

WOMEN'S MUNY SOFTBALL LEAGUE

Their first season in this league, our NASA girls are finding the 4-team league tough, but fun. They tromped the World Publishing team 27 to 4, then took a 10 to 1 defeat at the hands of the Sheffield Bronze team last week. Playing each Thursday evening at Kirtland on the lakefront, they are shown in the photo (l to r) standing: Nancy Finitzer, June Deegan (mgr.), Rose Poultney, Katie Grey, Nancy Klima, Margaret Kurz, Bernice Hartman, Betty Joe Moore, kneeling (l to r): Fedora Manfredi, Pat O'Donnell, Myrna Nored, Pat Simpson. Others not in photo are Jan Gabrielson, Lois Baukema, Pat Sirosky, Marilyn Kurtz.



SOFTBALL WINNERS

Wing Tips: September 25, 1959

The NASA women's softball team slugged its way through a three-game playoff with World Publishing Co. to win the consolation trophy of the Cleveland Women's Muny League. After losing a close first game 12 to 11, the girls came back with two big wins, 16 to 10 and the final clincher, 14 to 8.



Victory smiles and championship forms are evident in the team photo above: (L to R) Nancy Klima, Fedora Manfredi, Lois Baukema, Pat O'Donnell, Jan Gabrielson, Katie Grey, Aggie Rodak, Pat Syroski and Myrna Nored. Absent are June Deegan, Betty Jo Moore, Bernice Hartman, Rose Poultney and Nancy Finitzer.

Women's Team Wins Muny Championship

The winning NASA Women's Softball Team added another championship to their record on Aug. 31 when they captured the Muny Softball title.

Coach Art Sprungle reports.

This was the third straight time the girls have won the Women's B Muny Championship in the five years they have been in the competition.

The NASA team won five out of six games in the playoffs. Their last two victories were over Clark Recreation, the team that had been leading the tournament and had dropped NASA in an earlier game.

That game was on Aug. 16 and Clark Recreation won by a score of 15 to 2. The NASA team had 8 hits scattered throughout the game while Clark had 19. The tournament's start left NASA in the losers bracket.

In the second game — Aug. 20 — the NASA team seemed stronger and got off to an early start with 11 runs in the first three innings in a game against East Ohio Gas. Lois Christofferson, Bernie Hartman, Rose Klepper, and Patt O'Donnell each had 3 hits in 4 times at bat. The final score: 12 to 8.

on Aug. 30 when NASA again met Clark Recreation — at this time the tournament leader without a loss. Both teams had 10 hits each in this game. The difference was that Mary Lou Morgan had two triples and Diana Manista hit a double. In a well-played game by both teams, NASA was the victor by 6 to 1.

On Aug. 31 came the championship game with the girls again facing Clark Recreation. Each team now had one loss.

In the first inning NASA was down to 4 to 0. After four innings it was 9 to 5 in favor of Clark. Then in the fifth and sixth, the girls came through with five runs to lead 10 to 9. Clark tied the game in the seventh.

In NASA's last bat, Gail Gregg, who had 3 hits in 3 times at bat



CHAMPIONS — (front) Janet and Judy Sprungle, bat girls; (first row, left to right) Diane Manista, Lois Christofferson, Sue Barnes, Pat O'Donnell, Liz Ryan, Capt.; Barbara Lester, and Rose Klepper; (second row) Dr. Abe Silverstein, Carole Roskilly, Beverly Grumney, Bonnie Helton, Eileen Staab, Bernie Hartman, Art Sprungle, Coach, and Martha Matthews; (Above) Katie Albers, Evelyn Young, Agnes Wachs, and Mary Lou Morgan. Missing from picture: Gail Gregg.

Photo by Al Lukas.

Post Grill forfeited the third game.

On Aug. 27 the NASA team won a well-deserved victory in the fourth playoff contest against Play Boy Tavern, which had been in the lead until the final innings. In the fourth, NASA had 9 consecutive hits and 9 runs to overcome an 8-run lead held by the Play Boy squad. NASA won 12 to 11.

One of the crucial games came

so far, came through with another. Rose Klepper then singled. Carole Roskilly, who pitched the entire tournament, got an infield hit that loaded the bases with no outs. Lois Christofferson, who did an outstanding job as the team's catcher, lined a shot at the short stop to drive in the winning run.

The victory gave the NASA team an 11-3 overall record and their third straight Muny Championship.

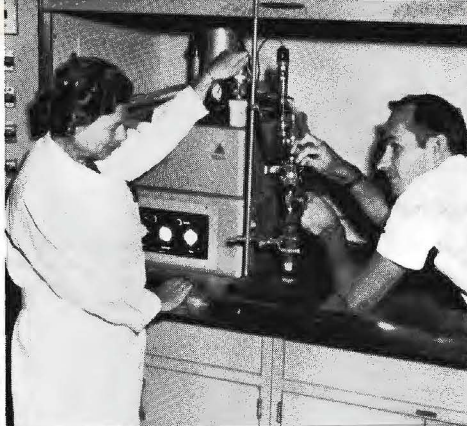


THAT WONDERFUL YEAR 1966 brought a lot of fun, if not a championship, to the NASA-Lewis Space Gals entry in the Cleveland women's open "muny" league. After taking the title in 1962, '63, and '64, they dropped to third place last year and finished in the same position this year. Above, left to right in front, are Batgirls Janet and Judy Sprungle, daughters of Art Sprungle, manager (not shown). First Row: Barbara Matousek, Val Bresnahan, Pat O'Donnell, Lois Wolfe, and Liz

Ryan. Second Row: Marianne Fazio (almost hidden), Clare Capadona, Jeanne Frankino, Terri Fazio, and Annette MacLean. Back Row: Rosalie Andrews, Diane Manista, Dianne Sikorski, Dorothy Davidson, Marlene Sutowski, Eileen Staab, and Barb Balaschak. Marylou Morgan is the only player missing from this photo, but Ed Andrews, coach, Al Wolfe, assistant coach, as well as Sprungle, are not shown in this season finale picture.



Robert Easter (left) and Paul Prokopius inspect a rig which tests fuel cell water rejection dynamics.



Mrs. Eva Luedecke and Harold F. Leibecki make adjustments in impregnating fluorocarbon polymers like Teflon or Kel-F with electrically conductive metal oxides.



Mrs. Patricia M. O'Donnell and Dr. Albert C. Antoine compare graph results of a cyclic voltametric experiment in high energy fluorine compounds.

CENTER CLOSE-UPS

Electrochemical Branch

Lewis News
Oct 11, 1968

If the day comes that the electric automobile eases our air pollution problem, some of the plaudits may well be due the Electrochemistry Branch of Lewis' Direct Energy Conversion Division.

Headed by Harvey J. Schwartz, the 22-man branch conducts research and development studies on the fundamental and applied facets of electrochemical power generation.

The Electrochemical Fundamentals Section inquires into the more fundamental aspects of electrochemistry. Scientists are improving present battery systems and identifying promising new battery structures by seeking a better understanding of the mechanisms and interactions of the electrode and electrolyte species.

The mission of the Electrochemical Technology Section is to improve existing battery systems, evaluate new extreme temperature and high energy battery systems, and develop fuel cells having better life, reliability and efficiency. Extensive in-house and contract efforts have produced a silver-zinc secondary battery having ten times the cycling capability of other silver-zinc batteries and a lithium-copper fluoride primary battery with about twice the energy of any previously available.

The objective of the Fuel Cell Systems Section is to improve the reliability, life, and energy conversion efficiency of hydrogen-oxygen fuel cell systems through in-house development work.

Fuel cells are remarkable power systems in that they are self regulating. If no load is placed on the cell, no electricity is produced and no fuel consumed; if a small amount of current is needed a small amount of fuel is used. Present control systems simply monitor the operation of the cell and shut it down if there is a variation from the normal pattern in areas such as the amount of heat produced, removal of by-products, and deviation from the type of current desired. Lewis research in this area is aimed at understanding the conditions that lead to shut down of the cell. When they are understood a control system can be designed which would sense a condition leading to fuel cell malfunction and correct the condition before malfunction occurs.



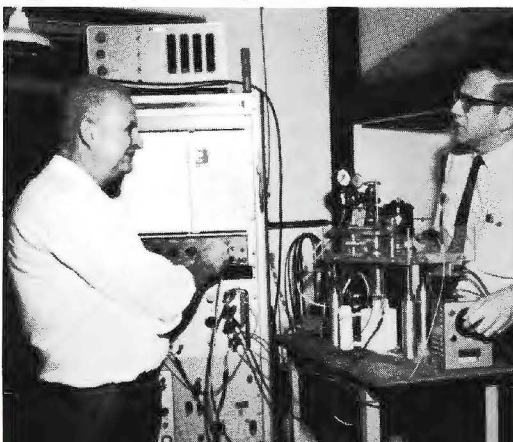
Dr. William L. Fielder resets instrumentation in studies of the electrical conductivity of a variety of ionic compounds to reveal the mechanism of ion transport in the solid state.

BELOW, Dr. Betty S. Del Duca and Dr. Lawrence H. Thaller use a transient method to study the kinetics of an aluminum electrode.

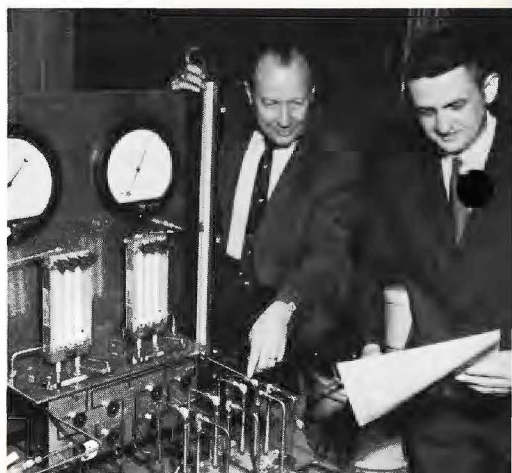


Photos by John Marton

BELOW, Riley O. Miller (left) and Dr. J. Stuart Fordyce, head of the Electrochemical Fundamentals Section, monitor a rotating disk-ring electrode system in the electrochemical reactions of chlorine and oxygen in non-aqueous electrolytes.



BELOW, James McKee (left), head of the Fuel Cells Systems Section, and Harvey Schwartz, Electrochemical Branch chief, look over a plan to expand a test set-up to study the possibility of removing heat and producing water from a fuel cell using a modified heat pipe principle.



Chemist is first gal here given invention award

When Mrs. Patricia M. O'Donnell received a \$50 award for an invention contribution to aerospace technology, little did she realize that she was making Lewis history. Since the organization of the NASA Invention Awards program in 1958 under the National Space Act, Mrs. O'Donnell is the first woman at Lewis to receive an Invention Award. The recognition is made when the invention is filed with the U.S. Patent Office for patent consideration.

Mrs. O'Donnell's invention solved the problem of beryllium oxidation. The method involves heating the beryllium to a temperature above 525° C, and then exposing the heated specimen to flourine. The flourine forms a film over the surface of the beryllium, protecting it from stress-corrosive elements. This glossy flouride film is insoluble in water.

The photo at right, taken by Martin Brown, shows Mrs. O'Donnell at the award-winning rig which she assembled. She displays in the test tubes beryllium-coated and beryllium-corroded specimens.



Bowlers strike final pins

Three Lewis bowling leagues celebrated the season's end with banquets, trophies, and elections.

LADIES' TUESDAY LEAGUE

The NASA Ladies Tuesday Night Bowling League held their recognition banquet at Eddy's Chalet West. The first place team award went to the Rebels, captained by Ginny Schlenkerman. Lee Petro received the trophy for the highest average (163) and highest series (602). Pata O'Donnell was awarded the highest individual game trophy for her 233a score. Roberta Butz was the league's a most improved bowler.

New officers for the Tuesday League were also elected at the banquet. They are: Margaret Alley, president; Trudie Rasmussen, vice president; June Reynolds, secretary; and Phyllis Nosky, treasurer.

LADIES' THURSDAY LEAGUE

The NASA Ladies Thursday Night Bowling League also held their awards program at Eddy's Chalet West. Helen Pasek, captain of the Chomps, accepted the first place team trophy.

Sue Phillips' 252 game won her the highest individual game trophy and she also merited the award for the highest average of 164. Carol Chapman accepted the high series trophy for her score of 548. Maryann Kohl improved her game the most during the season.

Newly elected officers for the Thursday League are: Eileen Norris, president; Jo Lubin, vice president; Helen Pasek, secretary, and Marian Pabetz, treasurer.

FAIRVIEW MEN'S LEAGUE

The Fairview Men's League finished their season with an awards banquet at Bess and Andy's. First place award went to the Dominos, captained by Lou Gedeon. Bob



TUESDAY WOMEN'S LEAGUE WINNERS - The Rebels, captained by Ginny Schlenkerman (second from left), are LaVerne Thesling (left), Jean Biby and Lee Petro. Missing from the photo were Colleen Holt and Joan Keating. (George Hoy photo)



THURSDAY WOMEN'S LEAGUE WINNERS - The Chomps, captained by Helen Pasek (seated) are (from left): Phyllis Mongulo, Betty Soppitt, Jean Oberlin and Carol Chapman. Missing from photo was Maryanne Haller. (John Marton photo)

Travelers abroad offer insights

During the past year, several Lewis employees traveled abroad to deliver scientific papers at conferences. All of them agreed they were received with the utmost hospitality and respect, and they agreed people are pretty much the same the world over. However they did find that some customs and ways of life differed from what they had grown accustomed to. Two offered their impressions.

Composite Materials Branch Chief, John Weeton was fascinated by the cars driven at night in Paris with only their parking lights on. "It seemed as though the whole city was engulfed in a dark blue haze, giving the effect of a peaceful calm settling over the city."

Weeton, who spoke at the 15th Annual International Gas Turbine Conference in Brussels, Belgium, said he had his greatest difficulty in communication during a brief stay in Paris. He says, "It is pretty hard to explain to a cab driver that in this country you only pay the fare for your one way trip and not the cabbie's fare back to where he started from as well." Nevertheless, he found Paris to be a warm and friendly city.

Patricia O'Donnell of the Direct Energy Conversion Division spoke at the Institute of Mining and Metallurgy at Krakow, Poland earlier this year. She was surprised at the many soldiers everywhere in Poland. "They were in the churches, the hotels and restaurants. Maybe it isn't a militaristic country, but that was my impression." On her way to Poland, she had to wait in Copenhagen, Denmark because visitors were allowed to enter the country only on certain days.

She also had her problems with cab drivers. She said, "I had to check in at the American Embassy in Warsaw. My cab driver stopped a few blocks from the embassy and refused to take me all the way. I found out later that their franchise did not permit them to do business with the embassy." While in Copenhagen, she was told that there was full employment and the country was free of slums. "I did not find, during my stay there, any reason to dispute their claim."

All of them agreed that a lot of goodwill was generated by NASA's manned moon shots. Wherever they went, they said, people told them how impressed they were with the first manned moon landing, and followed closely the events of the ill-fated Apollo 13 mission.

Technical papers generate interest

As the calendar year ends, eight more Lewis engineers and scientists are having papers they have written presented at professional society meetings throughout the country.

Dr. Marvin E. Goldstein of the Physics and Chemistry Division presented his paper entitled "Wind Driven Currents in a Shallow Lake or Sea" to the American Physical Society meeting at the University of California in San Diego November 22-24. Last week, a paper entitled "On Stabilizing the Performance of Water and Alkali-Metal Once-Through Boilers," by James R. Stone, Orlando A. Gutierrez and Nick J. Sekas of the V/STOL and Noise Division, was presented in San Francisco to the American Institute of Chemical Engineers.

Lewis News 5
December 3, 1971

At the American Society of Mechanical Engineers Winter Meeting in Washington, D.C. last week, Dr. Roy W. Miller's "Analysis of Unsteady Laminar Boundary Layer Flow by an Integrals Method" was given, which he co-authored with Dr. L. S. Han of Ohio State University. At the same meeting, Helmut F. Butze's papers "Progress in Reducing Exhaust Pollutants from Jets Aircraft" was presented.

At the American Chemical Society's meeting at Ursuline College in Cleveland December 8, Ms. Patricia M. O'Donnell will give her "Chemical Process for Producing Oxygen on the Moon," and Riley O. Miller will present "Cadmium Poisoning of Oxygen Reduction on Platinum Electrode in KOH."



Space program participant

Patricia M. O'Donnell of the Energy Conversion & Materials Sciences Division was one of a dozen employees throughout NASA selected to participate in a community space program held in New York City June 21-24.

The program was held to honor black scientist Dr. George Carruthers of the Naval Research Laboratory whose Lunar Surface Ultra Violet Camera/Spectrograph experiment was used on the Apollo 16 Moon mission. From the Moon, his telescope gave man his first simultaneous view of Earth's North and South Poles.

Among the participants were astronauts Thomas P. Stafford and others representing blacks, Spanish surname Americans, and women minorities. Patricia O'Donnell represented the women.

The three-day program included a motorcade through New York's boroughs of Harlem, Washington Heights, and Brooklyn. Stops were made at selected high schools where participants presented talks to students about NASA. (John Marton photo)

...Women honored



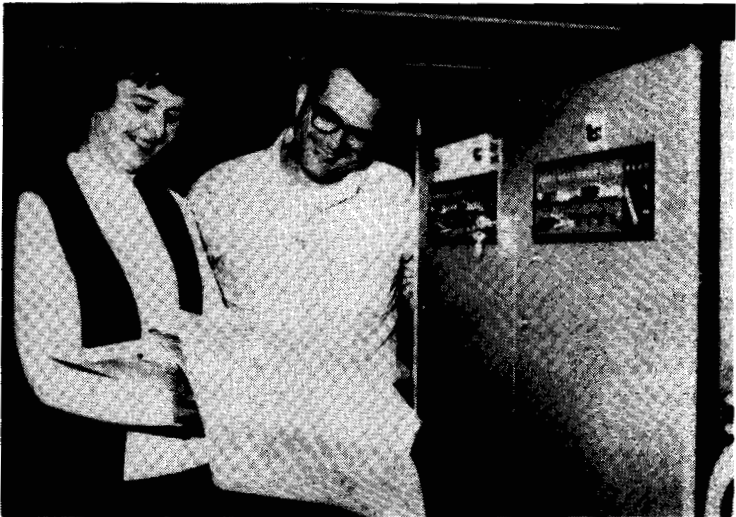
COLLEEN S. HOLT: (third from left) "In recognition of outstanding and cheerful performance of duties in mail system management and community service."



PATRICIA M. O'DONNELL: "In recognition of outstanding achievements in the field of chemistry, and involvement in numerous other activities."



PEGGY L. YOHNER: "In recognition of exceptional communication and organizational skills in supervision."



MARGUERITE G. JEREB: "In recognition of excellence in managing computer operations and computer systems."



GERTRUDE R. COLLINS: (third from left) "In recognition of conscientious and sensitive counseling, and continuous encouragement in training."



ROSE M. ANDREW: "In recognition of dedication to duty, reliability and outstanding overall work performance."



THERESA A. HORVATH: "In recognition of furthering the cause of women through her exemplary career."



GLORIA J. O'DONNELL: (left) "In recognition of exceptional secretarial efficiency, and service to the community."



MARGARET I. ALLEY: "In recognition of superior performance of duties in the field of X-ray diffraction, and excellence in numerous other activities."



JEAN M. BIBY: "In recognition of dedicated and compassionate service in employee relations."



Dr. Patricia M. O'Donnell

Dr. Fred Teren
(Cliff Brooks photo)

Two awarded Ph.D.

With the acceptance of a thesis entitled "The Fluorination of Cobalt and Zinc," Patricia M. O'Donnell put the final link in the chain which qualified her for a Ph.D. in chemistry from the University of Akron last December.

Dr. O'Donnell, who works as an aerospace technologist in the Terrestrial Photovoltaic Project Office, also holds a Bachelor's and Master's degree in chemistry from Case Western Reserve University.

Dr. O'Donnell came to Lewis in 1954 and worked on high energy boron fuels and subsequently worked in fluorine chemistry and in the area of solid ionic conductors for battery application.

In 1976, she was selected for the Career Development Program at NASA Headquarters where she worked in the Energy Programs Office.

An author of 35 technical papers, Dr. O'Donnell holds a patent on "Beryllium Fluoride as a Corrosion Retardant for Beryllium." She has been a guest lecturer at the Institute of Mining and Metallurgy, Krakow, Poland and at the University of Kyoto, Kyoto, Japan.

The mother of three is both a pilot and an occasional skydiver. She also enjoys skiing, traveling and painting.

Fred Teren, Chief, Systems Concepts Branch at Lewis, was recently awarded a Ph.D. in Aeronautics and Astronautics from Stanford University.

Starting as an aerospace engineer at Lewis in 1961, Dr. Teren has specialized in trajectory analysis and optimization, launch vehicle guidance and control, simulation and analysis of air-breathing propulsion systems and propulsion system stability, dynamics and control. He previously headed the Center's Vehicle Guidance, Simulation and System Dynamics sections.

Dr. Teren's Ph.D. dissertation is entitled "Minimum Time Acceleration of Aircraft Turbofan Engines by Using an Algorithm Based on Nonlinear Programming."

As Chief of the Systems Concepts Branch, he is responsible for guiding the efforts of engineers involved in the study and analysis of space propulsion and power systems, including electric and chemical propulsion, photovoltaic and dynamic power systems.

Dr. Teren has authored more than 20 papers in his technical area of expertise and has served as a member of American Institute of Aeronautics and Astronautics' Astrodynamics Committee.

In addition to his Ph.D., Dr. Teren holds Bachelor's and Master's degrees in physics from the University of Chicago and a Master's degree in engineering science from the University of Toledo which was earned in the Lewis on-site program. He has taught an in-house course at Lewis in celestial mechanics.

He was financially supported by the Lewis Training Section while pursuing his advanced degrees at the University of Toledo and Stanford.

Dr. Teren and his wife, Sandra, and their two children live in Beachwood.

Nearly \$30,000 awarded for top job performance

Almost \$30,000 was distributed among some 88 employees and groups for special job achievements at Lewis' 34th achievement awards ceremony held April 24 in the Administration Building Auditorium. Center Director Dr. John F. McCarthy, Jr. presented the awards.

Individual awards averaged about \$577 and were based on the employee's grade or salary. Members of individual teams and project teams received an average of \$142.

INDIVIDUAL AWARD RECIPIENTS

Persons honored were: Donna M. Calala, Dorothy E. Singleton, Thomas J. Dudzinski, Robert Friedman, Robert J. Jeracki, Albert L. Johns, Kaleel L. Abdalla, William C. Strack, Richard H. Knoll, Edward F. McBrien, Francis J. Stenger, John S. Clark, Richard E. Gluyas, Alex Vary, Lowell W. Townsend, John C. Sturman, Martin J. Conroy, Erwin A. Edelman, Joseph L. Fiala, Lawrence A. Nagy, Thomas P. Dorony, Edward M. Krawczonek, Wayne W. Larcey, Norman S. Melnyk, John R. Rhyner, Thomas B. Schneider, Robert P. Jones, June R. Reynolds, Floyd V. Weitzel, William C. Kluzak (retired), David J. Bily, W. Charles Noe, James M. Vrtis, Edward W. Corsetti, Vincente J. DiPiazza, Charles G. Moon, Eric C. Olsen, George S. Sarvay, Paul J. Sirocky and Arthur V. Zimmerman.

INDIVIDUAL TEAM AWARD RECIPIENTS

Shigeo Nakanishi and John L. Power; and George E. Glawe and Herbert A. Will.

PROJECT TEAM AWARD RECIPIENTS

Schuchuli and Upper Volta Photovoltaic Village Power Projects Team: Anthony F. Ratajczak, Richard W. Vasicek, Lawrence A. Thaller, John Toma, James E. Martz, Ralph D. Thomas, Robert C. Didelot, William J. Bifano, Patricia M. O'Donnell, Phillip L. Stone, Robert L. Cataldo, Ronald C. Cull, Richard DeLombard, Richard E. Texler, Arthur L. Laufman, William J. Ice, Lawrence O. Brown, Clifford H. Schroeder, Robert W. Gott and James F. Nichols. **Stander Engine Support Team:** Nicholas J. Csucsál, Thomas J. Toddy, Carl A. Ollick, Thomas L. Knapp, Walter F. Schlegelmilch, William P. Sexton, Jack L. Cuthrell, David E. Justavick, Edward Gierowski, Stevan Golas, Mark Bodziony, Gary M. Wolf, Raymond Gierowski, Frank P. Savel and Howard F. Kilpatrick. **Wind Turbine Support Team:** Virgile D. Kirkendall, Thomas J. Doeberling, William F. Hanlik, Frank J. Klemencic, John F. Schneider, Thomas R. Ropchock, Charles R. Martin, Ronald R. Rogers and Martin J. Pietrasze.

“The wise prove, and the foolish confess, by their conduct, that a life of employment is the only life worth leading.”
—Paley

John L. Allen
*Andrew J. Balbin
H. Robert Bear
Harry E. Bloomer
*Thomas J. Catalano
Michael A. Chepley
Reeves P. Cochran
James F. Connors
*Earl W. Conrad
Charles S. Corcoran
Gerald W. Englert
Robert E. English
J. Elmo Farmer
John C. Freche
Floyd B. Garrett
Thomas F. Gelder
George E. Glawe
Walter W. Gliebe



JOHN L. GREGG

**Congratulations
Service award
recipients!**

Louis R. Revnyak
Robert S. Ruggeri
Reino J. Salmi
Eldon W. Sams
Kenneth F. Shaltens
Robert F. Stanzel
John Toma
Eugene J. Tomasch
*Leonard K. Tower
Arthur M. Trout
*Alfred S. Valerino
Uwe H. von Glahn
Calvin W. Weiss
Maynard I. Weston
Warren J. Whitney
Gilbert J. Widra
Mary Jane Winter
*Retired

THIRTY FIVE-YEAR AWARDS

Cavour H. Hauser
Marcus F. Heidmann
Glen Hennings
Arthur G. Holms
Betty Jane Hood
Mildred C. Hutchison
William L. Jones
*John P. Kelley

*Arnold E. Kent
George R. Kinney
Raphael J. Koch
Milton G. Kofskey
Morton H. Krasner
Eileen A. LaSalvia
Arthur L. Laufman
Roger W. Luidens

Michael M. Modic
Wolfgang E. Moeckel
Zolton N. Nemeth
George Perhala
Porter J. Perkins, Jr.
Leonard J. Piechowski
James L. Prochaska
Keith A. Raymond

THIRTY-YEAR AWARDS

Charles J. Anderson
Ruth E. Arnholt
George L. Barber
James J. Barbush
Herman Barnett
Robert E. Behrendt
Willis M. Braithwaite
Harold Bulger
John R. Burns
William A. Casselberry, Jr.
Joseph F. Corrigan
Michael J. Del Regno
Lennard H. Dodge
John Domen
Norbert J. Dunn

Charles W. Eastwood, Jr.
Robert L. Engel
Anthony Fortini
Thomas A. Fox
George C. Fryburg
Louis Gedeon
Richard P. Geye
Robert W. Graham
Vincent J. Grebe
Louis H. Hartman, Jr.
Herbert J. Heppler

*James M. Hintz
Ernest F. Hund
Quillian C. Johnson
Lawrence P. Kelley
Raymond D. Kolecki
Edward M. Krawczonek

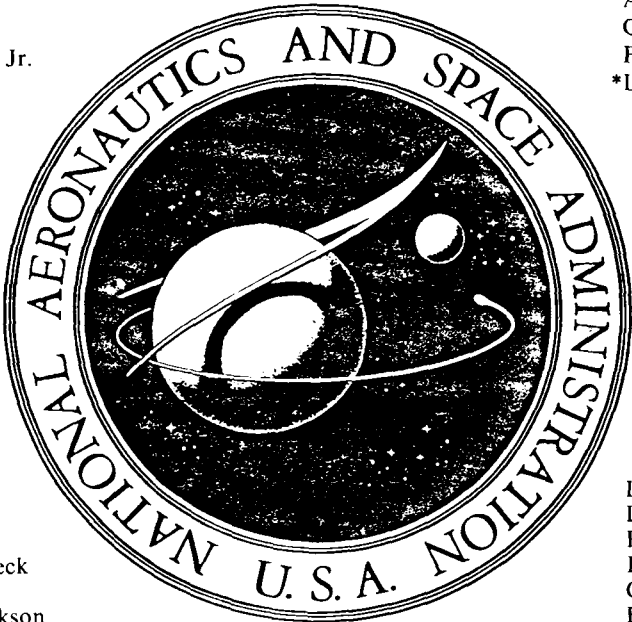
*John Krudy
David R. Krzewinski
Clarence Mamere
George Mandel
David W. Medwid
Wilbert E. Metzger
*Charles J. Mitsch
Angelo F. Muraco
Clarence A. Nolan, Jr.
Frank M. Nowak
*Larry E. O'Bryan

Clifford D. Panek
*John B. Pavlik
Robert S. Redinger
William E. Riedel
James O. Rotnem
Walter E. Russell
Benjamin R. Sharkey
Bernard H. Smith
Richard L. Tilton
John E. Ulrich
Robert L. Walker, Jr.
Theodore H. Warren
Howard T. Witzke
Richard R. Woollett
*Retired

TWENTY FIVE-

Evelyn Anagnostou
Betty Jo Armstead
Raymond R. Bateman
James I. Bergstrom
Donald R. Boldman
Richard C. Booth
Theodore A. Brabbs
Arthur D. Brenza
Jacob D. Broder
Melvin C. Broniman
Dorothy M. Carriedo
Jack H. Chargo
Andrew F. Corcoran
John G. Cornish
Kenneth C. Dean
Paul M. Dorenkott
Robert C. Ehlers
Robert Z. Farkas
Theodore E. Fessler
Albert F. Ganor

Alvin C. Gerold
Helen B. Giomini
Jack S. Grobman
Donald E. Groesbeck
Joseph K. Hanslik
Zellie A. Henderickson
Howard F. Hobart
Richard F. Hodous
Harry A. Jantz II
Merle L. Jones
Joseph L. Joyce
Joseph P. Joyce
William F. Kasay
Joan A. Keating
Steve J. Kiacz



John L. Klann
Vernon W. Klinec
Franklin J. Kutina
William A. Lechene
Ray A. Leidy
Donald W. Logue

YEAR AWARDS

Louis D. Longbrake
Donald M. MacBeth
Ronald J. Marett
Harry L. Marowsky
Charles W. Mealey, Jr.
Erwin H. Meyn
Robert A. Mueller
Norman T. Musial
Patricia M. O'Donnell
Robert E. Oldrieve
Norman W. Orth
Clyde A. Pardee
Donald A. Petrash
Bernard D. Pompiley
Daniel S. Prok

John D. Regetz
Henri S. Rigo
Robert W. Robinson
Melvin L. Sachs
William A. Sanders
Donald E. Schley
Frederick T. Schuller
Frank J. Schwelik
John L. Shannon, Jr.
Robert Siegel
George T. Siman
Harold E. Sliney
Frank Slovak
Dominic J. Sozio
Hilda M. Toth
James N. Tresler
Joseph F. Wasserbauer
Leon M. Wenzel
Donald W. Wisander
John E. Zeman

TWENTY-YEAR AWARDS

*Retired

Leland E. Anderson
Richard L. Ashbrook
Carl A. Aukerman
Everett E. Bailey
Harvey F. Baker
Boyd M. Bane
Henrikas V. Bankaitis
John P. Barranger
Byron E. Batthauer
Julian F. Been
Donald E. Benedict
Donald G. Beremand
Peter T. Bizon
Gerard A. Boulanger
James A. Bova
Werner R. Britsch
Anthony E. Britz
Harold T. Brodersen
Gerald V. Brown
Richard P. Brown
Robert O. Brown
Frederick D. Calfo
Donald R. Canfield
Rene E. Chambellan
Daniel Cica
Fayette M. Clark
Martin J. Conroy
Donald V. Cosgrove
Warren F. Davis
Joseph E. Dayner, Jr.
Robert A. Dezelick
Robert C. Didelot
Karl W. Dietz

Edward H. Drabik
Jennie Drahos
Charles R. Ensign
John C. Evans, Jr.
Duane G. Fair
Sanford F. Felder
Donald L. Finneran, Sr.
Douglas M. Fisher
Clarence E. Forbes
Robert E. Freed
Edward R. Furman
Ralph G. Garlick
Edward Gierowski
Raymond Gierowski
Francis Gourash
Robert R. Graham
William A. Groesbeck
Edward Gross
Fred A. Haley
Norman S. Hammersmith
Paul Harrigal
Frederick D. Hart, Jr.
Edward N. Hejnal
*Carl L. Hembly
William H. Holt
Glen M. Hotz
Theodore E. Hubbell, Jr.
William J. Ice
Rudolph Iglesias
Robert M. Jabo
*Thomas J. Janosko
Larry A. Jones
Stanley Jopek

Myron M. Joseph
Stanley J. Kaminski
Robert J. Kinas
James A. King
Robert B. King
Ojars V. Klans
*William C. Kluzak
Thomas L. Knapp
Eleanor M. Komm
Elmer J. Kopanicky
Stanley T. Krawchuk
Jerry M. Laplant
Erwin M. Lauffer
Arthur Lieberman
Irvin J. Loeffler
Lawrence P. Ludwig
Joseph M. Lukach
Stacy Lumannick
Michael J. MacKinnon
Edward A. Maslowski
Philip A. Masters
Robert M. Masters
Gerald L. Matusik
*Michael K. Matvay
Thomas B. McDevitt
John P. Merutka
Robert P. Migra
Robert P. Miller
Stanley J. Miller
Michael J. Mirtich, Jr.
William Misichko
Andrew M. Mitchell
Richard E. Morris

Edwin T. Muckley
Lawrence A. Mueller
Dennis A. Munson
William J. Nagle
John B. Nechvatal
John D. Noonan
Donald A. Ohlemacher
William A. Olsen, Jr.
Raymond W. Palmer
Roger S. Palmer
Raymond Petrimie
Ernest P. Petti
William S. Pierce
Robert E. Post
Roy W. Rachul
Robert L. Reid
Robert J. Reminder
*Vincent G. Rhodes
Francis G. Rooker
George J. Ropchock
John J. Ropchock
Charles A. Rueger
Wayne Rush
James F. Saltsman
Joseph J. Sanna, Jr.
James W. Satterfield
Hugh A. Schoeffler
Robert J. Schroeder
Richard K. Shaltens
Dean W. Sheibley
Darrell F. Sigmon
Raymond L. Sizemore
Frank V. Slam

Joseph P. Smail
Floyd Z. Smith
Kenneth Smith
Robert B. Smith, Jr.
David A. Spera
Richard L. Sprankle
Henry B. Stankiewicz
Stephan Stecura
Raymond J. Stemitz
William C. Strack
Ralph G. Strempel
Martin T. Stupiansky
Robert E. Sudik
Clifford K. Swartz
Henry Synor
June C. Szucs
William K. Tabata
Harold J. Tesack
Lawrence H. Thaller
Ralph D. Thomas
Thomas J. Toddy
Dennis P. Townsend
Charles J. Vagrosky
Lawrence T. Virag
Marco S. Vulpio
Edward L. Warren
Ross G. Willoh, Jr.
Alan R. Wolfe
Roger C. Wood
Richard F. Wulf
Stanley G. Young
Joseph Yuhas
Leonard A. Zmijewski

February 27, 1981



**DR. PATRICIA
O'DONNELL**

Staffer selected finalist for top engineer award

Dr. Patricia M. O'Donnell has been selected as one of the five finalists for the Engineer of the Year Award by the Engineers' Week Award Committee in the Greater Cleveland area. She was nominated by the Northeastern Ohio Section of the Society of Women Engineers.

The committee, comprising representatives from 19 professional engineering societies, will make the final selection for the prestigious award next month.

Dr. O'Donnell studied high energy boron hydride fuels during her early years at Lewis. She gained national and international recognition for this work and published some 20 papers in that area of research, including her Master's thesis.

As a result of this work, Dr. O'Donnell was an invited speaker at the University of Mining and Metallurgy in Krakow, Poland where she conducted a seminar on "Heterogeneous Fluorination Kinetics."

In addition to conducting the pioneering research related to chemical rocket propulsion, she was responsible for developing a method for producing oxygen on the moon for emergency life support.

Dr. O'Donnell's recent work in photovoltaics includes establishing two systems that use solar energy to produce electricity. These systems were put into operation in two remote areas of the world. She will be going to the country of Gabon in Africa soon to set up four photovoltaic systems.

Dr. O'Donnell currently serves as the project manager for the Center for Disease Control refrigerator project - the top project of the Photo-

Awareness cites REDOX team's achievements



Randy Gahn receives recognition certificate from Director Dr. John F. McCarthy, Jr. as Awareness Chairman Elaine Roberts looks on.

An Awareness ceremony was held in November to recognize the REDOX/Solar R&D Project team for its

significant contributions in integrating the first REDOX system with a solar array power source.

At a breakfast honoring the team, praise for the achievement came from Center Director Dr. John F. McCarthy, Jr.; Energy Director Henry O. Slone; Solar and Electrochemistry Division Acting Chief J. Stuart Fordyce; and Electrochemistry Branch Chief Lawrence H. Thaller.

Team members were: Julio C. Acevedo, Lawrence O. Brown, Shelton Beasley, Joo Ann Charleston, Richard DeLombard, Randall F. Gahn, Oscar D. Gonzalez, Russello

P. Gemeiner, Robert W. Gott, Cynthia Gutierrez, Norman Hagedorn, Mark A. Hoberecht, Jerome A. Johnson, Wilbur D. Knapp, Robert G. Kannenberg, Alfred S. Lajewski, Jerri S. Ling, Arthur Lieberman, James F. Nichols, Patricia M. O'Donnell, Roy L. Pickrell, Margaret A. Reid, Dale K. Stalnaker, Clifford H. Schroeder, Lawrence H. Thaller, Ralph D. Thomas, Donald L. Thoennes and Joseph Yuhas.

The LEWIS NEWS presents the Lewis Research Center story in terms of its people, its purpose and its progress. Published on alternate Fridays the News is produced by the Public Information Office, Lewis Research Center, National Aeronautics and Space Administration, 21000 Brookpark Road, Cleveland, Ohio 44135.

News items should be phoned into PAX 3284, or sent to Room 120, Ad Bldg., Mail Stop 3-11. Deadline is ten days prior to publication.

Editor: Charles Mitchell

Egyptians tour Lewis



Lewis recently played host to a pair of professors from the University of Helwan in Cairo, Egypt, who were studying NASA's technology in renewable energy sources. The professors' trip to Lewis was part of an AID campaign to bring American energy technology to developing nations. Lewis staffers Pat O'Donnell (left) and Paul Prokopious flank Dr. Hasim Heikel, chairman of the Department of Mechanical Engineering, and Associate Professor Mohsen Radwan. The group was photographed by Don Huebler as they toured the West Area's facilities.

Lewis News September 10, 1982

News Notes

July 15, 1983

BPW elects leaders

Lewis' chapter of the Business and Professional Women's Club installed a new slate of officers at a recent club meeting. **Susan Krosel** was elected president, **Susan Johnson** and **Monica Crespo** are 1st and 2nd vice presidents respectively, **Pat O'Donnell** is the new secretary and **Mary Cay Varholick** is club treasurer.

Lewis Newsline

WOMEN OF ACHIEVEMENT—Recently at a **Federal Women's Recognition Day** "Search for Excellence" program, 14 Lewis employees were honored for their outstanding contributions and achievements by the Cleveland Federal Executive Board and the Federal Women's Program Council. Lewis awardees were **Ruth Arnholt, Jo Ann Charleston, Diane Cento-Gomez, Gertrude Collins, Sandra Giorgio, Leslie Greenbauer-Seng, Gilda Jacinto, Carmela Lampkin, Bonnie McBride, Pat O'Donnell, Lucille Rhodes, Mary Tharp, Sandra Walters and Alice Whitlock**. And among those honored for having "achieved the status of the highest ranking woman in their local agency" was Lewis employee **Peggy Yohner**.

BPW LEADERSHIP—"You are indeed fortunate to have in your employ a true professional, a person who cares," said Patricia Molnar, president of **Ohio Federal Business and Professional Women**, in announcing Lewis employee **Theresa A. Horvath** as president-elect of that organization for the 1985-86 year. "By accepting this position, Theresa has demonstrated responsibility and leadership ability. She is indeed an asset to BPW, as I am sure she is to you at Lewis," said Molnar.

FIRE PREVENTION WEEK—During Fire Prevention Week, **Oct. 6-9**, the Center's Plant Services and Fire Protection Branch is planning an **Open House**, says Branch Chief **Ted Ermi**. Free hand-outs, a contest and live demonstrations are all planned for the event. Look for a flyer coming to your mail stop for more details.

ANNUAL STEAK-OR-BAKE—On **Sept. 27**, the **Facilities Operations and Maintenance Division** will hold their Seventh Annual Steak-or-Bake at the Picnic Grounds. "We are inviting all FOMD employees past and present and any FOMD retirees who would like to attend," says Edna T. Schleich, Division Secretary. Tickets are **\$8.50 per person** with extra clams at \$3 per dozen. Contact Edna at PAX 8078, MS 21-11; PBX 433-4000, ext. 250.r



Loris O. Chobanian

Composer, professor of composition and guitar; composer in residence, Baldwin-Wallace College

PRESENT AT CREATION

Brainstorms, bright ideas, and bolts from the blue — a look at creativity

Freud said artists couldn't really understand or explain creativity. "The nature of artistic attainment is psychologically inaccessible to us," he wrote. But over the next two months, the Cleveland Center for Contemporary Art will attempt to prove him wrong with a lecture series called "Creativity: Six Perspectives."

Beginning Tuesday — with Dr. Donald Coffey of the Johns Hopkins School of Medicine talking about "Human Creativity" — the center will explore the nature of creativity.

Later speakers include Dr. Howard Gardner of Harvard University ("Artistic Creativity: A Psychologist's Perspective," Oct. 21); composer Philip Glass ("The Creative Process: The Making of an Opera," Oct. 28); business executive Peter Lewis ("Business as a Creative Process," Nov. 6); artist Dorothea Rockburne ("An Artist's Approach to Creativity," Nov. 11) and composer-conductor Pierre Boulez ("Musical Creativity: Future Directions," Nov. 19).

For an advance perspective on creativity, Sunday Arts editor Joanna Connors talked with five local artists and scientists about the creative process in their work.

PD photos by Diana McNees



Dr. Patricia O'Donnell

NASA Lewis Research Center,
Deputy Chief of Energy Storage
Branch, Power Technology Division

I manage the work of 17 members of the branch, all engineers. What we do is work on fuel cells and batteries to provide power for spacecraft. We work on specific batteries for the space station, batteries for commercial satellites, and we work on batteries and fuel cells for space platforms.

I manage the activities of the group, set the milestones, the goals, do the finances, make the technical decisions.

We have no guidelines to go by; we're on the cutting edge of new technologies, so it's

SEE O'DONNELL/6-1

O'Donnell

FROM/6-1

One way we work is the task team will discuss it, do the research necessary, and then individual members will do the computer analyses and so on. Other times, when it's an in-house design, we compete against each other. We set up two teams, give them the goals of the mission, and then we pick the best design. It leaves everybody free to put their input in.

Generally our research is not something you do completely alone. It's a different atmosphere than a university; in a university you go in and don't really converse with people.

As I function now, I don't concentrate on one thing; I concentrate on one area. When something goes well, it's very exciting that we've thought of a design, looked into it, and progressed to the point where it works.

After work, if I want to do something that is a lot like my work, I go into the garage and pick up some tools. I've built a car; it runs; it works. I also paint — if I want to get away from my work, to have a diversion from engineering, I do that.



Alan Peters

Artist, artist in residence, Vet



Dr. Susan Shurin



Lee K. Abbott

scapes. I guess I could be considered a realist, so my inspiration can be more obvious than with other styles, but I

Lewis BPW Club Members Help Organize State BPW Convention

By Del Zatroch

When the 67th Annual Convention of the Ohio Federation of Business and Professional Women's (BPW) Clubs begins today, it will represent the culmination of months of planning and effort by members of the NASA Lewis BPW.

Seven hundred delegates and members from throughout Ohio are expected to attend the convention which will be held May 15-17 at Cleveland's Stouffer Tower City Plaza Hotel.

Presiding over the annual meeting will be Lewis employee Theresa Horvath, state president of the Ohio Federation of BPW Clubs. Horvath, who began her career at Lewis 24 years ago as a secretary, is now Executive Director of the Cleveland Federal Executive Board. She is a charter member and first president of the NASA Lewis BPW Club.

June Bahan-Szucs, of the Procurement Division, is serving as Convention Co-chairman, along with LaVerne Cowgill of the Lakewood BPW Club.

Other members of the NASA Lewis BPW who helped plan the convention include: Malvina Hay, a Lewis retiree, who is Ads and Corporate Sponsors Chairman; Fay Maldari, Air Force



Members of the NASA Lewis BPW have spent months helping to plan and organize the annual convention of the Ohio Federation of BPW Clubs to be held in Cleveland, May 15-17. Shown above: (left to right) Del Zatroch, June Bahan-Szucs, Malvina Hay, Gizella Horvath, Theresa Horvath, and Fay Maldari. Not shown: Susan Johnson, Mary Eitel, Lucy Geyser, Dr. Patricia O'Donnell, and Linda Schuster.

Zatroch, Bahan-Szucs, and Hay are modeling leis, in preparation for the Installation Banquet which will have a Hawaiian theme.

Systems Command Liaison Office, who is Flowers Chairman; Mary Eitel, a D-K employee in the Technical Information Services Division, who is Graphics Advertisement Coordinator; Linda Schuster, Health, Safety and Security Division, who is Hospitality Hostess; NASA Lewis BPW Club President Susan Johnson, Propulsion Systems Division, who is in charge of the

professional seminars; Del Zatroch, Health, Safety, and Security Division, who is Publicity and Public Relations Chairman; and Dr. Patricia O'Donnell, deputy chief, Energy Storage Branch, Power Technology Division, who is assistant to the Tour Chairman.

Lucy Geyser, Computer Services Division, has written a special narration that will be read

by Del Zatroch during the convention's opening ceremonies. Entitled "Perspectives," the presentation will portray the working business and professional woman from the turn of the century to the present.

The theme of the convention is "Making A Difference."

Seminars offered will cover professional skills for the woman achiever, business etiquette, health issues, and power and politics.

Attendees can also select sightseeing tours of Cleveland, its world-famous health centers, and Lewis. The social highlight will be the Hawaiian-themed Installation Banquet featuring entertainment by The Drums of Tahiti performers from Sea World.

Members of the Business and Professional Women's Clubs are part of an alliance of individuals dedicated to improving the professional, personal, economic, and educational outlook for women. With a quarter of a million members in 67 countries, the International Federation is the most influential organization of business and professional women in the world and the recognized voice for business and professional women at the United Nations.

The NASA Lewis BPW Club, organized in 1968, currently has 40 members. Individuals interested in joining should contact: Dr. Patricia O'Donnell (3-5248).



How Would You Rate Your Boss? Part II

Power Technology Division employees are evaluating the performance of supervisors

The August issue of Working Smarter described how wage grade employees in the Test Installations Division are using a questionnaire to evaluate the performance of their supervisors.

Since then, researchers, secretaries, and administrative support personnel in the Power Technology Division have also been given the opportunity to evaluate their supervisors. While there are many similarities between the two subordinate appraisal programs, there are also many differences.

Initiated At Closing The Loop

The idea for subordinate appraisal of supervisors within the Power Technology Division was first suggested at a Closing the Loop participative management training session in October 1986.

In December, a committee was formed to propose such a system. The objective was to provide a mechanism that would give supervisors constructive feedback from their employees in order to increase management effectiveness and overall Division productivity.

The committee was chaired by Bruce Banks, chief, Electro-Physics Office, and included Dr. Sheila Bailey, Dr. Patricia O'Donnell, Marla Perez-Davis, and Dr. Joseph Singer.

Before establishing basic appraisal guidelines, the committee studied literature about the con-

cept and consulted a widely recognized expert—Dr. H. J. Bernadin, a management professor at Florida Atlantic University. The committee also consulted with the Training and Development Branch, the Office of Chief Counsel, and the Computer Services Division.

Protecting Anonymity

To make sure the feedback to the branch chiefs and their deputies would be genuine and unreserved, the committee felt strongly that the forms should be submitted anonymously and tabulated by a neutral, external third party.

The committee also opted not to include open-ended questions as a means of preserving anonymity. Since branch chiefs and deputies are generally familiar with the writing styles of each employee, it's possible that a respondent could be identified by how his or her comments were phrased.

In addition, the committee recommended developing two separate appraisal forms: one for use by researchers and one for use by secretaries and other administrative support personnel. To protect the anonymity of secretaries (because there is only one per branch), the committee decided to aggregate the responses from the secretaries and other support staff.

The committee also recommended using frequency



responses (i.e., Always, Usually, Sometimes, Seldom, Never) instead of a 1 to 5 scale, because different numbers can mean different things to different people. A "Not Applicable" space was also included.

Developing Questions

A great deal of time, effort, and employee input went into developing the specific questions and determining how many questions should be included.

As a first step, the committee selected a list of 18 "Dimensions of Managerial Performance" to define the areas in which supervisors should be appraised. The list included responsibilities such as: planning, guiding subordinates, technical proficiency, persistence in reaching goals, handling crises, maintaining good working relationships, representing the organization to the public, and monitoring and controlling resources. The committee made sure that the appraisal questions covered all 18 areas and related only to aspects of supervisory performance that are within the supervisor's control and capability to improve.

Before finalizing the subordinate appraisal form, the committee sought comments on the

questions from: all the employees and supervisors within the Division; LESA (IFPTE Local 28); the Training and Development Branch; and Division Chief Dr. Henry Brandhorst, Jr. After getting the go-ahead to proceed, the committee contracted with Case Western Reserve University to conduct the survey.

Conducting The Appraisal

The subordinate appraisal forms were distributed to all civil service employees in the Division the last week in September. Responses were due October 9. Completed forms were returned from 63 percent of the employees who received them.

The forms for secretaries and administrative support personnel covered 47 specific concerns, including the supervisor's performance in: goal-setting; meeting deadlines; using criticism constructively; providing regular feedback on performance; making an effort to understand the subordinate's strengths, weaknesses, and career goals; keeping employees informed; being accessible; showing respect for employees' opinions; consulting individuals who will be affected before making final decisions; and securing promotions for deserving individuals.

The form distributed to scientists and engineers covered an additional 13 research-oriented aspects of the supervisor's performance. For example, researchers were asked how often their supervisors encourage them to: publish; interface with researchers outside NASA, and attend technical meetings.

Using The Feedback

"What is done with the feedback

will determine whether this was a worthwhile exercise," emphasizes Banks. While the subordinate appraisal is not part of the supervisor's formal performance review, each supervisor is expected to make a deliberate effort to improve in those areas identified as weaknesses.

Each supervisor will receive a scoresheet showing the mean score and total number of responses received from his subordinates for each statement. Each supervisor will also be able to see how the other supervisors were rated, although the supervisor won't be able to identify which other supervisor received which score.

Supervisors are then expected to meet with their subordinates to review the results to get further feedback.

To ensure that supervisors make legitimate efforts to address identified areas of concern or need, Branch chiefs will discuss the results with the Division chief and deputies will discuss the results with the Branch chiefs and the Division chief. The results of the aggregate appraisal of the Division support staff will be reviewed in a meeting of the Division chief with the Branch chiefs.

After nine months, CWRU will send up a follow-up appraisal form to Division employees to determine whether the supervisor has in fact improved.

"As with any new concept, there is generally some initial skepticism," says Banks. "Once people see that this system is working and that improvements are being made, we believe that the number of Division employees participating in future appraisals will be even higher."

Admiral Richard Truly Is Guest Speaker

1991 NASA Lewis Honor Awards Roll Call

OUTSTANDING LEADERSHIP MEDAL

Neal T. Saunders, director of Aeronautics.

EXCEPTIONAL SCIENTIFIC ACHIEVEMENT

Dr. Khairul Zaman B.M.Q., Inlet, Duct and Nozzle Flow Physics Branch, Internal Fluid Mechanics Division.

DISTINGUISHED PUBLICATION AWARD

Rebecca A. MacKay and Michael V. Nathal, Advanced Metallics Branch, Materials Division, for: "Coarsening in High Volume Fraction Nickel-Base Alloys"

EXCEPTIONAL SERVICE AWARDS

Robert Baumbick, Engine Sensor Technology Branch, Instrumentation and Control Technology Division; Harvey Bloomfield, Power Systems Integration Office, Power Technology Division; Frank Brady, Electrical Systems Branch; Raymond Burns, Systems Engineering and Analysis Branch, Systems Engineering and Integration Division; Jean Chapman, Office of Chief Scientist; Russell Corso, Fluid Systems Branch, Propulsion and Fluid Systems Division; James Davis, Facility Planning Office; Dr. John W. Dunning, Jr., deputy chief, Systems Engineering and Integration; Robert Evans, Terrestrial Propulsion Office, Propulsion Systems Division; Thomas Finnegan, Management Information Systems Branch, Computer Service Division; Phyllis Geffert, Telecommunications and Networking Branch, Computer Services Division; Steve Gonczy, Electronic Systems Branch, Aeropropulsion Facilities and Experiments Division; William Groesbeck, Thermal and Fluids Analysis Branch, Propulsion and Fluid Systems Division; Louis Ignaczak,

Flight Projects Branch, Space Experiments Division; Kenneth Jensen, Communications and Electronics Branch, Test Installations Division; Bonnie McBride, Aerothermochemistry Branch, Internal Fluid Mechanics Division; Carl Monnin, Software Engineering Office, Engineering Support Division; Monica Palivoda, Office of the Director; Patricia Parker, Office of the Comptroller; Paul Prokopius, Electro-Chemical Technology Branch, Power Technology Division; Gary Sagerman, Mission and Vehicle Integration Office, Launch Vehicle Project Office; Bobby Sanders, deputy chief, Inlets Technology Branch, Propulsion Systems Division; Charles Slauter, deputy chief, Fabrication Support Division; Joseph Stephens, Engine Materials Project Office, Materials Division; Eugene Symons, chief, Cryogenic Fluids Technology Office; and Dr. Fred Teren, chief, Electrical Systems Division.

EXCEPTIONAL ACHIEVEMENT MEDALS

Henry Geringer, Materials Development Branch, Test Installations Division; Arthur Laufman, Photographic and Printing Branch; Donald Packe, deputy chief, Computer Services Division; Vernon Parrish, Environmental Compliance Office, Office of Environmental Programs;

Laurence Petraus, chief, Materials and Engine Components Branch, Test Installations Division; Robert Schneider, chief, Project Control Office; and Thomas Tokmenko, Space Systems Branch, Procurement Division.

EXCEPTIONAL ENGINEERING ACHIEVEMENT

Leo Franciscus, Mission Analysis Branch, Aeropropulsion Analysis Office; Dr. Patri-

berg, Carl F. Lorenzo, John J. Reinmann, Charles J. Trefny. Employees from other organizations include: Charles J. Bauer and John L. Leingang, USAF Wright Laboratories; Robert L. Berrier, Ernest A. Mackley, and Charles R. McClinton, NASA Langley Research Center; Victor Corsiglia, NASA Ames Research Center; Robert Dobrowolski, Guy Mangano, and Ed Stawski, Naval Air Propulsion Center; James L. Keirse and Paul J. Waltrup, JHU/Applied Physics Laboratory; James Loudigan and C. Franklin Markarian, Naval Weapons Center; William Rose, Rose Engineering; Raymond Shreeve, Naval Postgraduate School.

Solid Surface Combustion Experiment Team: In recognition of the

sustained superior effort and achievement in the design, development, and flight of the Solid Surface Combustion Experiment. Team members include: Ralph J. Zavesky (project manager), Frank J. Barina, Kenneth M. Beno, William J. Bifano, Michael H. Brace, Daniel W. Buttler, James E. Cake, William M. Foster II, Christopher A. Gallo, Gary E. Gorecki, Daniel H. Haas, Robert L. Hauer, Thomas V. Hudach, Louis R. Ignaczak, Jean M. Johnson, Poppy Kalis, Gary N. Kotch, John M. Koudelka, John J. Logan Jr., William J. Masica, Richard D. Meden, Daniel P. Morilak, Eric S. Neumeann,

Scott A. Numbers, Sandra L. Olson, Angel M. Otero, Kimlan T. Pham, Howard D. Ross, Neil D. Rowe, Kurt R. Sacksteder, Jack A. Salzmann, Raymond G. Sotos, Donald R. Striebing, Kenneth G. Ulicny, Daniel M. Vanto, James C. Williams, and William J. Wolf. Lewis contractor employees include: Robert E. Bryan, Michael Shuty, John C. Sturman, and Dan Williston, Analex Corporation; Jay C. Owens, Cortez III Service Corporation; Mark Brezenski, David J. Haydu, James H. McKim, and John J. Merry. Employees from other organizations include: Robert A. Altenkirch, Mississippi State University; Thomas D. Akers, Charles E. Chassay, Kyle Fairchild, and Dawn A. Thomas, NASA Lyndon B. Johnson Space Center; Willie S. Beckham and Gary Deardorf, Lockheed; Richard Bradfield, The Bionetics Corporation; Bradley Carpenter, Warren G. Hodges, and James F. McGuire, NASA Headquarters; Beth A. Cerrato, Glenn C. Chin, Deborah J. Moates, and William J. Paton, NASA John F. Kennedy Space Center; Susan Freeman, Rockwell.

FORTY-FIVE-YEAR SERVICE EMBLEM

Robert G. Deissler, staff scientist for Fluid Physics, Office of the Chief Scientist.

FORTY-YEAR SERVICE EMBLEM

William P. Hassett, mechanical engineering technician, Facilities Operations Division; Leonard V. Pelka, electronics equipment specialist, Logistics Management Division; and Frank A. Zelko, lead electronics engineering technician, Test Installations Division.



Director of Aeronautics, Neal T. Saunders (center), received the Outstanding Leadership Medal. Center Director Larry Ross (left) and NASA Administrator Richard Truly (right) look on.

GROUP ACHIEVEMENT AWARD

Lewis FY 1990 Construction of Facilities Team: In recognition of outstanding implementation of the Construction of Facilities FY 1990 Minor Program resulting in substantial increases in mission capability and quality of life. The team includes: Daniel J. Keliher (team leader), Louis F. Bernhardt, Frances M. Borato, John Chovan, Pedro I. Colon, David S. Ebner, William D. Guthrie, Thomas J. Hinshaw, Robert F. Houk, William F. Hyde, Robert P. Jones, Paul A. Karla, Daniel F. Larson, Dallas Lauderdale Jr., Gene Pinali, Hugh A. Schoeffler, Michael C. Seaver, Paul B. Starner, Ronald A. Zurawski.

Low-Speed Propulsion Team: In recognition of an exceptional effort in low-speed propulsion technologies crucial for the National Aero-Space Plane Program. The team includes: Edward T. Meleason (team leader), John C. Aydelott, Bernard J. Blaha, David N. Bowditch, Robert E. Coltrin, Richard L. DeWitt, Ned P. Hannum, Erwin A. Lez-



Rebecca A. MacKay and Michael V. Nathal (center) received the Distinguished Publication Award. Center Director Larry Ross (left) and NASA Administrator Richard Truly look on.



Khairul Zaman (center), Inlet, Duct and Nozzle Flow Physics Branch, received the Exceptional Scientific Achievement Medal. Center Director Larry Ross (left) and NASA Administrator Richard Truly (right) look on.

Lewis employees receive 1995 Honor Awards

ON June 7, 1995, Leon Bibb, news anchor/reporter, WEWS News-channel 5; and Gerald Barna, Acting Deputy Director, presented plaques and medals to Lewis employees for their outstanding contributions in the civil service workforce.

Exceptional Service

Bernard J. Blaha, Propulsion Systems Division. For exceptional leadership of nozzle technology development critical to future high-speed commercial transport aircraft and for outstanding contributions to the advancement of air-breathing propulsion technology.

Maury L. Blanton, Office of Human Resources Management. For consistently providing outstanding service to the Lewis Research Center and NASA in the area of human resources management.

Paul L. Burstadt, Propulsion Systems Division. For outstanding leadership in advancing air-breathing propulsion technology for high-performance aircraft.

Pamelia P. Caswell, Logistics and Technical Information Division. For consistently providing outstanding editorial services and innovative solutions to publishing problems.

Daniel Cica, Computer Services Division. In recognition of sustained exceptional service of technical excellence in the innovation and implementation of Centerwide and Agencywide customer-oriented network technology.

James E. Dockrill, Electronic and Control Systems Division. For sustained superior performance in the design and development of the Electrical Power System for Space Station *Freedom*.

Betty J. Hemphill, Facilities Engineering Division. For outstanding administrative management of construction contracts in the Facilities Engineering Division.

Albert L. Johns, Propulsion Systems Division. For exceptional leadership in developing research capabilities and techniques for high-performance aircraft.

James Kassuba, Office of Human Resources Management. For providing outstanding, creative, customer-oriented services to the employees of NASA.

Dallas Lauderdale, Jr., Facilities Engineering Division. For extraordinary service in the performance and dedication to project management skills along with outstanding efforts in guiding Small Disadvantaged Businesses through the Construction of Facilities Program at Lewis.

Barbara A. Mader, Instrumentation and Control Technology Division. For exceptional knowledge, dedication, and outstanding secretarial and administrative skills, which have contributed significantly to the efficiency and effectiveness of the Instrumentation and Control Technology Division.

Linda M. McAllister, Office of Mission Safety. In recognition of sustained superior performance in administrative and contract management support for the Lewis Research Center's Safety, Reliability, and Quality Assurance Program.

John A. Mihevic, Facilities Operations Division. For outstanding engineering leadership and dedicated service in support of the Aeronautic

Research Support Systems Computer Controls serving the major Wind Tunnel and Propulsion Test Facilities at Lewis Research Center.

Donald R. Nealen, Test Installations Division. For outstanding performance and leadership in the assembly of high-speed rotating equipment and dedication to solving the difficult problems that arose.

Raymond W. Palmer, Space Electronics Division. For pioneering research in the computer-aided design of vacuum electronics devices that has enabled high-efficiency amplifiers for planetary exploration and commercial space communications.

Carolyn K. Purvis, Power Technology Division, retired, (presently working as a Distinguished Research Associate in the User Services and Consolation Branch). For helping to raise the field of Spacecraft Environmental Interactions from a scientific curiosity to one of the most important areas of spacecraft engineering.

George S. Sarvay, Propulsion and Fluids Systems Division. For outstanding engineering and leadership contributions to the support of the aeronautics, launch vehicle, terrestrial energy, and space technology programs at the Center.

John W. Schaefer, Aeropropulsion Facilities and Experiments Division. For outstanding leadership in establishing, refining, and implementing management procedures and methods for the effective maintenance and operation of the Aeronautics Directorate test facilities.

Wendell White, Test Installations Division. For outstanding service to his customers, managers, and peers through exceptional leadership in a variety of disciplines at Lewis Research Center.

Stephen P. Wnuk, Facilities Planning Office. For extraordinary initiative and leadership in the management of the Lewis Facilities Utilization Program.

Lois M. Wolfe, Space Flight Systems Directorate. For sustained exceptional performance in support of the management and administration of the Space Flight Systems Directorate.

Exceptional Achievement

Richard DeLombard, Space Experiments Division. For outstanding contributions in the development of microgravity measurement and analysis capabilities at the Lewis Research Center.

Julian M. Earls, Office of the Director. In recognition of the innovative programs established with Small Disadvantaged Businesses and Historically Black Colleges and Universities.

Chunill Hah, Internal Fluid Mechanics Division. For the development of a flexible turbomachinery code which has been applied to a wide variety of industry applications, including pumps, compressors, and turbines.

Sandra L. Hardy, Engineering Support Division. For exceptional contract administration service to the Lewis Research Center through the administration of the Scientific, Engineering, Technical and Related Services (SETAR) contract.

Christopher M. Kennedy, Logistics and Technical Information Division. For outstanding leadership and exceptional achievement in provid-

ing creative improvements and high-quality logistics and technical information services to Lewis Research Center.

Rodney M. Knight, ACTS Project Office. For outstanding achievements in management, organization, and leadership in the Advanced Communications Technology Satellite Project.

Dzu K. Le, Electronic and Control Systems Division. In recognition of initiating, advocating, and performing the development and application of the wavelet transform technology for use in the analyses of expendable launch vehicle dynamics.

Jesus M. Lopez, Fabrication Support Division. For extraordinary effort in the development and subsequent operation and implementation of the Numerical Controlled Programmming Support Area of the Machining Branch.

Ronald W. Sepesi, Procurement Division. For dedicated support that has significantly contributed to successful NASA Space Station Redesign activity.

Richard K. Shaltens, Power Technology Division. For outstanding efforts and accomplishments in managing the 2-kWe Solar Dynamic Ground Test Demonstration Project.

Laszlo F. Zala, Facilities Operations Division. For outstanding engineering leadership and dedicated service in support of the Internal Operations and Protective Services Group serving the critical needs of the Lewis Research Center.

Exceptional Engineering Achievement

Roberto J. Acosta, ACTS Project Office. For outstanding achievements in the development of the revolutionary antenna system for the Advanced Communications Technology Satellite (ACTS), which is dramatically improving the capabilities for commercial communications.

Steven A. Hippensteele, Internal Fluid Mechanics Division. For exceptional engineering achievement in pioneering the development and application of liquid crystal thermography to turbine engine heat-transfer research.

Exceptional Scientific Achievement

James L. Smialek, Materials Division. For outstanding contributions and technical leadership in understanding the high temperature environmental durability of advanced aeropropulsion materials.

Outstanding Leadership

R. Lynn Bondurant, Jr., External Programs Directorate. For exceptional leadership in creating educational programs that have significantly impacted the educational community while enhancing the visibility and prestige of the NASA Lewis Research Center.

William J. Masica, Space Experiments Division. For outstanding leadership in advocating and implementing Lewis Research Center programs in microgravity sciences, in-space technology, and renewable energy and conservation.

Leroy G. Sidorak, Test Installations Division. For exceptional service in support of labor/management cooperation at the Lewis Research Center.

Presidential Rank Awards

Meritorious Executive—*John J. Nieberding, James R. Ramler, and Joseph A. Yuska.* For sustained superior accomplishments in management of programs of the United States Government and for noteworthy achievement of quality and efficiency in the public service.

Distinguished Executive—*Ronald L. Thomas.* For sustained extraordinary accomplishment in management of programs of the United States Government and for leadership exemplifying the highest standards of service to the public, reflecting credit on the career civil service.

Lewis Distinguished Publication Award

Kenneth L. Suder, Rodrick V. Chima, Anthony J. Strazisar, and William B. Roberts, members of the Internal Fluid Mechanics Division. In recognition of the excellence and value of their publication entitled "The Effect of Adding Roughness and Thickness to a Transonic Axial Compressor Rotor."

Steven Szabo Engineering Excellence Award

Dale C. Ferguson, Carolyn K. Purvis, Michael J. Patterson, and David B. Snyder, members of the Space Environment Effects Branch. For identifying and implementing the plasma contactor as an engineering solution to the problem of high-negative electrical potentials on the Space Station.

Abe Silverstein Medal

Christos C. Chamis, Structures Division. For exceptional achievement in the development and application to the Space Shuttle Main Engine of probabilistic structural analysis and design methods, which formally account for random variations inherent in structural design.

Group Achievement Awards

Cleveland Federal Executive Board Team: For outstanding service and leadership provided to the Federal, State, and local Government communities of the Greater Cleveland Area.

Supply and Transportation Improvements Team: For developing and implementing the innovative zoned delivery system at the Lewis Research Center.

Total Quality Coaches: For outstanding contributions and dedicated service in support of the Lewis Research Center's Total Quality initiative.

Forty-Year Service Awards

Joseph H. Brown, Test Installations Division; *Jean A. Chapman,* Office of University Programs; *Norman T. Grier,* Retired; *Franklin J. Kutina,* Retired; *Patricia M. O'Donnell,* Power Technology Division; *Joseph A. Shivak,* Retired; *Robert Siegel,* Lewis Research Academy; *Alex Vary,* Retired; *Joseph F. Wasserbauer,* Retired.

Forty-five Year Award

Arthur E. Sprungle, Retired

Fifty Year Service Award

Richard H. Cavicchi, Internal Fluid Mechanics Division



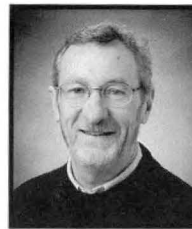
Johnson



Kroeger



Lapka



Manly



Meleason



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Pishkula



Porada



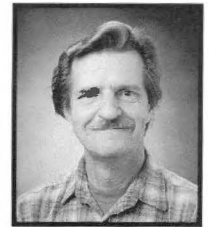
Pucci



Sidorak



Stevenson



Studnicka

Thomas Lapka, Test Installations Division, retired Apr. 3 with 21 years of NASA service.

Robert Manly, Facilities and Test Engineering Division, retired Apr. 3 with 36 years of NASA service.

Gerald Marquis, Manufacturing Engineering Division, retired Apr. 3 with 34 years of NASA service.

James May, Instrumentation and Controls Division, retired May 1 with 11 years of NASA service.

Linda McAllister, Space Directorate, retired Apr. 3 with 28 years of NASA service.

Edward Meleason, Turbomachinery and Propulsion Systems Division, retired Apr. 3 with 34 years of NASA service.

William Middendorf, Engineering Design and Analysis Division, retired Apr. 3 with 34 years of NASA service.

James Mierzejewski, Manufacturing Engineering Division, retired Feb. 28 with 35 years of NASA service.

Thomas Miller, Space Directorate, retired Apr. 3 with 30 years of NASA service.

Mary Ann Mulroy, Office of the Director, retired Apr. 3 with 35 years of NASA service.

Lawrence Nagy, Communications Technology Division, retired March 31 with 36 years of NASA service.

Patricia O'Donnell, Power and On-Board Propulsion Technology Division, retired Apr. 3 with 44 years of NASA service.

Lawrence Ontko, Procurement Division, retired Apr. 3 with 14 years of NASA service.

Joseph Pishkula, Facilities and Test Engineering Division, retired Apr. 3 with 36 years of NASA service.

Theodore Porada, Engineering Design and Analysis Division, retired Apr. 3 with 35 years of NASA service.

Alex Pucci, Systems Engineering Division, retired March 28 with 35 years of NASA service.

Richard Ranaudo, Aircraft Operations Office, retired Apr. 3 with 24 years of NASA service.

David Renz, Power and On-Board Propulsion Technology Division, retired Apr. 3 with 31 years of NASA service.

Jerome Rodak, Computer Services Division, retired Apr. 3 with 36 years of NASA service.

George Schaefer, Engineering Design and Analysis Division, retired Apr. 3 with 35 years of NASA service.

Robert Shumyla, Engineering Design and Analysis Division, retired Apr. 3 with 22 years of NASA service.



Szucs



Townsend



Webb

Leroy Sidorak, Test Installations Division, retired Apr. 3 with 36 years of NASA service.

Mary Solderitsch, Procurement Division, retired Apr. 3 with 14 years of NASA service.

Thomas Strom, Subsonic Systems Office, retired Apr. 3 with 40 years of NASA service.

Steven Stevenson, Systems Engineering Division, retired Apr. 3 with 33 years of NASA service.

Alan Studnicka, Test Installations Division, retired Apr. 3 with 36 years of NASA service.

June Szucs, Office of Community and Media Relations, retired March 31 with 39 years of NASA service.

William Tabata, Launch Vehicle and Transportation Projects Office, retired May 9 with 40 years of NASA service.

Dennis Townsend, Structures and Acoustics Division, retired Apr. 3 with 35 years of NASA service.

Louis Tull, Computer Services Division, retired Apr. 3 with 21 years of NASA service.

Michael Vanco, Aeropropulsion Research Program Office, retired Apr. 3 with 35 years of NASA service.

Perry Wachs, Facilities and Test Engineering Division, retired March 31 with 14 years of NASA service.

John Webb, Facilities and Test Engineering Division, retired Apr. 3, with 30 years of NASA service.

Harold Wharton, Office of the Chief Financial Officer, retired Apr. 3 with 39 years of NASA service.

Nancy Wolf, Logistics and Technical Information Division, retired March 31 with 18 years of NASA service.