Vol. 35, No. 9 May 10, 1996

Spaceport News

America's gateway to the universe. Leading the world in preparing and launching missions to planet Earth and beyond.

John F. Kennedy Space Center

1996 Savings Bond KSC drive results

Organization	Percent of participation
CD/DY/AC	90%
AC	74%
CC	**100%**
CM	88%
DE	66%
EO	**100%**
HM	76%
IM	72%
LO	59%
MD	84%
MK	61%
MS	80%
OP	66%
PA	**100%**
RQ	51%
TM	69%
Centerwide total	**70%**

Asian, Pacific Islander month honored at KSC

May has traditionally been observed as Asian and Pacific Islander American Heritage Month. The theme of this year's observance is "Asian Pacific Americans -- One Vision, One Mission, One Voice."

Among KSC activities planned for the month is a luncheon May 23 at 11:30 a.m. in the O&C Mission Briefing Room. Former Congressman Norman Mineta is scheduled to speak.

Two KSC employees named astronaut candidates

Two NASA/Kennedy Space Center employees have been named astronaut candidates, making a total of three candidates chosen from KSC in the last 16 months.

Fernando 'Frank' Caldeiro, a lead engineer in the systems assurance office, and Joan Higginbotham, a lead orbiter project engineer, received the news April 29 in phone calls from the astronaut office at NASA's Johnson Space Center in Houston.

"It is gratifying to see employees who work so diligently and successfully toward the process-

CALDEIRO

HIGGINBOTHAM

ing and launch of the Shuttle fleet here at KSC be given the opportunity to fly," said KSC Center Director Jay Honeycutt.

Caldeiro said the fact that he so thoroughly enjoys his work at KSC probably contributed to his selection. And the fact that he has always been interested in flight. His first job after receiving a mechanical engineering degree from the University of Arizona was with Rockwell International as a test engineer for the B-1B bomber in Palmdale, CA. Shortly afterward he was promoted to test director. After the 100th bomber was delivered in 1988, he transferred to KSC as a systems specialist with Shuttle main propulsion systems. In 1991 he was hired by NASA and began working in the KSC systems assurance office.

(See ASTRONAUTS, Page 8)

STS-77 to develop commercial edge

Developing the commercial potential of space will be the focus of Mission STS-77, the fourth Space Shuttle flight of 1996.

At press time, the 77th Shuttle mission and 11th flight of Endeavour was scheduled to begin with a May 16 liftoff from Pad 39B during a two-and-a-half-hour launch window which opens at 6:32 a.m. EDT. The date may change to no earlier than May 19 because of range scheduling. The planned 10-day flight is targeted for a landing at KSC's Shuttle Landing Facility on May 26 at 7:09 a.m. EDT.

The six-member crew will oversee the operation of the three primary payloads — the SPACEHAB-4, a commercially owned and operated laboratory module with 12 experiments, mostly in commercial space product development; the Spartan 207/Inflatable Antenna Experiment (IAE), a free-flying carrier with an antenna that will

THE STS-77 astronauts, posing during the Terminal Countdown Demonstration Test, are, from the left, Mission Specialist Mario Runco Jr.; Pilot Curtis Brown Jr.; Mission Specialist Marc Garneau (representing the Canadian Space Agency); Commander John Casper; and Mission Specialists Andrew Thomas and Daniel Bursch.

be inflated and later jettisoned after operations; and the Technology Experiments for Advancing Missions in Space (TEAMS), a set of four space technology experiments.

Planned as part of the Spartan 207/IAE and TEAMS investigations are a total of four rendezvous operations with two research satellites — the most ever during a single Space Shuttle flight.

On Flight Day Two, Endeavour's Remote Manipulator System (RMS) arm will release the Spartan 207 carrier with its attached IAE. The antenna, which is housed in a canister about the size of a large kitchen table, will then take less

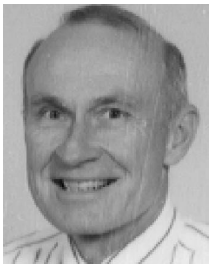
(See STS-77, Page 8)

1995 Kennedy Space Center Annual Honor Awards

1995 PRESIDENTIAL EXECUTIVE RANK AWARD

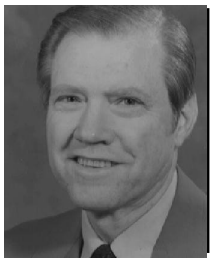
Distinguished Executive Rank Award

John T. Conway



Robert B. Sieck

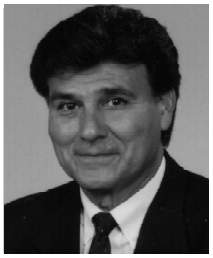
Meritorious Executive Rank Award



Tom Breakfield

This award is granted by the president to career members of the Senior Executive Service (SES) whose performance has been exceptional for at least three years. The award recognizes sustained extraordinary or superior accomplishment in the management of programs of the United States Government and for noteworthy achievement of quality and efficiency in the public service.

KSC DIRECTOR'S AWARD



Kenny G. Aguilar

The Director's Award is the highest award that the center confers on an employee. The award honors the accomplishment of a job-related task of such magnitude and merit as to deserve special center recognition.

KSC SECRETARY OF THE YEAR

Fran Brauer

This award is granted to a KSC employee serving in a secretarial position who has demonstrated exemplary performance of official duties over an extended period of time, or a significant one-time accomplishment directly related to official duties. The nominee's performance must also have been characterized by a high degree of personal integrity, judgment and responsibility.

NASA OUTSTANDING LEADERSHIP MEDAL

Charles B. Mars

Dr. James W. Wright

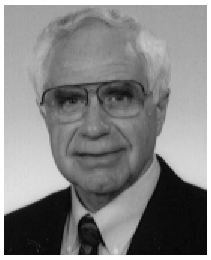
Elliot Zimmerman

Floyd Curington - (no photo available)

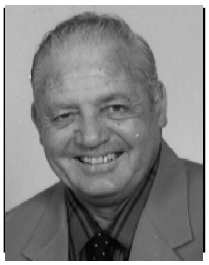
The NASA Outstanding Leadership Medal is awarded for notably outstanding leadership which has had a pronounced effect upon the technical or administrative programs of NASA. The award may be given for an act of leadership or for sustained contributions based on an individual's effectiveness as a leader, the productivity of an individual's program, or demonstrated ability to develop the administrative or technical talents of other employees.

KSC SERVICE AWARD

In grateful recognition and appreciation of faithful service in the National Aeronautics and Space Administration and the government of the United States of America.



40 years
Malcolm W. Fuller

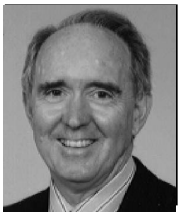


40 years
George H. Hughes, Jr.

KSC EQUAL OPPORTUNITY AWARD

This award is granted to any KSC employee or supervisor for outstanding contributions to Equal Opportunity. Examples of the types of contributions for which the award may be granted include: encouraging self-development and training among minorities and women; assigning minority and women employees to organizational tasks which broaden their experience; suggesting affirmative actions which alleviate problems peculiar to minorities and women; and, assigning minorities and women to tasks which encourage full utilization of their skills.

Janet A. Keith



Walt Stampley

NASA GROUP ACHIEVEMENT AWARDS

The NASA Group Achievement Award is given in recognition of an outstanding accomplishment which has been made through the coordination of many individual efforts and has contributed substantially to the accomplishment of the NASA mission. This award recognizes the accomplishments of either a total Government employee group or a group comprised of both Government and non-Government personnel.

Apollo/Saturn V Center
Facility Activation and Modification Management
Galileo Processing Team
Hardware Interface Module Project Team
KSC Emergency Preparedness Coordination Team
KSC Facility Asbestos Survey
NASA-KSC Midrange Procurement Implementation Team
1996 President's Quality Award Application Team
Russian Docking Module Payload Support Team
Safety and Mission Assurance Support Contractor Transition Team
Space Station Processing Communication Systems Working Group
STS-34 Orbiter main Landing Gear Failure Analysis Team
STS-69 Multi-Payload Processing Facility First Use Team

NASA PUBLIC SERVICE MEDAL

The NASA Public Service Medal is granted for exceptional contributions to the mission of NASA. The award may be given to any individual who was not a government employee during the period in which the service was performed.

Roger C. Greek
John B. Plowden
Richard H. Jolley, Ph.D., P.E.
Michael B. Renfroe

KSC CERTIFICATES OF COMMENDATION

This award recognizes exceptional individual accomplishment or outstanding direction or management of a program or program segment which affects the entire Center or contributes significantly to the Center's mission.

Hewitt Q. McKinney
Grant W. Stoddard
Donald Schiller
Robert Webster
William Bastedo
Cynthia Martin
Robert Franco
Gary Benton
John Parks
Frank Der
Karen Thompson
Scott Colloredo
Mario Busacca
Danny R. Culbertson
Michael D. Hogue
Ernesto T. Camacho
Mark A. Mason
Sharon Lowry
Michael B. Stevens
Jack L. Gardner
Louis G. MacDowell, III
Michael S. McCarty
Linda Hansen Ball
David J. Spacek
Terry L. Smith
Peter J. Musto
Timothy A. Bond
Steven J. Altemus
Alvaro Diaz
George W. Jacobs
Mack McKinney
Richard P. Schneider
Eugenio Pichardo
Kimberly Jenkins
Herbert Peete
Harry Wolfe
Tracy Gill
Brent Seale
Renee Minor
Bill Larson
Jim Aliberti
Miguel Morales
Carolyn McCrary
Robert M. Howard
Seunghee Lee
Peter P. Nickolenko
Joanne Cobbs
Betty Eldred
Clinton E. Bartley
Kenneth L. Newton
Pauletta K. McGinnis
Rosamund L. Rock
Michael J. Lonergan
Denise Y. Coleman
David G. Dixon
Christopher J. Carlson
Jan A. Zysko
Matthew K. Smisor
Larry A. Murray

KSC CERTIFICATE OF APPRECIATION

This award is intended to recognize significant contributions made by NASA employees, individual citizens, contractors, or public organizations to Center endeavors.

NASA Employees

Annette C. Dittmer
Kent E. Hawley
John J. Zuber
J. Bruant Keith, Jr.
John T. Demko
David W. Olsen
Darin M. Skelly
Marisa L. Hueckel
M. Claire Neptune
James W. Austin
Margaret A. Hinds
M. Melinda Smith
Mark Woloshin
Schonda L. Briggs
Ping Y. Yu
Frank S. Howard
Robert A. Cunningham
Kennedy L. Newton
Louis B. MacDowell, III
Herman T. Everett, Jr.
Glenn S. Perez
Norman J. Tokarz
Maria C. Stelzer
Thomas A. Schehl
Cheryl C. Hurst
Teresa M. Lawhorn
David A. Wansley
Jim E. Medina
Kenneth D. Hyde
Helen P. Kane
Deborah K. Ward
Robert L. Schwandt
Kristen J. Riley
Patricia F. Hatch
Paul A. Mogan
Kim C. Ballard
Larry L. Shultz
Gregory A. Hall
Joseph E. Porta
James H. Celsor
John Poppert
Ron Fox
Louise Boyd
John T. Halsema
Anne Jamison
Terry A. Stefanovic
Linda K. Buckles
Cheri B. Wynn
Karen E. Corne
Patricia E. Gladney
Denise De La Pascua
Wayne R. Martin
Henry Schwarz
Cynthia R. Wicker
Teddy J. Mosteller
Robert J. Koenn
Francis Villalpando
Shawn M. Quinn
Karin Biega
Robert K. Currie
Timothy P. McKelvey
Carlos D. Estrada
Joseph B. Voor
Thomas Hoffman

Contractors

Mary G. Chetirkin
Michael Jones
Robert C. Reuter
John D. Holt
John W. Boelke
Nancy J. Melton
Gary A. Woods
Wiley R. Alford
Elliott H. Burton
Mark W. Monaghan
Rikki Ojeda
Mark A. Hahn
Clarence D. West
Kenneth E. Hunter
James R. Matrazzo
Benjamin C. Glenn
Brian E. Bateman
James N. Hillis
Thomas J. Jamieson
Joe Regan
Joan D. Peterson
Robert C. Youngquist

All-American picnic

OSMAN IFTIKHAR, husband of Karen Iftikhar of the Equal Opportunity Office, helps kick off the opening festivities for the picnic with a jump onto the KARS park picnic grounds. Iftikhar and three other members of Astra's skydiving team from Titusville dropped in during the ceremonies. Together the four parachutists have a total of 60 years experience and 11,000 jumps, having performed at air shows throughout Florida.

JUDGES FOR THE fifth annual KSC chili cookoff get down to bu

FROM THE LEFT, David Brady, Johnny Wilkinson and Dana Peacock of the Merritt Island High School Quarterback Club helped cook some of the 800 pounds of hamburger consumed during the picnic.

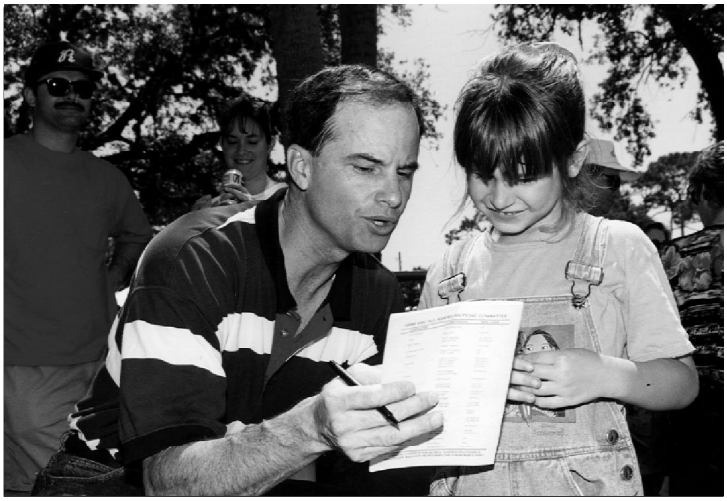
Kennedy Space Center's 1996 version of the All-American picnic was so popular, organizers resorted to handing out makeshift tickets at the gate.

Tom Breakfield, organizer of the event, said the final estimated attendance of 5,200 is a "conserva number. Most past picnics have drawn about half that, and the picnic committee this year had set a goal of 3,000.

Breakfield said the picnic committee began getting a li nervous the afternoon before the event when 4,200 ticke were reported sold. On the morning of the picnic "we ha people rushing out to locate more hamburger meat, hot dogs, drinks, ice and paper goods," he said. When all wa said and done, picnic goers consumed 800 pounds of ha burger, 200 pounds of hot dogs, 1,008 cups of ice cream 9,144 cans of soda and 5,000 pounds of ice.

Anyone who attended the picnic extravaganza would a the committee pulled it off beautifully. "It was a real succ Breakfield said. "The picnic was geared to real family-typ activity."

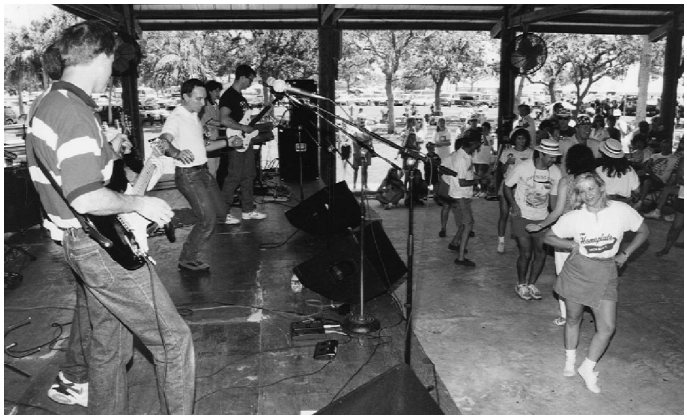
One of the biggest successes was the restructured children's activities area which featured games designed groups of employees, centered around KSC and space-



ASTRONAUT Kevin Chilton, who performed in the MAX Q band, signs an autograph for Trish Zion, 5, daughter of Howard Zion of Precision Fabricating and Cleaning.

r a w s a l l - o u t c r o w d

on the task of rating KSC's finest chili concoctions.



MEMBERS OF the MAX Q astronaut band get picnic goers, including Nora Ross of Shuttle Operations, on their feet with their rousing renditions of classic rock-n-roll favorites.

THE NASA KENNEDY Management Association Dunking booth provided participants an opportunity to c

1996 related themes. And the variety of entertainment topped off by a floor-stomping performance by the elusive MAX Q astronaut band. And the fifth annual chili cookoff which even attracted a judge from that other chili-loving state — George Abbey, director of the Johnson Space Center in Houston, Texas. "There was something for everybody," Breakfield said.

Of course the event required the coordinated efforts of hundreds. Breakfield said the real credit goes to the picnic committee members. He was especially appreciative of the support of the Exchange Council Facilities Operations Manager for KARS Bobby Goforth, the KARS Gun Club, and the KARS personnel who took on what may have been the biggest job of all — cleaning up the trash!

GROUND SYSTEMS team members won over the judges as their Roadkill chili received top prize in the chili cookoff. From left are Mark Nurge of Ground Systems, Mike McCully, director of Launch Site Operations for Lockheed Martin Space Operations Company and chili judge extraordinaire, Shawn Quinn of Ground Systems and Center Director and Chief Chili Honcho Jay Honeycutt. At right, Payload Operations Director John Conway's Politician's Chili may not have received the most votes, but it

NASA EXCEPTIONAL ACHIEVEMENT MEDAL

The NASA Exceptional Achievement Medal is awarded for a significant, specific accomplishment or contribution clearly characterized by a substantial and significant improvement in operations, efficiency, service, financial savings, science or technology which contributes to the mission of NASA.

Tracy Lee Crittenden	George R. Hurt
Richard Martucci	Gary Ray
Richard A. Boutin	Walter L. Covington
Herbert E. McDilda	Janet M. Parker
Ramon Lugo, III	Barbra Reitz
Shannon D. Bartell	Steve Dutczak
Lawrence F. Kruse	Theodore Cook, Jr.

NASA EXCEPTIONAL SERVICE MEDAL

The NASA Exceptional Service Medal is awarded for significant performance characterized by unusual initiative or creative ability that clearly demonstrates substantial improvements or contributions in engineering, aeronautics, space flight, administration, support, or space-related endeavors which contribute to the mission of NASA.

Nicholas J. Talluto	Ronald B. Kent
Sam Lenck	Daniel L. Tweed
Dudley R. Cannon, Jr.	Roy L. Russell
Rita Willcoxon	Gale J. Allen
Russell Romanella	G. Wyckliffe Hoffler, M.D.
Mike Kinnan	Andrew L. Haugevik
Roelof L. Schuiling	Joel R. Reynolds
Lesa Roe	Bruce R. Baker
Wayne Prince	Edward J. Mango
Charlie Quincy	Perry L. Becker
Tammy Conway	Barry M. Braden

KSC CENTER DIRECTOR Jay Honeycutt leads a panel of NASA center directors during the closing segment of the 33rd Space Congress on April 26 at the Howard Johnson Plaza-Hotel in Cocoa Beach. The leaders spoke on "A Perspective of the Future from NASA Center Directors." From the left are Mark Craig, deputy director at Stennis Space Center; Dr. Wayne Littles, director at Marshall Space Flight Center; Honeycutt, George Abbey, director of Johnson Space Center; and John Young, associate director (technical) of Johnson Space Center.

KARS offers discount attraction tickets

KARS is offering discounted tickets that can be used at Wet 'N Wild water park on Saturday, May 25. The special price is $13 (the regular rate is $25.39) and includes: free soft drinks from noon to 8 p.m.; free 18-hole Congo Golf from noon to 5 p.m.; regular hot dogs for 75 cents at the main snack bar; $1 tube rentals after 6 p.m. ($2.50 before 6 p.m.); and $1.00 parking with a parking coupon. Admission is good anytime after 10 a.m. KARS/KSC will have exclusive use of the park from 6 to 10 p.m. The rain check policy will be in effect for those entering the park after 4 p.m. Tickets will be on sale at all NASA Exchange retail stores from May 17-24.

A special rate has also been arranged with Universal Studios for the month of September. Ticket prices will be $23 for adults and $18 for children.

RECIPIENTS of the team award for fighting Foreign Object Debris (FOD) are Shuttle Landing Facility team members, from the left, Manager Robert Bryan, John Forzetting, Tamara Williams, William Lockwood, Sarah Patterson, Alvin Lightsey, Donald Linton, Kenneth Hooks and Ronald Feile, all from EG&G Florida, Inc. Not pictured are Terry Mann and Larry Parker of EG&G and Ed Taff of NASA.

PARTICIPANTS in Kennedy Space Center's Spring 1996 Intercenter Run make their way down the Shuttle Landing Facility runway April 17. Weather was nearly perfect and logistically the race went off without a hitch, reports Mary Kirkland, coordinator of the event. A total of 242 runners and walkers took part 2 mile, 5 kilometer and 10 kilometer events. Winners included: Two-mile, men: Ermin Dion Ramiscal, 14:40; Raymond E. Johnson, 15:15; Dominic Lapinta, 15:17. Women, Donna Boone, 14:49; Carmel Shearer, 15:50, Rebecca Smith, 16:44. 5K, men: Rick Simon, 20:12; Jimmy Juel, 20:37; David Demianovich, 21:06. Women, Leslie Hughes, 23:32; Andi Bernhard, 24:32; Nancy Zeitlin, 24:40. 10K, men: Tim O'Brien, 37:55; Chip Galliano, 39:13; Frank Kapr, 39:56. Women, Michelle Lackore, 43:36; Cheryl Mackowiak, 52:10.

KSC employees commended at STS-76 Honoree Event

Kennedy Space Center (KSC) honored 49 of its civil service and contractor employees at a special Honoree Event held March 19-22 at the space center.

The KSC employees were among some 250 NASA and industry employees from around the country who were honored by top NASA and industry leaders for their significant contributions to the nation's space program.

The KSC employees attended a special reception in their honor, and were joined by astronauts and senior NASA and industry officials of the Space Shuttle team.

They were given a VIP tour of Kennedy Space Center and participated in various briefings.

They also watched the STS-76 launch of the Space Shuttle Atlantis on March 22 from a special VIP viewing site.

The Honoree Award is the highest form of recognition bestowed upon an employee by the NASA Space Flight Awareness Program.

Recipients are selected for their professional dedication and outstanding achievement in support of the human spaceflight program.

Twelve civil service employees were honored. They were Kent Hawley, David Cox, Tricia Koger, Sharon Pine, Beth Vrioni, Robert Koning, Mark Rosato, Teresa Lawhorn, Michael Lonergan, Timothy Bond, James Devault and Thomas Howard.

Contractor employees honored included William Cook, The Bionetics Corp.; James Meeks, I-NET Inc.; Roger Greek Jr., Mark Juhr, Margie Myers,and William McCullough, McDonnell Douglas Space and Defense Systems-KSC; Kelly Geroux, Rockwell Aerospace, Rocketdyne; and Paul Hamric, Wiltech Corp.

Also, Frederick Martin, Catherine Parnell and Kenneth Saltz, Rockwell Aerospace, Space Systems Division; Stephanie Grathwol, ABEX NWL Aerospace; John Jahahn, Odetics; Gary Henderson, Pamela Storm and Steven Van Horn, United Technologies, USBI Co.; and Rosalind Barbaree, Richard Bennett, Cecil Boggs Jr., Dolores Galbreath and Mary Ann Jackson, EG&G Florida Inc.; and Evelyn Ott and Gordon Rogers Sr., United Service Associates Inc.

Lockheed Martin Space Operations employees honored were Peter Aiello, Frederick Cryder, Stephen Dupree, Benjamin Enriquez, Peter Kent, Dennis Knight, Debra Lamond, Roger Lee, Paul Lucas, Louis Marrero, Henry May, Robert Parsons, Judith Russell and Christopher Sally.

STS-76 honorees and their spouses/guests visited the Johnson Space Center in Houston May 1st and 2nd as part of the Space Flight Awareness activities. There they toured facilities including Mission Control and space station and Shuttle mockups.

Silver Snoopy awards

Several Silver Snoopy awards have also been presented to NASA and contractor employees during the past month.

On April 2, members of the STS-75 crew presented awards to NASA employees Jim Thompson, Troy Turbyville and Larry Mauk and contractor employees Kim Osgood, EG&G; Titus Freeman, Sherikon Space Systems Inc.; and Richard Risley and Paul Hudson, LMSO.

Astronaut Pam Melroy presented awards April 4 to John Lorch, NASA; Bob Wilson and Pete Hopman, LMSO; and Ed Gillenwater, Ron Feile, Bill Caffee and Mike Mann, EG&G.

Astronaut Jim Halsell presented awards to EG&G employees Richard Hardy and Jeff Peterson April 10 and civil servant John Dollberg on April 16.

On April 25, Astronauts Mike Gernhardt and Mike Anderson presented awards to Cheryl Hurst, NASA;, Brain Lawson, MDS&DS; Edward Simmons, Rockwell; and Bruce Rutledge, USBI.

Smithsonian, life scientists study CO2 effects at KSC site

Researchers from the Smithsonian Institution hope their experiment in a local scrub oak community at the Kennedy Space Center (KSC) will help them determine the effects of increased carbon dioxide (CO_2) on natural vegetation.

Experts forecast a doubling of the CO_2 in the Earth's atmosphere during the next century. The research team plans to simulate that increase to find out how natural ecosystems and vegetation will respond.

The Smithsonian, NASA, and the Department of Energy (DOE) are cooperating to find answers to these questions. The Smithsonian will lead the investigation with on-site assistance from KSC's life science organization. The Department of Energy provided $1.3 million for the three-year project through a grant to the Smithsonian. One year has been spent preparing the 4-acre site, located a half mile north of KSC's Launch Complex-39. The site contains 16 open-top chambers that house the Florida scrub vegetation being studied.

DR. BERT DRAKE, the Smithsonian's principal investigator on the study of CO2 levels in a KSC scrub oak community, issues a command to turn on the blowers dispersing ambient air and increased CO2 into open-top chambers. Dr. Ross Hinkle, biological programs manager for Dynamac, awaits the start of the experiment.

The 12-foot by 12-foot chambers been carefully placed over a new growth of scrub that is springing back after a planned burn of the area. Twice the normal amount of CO_2 will be blown into half of the chambers, through an electrically powered duct system. Underground cameras will monitor root growth and researchers will watch the growth and physiology of the plants over the next two years.

The experiment should help determine if an increase in CO_2 will help vegetation grow in nutrient poor areas, said Dr. Bert Drake, the Smithsonian's principal investigator on this project.

"The study may also show that some vegetation types are more amenable to extra CO_2 and that those will flourish and develop a competitive advantage over others," said Dr. Ross Hinkle, biological programs manager for Dynamac, KSC's life science contractor. NASA's Biological Programs organization views the project as an opportunity to share data and expertise.

Chuck Henschel remembered by Apollo co-workers

Charles "Chuck" Henschel, known by many at Kennedy Space Center for his good nature and grace under pressure, died at his home in Titusville on May 2.

HENSCHEL

Henschel worked at KSC for 30 years before retiring in 1994. He joined NASA in 1964 as a test conductor and was a lead test supervisor for the first Saturn V launch from Complex 39. He worked as a launch vehicle test conductor for the Apollo program, test supervisor for the Saturn V program, NASA test supervisor for the Shuttle program and as a technical assistant for the Vehicle Processing Division.

Angelo Taiani, a NASA/KSC retiree who worked as a technical support supervisor while Henschel served as Apollo test supervisor, remembered Henschel's careful command while on console.

"He never had any irritating words to say," Taiani said. "Some people on console were much different than he was."

Dick Young, who worked as a public information officer at that time, said Henschel was "very smart" and "very affable."

"When he'd issue status reports he'd put it in English for us dummies," Young said.

Henschel took on a wide range of responsibility as he moved into the Shuttle program, from helping former Launch Director Norm Carlson coordinate the traditional post-launch beans to serving as a back-up in the firing room during launch to preparing the Launch Complex 39 area for the center's annual open house.

"He always had a lot of projects going," said Ted Mosteller, an astronaut support office employee who trained under Henschel in the Vehicle Processing Division from late 1993 until Henschel's 1994 retirement. Those projects extended to his church and into the community, he said. "After he retired he said he didn't know how he had found time to work," Mosteller said. Recently Henschel worked as a volunteer for the Public Affairs Office and served as a consultant for the Apollo Saturn V center and shows currently under construction.

Henschel is survived by his wife, two sons, his mother and a sister. Flags at KSC were flown at half-mast May 6 in his memory.

Astronauts. . .

(Continued from Page 1)

After completing his master's degree at the University of Central Florida he was encouraged by Safety and Mission Assurance Director JoAnn Morgan and co-workers to apply for the astronaut corps. In his spare time Caldeiro and his wife Donna enjoy traveling in the two-seat composite airplane he built himself.

Higginbotham began working for NASA in 1987 as a payload electrical engineer. Within six months she became the lead for orbiter experiments on the Space Shuttle Columbia.

In August, she will add a master's degree in space systems to her bachelor's degree in electrical engineering and her master's in management.

Higginbotham was recently promoted to the lead orbiter project engineer position for the Shuttle Columbia after two years as an orbiter project engineer for the Shuttle Atlantis.

She engages in numerous public speaking engagements, conducts tours on behalf of NASA and tutors at a local elementary school. She has received a NASA Exceptional Service Medal and the Outstanding Woman of the Year Award.

Kay Hire, formerly an engineer with Lockheed Space Operations Company, became the first KSC employee to be named a candidate in December 1994.

STS-77. . .

(Continued from Page 1)

than six minutes to inflate to about the size of a tennis court. Fully inflated by nitrogen gas, the lens-shaped antenna will have a diameter of 48 feet (14.6 meters) and include three 92-foot-long (28-meter-long) struts. The orbiter will be about 400 feet (122 meters) away as the crew photographs the inflation. The IAE will be jettisoned after a 90-minute test of the deployment (i.e., inflation) and performance of a large inflatable antenna on orbit. The RMS robotic arm will then be used to retrieve the Spartan carrier the following day.

Inflatable components like the antenna could significantly reduce the cost, while increasing the reliability, of deployable structures in space such as solar arrays.

The three other rendezvous operations scheduled during the mission are with a small satellite used in one of the four TEAMS experiments called the Passive Aerodynamically-Stabilized Magnetically-Damped Satellite (PAMS). The investigation is designed to demonstrate the principle of using the thin atmosphere remaining at low altitude to position a satellite in a specific orientation. In addition, magnetized rods will be used to help align the satellite with the magnetic field of Earth. Endeavour is expected to rendezvous with the approximately 2-foot-long (0.6-meter-long) satellite on the day of deployment, Flight Day 4, as well as on Flight Days 7 and 8.

Aerodynamic stabilization could result in the design of satellites which are more reliable and cost-effective, and less complicated.

The highest-priority experiment of the flight is the Commercial Float Zone Furnace to grow high-quality crystals of semiconductor materials for electronic devices, infrared detectors, faster computers and improved optical electronic devices. The SPACEHAB-4 investigation is being performed in cooperation with the Canadian Space Agency and the German Space Agency (DARA).

The crew also will conduct and oversee a variety of secondary experiments in the fields of technology demonstration, protein crystal growth and biological processes.

More than 90 percent of the payloads on the mission are sponsored by NASA's Office of Space Access and Technology through its Commercial Space Centers and their industrial affiliates.

Crew members are Mission Commander John H. Casper; Pilot Curtis L. Brown Jr; Mission Specialist Andrew S.W. Thomas, serving as payload commander; Mission Specialists Daniel W. Bursch and Mario Runco Jr.; and Mission Specialist Marc Garneau from the Canadian Space Agency.

John F. Kennedy Space Center

Spaceport News

The *Spaceport News* is an official publication of the Kennedy Space Center and is published on alternate Fridays by the Public Affairs Office in the interest of KSC civil service and contractor employees.

Contributions are welcome and should be submitted two weeks before publication to the Media Services Branch, PA-MSB. E-mail submissions can be sent to Barbara.Compton-1@kmail.ksc.nasa.gov

Managing editor. . . . . Lisa Malone
Editor. . . . . .Barb Compton
Editorial support provided by Sherikon Space Systems Inc. writers group.

USGPO: 733-096/20021