, visible, and near-infrared wavelengths, STIS has discovered [supermassive black holes](#) at the centers of galaxies, and made one of the first spectroscopic measurements of the atmosphere of an exoplanet - a planet orbiting another star.

STIS was originally designed to operate for five years, but it lasted 7.5 until a power supply failed in August, 2004. At the time, STIS was being used for about 30 percent of the Hubble observing program. Because STIS was such an incredibly useful instrument, it became a high-priority task for repair on Hubble's final servicing mission.

Most Hubble servicing mission tasks involve replacing an instrument by swapping out large boxes, not repairing an instrument, which involves much more detailed and nimble work. Gaining access to STIS' electronics cards would involve removing 107 small screws, so Goddard engineers custom-designed a fastener capture plate for the task while the astronauts trained tirelessly at the Johnson Space Center for the months leading up to the mission.

The Hubble team was well prepared for this incredibly complex task. Sometimes, however, it's the simplest items that present a huge obstacle, and the highly trained team must scramble to quickly devise an unusual solution.

Watch the video to see how this spacewalk on May 17, 2009 played out.

Provided by NASA

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