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Skylab's first 40 days

Skylab, America's first space station, began with crippling problems created by an incident during its May 1973 launch. High temperatures and low power conditions aboard the orbital workshop forced engineers to devise corrective measures quickly. Astronauts Pete Conrad, Paul Weitz and Joe Kerwin flew to the station and implemented the repairs, rescuing the spacecraft's mission. This film tells the story of Skylab's first 40 days in space.

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Jupiter flyby preview

NASA's New Horizons space probe will fly past Jupiter in late February, using the giant planet's gravity as a sling-shot to bend the craft's trajectory and accelerate toward Pluto and the Kuiper Belt. Mission officials describe the science to be collected during the Jupiter encounter during this briefing.

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Supplies arrive at ISS

The 24th Russian Progress resupply ship sent to the International Space Station successfully makes the final approach and docking to the Pirs module of the outpost while running on automated controls.

■ [Rendezvous](#) | [Docking](#)

Interview with teacher

Barbara Morgan

Barbara Morgan, the former Idaho school teacher who served as Christa McAuliffe's backup for the Teacher in Space program, sits down for this NASA interview. As NASA's first Educator Astronaut, Morgan will be a mission specialist and robot arm operator during shuttle Endeavour's STS-118 flight to the space station, targeted for launch in June.

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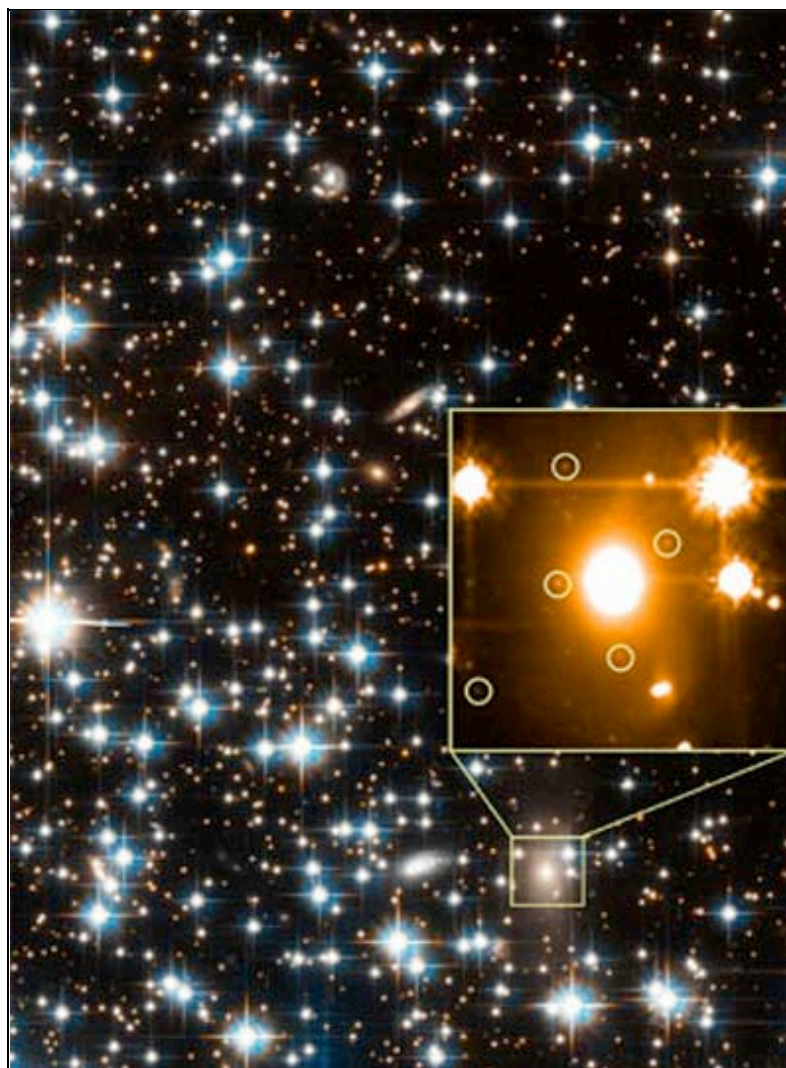
The Flight of Siam 7

Most distant star clusters found hidden nearby

UNIVERSITY OF CALIFORNIA-SANTA CRUZ NEWS RELEASE

Posted: January 23, 2007

SEATTLE, WA -- Astronomers have discovered the most distant population of star clusters ever seen, hidden behind one of the nearest such clusters to Earth. At a distance of more than a billion light-years, the newly discovered star clusters provide a unique probe of what similar systems in our own galaxy once looked like.



This Hubble Space Telescope image shows a small field within the Milky Way globular star cluster NGC 6396; the inset image shows a close-up view of a distant elliptical galaxy in the background, revealing more than 100 globular clusters within a galaxy located more than 1 billion light years from Earth. Credit: NASA, ESA, H. Richer (UBC), J. Kalirai (UCSC)

"Given their distance, the light that we see today from these clusters

Ares patch

The Ares Project will develop two new rockets to launch astronauts back to the Moon under NASA's Vision for Exploration. The



Ares 1 will employ a single space shuttle solid rocket booster to loft the Orion crew capsule. The gigantic Ares 5 will haul the equipment and cargo needed for such lunar voyages. This is the Ares emblem.

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Atlantis' STS-122 mission that launched the Columbus science lab in February is available to U.S. customers from our store.

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The ultimate Apollo 11 DVD

This exceptional chronicle of the historic Apollo 11



The Flight of Sigma 7

On October 3, 1962, Wally Schirra became the fifth American to rocket into space. This NASA film entitled "The Flight of Sigma 7" explains the 9-hour voyage that gained important knowledge in the Mercury program.



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Supply ship departs ISS

The Russian Progress M-57 cargo vessel undocks from the International Space Station on January 16 for re-entry into the atmosphere. It was the 22nd resupply ship sent to ISS.



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STS-109: Extending Hubble's life and reach

The fourth servicing mission to the Hubble Space Telescope extended the craft's scientific potential with an advanced camera and performed a major overhaul on the orbiting observatory's power system with the installation of new solar arrays and an electrical heart. The crew of space shuttle Columbia's STS-109 mission tell the story of the March 2002 mission in this post-flight highlights film.



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Shuttle: A Remarkable Flying Machine

"Space Shuttle: A Remarkable Flying Machine" is a NASA movie that takes you inside the first voyage of the space shuttle program. Commander John Young and pilot Bob Crippen flew Columbia in April 1981, opening a new era in American space exploration.



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Shuttle booster cams

Check out amazing footage from the video cameras mounted on the twin solid rocket boosters during space shuttle Discovery's nighttime launch.



■ [Full Coverage](#)

STS-116: Full coverage

Relive space shuttle Discovery's STS-116 mission to the International Space Station. We have nearly 200 movie clips from the December flight that installed a new truss segment and retracted a stubborn solar wing.



■ [Full Coverage](#)

Minotaur launch

The most beautiful

was emitted more than one billion years ago and may hold important clues for understanding the evolution of globular clusters," said Jason Kalirai, a postdoctoral fellow at the University of California, Santa Cruz, who will present the findings in a talk at the American Astronomical Society meeting in Seattle.

Kalirai and Harvey Richer of the University of British Columbia led the study, which began as an investigation of a globular star cluster in the Milky Way galaxy known as NGC 6397. The researchers acquired one of the deepest optical images ever taken with the Hubble Space Telescope's Advanced Camera for Surveys, focusing on a small field within NGC 6397. This cluster, home to hundreds of thousands of stars, is 8,500 light-years away, making it one of the closest globular clusters to Earth.

The new data from stars within NGC 6397 have yielded important insights into the age, origin, and evolution of this cluster. Hidden in the background, however, were findings that may hold even greater promise for understanding the evolution of such clusters, Kalirai said. Within the population of stars and galaxies behind NGC 6397, the Hubble image revealed a large elliptical galaxy that contains several hundred globular clusters.

Although each of these clusters probably contains hundreds of thousands of stars, they are so far away from the Earth that each cluster appears as a single faint point of light in the Hubble image. In fact, a single giant star in NGC 6397 appears 10 million times brighter than one of the distant globular clusters. Nevertheless, the faint light from these clusters could yield valuable information, Kalirai said.

Kalirai and Richer followed up the Hubble imaging observations with spectroscopic observations using the Gemini Multi-Object Spectrograph on the Gemini South Telescope on Cerro Pachon in Chile. They were able to determine the distance of the elliptical galaxy hosting the globular clusters by measuring its redshift (a measure of how the expansion of the universe shifts the wavelengths of light from a distant object). This showed that the globular clusters are the most distant ever studied.

"The properties that we infer for these clusters may therefore represent an important clue in understanding what our own Milky Way globulars, such as NGC 6397, looked like in the past," Kalirai said.

Previous studies by other researchers of globular clusters in nearby galaxies, including the Milky Way, have shown that these systems play a very important role in understanding the formation and evolution of galaxies. With a sample of almost 200 clusters in this one distant galaxy, Kalirai's team will test whether the properties of these globulars are consistent with the idea that elliptical galaxies formed the bulk of their stars at early times. For the first time, the observations may also allow astronomers to test for evolution in the properties of globular clusters themselves, Kalirai said.

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Columbia Report

A reproduction of the official accident investigation report into the loss of the space shuttle Columbia and its crew of seven.



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STS-115 patch

The official crew patch for the STS-115 mission of space shuttle Atlantis to resume orbital construction of the International Space Station.



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The ultimate Apollo 11 DVD

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It was a beautiful sunrise blastoff for the Orbital Sciences Minotaur rocket from Wallops Flight Facility carrying the Air Force's TacSat 2 spacecraft and NASA's GeneSat 1.



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First ULA Delta 2

The first United Launch Alliance Delta 2 rocket blasts off from California's Vandenberg Air Force Base carrying a classified payload for the National Reconnaissance Office.



■ [Full Coverage](#)

Mars water discovery

Mars Global Surveyor has found bright new deposits in two gullies that suggest water may have spurted on the surface during the past few years. The images are presented by scientists in this news briefing presentation.



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In addition to Kalirai and Richer, the team involved in this research includes Jay Anderson of Rice University and Jay Strader and Kieran Forde of UC Santa Cruz. This work was supported by NASA through a Hubble Fellowship grant awarded by the Space Telescope Science Institute to Kalirai. Support for this work was also provided by a grant from NASA/STScI, the Natural Sciences and Engineering Research Council of Canada, and the Canada-U.S. Fulbright Program through the award of a Fulbright Fellowship to Richer.

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