## A HALF CENTURY OF NASA PHOTOS

BY GEORGE MICHAEL (MIKE) GENTRY

You might think I would take my work for granted after almost forty years of working with NASA photos. I never have, and even to this day I occasionally pinch myself. The same thrill I had dealing with the Apollo 11 photography when it was fresh, right after the moon landing in 1969, continues today when I see a great picture of the International Space Station over a panoramic spread of terrain or a new picture of some interesting part of the universe from the Hubble Telescope. From Apollo through early shuttle, we waited for astronauts to complete their space missions and bring back bags of film, which required lab processing and lots of other work prior to release to the media. I enjoyed receiving a large stack of moon photos from our photo lab that still had the smell of a darkroom on them for distributing to media, and then actually seeing them in collated sets, the sense of smell quickly giving way to the sense of sight. With their beauty just jumping up to smack you in the face, we felt like Santa Claus packaging up shiny new toys for the children of the world.

No smell of dark room chemicals and no more 8 x 10 paper prints greet us in 2008, but digital imagery looks just as impressive as it pops up in a gallery of thumbnails on the computer screen for captioning and editing. The digital capabilities we now have mean we can release a photo the very same day a space-walking astronaut has taken it. That may not impress the younger generation, but it still amazes us greybeards, with our memories of darkrooms and rushed courier trips from the airport. Many who read this will someday be able to take for granted new leaps in technology now unknown that will communicate NASA's future adventures and discoveries.

Here are a few of the many great images that help tell part of the story of NASA's first fifty years.



There are no photos of President Dwight D. Eisenhower signing the National Aeronautics and Space Act on July 29, 1958. According to Public Papers of the Presidents, he released a statement upon signing the bill. This usually means that he did not deliver the statement in person, so there was no ceremony. The other two men in the photo are T. Keith Glennan and Hugh L. Dryden. The photo was taken at the swearing in ceremony for Glennan as administrator of NASA and Dryden as deputy administrator that took place in the White House Conference Room on August 19, 1958.

This photograph of the Gemini 7 spacecraft was taken from the hatch window of the Gemini 6 spacecraft during rendezvous and station keeping (maintaining a specific orbit) maneuvers at an altitude of approximately 160 miles on December 15, 1965. The two spacecraft are just a few feet apart. Inside the Gemini 7 spacecraft are astronauts Frank Borman and James A. Lovell. The December 1965 flight was followed three years later by a historic Apollo 8 flight, also in December, which included the same two astronauts as part of a three man crew.



Photo Credit: NASA

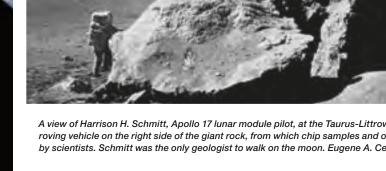
The first three Americans to fly in space were, from left to right, John H. Glenn, Jr.; Virgil I. (Gus) Grissom; and Alan B. Shepard, Jr. They posed for this photo in 1961 while anticipating their flights of Mercury-Atlas 6, Mercury-Redstone 4, and Mercury-Redstone 3, respectively. They personified the Thomas Wolfe-coined term, "the Right Stuff." Glenn was the first American to orbit the earth, while Shepard was NASA's first astronaut to go into space. Grissom, who six years later lost his life in the Apollo 204 (also known as Apollo 1) fire at Cape Kennedy, flew a suborbital mission, launched between the flights of Shepard and Glenn.

Several years ago I was at Fair Lanes Bowling Alley, participating in a NASA mixed Tuesday night league, when I got a page from the main desk telling me I had a phone call. It was John Denver. He was here in Houston, having just completed a battery of medical tests at Johnson Space Center because he wanted to fly in space.

He said, Hi, John Denver here ... got your name from PAO [the public affairs office], and they said you were probably at the bowling alley. I m looking to do a hologram based on the Apollo 17 Earth photo, and I wanted to talk to you about that. I want to use it as a huge icon for my future concerts.

It is by far the most asked for image in the NASA collection. It so inspired a anadian teacher twenty years ago that she took on the mission of distributing mage worldwide. The name of her project was "The Earth in Every room.

I have traveled to various parts of Mexico and Japan and in about thirty states in the United States. I don t think there s been a trip I ve taken that I didn t see the Apollo 17 Earth view on TV or on a billboard or in some medium or other.



A view of Harrison H. Schmitt, Apollo 17 lunar module pilot, at the Taurus-Littrow landing site during the mission's first spacewalk. Note the lunar roving vehicle on the right side of the giant rock, from which chip samples and other pieces were taken for return to Earth and subsequent scrutiny by scientists. Schmitt was the only geologist to walk on the moon. Eugene A. Cernan took the handful of pictures that make up this mosaic.

Magellan, Pioneer, and Soviet Venera spacecraft all played a role in producing this image of Venus. Magellan synthetic aperture radar mosaics from the first cycle of Magellan mapping were placed onto a computer simulated globe to create the image. Data gaps were filled with Pioneer Venus orbiter data, or a constant mid range value. Simulated color was used to enhance small scale structures. The simulated hues are based on color images recorded by the Soviet Venera 13 and 14. The image, produced at the Jet Propulsion Laboratory (JPL) Multimission Processing Laboratory, is a single frame from a video released at the JPL news conference on Oct. 29, 1991.



The International Space Station was photographed against the topography of the Canadian province of Quebec on April 29, 2001, following separation from the Space Shuttle Endeavour. An impact feature known as the Manicouagan Reservoir is almost directly beneath the orbital outpost. One of several impact craters on Earth, Manicouagan's unique crab-like shape makes it easily recognizable from 220 statute miles above Earth. The 35mm frame was exposed by one of the STS-100 crewmembers onboard the shuttle.



This picture of a half-moon over a relatively small section of Earth and its atmosphere is not a rarity, because many space travelers have encountered similar scenes, but this particular image was captured by the final Space Shuttle Columbia crewmembers prior to their deaths on February 1, 2003. Although it was recorded with a digital still camera and downlinked from space, much of the crew's filmed imagery was recovered in very good condition among the Columbia debris in North Texas after the mission's end.



Photo Credit: NASA

This eleven-year-old Hubble image reveals a pair of one-half lightyearlong interstellar "twisters"eerie funnels and twisted-ropelike structures-in the heart of the Lagoon Nebula (Messier 8), which lies 5,000 light-years away in the direction of the constellation Sagittarius. The Lagoon Nebula and nebulae in other galaxies are sites where new stars are being born from dusty molecular clouds. These regions are the "space laboratories" for astronomers to study how stars form and interactions between the winds from stars and nearby gases. These color-coded images are the combination of individual exposures taken in July and September of 1995, with HST's Wide Field Planetary Camera 2.

When I was in the ninth grade (in the fifties), you learned (if you didn t know already) that Saturn had rings. There was no mention of rings on Jupiter, which the Voyager missions of the late seventies found. Jupiter s rings are not nearly as conspicuous or pretty as Saturn s. Each time we fly a spacecraft near Saturn, we learn something new or discover more spectacular views. The Voyager views of both Saturn and Jupiter knocked me off my feet, and the Cassini ones have left me speechless. This natural color mosaic was constructed from forty five wide angle camera images (fifteen separate sets of red, green, and blue images) taken by the Cassini spacecraft over the course of about two hours.



Scientist-Astronaut Harrison Schmitt, Apollo 17 lunar module pilot, is photographed next to the U.S. flag at the Taurus-Littrow landing site during extravehicular activity of NASA's final lunar landing mission in the Apollo series. The photo was taken by astronaut Eugene A. Cernan, commander and the last man of the twentieth century to have walked on the moon. The highest part of the flag appears to point toward our planet Earth in the distant background. This is one of a very few pictures from the moon that show both a human being and Earth in the same frame.



hundreds of hours thus far spent by astronauts assembling the orbital

View of Astronauts Robert L. Curbeam, Jr., (left) and Sweden s Christer Fuglesang of the European Space Agency, both serving as STS 116 mission specialists, as they work at the forward side of the starboard 1 truss on the International Space Station during the first extravehicular activity session on the flight. This breathtaking view represents the

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outpost. New Zealand is visible in the background.



Photo Credit: NASA