

NASA's 50th Anniversary Activities Come to a Close

BY S. JENISE VERIS

During special events held September 26 at Plum Brook Station (PBS) and October 1 at Lewis Field, Glenn's 50th Anniversary Social and Morale Committee concluded its work by organizing a "birthday" reception and recognition program to thank center employees for their involvement throughout the year.

Over 800 employees, contractors and volunteers staffed a series of 50th Anniversary-related activities and events, both internal and external. These activities were planned and coordinated by Glenn's Implementation Team and its subcommittees. (See *Straight from the Director*, pg. 2, for a list of activities.)

"The 50th Anniversary outreach events inspired and informed over 100,000 attendees about NASA's history and contributions of the past and into the future," said John Hairston, former director of Glenn's External Programs Directorate and co-chair for Glenn's 50th Anniversary Programs. "We know this to be true based on the feedback shared individually and through media coverage locally, nationally, and, yes, even internationally."

PBS Manager David Stringer presided over the PBS celebration. In a similar fashion, Center Director Dr. Woodrow Whitlow, Jr. presided over the festivities at Lewis Field on October 1, the official date of the NASA anniversary.



Photo by Imaging Technology Center

C-2008-3200

Lewis Field employees pose for 50th Anniversary photograph in Hangar.

Both celebrations featured a short program to present Certificates of Appreciation; to view pictures and videos of the year's events; and to enjoy 50th Anniversary cake for a festive thank you to all employees for their participation. PBS extended their celebration into the afternoon with a picnic in honor of the 52nd anniversary of the facility's groundbreaking.

The birthday celebration was one of several onsite events launched by the Social and Morale Committee this year. They also coordinated the NASA History Trivia Trifecta and the NASA Spirit Days, along with significant support to the open houses.

Glenn employees got involved in another significant effort that celebrated NASA's 50th Anniversary. At the request of Center Deputy Director Ray Lugo, photographers

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Sharing the Celebration

On October 1, 1958, NASA officially opened for business to perform civilian research related to space flight and aeronautics. Over the past 50 years, our efforts have not only enabled us to explore the universe, but also to improve life on our own planet.

To recognize these accomplishments, Glenn has been reaching out this year to a wide range of audiences, inviting them to share in this milestone celebration:

- We hosted former center directors, local dignitaries, center managers and employees for a commemorating ceremony to unveil the discovery of groundbreaking tools used for both the NACA Aircraft Engine Research Laboratory in 1941 and the NACA Plum Brook Reactor Research Facility in 1956.

- We put out the welcome mat at Lewis Field and Plum Brook Station to tens of thousands of visitors during our open house events. During these two weekends, our employees briefed inquisitive visitors on our past accomplishments as well as our future goals.

- We reconnected with our former employees at our Retiree Reunion by showing them how we are carrying on their legacy. Over 300 retirees returned to Glenn to see what's new and what's on the horizon.

- We brought together generations of center employees at the Employee and Retiree Picnic. Food, games, music and lots of camaraderie highlighted this celebration.

- We celebrated with the Ohio aerospace community by joining them in an Anniversary Celebration Gala and Ohio Astronaut Reunion in downtown Cleveland. Nineteen astronauts with ties to Ohio, including John Glenn, Neil Armstrong and Jim Lovell, shared memories of their space adventures during this once-in-lifetime event.



Dr. Whitlow

- We took the show on the road by participating in a variety of events locally and nationally, including the agency's Future Forum series, the Smithsonian Folklife Festival and the Cleveland National Air Show.

- We threw NASA birthday celebrations at Plum Brook Station and Lewis Field, where we recognized employees for their contributions to special activities throughout the year. The gathering at Plum Brook Station also highlighted the facility's 52nd anniversary.

NASA's 50th Anniversary wasn't meant to be celebrated alone. It was a time to reach out across the nation—and in our own communities. We acknowledged this agency's great contributions and reminisced with esteemed colleagues. We now confidently look ahead to the future. The best is yet to come!

Essay Contest Winner

Why Does NASA Inspire Me?

In honor of NASA's 50th Anniversary, Glenn held an essay contest to encourage civil servant and support service contract employees to address why NASA continues to inspire. Celebrity judges, Leon Bibb, TV5; Terry Butler, Cuyaboga Community College; Kevin O'Brien, The Plain Dealer; and Tim White, TV3, reviewed 27 submissions.

Winning essayist, Jeffrey Woytach, System Integration Branch, received two free tickets to the 50th Anniversary Celebration Gala and Ohio Astronaut Reunion on August 29. Woytach's essay is printed below:

Once upon a time, a seven year old boy sat transfixed in front of his television set watching the grainy image of a man in a bulky, white space suit step on to the surface of another world. That man was Neil Armstrong taking his giant leap for Mankind. That boy was me. That night, NASA inspired me by demonstrating that dreams can become reality. The Apollo explorations of the Moon proved that a future imagined can be a future realized. Apollo took a boy's spark of interest and turned that spark into a guiding light that illuminated his path forward, just as it did for countless other "children of Apollo."

In 1983, that path brought me to the Lewis Research Center, and my dream of being part of the exploration of space became a reality. And I have been living that dream for the last twenty-five years!

Why does NASA continue to inspire me? By returning to the Moon as a prelude to reaching further out into space, NASA is leading Humanity on its first step from the cradle of Earth out into the Universe. NASA has sparked another guiding light, illuminating a path leading to the future. Just as they did from Apollo, new generations will find THEIR paths illuminated by that same light. They will carry that torch forward, continuing to light a path for successive generations that will follow. The technological developments we will make along the way will be applied to benefit those who remain at Home, just as they did in Apollo. But those inspired by the light will forever look outward.

Our future lies out there; one giant leap at a time for all Mankind!

Woytach, right, pictured at the Gala with his daughter, Carissa, and wife, Roberta.



C-2008-2312

Photo by Marvin Smith

Employees Discover a Chest of Historic Treasures

BY DOREEN B. ZUDELL

While many dream of discovering hidden treasure, three Call Henry, Inc. employees actually found some—right here at NASA Glenn.

While cleaning out the contents of a storage barn scheduled for demolition last year, Scott Marabito, Bob Rini and John Tsolakis, members of the Facilities Division, came across a wooden crate stenciled with the words "Dedication Tools."

"Most of the boxes in the barn contained glass, wooden blocks, steam system parts and other items," explained Marabito, "but this box, nailed shut and steel banded, made me curious. When we opened the crate, we discovered a shovel, pick and dedication plaque with some missing letters. I set the box aside to look at later, but at the end of the day something told me to make sure nothing happens to the box. So I loaded it on my truck for safekeeping."

Glenn History Officer Kevin Coleman confirmed Marabito's suspicion about

the box. It contained a nickel-plated pick and shovel used in the groundbreaking ceremonies for both the NACA Aircraft Engine Research Laboratory in 1941 and NACA Plum Brook Reactor Research Facility in 1956. Center Director Dr. Woodrow Whitlow Jr. then commissioned Call Henry employees to clean up the items, re-glue the letters to the plaque and build a display case to showcase the items. No extensive refurbishing was done to the items to preserve their authenticity.

On January 23, 2008—67 years to the date of the NACA Aircraft Engine Research Laboratory groundbreaking—the center held a commemorating ceremony to unveil the dedication tools display. Former center directors, local dignitaries, center managers and employees gathered at the Employee Center Building to celebrate the "treasure."

"It was fitting that the ceremonial pick and shovel be displayed at the Dr. Edward R. Sharp Alcove of Honor in the Employee Center, as Dr. Sharp was present at both the groundbreakings," said Coleman. "This discovery is momentous in terms of



C-2008-1791 Photos by Quentin Schwinn



C-2008-1771 Above: The display is now a permanent part of the Dr. Edward R. Sharp Alcove of Honor in the Employee Center. Below: Dr. Whitlow, right, presents Marabito with a certificate of appreciation for his efforts in preserving the historic tools.

our center's history, especially in light of NASA's 50th Anniversary celebration."

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DEADLINES: News items and brief announcements for publication in the November issue must be received by noon, October 13. The deadline for the December issue is noon, November 10. Submit contributions to the editor via e-mail, doreen.zudell@nasa.gov, fax 216-433-8143, phone 216-433-5317 or 216-433-2888, or MS 3-11. Ideas for news stories are welcome but will be published as space allows.



50th Celebration Draws to a Close

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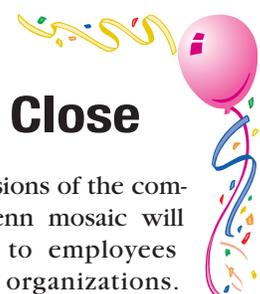
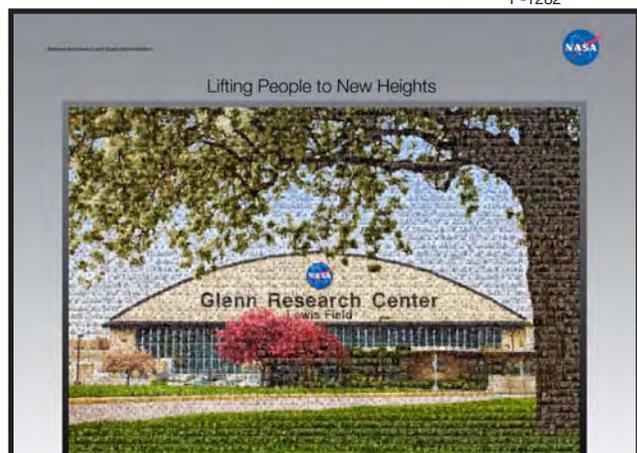
from the Imaging Technology Center, Logistics and Technical Information Division, canvassed every corner of Lewis Field and PBS, capturing photos of over 2,100 members of the workforce. These smiling faces have been assembled into a "mosaic" image of the NASA Glenn Hangar taken earlier this year.

Where is your image in the mosaic? Finding it will be half the fun.

Right: NASA Glenn mosaic

Poster-sized versions of the commemorative Glenn mosaic will be distributed to employees through their organizations.

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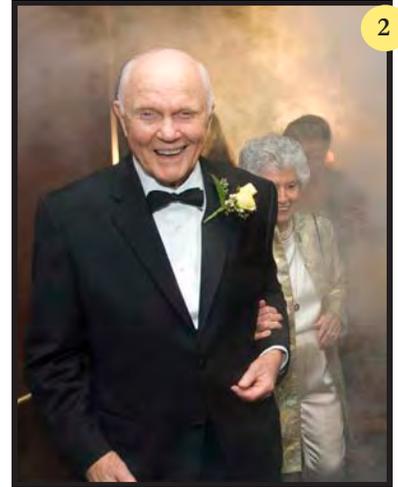


Glenn Celebrates NASA 50th with Esteemed Guests

NASA Glenn, the Northeast Ohio aerospace community, civic and corporate leaders recognized NASA's 50th Anniversary during a Celebration Gala on August 29 at the Cleveland Marriott Key Center. In addition to acknowledging 50 years of NASA inspiration, innovation and discovery, the event saluted Ohio's astronauts, John Glenn, the first American to orbit Earth; Neil Armstrong, the first person to walk on the moon; Jim Lovell, veteran of two Apollo missions; and Kathryn Sullivan, the first woman to walk in space, joined 15 other astronauts from Ohio. NBC News Space Correspondent Jay Barbree moderated "A Conversation with the Astronauts," during which the 19 astronauts in attendance reminisced about their spaceflight experiences. Many of the visiting astronauts participated in community events over the weekend as well.



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SPECTACULAR CELEBRATION: (1) Center Director Dr. Woodrow Whitlow Jr. thanks the astronauts for their participation in the Gala. (2) Senator John Glenn emerges from a cloud of smoke into the reception, followed by his wife, Annie.



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C-2008-2381



C-2008-2353



C-2008-2282



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MINGLING AT THE GALA: (3) Director of Space Flight Systems Robert Moorehead and Delores Moorehead, NASA Safety Center. (4) Center Deputy Director Ray Lugo with local students from the FIRST (For Inspiration and Recognition of Science and Technology). (5) Ohio Governor Ted Strickland, Center Deputy Director Lugo and Neil Armstrong. (6) Plum Brook Station Manager David Stringer, Jane Stringer and Armstrong. (7) Glenn University Affairs Office Dr. David Kankam, center, and Senior Aerospace Technologist Dr. Christos Chamis with their spouses Alice, left, and Charity. (8) Annie Glenn, Michelle Whitlow and Dr. Whitlow. (9) Sunita Williams and Director of Research and Technology Dr. Jib-Fen Lei.



C-2008-2260



C-2008-2343

OHIO ASTRONAUTS REUNITE: (1) Pictured, left to right, back row: Mary Ellen Weber, Michael Foreman, Michael Gernhardt, Kevin Kregal, Donald Thomas, Sunita Williams; middle row: Nancy Currie, Tom Henricks, Ronald Sega, Mark Brown, Gregory, Harbaugh, Thomas Hennen, Carl Walz; front row: Kenneth Cameron, Robert Springer, Neil Armstrong, John Glenn, Jim Lovell, and Kathryn Sullivan attended the Gala and Ohio Astronaut Reunion. (2) NBC News Space Correspondent Jay Barbree, seated facing astronauts, moderated "A Conversation with the Astronauts." Pictured, left to right, are Robert Springer, Neil Armstrong, John Glenn, Jim Lovell and Carl Walz.



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C-2008-2240



C-2008-2458



C-2008-2251

OHIO CONNECTION: (3) Mary Ellen Weber signs an enlarged print of the Ohio Astronaut collage. All 19 astronauts signed the print, which is now displayed in NASA Glenn's Visitor Center. (4) Gala and Astronaut Reunion leads Lori Manthey, back left, and David Defelice, front left, with John Glenn and Jay Barbree at the Gala.



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OUT IN THE COMMUNITY: (5) Eight astronauts participated in a pre-Gala media briefing on August 28. (6) Eight of the visiting astronauts stand for the National Anthem at the start of the Cleveland Browns game on August 28. They were later recognized in the "Hats off to the Heroes" tribute. (7) Astronauts (retired/active) who attended the Cleveland Indians baseball game on August 31, were acknowledged with a scoreboard tribute. They answered questions and greeted guests at the NASA Glenn exhibit, as well. Pictured is Michael Foreman signing autographs. (8) Kathryn Sullivan, seated front, and Michael Foreman, seated back, signed autographs and talked with visitors at the NASA booth during the Cleveland National Air Show on August 30. (9) Tom Henricks took a ride in a Blue Angels jet at the air show.



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Photos by Chris Lynch, Quentin Schwinn and Marvin Smith

Glenn's 50-Plus Year Employees Among NASA's Finest



When NASA opened for business in 1958, it welcomed 8,000 employees from the 43-year-old National Advisory Committee for Aeronautics (NACA). Five NASA Glenn employees, who punched the time clock on NASA's first day, still proudly wear the NASA badge. Glenn's Community and Media Relations staff offer a glimpse into these extraordinary careers through the following vignettes. (Slightly larger renditions of these articles can be found in the *NASA 50 Years of Exploration and Discovery* publication.)

Tools of the Trade

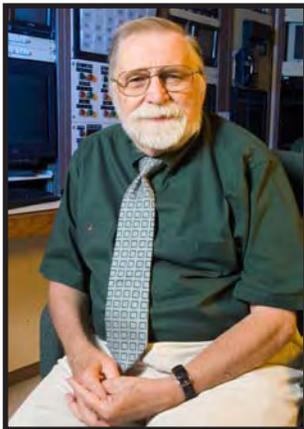
Bernhard "Bernie" Anderson remembers when a slide rule was considered a state-of-the-art tool. Now he utilizes sophisticated computer software to help NASA discover new approaches to achieving technology breakthroughs.

"While our early tools and testing methods may be considered archaic by today's standards, we relied a lot on our intuition," said Anderson, who came to NACA in 1955 fresh out of Rensselaer Polytechnic Institute in Troy, New York.

Anderson began his career as an aeronautical engineer under the supervision of Dr. Abe Silverstein, who would serve as Director of Lewis (Glenn) from 1961 to 1973. Anderson laid out test plans and set up hardware for engine inlet testing in what would later be named the Dr. Abe Silverstein 10-by-10 Supersonic Wind Tunnel.

"My early work centered primarily on advancing engine inlet technology," Anderson explained. "Some of my projects included work on military applications such as the B-58 bomber and the YF-12 fighter."

About 25 years ago, Anderson traded in his slide rule for a computer and began designing new inlet concepts for various projects using computational fluid dynamics. Many of his designs have been turned into hardware that was tested in the wind tunnel. Along the way, he earned numerous awards, including the



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Anderson

NASA Exceptional Service Medal. While Anderson's early days with the agency revolved around discovering new and exciting possibilities in engine design and testing, his more recent excitement comes from using ever-advancing computer technology to produce designs much more effectively than ever before.

"NASA's improved tools and knowledge will enable us to efficiently advance aeronautics research," Anderson said, "and I plan on staying around for a while to see it."

BY DOREEN B. ZUDELL

Part of NASA Team Until the Final Inning

When NASA came into being in 1958, Richard "Dick" Cavicchi already had 14 years of service with the Federal government—four years in the Army and ten years with NACA.

On July 7, 1948—"the last year the Cleveland Indians baseball team won the World Series," Cavicchi is quick to point out—he began his career at the Aircraft Engine Research Laboratory in Cleveland, Ohio, (now NASA Glenn) doing turbine aerodynamics.

"The Germans had started using jet planes during World War II, but the U.S. was just getting into jet engines after the war. The turbines I was working on were for jet engines," recalled Cavicchi.

In the early years of NASA Glenn, Cavicchi attended two years of full-time training in nuclear physics and nuclear engineering, in preparation for designing nuclear rocket engines, which were intended to go to Mars.

"So at that time, I was in the space program," said Cavicchi. "When I came here in 1948, nobody was thinking of going to space; it was all aeronautics."

Over the years, he has worked in ground power and rotor dynamics; presently he works in computational fluid dynamics. The focus of his work may have changed, but two things that haven't changed are his interest in baseball and in keeping active.

"When I was young, I played on basketball and softball teams here. I also played trumpet in a band on Lab," Cavicchi said. He was active in the running club for years, and today he is seen riding his bike to and from work as he has done since 1964.



C-2006-1791

Cavicchi

Asked when he might retire, he said laughingly, "When the Cleveland Indians win the World Series again."

BY SALLY HARRINGTON

Standing the Test of Time

What do a piece of petrified wood (BC), a hassock that doubles as a fan (circa 1940), and a ceramic heater (2002) have in common? They are all unique possessions that have stood the test of time, and together with Earl Hanes reside in his office at NASA Glenn.

Hanes has stood the test of time as well. Quite possibly the youngest employee when he started at NASA, he entered

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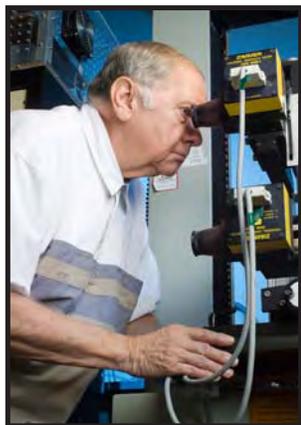
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the apprentice program at age 16 ½ in 1953!

Hanes was aiming for a job at NASA since he was 13, and West Tech High School's shop classes hooked his interest in engineering by exposing him to open houses and other events at this NASA facility. During and after graduating from the apprentice program, he attended Baldwin Wallace College and The Ohio State University.

He has worked in the same branch his entire career, although the focus of work has changed throughout the years.

C-2006-1787



Hanes

From a start in mechanical and electronics engineering, to nuclear, physics and chemistry research, his work for the now-Ceramics Branch has garnered him an Honor Award for establishing world-class laboratory facilities for advanced ceramic materials research.

Hanes' current research is on ceramic composites, solid oxide fuel cells, and nanotube technologies. He believes that these materials will be prominent in getting us back to the moon and Mars. Hanes plans to stick around to see all the changes coming, for at least a few more years, or until that hassock fan comes back in style!

BY KATHLEEN ZONA

Unharnessed Energy

In June 1957, as NASA Lewis was shifting towards an expanded role in space research, Robert C. Hendricks, an aerospace engineering graduate and newly commissioned U.S. Air Force officer, reported for duty in the Rocket Branch.

"I was recruited to help solve combustion problems on the X-15 rocket en-

gine, part of a classified program managed by Langley," Hendricks explained. "My research culminated in the successful operation of the liquid oxygen (LOX) ammonia man-rated rocket engine and my commitment to the Air Force."



Hendricks

Hendricks' next challenge led to development of critical cryogenic heat transfer data for liquid hydrogen fuel used for rocket engines. This new enabling technology aided Lewis' work on Centaur and directly impacted the Apollo program. It is now used in all LOX-hydrogen engines including the space shuttle main engine and crew and cargo vehicle (J-2X, S) engines.

"I was intense and eager to get things done," Hendricks recalled. "Robert Graham, my supervisor and a clear thinker, helped me to be patient, while constantly working to open doors."

That energy, interest and breadth of research have not been harnessed by time. A senior technologist and research engineer in the Research and Technology Directorate, Hendricks performs basic and applied research in fluid dynamics and heat transfer. He continues to make significant contributions in research related to turbo pump seals that has led to creation of design codes and the agency's Seal Program. He also performs important jet engine characteristic work related to heat transfer and to alternative fuels. His dedication to research benefiting aeronautics and space exploration is equaled in his passion to protect the Earth and its inhabitants.

BY S. JENISE VERIS

Where He Belongs

When Erwin Zaretsky interviewed with NACA in 1957, he was looking for a temporary position. About to graduate college as a mechanical engineer and U.S. Air Force officer, he was scheduled

for active duty later that year. Little did he know that after a year and a half of duty in Asia, the Air Force would station him right back where he was when he left—at NASA Lewis. In 1960, Zaretsky completed his active military service and joined NASA's civilian staff as a materials research engineer.

"The depth of technical expertise here was immense," Zaretsky said. "The people were outstanding, the work was a challenge, and we were making contributions that had an impact."

One of his biggest contributions was improving rolling-element bearings for aircraft engines. In the 1950s, experts predicted that the speed and temperature of aircraft engine bearings would increase dramatically during coming decades. To address the predicted increase, Zaretsky and his colleagues set out to develop ball and roller bearings that would run faster, withstand higher temperatures and last longer.

"By 1973, we achieved bearings temperatures up to 600 degrees Fahrenheit. They operated two times faster and lasted 40 times longer than when we started," he said. "That technology is now flying in commercial and military aircraft."

Today, Zaretsky is chief engineer in the Materials and Structures Division. He has developed patented technology, earned numerous awards, published two books and more than 180 papers, and traveled all over the world as a speaker.

"It's been a nice experience," Zaretsky said. "I don't think I could have done that anywhere but NASA."

BY JAN WITTRY

C-2006-1795



Zaretsky



On behalf of Glenn's co-chairs for this year's 50th Anniversary—John Hairston, Howard Ross and myself—I congratulate all of the 50th Anniversary Implementation Team who provided leadership, hard work and passion to make all of the Glenn events memorable and successful.

We witnessed so many great NASA moments: Communities, near and far, turned out for the open houses; NASA retirees returned for a reunion to fondly and proudly recall their tenure at Glenn; and who could have imagined attending an event where the first man to walk on the moon and the first astronaut-senator would be in one place, surrounded by fellow Ohio astronaut heroes answering questions about their out-of-this-world experiences. In fact, their attendance at this year's Cleveland National Air Show was part of the largest NASA presence since 1996! All the events imparted fantastic memories that surely made the effort exerted by so many worthwhile. So, I take this opportunity to say thank you to all.

—Kenny Aguilar, Director of Center Operations,
50th Anniversary co-chair



The Implementation Team Event Leads with Roles and Responsibility

- David DeFelice, Team Lead
- Rhonda Holstein, Open House at Lewis Field
- Geneva Biglin, Open House at PBS
- Anne Power, Retiree Reunion
- Jim Simek, Employee-Retiree Picnic
- Lori Manthey & David DeFelice, Gala/Ohio Astronaut Reunion
- Anne Heyward (OAD), Gala Chair-Community Liaison
- Rick Reames, Social/Morale Events
- Orlando Thompson, Cleveland National Air Show

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