



February 2003

Volume XXXIII, Issue 2

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In Memoriam

The Crew of STS 107

On February 1, 2003, with 16 minutes remaining to complete their mission and land, the 7 member crew of Space Shuttle Columbia made the ultimate sacrifice for science, space exploration and the advancement of the human race. This issue of The Custer Comment is a tribute to them.

*Commander Rick D. Husband (second flight),
Pilot William C. McCool (first flight),
Payload Specialist Michael P. Anderson (second flight),
Mission Specialist Kalpana Chawla (second flight),
Mission Specialist David M. Brown (first flight),
Mission Specialist Laurel B. Clark (first flight),
Payload Specialist Ilan Ramon, Israel (first flight),*

we salute you.

Via con Dios.

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EDITORIAL PAGE

<p>Tom Madigan, Editor</p> <p>Tom Madigan 99 North Summit Ave. Patchogue, NY 11772-2226 tmadigan@optonline.net</p> <p>631-447-5339</p> <p>Cutoff for submissions is the 15th of the month preceding publication</p> <p>Visit the new Custer Website at http://www.custerobservatory.org</p>	<p>The Custer Comment is published monthly by</p> <p>Custer Institute P.O. Box 1204 Main Bayview Road Southold, NY 11971 631-765-2626</p>
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A Special Note from your editor.

It's an honor and privilege to take the reigns as the editor of your Custer Comment. I apologize for the lateness of this month's issue. In a sad irony, this lateness has given me the opportunity to pay tribute to the courageous crew of Space Shuttle Columbia, STS 107, who boarded that cabin on January 16, uncertain of what lay ahead. From the violent roar of liftoff, the thrill of accelerating to near-escape velocity, to orbital insertion, each Shuttle mission is fraught with danger. This mission was no different. They faced that danger with the courage of Columbus. How ironic, also, that the name of their shuttle would be Columbia!

As your editor, lets hope that I live up to the quality, expectations and high standards you are accustomed to, provided by those who have edited this esteemed journal before me.

Please feel free to contact me. This is your journal, so please don't be shy. Your comments, critique and submissions are most welcome.

Best,
Tom

Tom Madigan

PRESIDENT'S MESSAGE

What can I say but thank you, thank you, thank you to all the members who answered Custer's recent call for donations. And a very special thanks to those who gave the extra large donations. Enough money was raised to complete the shed repairs with some left over for the dome repair fund. The shed roof replacement contract has already been awarded and the contractor has completed the necessary preliminary tree and bush clearing work. Much of the damage was found to have been caused by the uncontrolled growth of these trees and bushes against the shed. In the future, this type of growth will have to be kept cut down to ground level and the area kept mowed. Custer still faces a huge repair bill to fix/replace the dome. Your generosity continues to be necessary and the Board is investigating fund raising methods.

Let me introduce and welcome the new Editor of the Custer Comment, Tom Madigan. This is his first issue and I know many more excellent issues are going to follow.

My heart felt thanks to our previous Editor, Tom Carey, who volunteered to fill in as Editor when the job suddenly became vacant. Though not a computer guru, Tom struggled and saw to it that a Comment went out each month. Tom is now free to once again pick up his main job of Jamboree 2003 Chairman. Thanks again Tom, for all your hard work!

The first lecture of the year was held on Jan. 18th and it was well attended and very interesting. Dr. Harbottle left us with lots to think about concerning the validity of the Yale Vinland Map. For those of you who whimpered out because of the cold, you missed a good one.

Bob Vanson

HEAVENTLY HIGHLIGHTS TO WATCH for in FEBRUARY, 2003

Jupiter and Saturn reign during evening. Venus and Mars highlight the dawn.

February 1st.

- ❖ New Moon (5:48 a.m., EST).
- ❖ Mercury shows its greatest illuminated extent, 22 square arc seconds, at gibbous phase.
- ❖ Jupiter comes to opposition.

February 4th.

- ❖ This morning Mercury reaches greatest elongation, 25 degrees west of the Sun.

February 7th

- ❖ Early this morning, do not mistake mu Sagittarii (mag. 3.9) for a telescopic satellite of Venus.

February 9th.

- ❖ First-quarter Moon (6:11 a.m., EST)

February 10th.

- ❖ From 9:28 to 9:40 p.m., EST, Jupiter's moon Europa passes directly in front of Ganymede. Then from 10:16 to 10:25 p.m., EST, Europa's tiny shadow crosses Ganymede's disk.

February 12th.

- ❖ Asteroid 97 Klotho (mag. 10.7) passes just 15" south of 43 Leonis at 2:41 a.m., PST and 18" west of it at 3:17 a.m.

February 16th.

- ❖ Full Moon (6:51 p.m., EST).
- ❖ Shortly after 4 a.m., EST, Epsilon xi(2) Sagittarii (mag. 3.5) lies 9' due south of Venus.

February 21st.

- ❖ Neptune is 1 ½ degrees north of Mercury.

February 23rd.

- ❖ Last-quarter Moon (11:46 a.m., EST)

EVENTS CALANDAR
FEBRUARY, 2003

Feb. 8 Sat.

- 3:30 PM Board Meeting**
- 6:30 PM * MEMBERSHIP MEETING ***
- 8:00 PM PUBLIC OBSERVING** weather permitting.

Feb. 22 Sat.

- 10:00 AM Custer Cradle of Aviation Museum Trip**
Those interested in going will meet at the Parking lot of the Carving Board Rstaurant on Rt. 25 in Calverton for carpooling to the Museum. Those who live further west can meet us at the Museum around 11:30 AM. The Museum has aviation, mars and and aerospace exhibits, plus an IMAX theater. Tickets are \$16.50. We will stop for dinner on the way home and should be back by 6:00 PM or so. The cradle of aviation Museum is on Lindbergh Blvd. In Garden City, Phone: 516-572-4111.
Museum Directions: From Northern Parkway, Take Meadowbrook Parkway south to exit M4, initially follow signs to Nassau Coliseum. Within approximately 1/4 mile take the right fork to Charles Lindbergh Blvd., remain on it to the second traffic light and turn right into the parking lot.
 - 8:00 PM PUBLIC OBSERVING** weather permitting.
- OBSERVING** weather permitting.

MARCH, 2003

Mar. 1 Sat. 4:00 PM – 10:00 PM Art Program and entertainment

Mar. 8 Sat. 3:30 PM - Board Meeting

**5:00 PM – Art Opening – Lorraine Page and Lois Leonard -
Photography Wine and Cheese reception.**

9:00 PM PUBLIC OBSERVING weather permitting.

Mar. 15 Sat.

ST. PATRICK'S DAY

4 PM - *** CORNED BEEF & CABBAGE DINNER *******

Famous Irish Chef Chuck O' Cardona has volunteered to cook.

If you can, bring a favorite holiday side dish to share.

A \$5.00 per person donation is requested.

For info, call Chuck Cardona 631-369-1100

8:00 PM - PUBLIC OBSERVING weather permitting.

**March 22 Sat. 9 AM – 5 PM Free Spay Clinic – Come and have your pet spayed
for free.**

March 29 Sat. 5 PM – 8:30 PM Private Party by invitation only, for members of SAVES

IN MEMORIAM

Edward M. Brooks, PhD (1916-2002)

It is with great sadness that I report the death of Dr. Edward M. Brooks, longtime professor of meteorology and geophysics at Boston College. Dr. Brooks passed away on December 11 of complications from a head injury that he suffered in a fall at his home in Newton, Massachusetts. He was 86 years old.

Dr. Brooks was born in New Haven, Connecticut and started keeping weather records at the age of 6, having been inspired by his father, Charles F. Brooks, a former Harvard Professor, Director of the Blue Hill Observatory in South Boston and the founder (in 1919) of the American Meteorological Society.

Dr. Brooks graduated with a degree in mathematics from Harvard in 1937. He then earned a masters degree in aeronautical engineering and a doctorate in meteorology, both from MIT in Cambridge.

Many long-time readers of Sky & Telescope magazine will remember the articles on weather prospects for upcoming astronomical events that were written by Dr. Brooks during the 1960s, 70s and 80s. Among his most vivid memory was as a 9-year old boy, witnessing his very first total eclipse of the Sun in Connecticut on January 24, 1925.

Ed was also the first to successfully utilize short-term weather forecasts on a cruise ship -- the TSS Olympia -- in July 1972, to allow both passengers and crew a view of a total solar eclipse. He later would go on to serve as onboard meteorologist for many other "eclipse at sea" ventures.

On a personal note, Ed edited the manuscript for my book "Your Guide to the Great Solar Eclipse of 1991," making very helpful suggestions, particularly in the weather and climate tables. He also was kind enough to look over the first-draft manuscripts of some of my S&T articles on the Leonid meteor shower in the mid 90s.

Interestingly, although we knew each other through letter and phone correspondence from 1978, it was not until August 1999 that we finally met face-to-face on board the cruise ship, Regal Empress. Ironically, twenty-seven years earlier, that ship bore the name TSS Olympia -- the very same one that Ed had guided to a clear view for the very first eclipse cruise. In 1999, it was now my turn to try and position that very same ship for a view of the totally eclipsed Sun. Prior to the eclipse Ed had commented to some of the passengers onboard that, "I have the utmost confidence in Joe . . . He'll do a good job for us."

Coming from the "Dean of Eclipse Meteorology," I will always remember that!

Ed certainly lived a long and full life. He is survived by his wife of 61 years (Sarah), three sisters, one brother, four sons, three daughters, and 32 grandchildren! He donated his body to the Harvard Medical School.

A memorial service will be held on June 28 in Cambridge, Massachusetts.

--Joe Rao

Timothy Ferris, *Seeing in the Dark*

***Seeing in the Dark*, by Timothy Ferris, Simon and Schuster, 2002, 379 pages.**

A review

Amateur Astronomy More Relevant Than Ever

By Edward Furey

Any new book by Timothy Ferris is welcome, and “*Seeing in the Dark*” doubly so because it just about ties Leslie Peltier’s “*Starlight Nights*” as the best book ever written about amateur astronomy. In an age of Big Science, when even astronomy, with its long and storied history of amateur contributions, seems to have wandered off into narrow questions, impenetrable to all but the largest and costliest of instruments, Ferris begs to differ, and rightly so.

New technologies like the Dobsonian telescope, the PC and the CCD bring new sophistication to amateur astronomy, sharply paring the differential between amateur and professional equipment. And there is ever more work to be done. Forget the conventional wisdom that space probes have given us such good looks at the planets that there’s little left other than stargazing.

Spacecraft wear out, or, like Voyager, fly on, but the action in the solar system, like that in Vegas, never stops. A major Martian dust storm in 1988 was observed almost entirely by amateurs. Indeed, it was the amateurs who advised NASA that the first *Mariner* was about to be greeted by a Martian dust storm. Even the most-observed objects can yield secrets to determined amateurs. After centuries of lunar observations since Galileo, Patrick Moore managed find to *Mare Orientale* in the 1930s, although his discovery would not be confirmed until the Soviet probe, *Lunik 3* brought back the first pictures from the Far Side in 1959.

Ferris begins with a memoir of his start in astronomy, and throughout the book, he reverts back to his own observations touching on the matter at hand as he takes us through the solar system and out into the deepest space. Besides lending immediacy to the narrative, if you're of a certain age, the tale of his adventures echoes your own. From the awful starter telescope that he could barely get to work to the frequent appearances of NASA’s merry prankster of that Era, *Echo*, it’s all there. Views of Saturn and Jupiter's moons, attained after massive efforts, inspired a mania for a better telescope akin to that of Ralphie’s quest for the Red Ryder BB-gun in “A Christmas Story.” Ferris's better instrument was the classic second telescope, a 2.4 refractor with spring loaded slow motion controls that actually worked. He doesn't name it, but the guess here is that it was a Unitron, whose ads were as constant a feature of the *Sky & Telescope* of that era (late 1950s and early 1960s) as the monthly chart of the planets.

Ferris grew up in Florida at the start of its explosive growth. Which meant he could see Omega Centauri – forever invisible from Long Island's South shore – and had a generally better view of the deep sky in the Scorpio/Sagittarius region, as well planets higher and clearer in the sky. You can still see objects like Hale-Bopp from Fort Lauderdale, but the skies aren’t much darker than those of Nassau County now.

The narrative starts with the sun and works through planets, ending with the quest for supernovae in distant galaxies. Interspersed are short chapters featuring interviews with such worthies as Patrick Moore, David Levy and David May, best known as the guy in the rock group Queen who gave “We Will Rock You” to American sporting audiences, but who also sports a Ph.D. in astrophysics. Those who heard Stephen J. O’Meara describe the first visual sighting of Halley’s Comet from atop Mauna Kea at Custer’s 1985 Astronomy Jamboree might be tempted to skip that chapter, but shouldn’t.

Beyond May, Ferris notes a few other celebrities who took an interest in Astronomy. George III was an amateur astronomer and became William Herschel’s patron. While perhaps not a true amateur, Abraham Lincoln visited the Naval Observatory in Washington. He might also have mentioned that Al Gore seems to have been the only Vice President to make much use of the 26-inch Clark next to the Vice Presidential residence or that Johnny Carson’s enthusiasm for astronomy was one reason why Carl Sagan got so many invitations to the “Tonight Show.”

If you aren’t familiar with the many and varied feats of contemporary amateurs, “Seeing in the Dark” will be an eye-opener. We all know that amateurs discover many, if not most comets. But a Japanese amateur was the first to run the numbers and notice that Shoemaker-Levy 9 was going to crash into Jupiter. O’Meara first noted the radial “spokes” in Saturn’s rings, considered an optical illusion until confirmed by Voyager many years later. Two amateur collaborators noticed that Venus seems to rotate every four days, based on their studies of the clouds. Carl Sagan said that couldn’t be right because radar showed a much longer rotation period. Space probes would later show that Venus’s atmosphere – not the solid planet beneath – does rotate every four days. It was one of those bizarre Miller Lite cases: both sides of the argument were right.

Comet hunting does get its due, with some amusing twists. Comet enthusiasts will enjoy the tale of Yuji Hyukatake, who was observing a comet he had discovered five weeks earlier with proprietary enjoyment when he noticed another comet nearby through a hole in the clouds. It turned out to be the great comet of 1996 that bears his name. Alan Hale, a professional astronomer specializing in extra-solar planets, was taking a break from his usual routine to look at a couple of comets at the same time amateur Tom Bopp also decided to take a look at M70 in Sagittarius. Both were looking mostly for fun, because the wealth of nebulosity in the Sagittarius region makes it unpromising for comet-hunting. So the discovery of what turned out to be the great comet of the second half of the 20th Century – Hale-Bopp – was something of a happy accident.

There is the odd error. Mira is Latin for “wonderful” (also “strange”), not Arabic, and it was J.B.S. Haldane who commented on God’s apparent fondness for Beatles, not Charles Darwin. Still, The New York Times Book Review named “Seeing in the Dark” one of the ten best books of 2002, and it should get your vote too.

FEATURE ARTICLE

A Tribute to the Crew of The Columbia, STS-107

1. A Statement from the families of the Crew of STS 107, February 8, 2003

The Astronaut Spouses Group released the following statement on Friday, Feb. 7.

"We, the spouses and children of the NASA astronaut corps, would like to thank the people of the world from the bottom of our hearts for the incredible outpouring of support and love that you have shown us in our time of deep grief.

"NASA centers have been overwhelmed with cards, letters, emails, and phone calls from you expressing your concern and support. We have also received hundreds of personal calls, emails, flowers, food, and cards at our homes. The makeshift shrine in front of the Johnson Space Center is overflowing with flowers, signs, and balloons from well wishers from all over the world. Memorial services throughout the world have honored our dear friends. You, our brothers and sisters of the world community, have been a tremendous source of comfort and love to us and we are so grateful. We are deeply mourning our dear friends Rick, Willie, Mike, Kalpana, Ilan, Laurel, and Dave and we ask that you continue to keep their parents, wives, husbands, and children in your thoughts and prayers.

"We would also like the world community to know that as terrible and as difficult as this journey has been and will continue to be for all of our families, we cannot stress enough how blessed and honored we feel to be counted as members of the NASA family. We proudly support the noble goals and objectives of NASA and we will continue to support NASA in its finest and its darkest hours. It is our deepest hope that you also will continue to share in our belief and support of NASA's dreams. We believe NASA is a beacon of hope and light to all nations, for NASA has proven beyond the shadow of a doubt, that peoples from all races, genders, cultures, religions, and political backgrounds can transcend those differences and become the closest of friends. And these friends will continue to pursue space exploration and scientific discovery for the single purpose of helping and furthering all of mankind.

Thank you for your love and support.

"The husbands, wives, and children of the NASA Astronaut Corps."

2. Remarks by the Honorable Sean O'Keefe, NASA Administrator Given at the STS-107 Crew Memorial Ceremony NASA John F. Kennedy Space Center Cape Canaveral, Florida February 7, 2003

i.

This is the place where our space exploration dreams take flight. From here seven courageous astronauts sailed to the heavens on their daring adventure of exploration and discovery.

This is where great lives are defined by great purposes. Throughout our history, people have always marveled when great ships leave their ports and venture out beyond the horizon. When the history of our time is written, future generations will always know that the port that sent spirits and spacecraft soaring was named Kennedy.

It is from this port that forty-one years ago this month mission control uttered the words, "God-speed John Glenn," as this original seven Mercury astronaut became the first American to orbit the Earth. It was from this port that our Apollo moon voyagers set forth, coming in peace for all mankind.

ii.

"Mystery creates wonder, and wonder is the basis of man's desire to understand," said Neil Armstrong, the hero whose very next footprint after he stepped away from the sandy soil

here in Florida some 34 years ago came on the lunar soil at Tranquility Base. Yes, great lives are defined by great purposes. It was from here, too, that spacecraft were sent to explore the planets and moons of our solar system, sending back images of fascinating places that humans yearn to explore in the century ahead. Twenty-two years ago, from here, Columbia the new gem of our ocean of space, launched on her maiden voyage with the outstanding crew of John Young, and Bob Crippen, who we are honored to have on our stage today. Along with her sister shuttle's, Columbia helped set the stage for the permanent human occupancy of the space frontier, an amazing milestone in human history that is now being achieved on the International Space Station.

This was the port from which all this historic exploration occurred, and from which so much more history will be made as we continue to pursue our mission goals of understanding and protecting the home planet, exploring the Universe and searching for life, and inspiring the next generation of explorers.

iii.

Before her final voyage, Scott Thurston and the extraordinary team of folks who lived with, worried about, and attended to every single detail of Columbia, made sure that it was safe for flight. She carried as wonderful a group of human beings as you could ever hope to assemble—Rick Husband, William McCool, Mike Anderson, David Brown, Laurel Clark, Kalpana Chawla, and Ilan Ramon. We miss them more than words can describe. Last Saturday, Columbia and her stalwart crew were minutes away from this port, this very spot and safety, following their noble mission to advance the frontiers of science. Friends and family, we were gathered here at the Shuttle landing facility, waiting to give these space explorers a welcoming hug on their return to this good Earth. Instead, God brought the crewmembers into his loving embrace. Such are the mysteries of existence that we can never hope to fathom. Throughout our NASA family, and here at Kennedy as well, our rivers of tears flow. It was our fervent prayer that Columbia and its crew would safely come home to its harbor here at Kennedy. But this was not to be the case.

iv.

But please know this. Do not lose heart. The families of the astronauts, the American public, and the President have all expressed deep confidence in you. On Tuesday, you will recall, the President said, "The people of NASA are being tested once again. In your grief, you are responding as your friends would have wished—with focus, professionalism, and unbroken faith in the mission of this agency. Captain Dave Brown was correct: America's space program will go on." And we thank the President's brother, the Governor of Florida who is here with us, for the wonderful expression of support that he demonstrates. Governor, we are all proud of the performance of the Kennedy Space Center team. We know spaceflight has risk. But on Saturday when our worst fears were realized, the people of this Center were focused, organized and deliberate, doing so well what we've all been trained to do so many times. Your response here at Kennedy and the teamwork that was displayed was simply magnificent. And throughout this difficult week, you have assisted our ongoing data analysis and debris recovery work with thoughtful regard for the enormity of our duty. Like the rest of the NASA family, we will persevere.

v.

The entire space coast community and the people of Florida are part of this extended NASA family. To you the astronauts were more than heroes admired from afar—you shared a special bond with these space explorers, because when they went on their amazing adventures, they were going from this very backyard. We know the pride you have in our astronauts and in our entire NASA family. And to honor the legacy of Columbia's astronauts, and as a commitment to the families, you can be assured that we will find the cause of the accident, correct the problems and return to safe flight. Every time I come to Florida, I am eager to meet the members of our future generation of explorers, and there are so many here in the Florida area that certainly fit this characterization. Up and down the space coast there are kids who go to bed dreaming that they will one day grow up to be heroes the caliber of Rick, William, Mike, David, Laurel, Kalpana, and Ilan. And to these explorers of the future who are so fortunate to attend schools with names like Astronaut, Freedom 7, Challenger 7, Atlantis, Discovery, Endeavour and, of course, Columbia, we have a special message: While we are filled with sorrow now, there is so much about these heroic astronauts for us to be grateful about. Be grateful each had a burning desire to conduct research to help better our lives.

vi.

The astronauts, who represented such a wonderful tapestry of different races, religions and nationalities, also demonstrated through their genuine love for each other the essential brotherhood and sisterhood of man. Ilan Ramon reflected on this truth when as he paused to ponder the beauty of his ancient homeland, he observed how it "looks marvelous from up here, so peaceful, so wonderful and so fragile." We thank him for that priceless memory. Great lives are indeed defined by great purposes. This is the legacy of the Columbia astronauts that we will always remember...and treasure...forever. May God bless the crew of STS-107, and give comfort to all those who mourn for these valiant heroes.

3. President Bush Attends Memorial Service for Columbia Astronauts
Remarks by the President at the Memorial Service in Honor of the STS-107 Crew, Space Shuttle Columbia
National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
Houston, Texas

THE PRESIDENT: Their mission was almost complete, and we lost them so close to home. The men and women of the Columbia had journeyed more than 6 million miles and were minutes away from arrival and reunion.

The loss was sudden and terrible, and for their families, the grief is heavy. Our nation shares in your sorrow and in your pride. And today we remember not only one moment of tragedy, but seven lives of great purpose and achievement.

To leave behind Earth and air and gravity is an ancient dream of humanity. For these seven, it was a dream fulfilled. Each of these astronauts had the daring and discipline required of their calling. Each of them knew that great endeavors are inseparable from great risks. And each of them accepted those risks willingly, even joyfully, in the cause of discovery.

Rick Husband was a boy of four when he first thought of being an astronaut. As a man, and having become an astronaut, he found it was even more important to love his family and serve his Lord. One of Rick's favorite hymns was, "How Great Thou Art," which offers these words of praise: "I see the stars. I hear the mighty thunder. Thy power throughout the universe displayed."

David Brown was first drawn to the stars as a little boy with a telescope in his back yard. He admired astronauts, but, as he said, "I thought they were movie stars. I thought I was kind of a normal kid." David grew up to be a physician, an aviator who could land on the deck of a carrier in the middle of the night, and a shuttle astronaut.

His brother asked him several weeks ago what would happen if something went wrong on their mission. David replied, "This program will go on."

Michael Anderson always wanted to fly planes, and rose to the rank of Lt. Colonel in the Air Force. Along the way, he became a role model -- especially for his two daughters and for the many children he spoke to in schools. He said to them, "Whatever you want to be in life, you're training for it now." He also told his minister, "If this thing doesn't come out right, don't worry about me, I'm just going on higher."

Laurel Salton Clark was a physician and a flight surgeon who loved adventure, loved her work, loved her husband and her son. A friend who heard Laurel speaking to Mission Control said, "There was a smile in her voice."

Laurel conducted some of the experiments as Columbia orbited the Earth, and described seeing new life emerge from a tiny cocoon. "Life," she said, "continues in a lot of places, and life is a magical thing."

None of our astronauts traveled a longer path to space than Kalpana Chawla. She left India as a student, but she would see the nation of her birth, all of it, from hundreds of miles above. When the sad news reached her home town, an administrator at her high school recalled, "She always said she wanted to reach the stars. She went there, and beyond." Kalpana's native country mourns her today, and so does her adopted land.

Ilan Ramon also flew above his home, the land of Israel. He said, "The quiet that envelopes space makes the beauty even more powerful. And I only hope that the quiet can one day spread to my country." Ilan was a patriot; the devoted son of a holocaust survivor, served his country in two wars. "Ilan," said his wife, Rona, "left us at his peak moment, in his favorite place, with people he loved."

The Columbia's pilot was Commander Willie McCool, whom friends knew as the most steady and dependable of men. In Lubbock today they're thinking back to the Eagle Scout who became a distinguished Naval officer and a fearless test pilot. One friend remembers Willie this way: "He was blessed, and we were blessed to know him."

Our whole nation was blessed to have such men and women serving in our space program. Their loss is deeply felt, especially in this place, where so many of you called them friends. The people of NASA are being tested once again. In your grief, you are responding as your friends would have wished -- with focus, professionalism, and unbroken faith in the mission of this agency.

Captain Brown was correct: America's space program will go on.

This cause of exploration and discovery is not an option we choose; it is a desire written in the human heart. We are that part of creation which seeks to understand all creation. We find the best among us, send them forth into unmapped darkness, and pray they will return. They go in peace for all mankind, and all mankind is in their debt.

Yet, some explorers do not return. And the loss settles unfairly on a few. The families here today shared in the courage of those they loved. But now they must face life and grief without them. The sorrow is lonely; but you are not alone. In time, you will find comfort and the grace to see you through. And in God's own time, we can pray that the day of your reunion will come.

And to the children who miss your Mom or Dad so much today, you need to know, they love you, and that love will always be with you. They were proud of you. And you can be proud of them for the rest of your life.

The final days of their own lives were spent looking down upon this Earth. And now, on every continent, in every land they could see, the names of these astronauts are known and remembered. They will always have an honored place in the memory of this country. And today I offer the respect and gratitude of the people of the United States.

May God bless you all.

4. Senate Honors Columbia
**The United States Senate honored the Columbia crew with
Senate Resolution 41**

Resolved, That the Senate commemorates with deep sorrow and regret the fate of the Columbia space shuttle mission and when it adjourns today, it do so as a further mark of respect to the astronauts who lost their lives.

5. Irish Woman Set for Space
By Mairead Carey

A 28-YEAR-old Offaly woman still believes that she will be Ireland's first astronaut despite the Columbia tragedy over the weekend.

Michelle McKeon, a research scientist, is due to travel to Florida later this year to take part in a space technology program at the Kennedy Space Center.

McKeon, who is currently working as a lecturer at Limerick Institute of Technology, met officials from NASA over the weekend to discuss her research project on hydroponics – the growing of plants without soil.

NASA has set up a pilot program in Ireland with the training agency FAS. They held an opportunities fair last year, and officials were so impressed with McKeon's research that they invited her to the Florida Space Center.

McKeon has been fascinated with space travel since she was a child. "I had this image of being able to touch the stars and it was one of the driving factors for me," she said.

The weekend tragedy was devastating, she added. "But if anything, it has made me more determined. It terrifies me that something like this can happen and in a way, it's a reality check, but science is a passion and the people who lost their lives in the Columbia space shuttle wouldn't want us to stop." One of the seven who died in the tragedy had strong connections with Co. Donegal. William McCool, 41, had relatives around Carndonagh, from where his grandfather Joseph emigrated to Boston over 70 years ago.

Anna Kemmy, 82, who is a cousin of McCool's, said the family had always kept in touch with home, and returned to Ireland for funerals. She described his death as a great tragedy.

Reprinted from Irish Abroad, 2/08/2003

<http://www.irishabroad.com/news/irishinamerica/news/olstory.asp?article=1942928>

6. The Latest

developments, remarks, commentary and information about STS-107, the Crew of the Columbia and the tragedy that befell us all on 1 February, 2003, please visit NASA's Official Columbia Website at: <http://www.nasa.gov/columbia> . The official Website for the memorial can be found at: http://www.nasa.gov/columbia/COL_memorial.html . The official website for the investigation: <http://www.spaceflight.nasa.gov/shuttle/investigation/index.html>

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OBSERVATORY DUTY

INTERESTED IN SERVING AS AN OBSERVATORY STAFF MEMBER?
Observatory chair, Jim Eagan is looking for volunteers who would like to take the next course and become Observatory Staff members. If you would like further info, please contact Jim at 631-369-4517, evenings or by email to:
James_L_Eagan@compuserve.com .

ANNOUNCEMENTS

WELCOME TO OUR NEW OR RETURNING MEMBERS

Robin & Richard Amper of Ridge received a gift membership from Jill Lewis; Eric Halber of Nesconset and Vicki Schuppe-Howitt of East Meadow, welcome back.

CUSTER NEEDS VOLUNTEERS TO HELP!

The new year is here and there is a lot of fixing up, cleaning up, indoor, and outdoor work that needs doing around Custer, early this Spring. We need lots of members to volunteer for a work party day or two to make it happen. There is no one else to get it done, **just you, our members and friends**. So, please try to donate a 10 AM to 5 PM Saturday of work to your organization in March and April. Give me a call at 631-218-2350 or Email me at bvanson@aol.com. Once I have assembled a group of volunteers, the work party dates will be posted on the web site, www.custerobservatory.org, and in the Comment, so keep watching!

TOM MADIGAN, Editor
CUSTER COMMENT

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FORWARDING AND ADDRESS CORRECTION REQUESTED

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