

Pat Rawlings

2002 Rotary National Award For Space Achievement 

A True Space
Pioneer.

Boeing salutes Dr. George E. Mueller,
winner of the 2002 Rotary National Award for Space Achievement.

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 **BOEING**[®]
Forever New Frontiers

Phillips...

could never understand

why^{the} histories of Apollo

paid so little attention
to Mueller -
he hadn't ever

“gotten the credit that

he really **deserves**
for the **success** of Apollo.”

It wasn't just the *big* things,

like the *all-up* decision....

Mueller could work

The *Hill* one day,

then go off and **supervise** a

highly
technical task force
to **deal** with
problems

in
the flight operations software.

“I’ve never dealt
with
a more **capable** man,
in terms
of his **technical
ability,”**
said **Chris Kraft**,
who dealt with
everybody.



Awards Banquet

Sixteenth Annual

2002

Rotary National Award
For Space Achievement

Awards Banquet

Friday, March 8

6:00

RECEPTION

7:00

WELCOME

Floyd V. Bennett
Chairman, RNASA Foundation

PRESENTATION OF COLORS

Houston Naval Reserve

NATIONAL ANTHEM

Shari Wilkins

INVOCATION

Reverend Morris Mathis
Pastor, Clear Lake United Methodist Church

DINNER

8:15

VIDEO INTRODUCTION TO PROGRAM

INTRODUCTORY REMARKS AND INTRODUCTIONS

Ron Stone
Master of Ceremonies

PRESENTATION OF SPACE COMMUNICATOR AWARD

Daniel K. Carpenter
JSC Public Affairs Office

PRESENTATION OF THE STELLAR AWARDS

Astronauts Lt. Col. Pamela Melroy and Dr. James F. Reilly

PRESENTATION OF THE NATIONAL SPACE TROPHY

Dr. Christopher C. Kraft

PRESENTATION OF OMEGA WATCH

Lt. Gen. Thomas Stafford and
Roy McCharen, Omega

CLOSING OF PROGRAM AND SPONSOR RECOGNITIONS

9:30

POST BANQUET COFFEE HOUR

WRITTEN TRIBUTE TO CHARLES HARTMAN

Dr. George E. Mueller

National

George Mueller, Ph.D. has been a key player in the United States aerospace program for nearly five decades. Often referred to as the “father of the space shuttle program,” his contributions have led to major advancements in the ballistic missile, Apollo, Skylab, Space Shuttle and commercial programs.



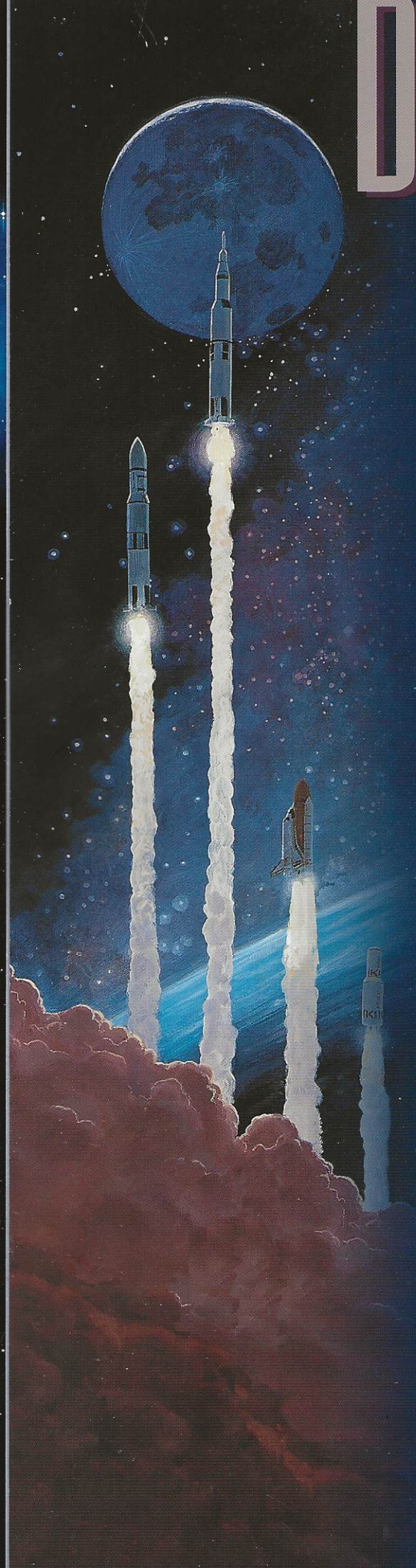
Since 1995, Dr. Mueller, 83, has served as chief executive officer of Kistler Aerospace Corporation, where he directs the development and operations of the K-1 aerospace vehicle. The K-1, a commercial reusable launch vehicle, is designed to deliver satellites into low-Earth orbit and provide a low-cost alternative to single-use launch vehicles. Dr. Mueller guides Kistler's professional team, along with seven major aerospace contractors who are collaborating on the program. He also directs corporate strategies in launch site selection, marketing, finance and corporate relations.

After earning a master's degree in electrical engineering from Purdue University in 1940, he joined the technical staff at Bell Telephone Laboratories. In 1946, he became a professor of electrical engineering at Ohio



State University, developing curriculum, unique engineering-based courses and laboratory research projects. Four years into his teaching career, he earned his doctorate in physics. Dr. Mueller later took a one-year sabbatical at Ramo Wooldridge Corporation, where he led the design review of the missile guidance systems for the Intercontinental Ballistic Missile (ICBM) program. The challenges of this program and its applications to space exploration inspired Dr. Mueller to take a full-time position with Ramo Wooldridge in 1957. As the head of the electronic laboratories division, he oversaw the guidance and control systems of the Atlas, Titan, Thor and Minuteman ballistic missiles. He was also the project engineer for the development of the United States' first successful space probe, Pioneer 1, and for the establishment of the U.S. Air Force SPAN satellite tracking network.

By now, the year was 1963 and the United States was in a race to put a man on the Moon by the end of the decade. Having earned a reputation as a successful manager of space programs, Dr. Mueller joined NASA as the associate administrator for manned space flight. As leader of the Apollo and Saturn programs, he quickly saw that current plans called for testing individual pieces of flight-ready hardware in a single mission. This plan was not going to lead to the lunar landing before 1971. Therefore, Dr. Mueller proposed to drastically condense testing plans. His “all-up” approach tested



Mueller

Space Trophy Recipient



all pieces of flight-ready hardware in one single launch. Although considered extremely risky, Dr. Mueller's approach was later acknowledged as the only way NASA was able to achieve the lunar landing by the end of the '60s.

During his six-year career at NASA, Dr. Mueller supervised the actions of the directors at three NASA field centers. He also developed one of the most sophisticated and successful management systems ever devised, which synergized the activities of 20,000 industrial firms, 200 universities

and colleges, and thousands of individuals. He originated Skylab, and authored "An Integrated Program of Space Utilization and Exploration," which has been the guiding document for NASA for several decades following the Apollo program.

Dr. Mueller left NASA in 1969 to launch a career in private industry. He joined General Dynamics Corporation as its senior vice president, supervising the defense division and managing the company's transition in the post-Apollo era. In 1971, he joined System Development Corporation, a pioneer in large computer-

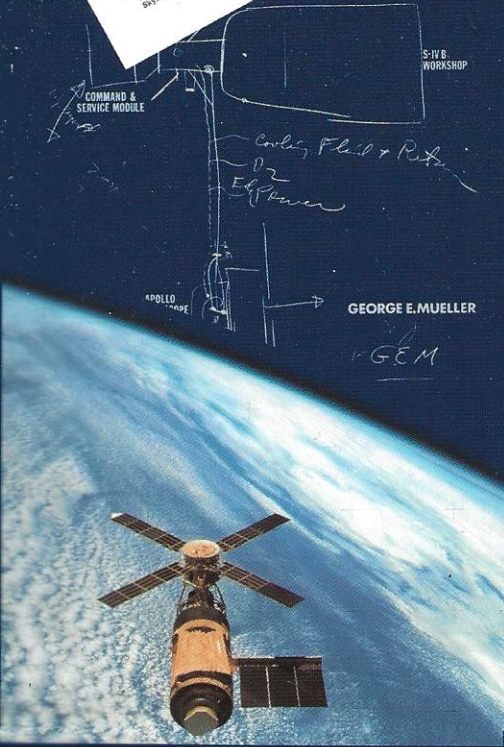
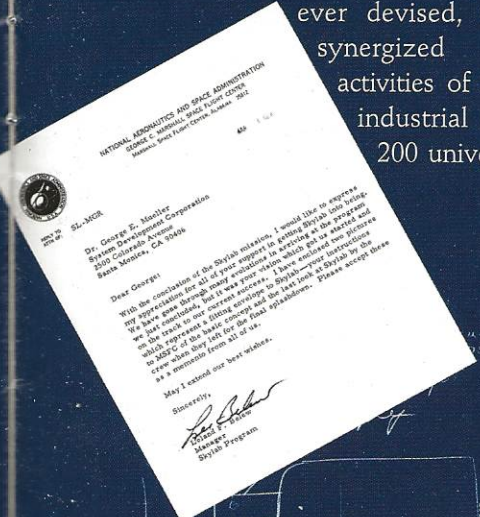
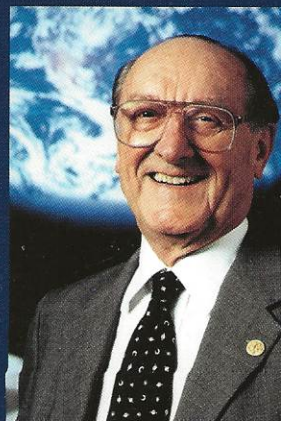


Dr. Mueller's accomplishments have garnered him tremendous accolades from educational institutions, as well as space-based organizations and groups. He holds honorary doctorates from six major universities. He also has received three NASA Distinguished Service Medals and received the National Medal of Science in 1970 for his contributions to the design of the Apollo system.

Throughout his entire career, Dr. Mueller has been described as an inspirational leader who combines intellect with practicality to outline a clear vision for success. He has always demanded excellence from his employees by empowering them with the authority and support to successfully perform their assignments. This unique approach has led him to create first-rate technical teams for nearly 50 years.



A native of St. Louis, Missouri, Dr. Mueller is the father of four grown children. He and his wife, Darla Jean, have been married since 1978 and currently reside in Kirkland, Washington.



Ron Stone

Master of Ceremonies



Ron Stone is a household name in Houston. Billed by the *Houston Chronicle* as "the most popular and revered anchor Houston has ever seen," he spent more than 30 years broadcasting the news on Houston television stations KHOU-TV/Channel 11 (CBS) and KPRC-TV/Channel 2 (NBC).

Mr. Stone launched his broadcast journalism career in his native Oklahoma, but was later lured to Texas by a young newsman who was quickly climbing the broadcasting ladder, Dan Rather. Mr. Rather hired Mr. Stone as a reporter, assigning him to crime and court stories before moving him inside the studio as an anchor.

As a reporter, Mr. Stone has done everything from interviewing presidents and world leaders to covering wars in the Middle East. He was at the Berlin Wall the night it fell, and covered the 50th anniversary of D-Day in France. In addition, Mr. Stone did his share of covering the U.S. space program.

"I remember traveling to Webster to cover the community's reaction to the announcement that NASA was going to build its Manned Spacecraft Center on the shores of Clear Lake," Stone said. "Some people were excited. Others were skeptical. But, the man I most remember was a Japanese-American truck farmer who looked up at the sky as we talked, awed by the idea that man was going to the stars. He said, 'This is good land. I hope this is a good thing that will grow here now.' I will never forget that man."

Mr. Stone also remembers standing in the Channel 2 control room during the Apollo 11 landing. "We were all crowded into the room watching the live feed from the NASA monitor," he said. "Then, I watched our director punch a button in our control room, and suddenly, the world saw a man land on the Moon."

In 1992, Mr. Stone retired from his anchoring position at KPRC-TV and launched a new venture with his youngest son, Billy. Stonefilms of Texas, a production company, has grown into one of the most successful broadcast and corporate communications firms in Houston. Mr. Stone currently serves as the company's president.

In addition to his on-camera career, Mr. Stone has also appeared on the radio waves as a football broadcaster for the National Football League and the former Southwest Conference. He is also an accomplished author and has written three books on Texas history, including *A Book of Texas Days*, *Disaster at Texas City* and *Houston: Simply Spectacular*. He also writes a monthly column for the *Lifestyle* magazine in Houston, and has contributed Texas stories to AAA's *Journey Magazine*. Civically, Mr. Stone is an active member of the Sons of the Republic of Texas and a Knight of San Jacinto.

Mr. Stone earned a bachelor's degree in arts from East Central State University and a master's degree in language arts from Houston Baptist University. In 1994, the University of Houston awarded him an honorary doctorate of humane letters. He also serves as artist in residence in the communications department at The University of St. Thomas.

Dr. Christopher C. Kraft

The National Space Trophy Presented

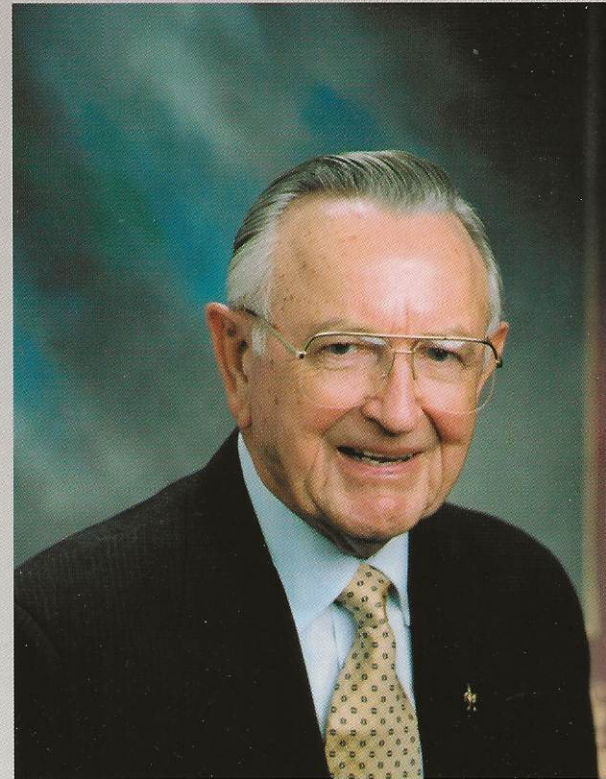
Dr. Chris Kraft will present the 2002 Rotary National Award for Space Achievement to his longtime friend and colleague, George Mueller. A former director of the Johnson Space Center (JSC) for 10 years, Dr. Kraft is known as a driving force in the United States human spaceflight program. His legendary accomplishments have helped shape the program from its early beginnings to the Space Shuttle era.

Dr. Kraft launched his career in January 1945 when he joined the Langley Aeronautical Laboratory of the National Advisory Committee for Aeronautics, the predecessor to NASA. There he made significant contributions in aeronautical flight research. Shortly after NASA was formed in October 1958, Dr. Kraft was assigned to Project Mercury, which officially launched the U.S. human space flight program. Throughout the Mercury program, he performed numerous duties and roles, including director of flight operations and manager of the creation of Mission Control Center in Houston. He later moved into mission planning and operational control of the Gemini program, leading all aspects of flight operations until the second lunar landing.

In December 1969, Dr. Kraft was appointed deputy director of the Manned Spacecraft Center, now known as JSC, and became its director in 1972. Over the next 10 years, he played a vital role in the creation of the Space Shuttle program.

Dr. Kraft retired from NASA in August 1982 and launched a career in private industry. He has served as an aerospace consultant to Rockwell International, IBM and several other companies. He served two terms as director-at-large of the Houston Chamber of Commerce and two, 4-year terms as a member of the Board of Visitors at Virginia Polytechnic Institute and State University.

He holds a bachelor's degree in aeronautical engineering from Virginia Polytechnic Institute and State University. In addition, he has earned honorary doctorates from the Indiana Institute of Technology, St. Louis University and Villanova University. Dr. Kraft is a member of several aerospace-related professional organizations, and has earned numerous awards and accolades throughout his career, including three NASA Distinguished Service Medals and NASA's Outstanding Leadership Medal, which was awarded by President John F. Kennedy in 1963. In 2001, he published his autobiography entitled FLIGHT -My Life in Mission Control.



The National Space Trophy

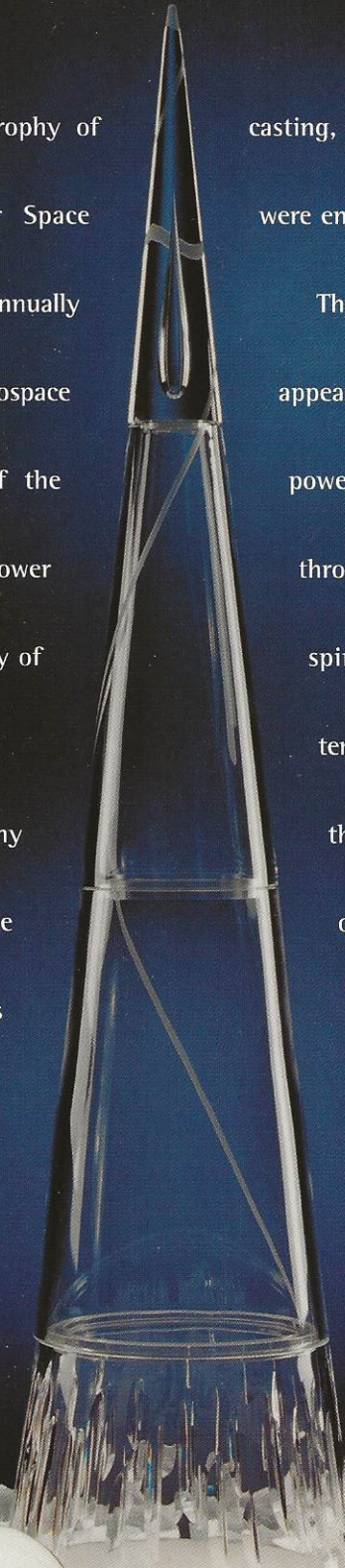
The prestigious National Space Trophy of the Rotary National Award for Space Achievement Foundation, awarded annually to an individual selected by aerospace leaders, depicts the aspiration of the human need to explore space, the power and vastness of space and the glory of human achievement.

Created by Steuben Glass Company of New York, the trophy is made entirely of lead crystal. It weighs approximately 500 pounds and is almost four feet tall. Most of the processes practiced by Steuben –

casting, cutting, blowing and engraving – were employed in the trophy's creation.

The trophy is a conical column that appears to hover over a field, of explosive power, randomly scattered with spheres throughout. A bright sandblasted line spirals around the column and terminates at the tip. Captured within the top of the cone is a bubble of air, seeming to hurtle upward.

The trophy is permanently displayed at Space Center Houston, the official visitors center of the Johnson Space Center.

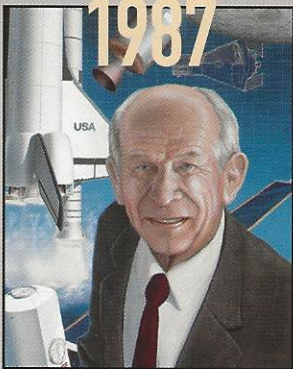


Past Recipients

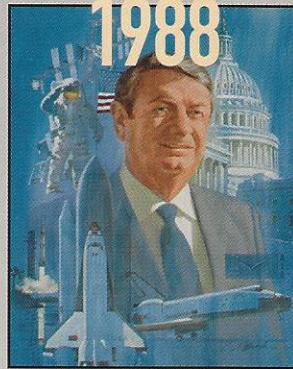
Previous National Space

Trophy Award
Recipient

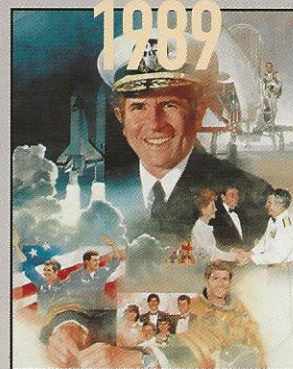
Dr. Maxime Faget



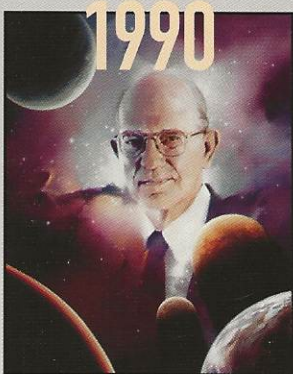
Don Fuqua



Vice Adm. Richard Truly



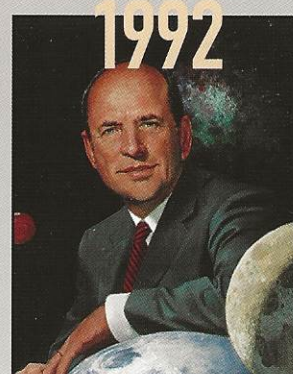
Dr. Lew Allen



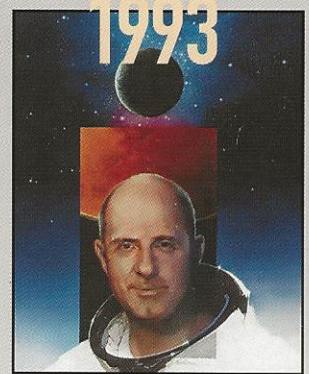
Aaron Cohen



Norman Augustine



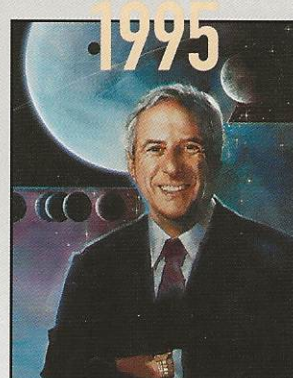
Lt. Gen. Thomas Stafford



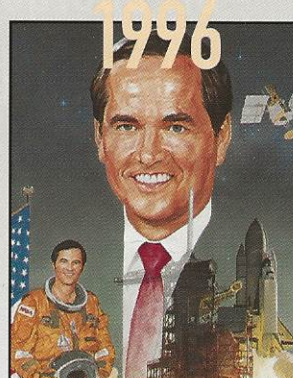
E.C. "Pete" Aldridge



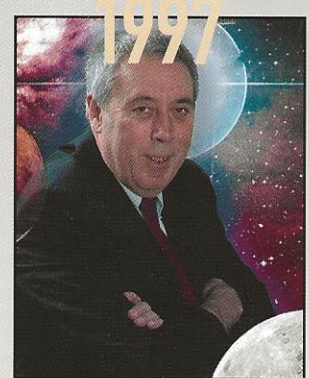
Dan Goldin



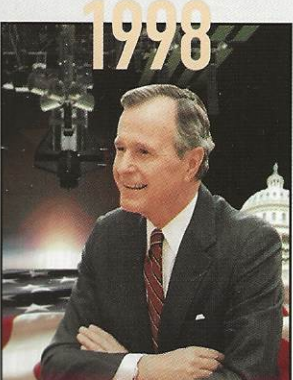
Robert L. Crippen



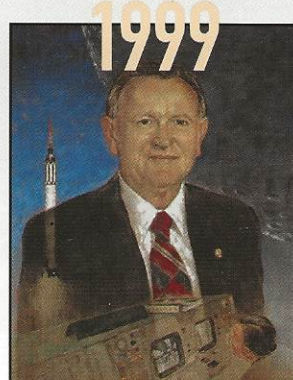
George W. S. Abbey



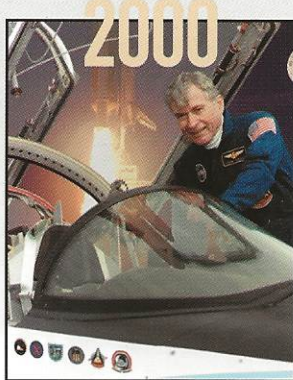
George W. Bush



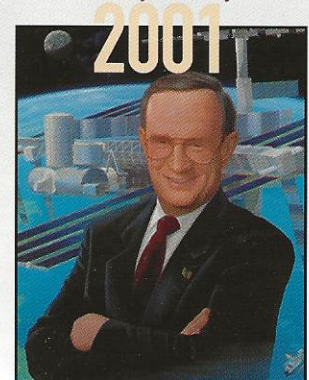
Christopher C. Kraft, Jr.



John W. Young



Tommy Holloway





We Congratulate
Dr. George E. Mueller
for Building the Steps on a
Stairway to the Heavens



SAIC
An Employee-Owned Company

Daniel K. Carpenter

Space Communicator Award Presenter



RNASA is proud to have Daniel K. Carpenter as the presenter of this year's Space Communicator Award. A former member of the United States Marine Corps, Mr. Carpenter is the current director of public affairs at the Johnson Space Center.

Mr. Carpenter launched his career in the U.S. Marines as an infantry platoon commander in 1980. Two years later, he became a public affairs officer at one of six Marine Recruiting District Headquarters. In 1988, he was promoted to personal assistant and public affairs officer for the commander general of the 4th Marine Expeditionary Brigade. During this assignment, he spent eight months in the North Arabian Sea and Persian Gulf aboard the USS Nassau from August 1990 to April 1991. There, he worked media issues associated with the largest amphibious force assembled since the Korean War. A highlight of this trip was coordinating details for the White House media pool traveling with President George Bush for his Thanksgiving visit to the USS Nassau in the Persian Gulf.

Other positions during his Marine career included media course director for the Marine Corps Command and Staff College from 1995 to 1996, where he taught media relations principles and techniques to 200 students a year. As director of the Consolidated Public Affairs Office from 1996 to 1998, he was stationed in Okinawa, Japan, where he gained real world strategic and operational public affairs experience. He also served as a public affairs doctrine officer where he edited the first operational public affairs guide for the Marine Corps. After a 20-year career, Mr. Carpenter retired from the Marines in May 1999.

After earning a master's degree in public administration from Harvard University, Mr. Carpenter joined NASA in the summer of 2000. In addition to this degree, he holds a bachelor's degree in radio-television broadcasting from the University of Mississippi, as well as a master's degree in information technology management from the Naval Postgraduate School in Monterey, California.

CNN's Miles O'Brien

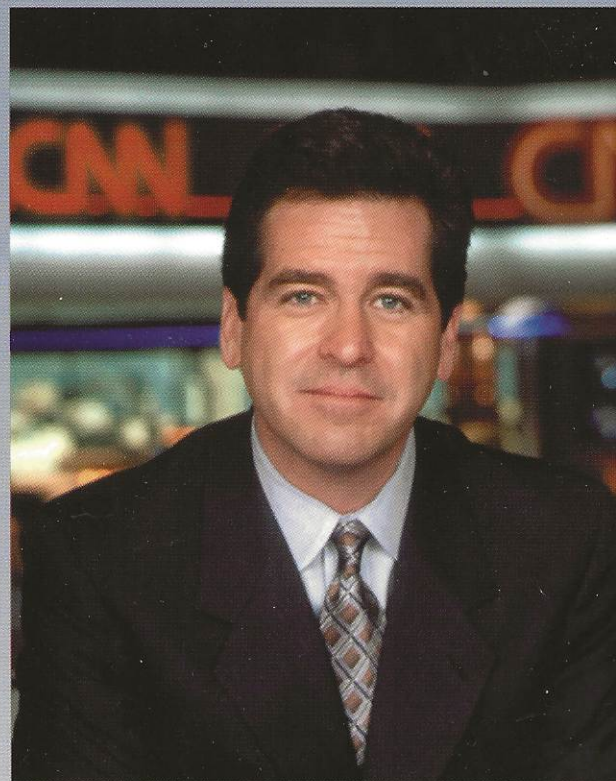
Space Communicator Award Recipient

Miles O'Brien, news anchor and chief space correspondent for CNN News Group in Atlanta, covers all aspects of space flight, as well as automated scientific missions for CNN. Known in the industry for presenting balanced and accurate stories, he is an Emmy award-winning journalist who has played a crucial role in bringing the stories of today's space program to viewers around the world.

Mr. O'Brien launched his career in 1982 as an assignment editor at WRC-TV in Washington, D.C. For the next 10 years, he worked as a general assignment reporter and anchor for television stations in Boston, Massachusetts, Tampa, Florida, Albany, New York and St. Joseph, Missouri.

In 1992, Mr. O'Brien joined CNN as an anchor and correspondent for CNN's Science Unit. In this position, he produced various stories for air during CNN's daily programming, as well as wrote and hosted the weekly broadcast, *CNN Science & Technology Week*.

He has been at the forefront of such aerospace milestones as Senator John Glenn's return to space in 1998, where he shared the desk with Walter Cronkite, as well as the launch of the first multinational crew to live aboard the International Space Station in 2000. He recently completed a one-hour documentary that provides viewers with an unprecedented look inside the intricate, sometimes-perilous process of preparing the space shuttle for flight. In addition to his on-camera duties, Mr. O'Brien writes a widely read Internet column on space issues called "Downlinks" for www.cnn.com. In October 2000, he spearheaded the effort to simultaneously video-stream a shuttle launch live to the Web, allowing participants in a CNN.com online chat room to pose questions to him and an astronaut during the countdown and ascent. An instrument-rated pilot with several hundred hours of flight time in a dozen types of aircraft, Mr. O'Brien earned his bachelor's degree in history from Georgetown University.



Melroy & Reilly

Stellar Award Presenters



Pamela Ann Melroy

A lieutenant colonel in the U.S. Air Force (USAF), Pamela Melroy is a Shuttle pilot with more than 300 hours in space. She has logged more than 5,000 hours of flight time in nearly 50 different aircraft, including 200 combat and combat support hours.

She served as pilot aboard STS-92/Discovery in October 2000. During the 13-day mission, the seven-member crew performed four space walks and used Discovery's robotic arm to attach the Z1 Truss and Pressurized Mating Adapter 3 to the International Space Station (ISS). This expansion of the ISS opened the door for future assembly missions and prepared the station for its first resident crew. She is scheduled to return to space later this year as pilot on STS-112.

Prior to her astronaut career, Lt. Col. Melroy spent nine years in various assignments within the USAF.

Lt. Col. Melroy holds a bachelor's degree in physics and astronomy from Wellesley College and a master's degree in earth and planetary sciences from the Massachusetts Institute of Technology.



James F. Reilly II, PhD

An officer in the U.S. Navy Reserves, James F. Reilly, II, Ph.D. is a Shuttle mission specialist and veteran of space flight with two space walks. Between his two missions, he has logged more than 500 hours in space.

Dr. Reilly was named to NASA's astronaut corps in 1994. His first trip to space was in 1998 aboard Endeavour on STS-89, the eighth Shuttle-Mir docking mission. The crew transferred over 9,000 pounds of scientific equipment, logistical hardware and water from Endeavour to Mir. The crew also delivered Andy Thomas to Mir and returned with David Wolf, the fifth and last exchange of a U.S. astronaut.

His second flight was aboard Atlantis on STS-104 in 2001, the ninth assembly flight for the International Space Station. The crew performed three spacewalks to deliver and install the Joint Airlock, which will permit spacewalks without Russian or U.S. spacesuits.

Prior to becoming a NASA astronaut, Dr. Reilly established a solid career as a geoscientist. He holds bachelor's, master's and doctorate degrees in geosciences from the University of Texas-Dallas.

Nominees

Stellar Award

EARLY CAREER

Capt. Brian C. Barker United States Air Force

Dynamic leadership and astute technical abilities applied to the development and implementation of the next-generation Global Positioning System (GPS) military navigation signal, thus paving the way for civil "safety of life" use of GPS and advancing military dominance for the next 30+ years.

Paul M. Bilstein TechTrans International, Inc.

Dedication to excellence in teaching and a commitment to the vision of international cooperation in space, during management of the JSC Language Training Program for ISS and

Shuttle crews, and implementation of unified training programs between NASA-JSC and the Russian Space Agency.

Ketan S. Chhipwadia NASA-Johnson Space Center

Exceptional level of professional responsibility, technical expertise and leadership as project manager in the design, development and certification of the waste collection and water transfer hardware for human operations in space.

Ali R. Dianaty Boeing, Rocketdyne

Significant contributions to the design and development of the new generation of turbopumps for booster and upper stage liquid rocket engine applications.

Steven E. Fredrickson, Ph.D. NASA-Johnson Space Center

Effective leadership of an inter-disciplinary team during development of the Autonomous Extravehicular Robotic Camera (AERCam), a small and technologically advanced free-flying robotic camera for extravehicular inspections and supplemental camera views of the ISS.

Jason T. Hutt United Space Alliance

Demonstrated outstanding leadership and technical abilities in fulfilling the training needs of STS-98/5A, Expedition 1 and other customers; skill development of his fellow instructors; and enhanced fidelity of two of the major simulators used for Space Flight Training.

Christie N. Sauers
NASA-Johnson Space Center

Technical expertise and leadership in managing the X-38 electrical systems integration team, which has engineered the most complex wiring system design ever produced by the Johnson Space Center.

Julie A. Smith
Boeing, Rocketdyne

Significant contributions to advanced rocket engine programs with rapid turnaround, low-cost test data review approaches, integrated test planning and procedures and risk management approaches.

Mark E. Tobias
ATK Thiokol Propulsion Corp.

Key contributions to potential break-through enhancements in Space Shuttle safety and performance during the Five-Segment Booster Solid Rocket Motor and Five-Segment Reusable Solid Rocket Motor static test development projects.

Capt. John W. Wagner
USAF Space Warfare Center

Tremendous impact on our national security space programs and the advancement of space technologies which will ensure that the U.S. maintains space superiority and remains ready to meet future challenges.

Timothy J. Woeste
NASA-Johnson Space Center

Successful leadership of two critical Shuttle flight tests of the ISS Space Integrated GPS/Inertial Navigation System (SIGI) Orbital Attitude Readiness Experiment and effective management of the ISS SIGI program.

MIDDLE CAREER

Daniel R. Adamski
Boeing, Rocketdyne

Nationally recognized expertise in large rocket engines and responsibility for assuring safety of flight for the Space Shuttle main engines.

Richard D. Bailly
Boeing, Rocketdyne

Excellent technical and programmatic leadership of critical Boeing rocket engine and electrical power system development programs, with notable attention to detail and organizational skills, root cause and corrective action process logic.

Maj. Thomas Becht
United States Air Force

Definition, design and engineering of modifications to the GPS replenishment satellites that will provide unprecedented new capabilities to military and civil users of GPS worldwide.

Jeppy L. Clayton
NASA-Marshall Space Flight Center

Dedication, thoroughness and professionalism shown in the critical engineering and analytical assessments of the Space Shuttle's Reusable Solid Rocket Motor's nozzle joint sealing systems.

Kevin J. Cramer
Boeing, Rocketdyne

Product team management of the Space Shuttle Main Engine Turbomachinery, in spite of significant reductions in personnel, and support of program year-end cost underruns of more than \$100 Million.

Donald A. Cybulski
NASA-Johnson Space Center

Innovative approaches to the design, development,

upgrade and test of flight, ground support and technology hardware projects, including the ISS 120-volt and 28-volt power strips, the NASA Standard Initiator Resistance Measure Unit and Mini-AERCAM battery electronics.

Eric P. Gardze, Jr.
Boeing, Rocketdyne

Extensive engine processing knowledge and engineering excellence that are instrumental to KSC's timely achievement of critical Space Shuttle Main Engine processing milestones.

Michelle S. Gonzales
NASA-Johnson Space Center

Providing indispensable integration and problem solving during mission integration, scheduling, resource management and coordination between JSC's Mission Operations Directorate and other JSC organizations.

Linda J. Ham
NASA-Johnson Space Center

Exceptional leadership and guidance in the planning of Space Shuttle flights, formulation of critical mission objectives and process improvement for Shuttle problem reporting and corrective action, resulting in increased compliance and cost savings.

Kenneth W. Hunt
Boeing, Rocketdyne

Groundbreaking work on the definition of injector systems for the engines of future NASA space launch vehicles, and outstanding leadership of numerous challenging combustion device technology projects including the RS-68 hydrogen/oxygen rocket engine, the X-33 aerospike program and the Kinetic Energy Weapon engines.

MSgt Charles L. Jamison
United States Air Force
76th Space Control Squadron

Outstanding technical expertise and leadership while serving as an Air Force Space Support Team member and the Mission Generation Flight Commander for the 76th Space Control Squadron.

Capt. Muhammad S. Khan
United States Air Force
GPS Joint Program Office

Exceptional contributions in representing the U.S. government in the formulation, acceptance and international adoption of favorable GPS radio frequency protection positions and the defense of U.S. positions leading to the World Radiocommunication Conference in 2003.

Col. Donald P. Knight
United States Space Command

Career achievements in 25 years of military space operations ensuring full space support to both the United States military and its allies.

Gerald J. LeBeau
NASA-Johnson Space Center

Persistence, dedication and creativity in the development of the Direct Simulation Monte-Carlo Analysis Code, recognized as NASA's state-of-the-art computational tool for low density flow field simulations.

Dean L. Lenort
United Space Alliance

Critical support of Space Shuttle flights as a propulsion systems analyst, propulsion systems flight controller and as the propulsion project lead for the Orbiter Propellant Transfer System, Forward RCS Interconnect System and the Shuttle Cockpit Avionics upgrade teams.

Gregg J. Martin
The Boeing Company

Crucial and effective day-to-day direction of the entire Boeing team, consisting of thousands of talented workers who contributed to the firm's construction, integration and deployment of the ISS Phase 2 elements during fourteen successful integration missions in twelve months.

Isaac W. Moore
NASA-Johnson Space Center

Initiative and leadership during two decades of work in JSC's spaceflight training facilities and mission operations, including work on the Shuttle Mission Simulator, the Shuttle-Mir Phase I Program and the Space Vehicle Mockup Facility.

Ronald R. Ninneman
United States Air Force
Space & Missile Systems Center

Highly successful development and execution of the first demonstration of autonomous adaptive structural control in space and the first active science experiment flown aboard the ISS, the Middeck Active Control Experiment Reflight, which provides an enabling technology for the operation of extremely large optical systems in space.

Daniel J. Rybicki
Lockheed Martin Space Operations

Excellence in the design and development of inventive contributions to welding technology for the Space Shuttle and International Space Station Program.

Michael T. Suffredini
NASA-Johnson Space Center

Establishing critical ISS technical and management processes, superb expertise and knowledge in troubleshooting and comprehensive leadership in the integration of engineering and testing processes for international hardware destined for the ISS.

Russell L. Swart
United States Air Force,
Air Force Space Command

Significant contributions to acquisition management and planning for the Space Based Laser Integrated Flight Experiment, with potential to provide the world's first-ever global boost-phase missile defense capability.

Dave A. Thayer
American Pacific Corporation

Heroic and indispensable effort in preserving America's production capacity for the strategic solid rocket fuel component, ammonium perchlorate and applying the production process to the rigorous requirements of manned space flight.

Ronald Tyre, Jr.
Boeing, Rocketdyne

Effective direction of the Space Shuttle Main Engine manufacturing and coordination between product and process teams at NASA and within Boeing organizations.

James E. Van Laak
NASA-Johnson Space Center

Vigilant organization and timely resolution of ISS on board operations issues during the past decade of joint U.S. and Russian flights, with integrity, commitment, outstanding leadership, devotion to duty and multiple technical and managerial competencies

Stellar Award

David A. Weber **United Space Alliance**

Instrumental leadership in transitioning the NASA managed tasks to United Space Alliance in the first years of USA's formation and achievement of numerous successes as Deputy Director, Launch Operations.

Jeff P. Wilkinson **ATK Thiokol Propulsion Corp.**

Extraordinary leadership in the critical area of Integrated Product and Process Development to dramatically improve the quality of Reusable Solid Rocket Motor "build-to-packages," while increasing efficiency and reducing hardware nonconformities.

LATE CAREER

Paul E. Adamek **United Space Alliance**

Significant achievements in support of continuous improvements to the Space Shuttle Program's ground operations and launch processes at the Kennedy Space Center.

Francisco Alanis **NASA-Johnson Space Center**

Significant achievements in support of continuous improvements to the Space Shuttle program's ground operations and launch processes at the Kennedy Space Center.

Lt. Gen. Brian A. Arnold **United States Air Force**

Visionary leadership of the military space program for the Department of the Air Force, including development, production and sustainment of multiple, highly technical space and missile systems in a portfolio valued at \$5 billion.

Richard L. Barton **NASA-Johnson Space Center**

Exemplary leadership, invaluable mentoring to young employees, extensive technical knowledge of aeroscience and flight mechanics for human spaceflight, management techniques that reflect his integrity, character and technical depth, and a far-reaching influence on all who work for him or with him.

Benton C. Clark, Ph.D. **Lockheed Martin Astronautics Operations**

Scientific leadership of highly visible and rewarding Lockheed Martin Planetary and Discovery missions, including Mars Global Surveyor, Stardust, Genesis and the 2001 Mars Odyssey.

Richard E. Coblentz **NASA-Johnson Space Center**

Notable contributions to software development processes in JSC's Avionics System Division, including bringing the Division software processes to full compliance with Level 2 of the Software Engineering Institute's Capability Maturity Model.

Harold C. Croop **Air Force Research Laboratory, Structural Mechanics Branch**

Technical and programmatic leadership in the field of Thermal Structures Concepts for three decades enabling future endeavors in the area of Reusable Launch Vehicles and Military Space Operating Vehicles.

Glenn M. Ecord **NASA-Johnson Space Center**

Outstanding engineering contributions to fracture control methodology, innovative solutions resulting in significant cost savings to the government and a sound and internationally endorsed approach for the safety of space flight hardware.

John Harduvel **The Boeing Company**

Superior service as a senior technical leader associated with the design of the U.S. Attitude Control System for the International Space Station and as a key resource for ISS control systems design, development and verification.

Robert Hofland, Jr. **The Aerospace Corporation**

Pioneering laboratory, theoretical and technical management contributions to America's development and understanding of high-power chemical lasers, culminating in the transition of chemical laser technologies to the Space Based Laser Integrated Flight Experiment.

Clarence J. Howard **The Boeing Company**

Successful application of significant DOD and NASA experience to lead a diverse program-wide team responsible for integration of the complex ISS program software.

William R. James **United States Air Force**

Significant contributions in the development of the \$150 million, first-of-its-kind, Performance Test Facility through regular coordination with DOD leadership, Congressional members and the world's leading contractors.

Joseph J. Kosmo **NASA-Johnson Space Center**

Technical expertise and outstanding leadership applied to the development and advancement of space suit technologies, such as glove designs that increase mobility and decrease hand fatigue, which are critical for current and future extravehicular exploration.

Oleg M. Lvovsky **Muniz Engineering, Inc.**

Unique contributions to manned spaceflight test and verification, including innovative developments for leak testing of pressurized components of the ISS Program, assuring that flight hardware is "leak tight" and ready to fly.

Valer O. Papanyan, Ph.D **Lockheed Martin**

Possessing peerless scientific knowledge and demonstrating astute engineering insight during development and test of the X-38 Crew Return Vehicle Prototype Diode Pumped Option (Type II) Laser Firing Unit.

Milton W. Reed **Honeywell Inc., Space Systems Houston**

Providing technical leadership and expertise to the Shuttle Entry Flight Control System (FCS) design that today permits higher performance, improved flight safety and increased Entry FCS operational envelopes.

John P. Riehl **NASA-Glenn Research Center**

Development of multiple low and high speed thrust analysis tools for use in America's early and current space flight and exploration

programs, with vital contributions to NASA endeavors to Mars and solar system exploration studies.

Munir D. Sindir, Ph.D. **Boeing, Rocketdyne**

Outstanding contributions to the advancement of computational fluid dynamics and multidisciplinary probabilistic analysis as design tools.

Michael Withey **Oceaneering Space Systems**

Continuous creativity and dedicated leadership in the development and production of EVA, IVA and satellite servicing systems in support of the Space Shuttle and Space Station assembly and maintenance activities.

John R. Wooten **Boeing, Rocketdyne**

Tireless pursuit of excellence in advanced materials and process technology and significant contributions to the future of liquid rocket engines and advanced space transportation liquid propulsion.

TEAM

Reusable Solid Rocket Motor Nozzle-to-Case J-Leg Team **ATK Thiokol Propulsion Corp.**

Successful demonstration of a new Reusable Solid Rocket Motor Nozzle-Case J-joint with a carbon robe thermal barrier on Flight Support Motor 9 with no leaks into or through the joint, a major milestone in the flight certification.

Robonaut Development Team **NASA-Johnson Space Center**

Application of state-of-the-art concepts for the development of Robonaut, whose humanoid robot upper torso represents multiple technological advances and opens a wide range of possibilities for augmenting human support of space vehicles such as Space Station.

StarBus Satellite Development Team **Orbital Sciences Company**

Lowering the market entry cost and risk of commercial satellite broadcasting and communications systems through the development, manufacturing and successful first flights of a new state-of-the-art geosynchronous satellite platform, the StarBus.

Crew On-Orbit Support System Team **United Space Alliance**

Excellence in the development and delivery of innovative training tools and support applications for crewmembers on board the Mir and International Space Stations.

NASA-Kennedy Space Center Expendable Launch Vehicle Project Management Team **NASA-Kennedy Space Center**

Successful implementation of the NASA Expendable Launch Vehicle Project consolidation and providing safe, reliable and timely launch services for 35 active NASA scientific missions on six different launch vehicles.

2001 Mars Odyssey Team **Lockheed Martin Astronautics Operations**

Outstanding commitment and success in the development and operation of the 2001 Mars Odyssey spacecraft, leading to successful launch, cruise, Mars orbit insertion and aerobraking operations.

Shuttle Probabilistic Risk Assessment Team

Science Applications International Corp.
Planning, development and coordination of an integrated, comprehensive risk model of the Space Shuttle, which will provide NASA with a better risk informed decision-making process as plans call to extend the life of the Shuttle for another 20 years.

Trajectory Operations Officer Team

Barrios Technology Inc.
Outstanding achievement in leading a multi-agency, international team to develop and execute the operational capability for International Space Station trajectory planning, training and execution.

International Berthing/Docking Mechanism Design Team

Lockheed Martin Space Operations
Development of a low impact berthing/docking system, including the control algorithms, the control electronics, the control actuators and the mechanical hardware, which as an integrated system will reduce the disturbance of the ISS during docking operations with the Crew Return Vehicle.

Hydrocarbon Scramjet Engine Technology Team

Pratt & Whitney Space Propulsion
Advancement of the state-of-the-art in hypersonic propulsion by successfully testing a fully integrated Supersonic Combustion Ramjet (Scramjet) propulsion system that met or exceeded all test objectives.

Fourier Transform Hyperspectral Imaging Team

Air Force Research Laboratory, Space Vehicles Directorate
Deployment of a totally new surveillance technique that is a pathfinder for the future of imaging satellites, with the successful integration, test, launch and operation of the first-ever space-based hyperspectral imaging system.

Inertial Upper Stage Propulsion Design Team

Pratt & Whitney Space Propulsion
Unprecedented technology advances in solid rocket propulsion through the design and implementation of the 1st and 2nd stages for the Inertial Upper Stage, which is critical to NASA accomplishing key orbital and interplanetary missions.

AFRL Control Science Center of Excellence

Air Force Research Laboratory, Air Vehicles Directorate
Outstanding technical achievement in developing an Adaptive/Reconfigurable control law for the X-33, which allows for a robust and autonomous flight control system for the X-33 vehicle.

Heritage Launch Programs 2001 Mission Success Team

United States Air Force
Sustained focus on mission success as #1 priority, resulting in seven launch successes in seven flights of Titan IVB, Atlas II, and Delta II heritage launch vehicles in 2001 and continuing a string of 20 straight successes dating back to May 1999.

Photon Pressure Measurement Team

NASA-Marshall Space Flight Center
Successfully accomplishing the quantitative

measurement of photon pressure from a simulated solar spectrum and establishing a photon thrust measurement capability for future solar sail development.

Advanced Space Lift Architecture Team

United States Air Force
Service as the premier resource for U.S. advanced space lift needs, with the development and execution of the first cross-agency space lift needs analysis methodology and delivery of decision-quality information to space senior leaders.

Navstar Global Positioning System Joint Program Office

United States Air Force
Multinational effort, with both military and civilian participants, that is aggressively developing and fielding new GPS capabilities, while sustaining an aging GPS constellation at unprecedented high levels of performance, as well as embarking on a modernization program that will revolutionize this global resource over the next two decades.

Virtual Panel Payload Training Simulator Development Team

Raytheon-Aerospace Engineering Services
Exceptional accomplishment in the design and development of a reconfigurable Virtual Panel Payload Training Simulator in 4 1/2 months, to be used for training ISS astronauts on operational procedures for different types of facility class and sub-rack payloads.

International Space Station Cold Plate Reliability Assessment Team

NASA-Glenn Research Center
Outstanding performance in planning, managing and executing a technical effort to certify the in-service reliability and durability life limits of Space Station hardware critical to the success of future human space efforts.

Human Research Facility Rack Activation Team

Lockheed Martin Space Operations
Successful activation of the Human Research Facility Rack, the first dedicated research rack for human life sciences experiments onboard the ISS.

United States Air Force 3rd Space Operations Squadron

United States Air Force 3rd Operations Squadron
Exceptional dedication and excellence conducting over 22,000+ satellite command and control sorties on 19 communications satellites linking government leaders with all military and diplomatic operations of the United States, the United Kingdom and the NATO alliance.

High Altitude Protection Research Team

Air Force Research Laboratory
Successful development of a procedure to provide astronauts with decompression sickness protection during extravehicular activity with only half the normally required time for oxygen prebreath.

High Energy Replicated Optics Team

NASA-Marshall Space Flight Center
Design, fabrication and launch of the first focusing high-energy x-ray telescope, opening a new window on the universe and providing the

technology for new views of the deaths of stellar black holes and the central engines of active galactic drive galaxies.

Defense Support Program Shuttle Launch Option Team

United States Air Force
Development of an accelerated launch integration solution for the Defense Support Program satellite on the Space Shuttle Orbiter, providing an affordable contingency option to the Titan IVB and Delta IV-Heavy EELV baseline manifest, allowing assured access to space for a vital area of our nation's infrared surveillance and early warning capability.

Window Observation Research Facility & Science Window Team

The Aerospace Company
Dramatically improved view of Earth from the ISS, made possible with the Destiny Module Nadir Science Window and Window Observation Research Facility, providing world class Earth science with high quality views of 85 percent of the globe.

Rendezvous & Proximity Operations Program Development Team

Lockheed Martin Space Operations
Expertise, ingenuity and dedication in development and implementation of guidance algorithms into the Rendezvous & Proximity Operations Program, which is a Space Shuttle piloting aid that flew successfully with guidance on STS-100w Citation

Boeing Rocketdyne RS-68 Development Team

Boeing, Rocketdyne
Successful development of the RS-68, the main stage engine for the new Delta IV family launch vehicles, as the first U.S. rocket engine in 25 years, in half the time of previous rocket engine programs and with notable cost savings.

Lockheed Martin Advanced Technology Center Solar Physics Group

Lockheed Martin Advanced Technology Center
Expansive knowledge gains in solar physics and outstanding contributions to space science, including high-resolution imaging of the sun and corona of the Sun, leading to new revelations about how the Sun works and how solar activity influences the Earth.

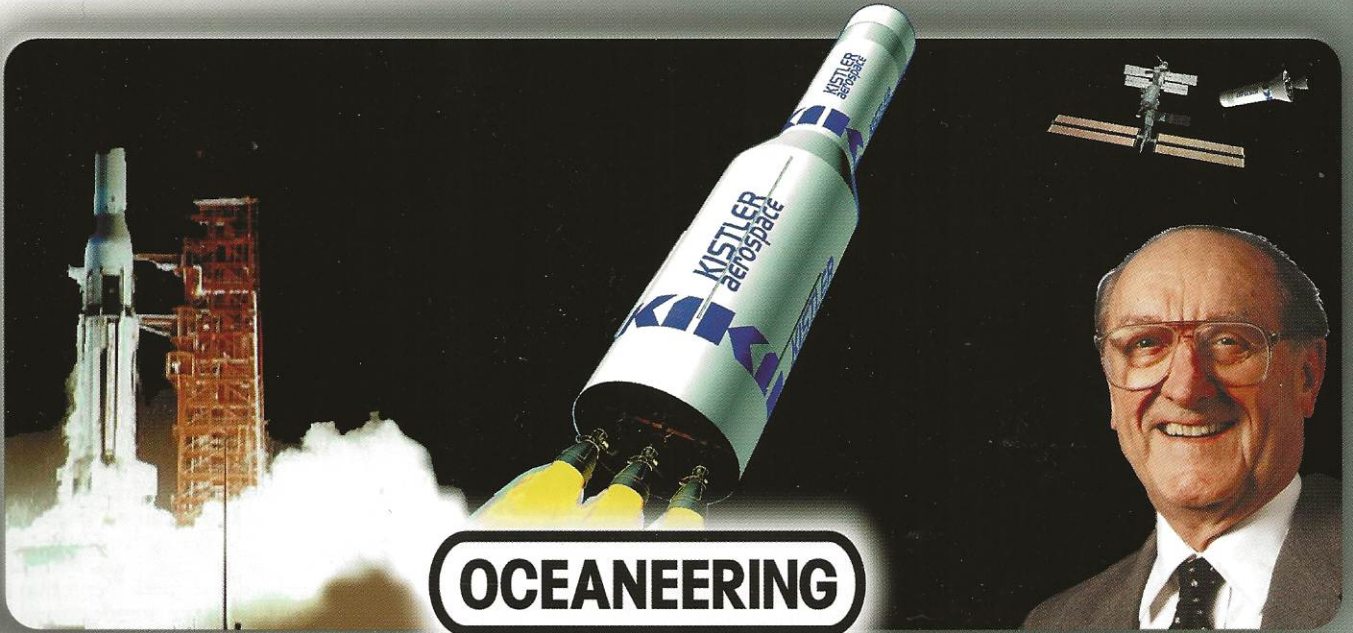
Honeywell X-38 MACH Flight Control Team

Honeywell Inc., Space Systems Houston
Successful application of innovative flight control design technologies for NASA's X-38 Program, with the use of algorithm development methodologies that dramatically reduce the time and cost of flight control software development and deployment.

United States Space Command And Components

United States Air Force Space Command
Pioneering use of space technology and space based systems to support combat and information operations during Operation Enduring Freedom, to ensure U.S. Space Superiority and to assure the future of space as the foundation for our national security.

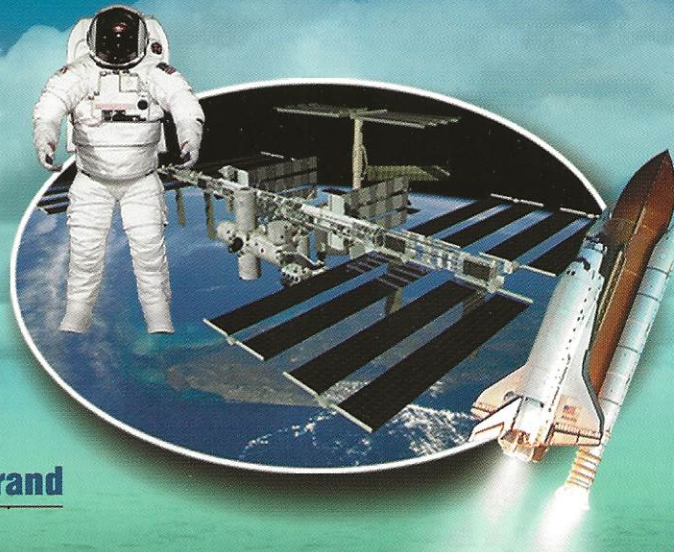
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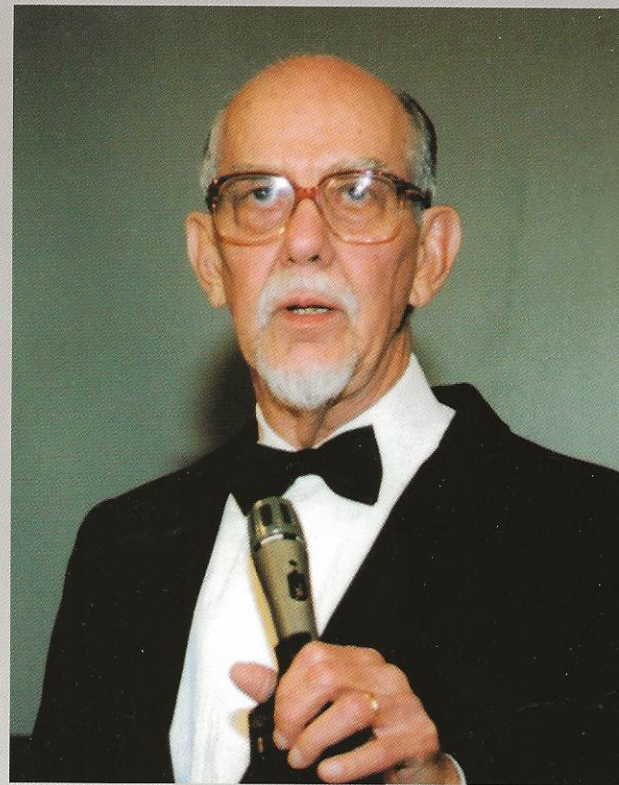
In Memoriam

Charles Henry Hartman was one of the originating founders of the Rotary National Award for Space Achievement (RNASA). His hard work and contributions over the years created this prestigious annual award that has recognized and honored some of the most inspirational leaders within the aerospace industry.

Mr. Hartman joined the United States Air Force in 1942, and for five years, served as a B-24 pilot in World War II. He piloted the first reconnaissance flight over Nagasaki, Japan following the dropping of the atomic bomb. After leaving the USAF in 1947, he launched a retail career and managed several men's clothing stores in Pasadena and Clear Lake City. Many years later, and desiring a change of pace, Mr. Hartman obtained his real estate license and became a commercial real estate broker. Through this position, he became deeply involved in the community, including an active member of the Space Center Rotary Club.

In 1986, Owen Morris had a desire to honor an individual who had made a significant contribution to the exploration of space. To bring his idea to fruition, he approached Mr. Hartman who took the idea and founded RNASA. As the original chairman of the board of directors, he oversaw the development of the nomination and selection criteria for this prestigious award. He also spearheaded the effort to find a firm that could design a one-of-a-kind award. The result is now the breathtaking National Space Trophy, a seven-foot-tall, conical lead crystal that weighs 500 pounds and is permanently displayed at Space Center Houston. Mr. Hartman held the position of chairman of the RNASA committee until 1997. He continued to participate in Rotary and RNASA in a volunteer capacity.

Mr. Hartman was married to his wife, Virginia, for 57 years. They had two sons, who are now grown with children of their own. Mr. Hartman passed away in 2001 at the age of 78.



1923-2001

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Pictured (back row): William H. Geissler, Floyd V. Bennett, Jack R. Lister, Robert J. Wren, Timothy C. Kropp, Mike Reeder,
(front row) Victor G. Maria, Jennifer D. Wagenknecht,
A. L. Brady, Julia L. Phillips, Joseph T. Mayer

Not Pictured: Jeff Carr, Rodolfo A. González, Gwen D. Griffin,
Gregory W. Hayes, Suzi Howe, Gary Johnson, Pat Malpass,
David Owen, Frank Perez, Duane Ross, Stacy Sarault,
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**CONGRATULATIONS
DR. GEORGE E. MUELLER**
FOR YOUR STELLAR
CONTRIBUTIONS TO
THE SPACE INDUSTRY

Mueller...
was part of the
third tribe,
the invaders from the
world of systems engineering,
socialized by the
experience of building
missile systems and
early-warning radar systems....

They, too,
were craftsmen,
but of a *different* sort.

Their *craft*
was not building hardware,
but *machining*
the *managerial*
equipment
for *huge*, highly technical,
highly complex tasks.

+

George Mueller...
is one of the most
elusive figures in the
Apollo
story.

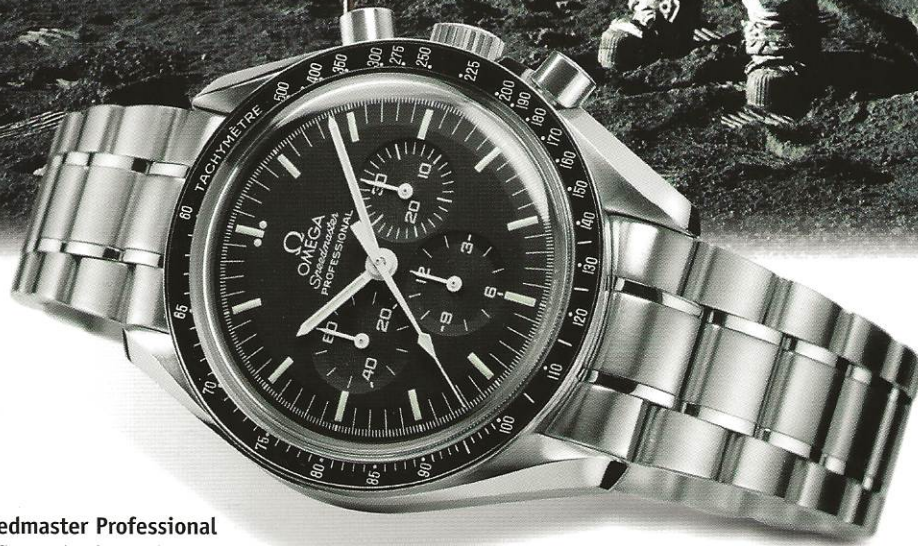
For the most part,
Apollo was
led by men of great ability,
often colorful and
occasionally
eccentric;

but always
they were men who
plainly bled
when pricked.

With Mueller,
it was harder to be sure.



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space exploration At Lockheed Martin, we take pride in our support of NASA and America's space program. And, we salute Dr. George Mueller, recipient of the 2002 Rotary National Award for Space Achievement. Congratulations, Dr. Mueller.

Mission Success

with integrity, leadership, and imagination,
the future knows no bounds.

