Space News Roundup)

Vol. 25 No. 22

November 21, 1986

National Aeronautics and Space Administration

Employees honored at awards ceremony

Fletcher credits JSC's work, "unmatched anywhere else in the world"



Eight NASA employees, seven from JSC, shared a \$35,000 Presidential Commendation under the Federal Incentive Awards Program for their suggestion of a Shuttle night landing system for Edwards Air Force Base. The recipients were Charles Baker of the Dryden Flight Research Facility, Dewey Brown, Charles Deiterich, Frederick Hauck, John Nelson, Loren Shriver, Richard Tuntland and Michael Smith. Jane Smith, pictured standing next to JSC Director Aaron Cohen, accepted the award for her late husband.

NASA honored JSC employees and others who have made outstanding contributions to manned space flight at the NASA and JSC Honor Awards Ceremony on November 13.

Dr. James C. Fletcher, NASA Administrator, told JSC employees last Thursday that "NASA is on the move again," and assured them that he is dedicated to "keep the space program going and growing."

Fletcher visited JSC as principal presenter for the NASA and JSC Honor Awards Ceremony in the Teague auditorium. Dale Myers, NASA Deputy Administrator, Rear Adm. Richard Truly, NASA Associate Administrator for Space Flight, Dr. Aaron Cohen, JSC Director, and Dr. Carolyn L. Huntoon, JSC Associate Director, assisted.

"It is quite clear we have turned the corner in our recovery efforts," Fletcher said, "thanks in large part to the efforts of those honored here today."

Fletcher said he knew the extreme difficulties and changes faced during the past year at JSC, which he called "the home of the astronauts and the heart of the nation's manned space program." He said the expertise at JSC, "unmatched anywhere else in the world," will help assure that the

Space Shuttle returns to safe, reliable flight status.

"I know the incredible capabilities of the Johnson Space Center family — their strength, their comradeship, their technical expertise and their fortitude in times of crisis," Fletcher said. "We are all part of the NASA family. I'm proud to be part of that family and proud to be associated with the men and women in this auditorium today."

In welcoming the guests from NASA Headquarters, Dr. Cohen voiced his belief that "with you in the key roles, NASA will continue to be the agency that knows how to get the job done."

Fletcher began the presentation with posthumous awards to the "seven brave astronauts who made the supreme sacrifice." Accepting the NASA Distinguished Service Medals and NASA Distinguished Public Service Medals on behalf of their family and friends were June Scobee (for her husband and Christa McAuliffe), Cheryl McNair, Lorna Onizuka, Marcia Jarvis, and Tammy Jernigan (for Judy Resnik). Sue Thorne, wife of Stephen Thorne, accepted his posthumous Navy Commendation Medal.

NASA awards included:

(Continued on page 3)

Shuttle management reorganized

Changes in the management structure of the National Space Transportation System (NSTS) Program are being made to clarify the focal points of authority and establish clearer lines of communication, said NASA Deputy Administrator Dale D. Myers.

Under the reorganization plan, NSTS Manager Arnold D. Aldrich will assume the new position of Director, NSTS, in Washington, D.C., reporting to Rear Admiral Richard Truly, Associate Administrator for Space Flight. Aldrich will be responsible for the operation and conduct of the program, including total program control with full responsibility for budget, schedule and balancing program

content

The plan also establishes two NSTS deputy director positions, one for the program and one for operations.

Richard H. Kohrs, currently the Deputy Manager of the NSTS Program, has been named to the new position of Deputy Director, NSTS Program. Robert L. Crippen, currently the Deputy Director of Flight Crew Operations on detail to NASA Headquarters, was named to the new position of Deputy Director, NSTS Operations.

Kohrs will be responsible for the day-to-day management and execution of the Shuttle program, including detailed program planning, direction, scheduling and STS

systems configuration management. Other responsibilities will include systems engineering and integration for the Orbiter fleet, ground facilities and cargos. Kohrs will remain at JSC and will report to Aldrich in Washington.

Crippen's duties will include all operational aspects of Shuttle missions. These responsibilities include final vehicle preparation, mission execution and return of the vehicle for processing. Crippen also will present the Flight Readiness Review (which will be chaired by the Associate Administrator for Space Flight), manage the final launch decision process and chair the Mission Management Team.

Crippen said he will locate his to report to the mission management to report the mission of the vehicle for program is one of the vehicle for processing. Crippen also will present the mission of the vehicle for processing to report to the mission of the vehicle for processing. Crippen also will present the Flight Readings and the vehicle for processing to the vehicle for processing

offices either at the Kennedy Space Center or at JSC.

The new management plan also calls for the Manager of the Shuttle Projects Office at Marshall Space Flight Center, William R. Marshall, to report directly to the Deputy Director, NSTS Program.

"In my view, the formation of this program management organization is one of the most positive steps NASA has taken in the last several months to strengthen the Shuttle program and return to flight status," Truly said. "The individuals named to these new posts undoubtedly will play a major role in preserving our nation's pre-eminence in space."

A crucial part of NASA's strategy to safely return the Shuttle program to flight has been to strengthen the NSTS program management structure and operation. This action was directed by Truly in a March 1986 memo. It was later addressed by the U.S. House of Representatives Committee on Science and Technology, which investigated the Challenger accident, and by the Presidential commission on the Space Shuttle Challenger Accident in its recommendations to review the shuttle management structure (Recommendation II) and to improve program communications (Recommendation IV).

GSA cites Keathley for computer network

S. Milo Keathley, chief of JSC's Data Processing Systems Division, has become one of only nine federal managers to receive the 1986 Excellence in Administration Award bestowed by the General Services Administration.

The GSA selection panel, chaired by Constance J. Horner, director of the Office of Personnel Management, applauded Keathley's direction of the state-of-the-art data communications network that interconnects multiple data centers at the Johnson Space Center and across the country.

"The network that has evolved under his direction serves and interconnects multiple computer products as well as a wide variety of terminals and workstations. It allows access to the mainframes from both public and private data networks. The development of this network represents a significant technical and managerial accomplishment," reads a GSA award announcement.

GSA cited initial savings of

approximately \$7.5 million and annual savings of \$8.75 million directly attributable to the network that, in addition to connecting JSC to NASA Headquarters and other field centers, provides links with contractors in Clear Lake City, Rockwell International's facilities in California, and Space Station contractors across the country.

"I'm very pleased about the award," Keathley said. "It came as a total surprise to me."

Keathley said many people have contributed substantially to the network's development, particularly Jack Garman, who was division chief a year and a half before Keathley took over and "the entrepreneur who got the whole activity off the ground."

The purpose of the computer network that prompted the award is to make information readily available to the people who need it, said Keathley. In addition, the network allows rapid communication at all levels — from manager to manager, peer to peer, engineer to engineer,

ne said

One thing that sets JSC's network apart from others, he said, is the emphasis placed on costsavings during its development. Most of those savings come in the area of productivity improvements and cost avoidance, he said.

"I personally believe very much that there has been improvement in productivity, especially at the division level and below," he said. "Those improvements in productivity are real, but very difficult to quantify."

Keathley said he is not content with the network as it stands, however. The ultimate goal is for every JSC employee to have a computer workstation and to have access to any computer and any computer application they are authorized to use.

Keathley said the challenge in achieving those goals is in working in a multi-vendor environment. Connectivity and compatibility among computer systems is some-

(Continued on page 2)



Milo Keathley, Chief of the Data Processing Systems Division, displays the plaque awarded to him by the General Services Administration for his work on the Program Support Control Network.

Bulletin Board

Employee meetings with Cohen scheduled

Three more organizational meetings with JSC Director Aaron Cohen are scheduled in December. The Director has already met with employees from the Engineering, Administration and Center Operations Directorates and the Office of the Comptroller. All of the upcoming meetings, planned to last for about one hour, will be held at 8:30 a.m. in the Bldg. 2 Auditorium. On Dec. 1, Cohen will meet with employees from Mission Operations and Flight Crew Operations. On Dec. 8, Cohen will meet with employees from Mission Support, Space and Life Sciences, and the Personnel, Equal Opportunity Programs, Legal and Public Affairs Offices. On Dec. 15, Cohen will meet with employees from the National Space Transportation System, STS Integration and Operations, STS Orbiter and GFE Projects, Space Station Projects, Space Station Program and Safety, Reliability and Quality Assurance Offices.

IEEE Videoconference set for Dec. 4

The Clear Lake Council of Technical Societies, the Institute of Electronic and Electrical Engineers and the Instrument Society of America will offer a one day videoconference Dec. 4 on data communications issues. Those issues will include network security, local area networks and integrated services digital networks. The videoconference will be held from 9:30 a.m. to 3:30 p.m. at the Gilruth Recreation Center. Advanced registration is required. For more information, call Ray Baker, x4509, or Bill Densmore, x6108.

Blood drive to be held Dec. 4

The third JSC blood drive for 1986 will be held from 8 a.m. to noon and from 1 to 4 p.m. Dec. 4 at the Gilruth Recreation Center. For an appointment, call Bob Jones at x6251, Mary O'Rear at x5058, or Helon

EAA Christmas Dances are Dec. 12 and 13

Employees are invited to dance to the strains of the Rick Navarro Orchestra and Sunshine Festival Dec. 12 or Dec. 13 when the Employee Activities Association sponsors the annual JSC Christmas Dinner Dances at the Gilruth Recreation Center. The entree on Friday night is roast beef at \$12.50 per person. The prime rib dinner Saturday evening is \$17.50 per person. Festivities on both nights will begin with a social hour at 7 p.m., followed by dinner at 8 p.m. and dancing from 9 p.m. to 1 a.m. Tickets are on sale until 2 p.m. Dec. 9 in the Bldg. 11 Exchange Store. Coordinator Larry Davis advises that ticket lines often form before 8 a.m. and that a limited number of tickets are available for either night. For more information, call Davis at x2855.

BAPCO to meet Dec. 16

BAPCO, the Bay Area PC Organization, will hold its next monthly meeting at 7:30 p.m. Dec. 16 at the Holiday Inn on NASA Road One. The group is open to all persons with an interest in microcomputers and meets regularly on the third Tuesday of each month. For more information, call Earl Rubenstein at x3501 or Jack Calvin at 326-2983.

Dickens on Strand tickets available

Discounted tickets for Galveston's annual Dickens on the Strand presentation are available each weekday from 10 a.m. to 2 p.m. in the Bldg. 11 Exchange Store. The 13th rendition of the annual Victorian Christmas celebration will be held from 10 a.m. to 10 p.m. Saturday, Dec. 6 and from 10 a.m. to 8 p.m. Sunday, Dec. 7 in the Strand District between 20th and 25th Streets. Tickets are \$3 for adults and \$1 for children and senior citizens. The discounted tickets are sponsored by the Employee Activities Association.

"Dinosaurs" adds Thursday showing

Sell-out Planetarium programs have prompted the Houston Museum of Natural Science to schedule Thursday evening showings of "Death of the Dinosaurs" in the Burke Baker Planetarium. The show is an exhibit of seven life-like robotic dinosaurs. The museum will be open Thursday evenings until 9 p.m. through Jan. 31. Admission is \$4 for adults and \$2 for children under 12. The Burke Baker Planetarium is located in Hermann Park across from the Miller Theater. For more information, call 526-4273

NACA reunion planned for 1988

Planning is underway for the fourth reunion of former employees of the National Advisory Committee for Aeronautics, one of the predecessor organizations of NASA. The reunion will be held in the San Francisco bay area Sept. 30 through Oct. 2, 1988. To ensure receiving more definite information on the reunion when it becomes available, interested persons should send their current address to: NACA Reunion Committee, Mail Stop 241-4, Ames Research Center, Moffett Field, CA, 94035.

New in the Library

The JSC Technical Library is located in Bldg. 45, Room 100, and is open from 8:00 a.m. to 4:30 p.m. Monday through Friday. The general information number is x4048. New books received in the Library as of September 15 include:

Executive's Guide to Online Information Services, by R. E. Hoover. Failure Mechanics of Composites, by G. C. Sih.

From Skylab to Space Station, by H. Stoewer. Fuzzy Mathematical Approach to Pattern Recognition, by S. K. Pal.

Robot Vision, by B. Horn.

Software Engineering, by I. Sommerville.

Space: America's New Competitive Frontier, by Business Higher Education Forum.

The Heavens and the Earth: a Political History of the Space Age, by W. A. McDougail.

NVSV = Space News Roundup



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Brian Welch Assistant Editor... Kelly Humphries

DPSD opens new training facility

By Gayle Taylor

The Data Processing Systems Division has opened a new computer training facility in the Regents Park complex near the JSC Credit Union.

An open house for the new facility was held Oct. 27. The building is one block north of the Credit Union at 1335 Regents Park Drive.

Training space has grown from the original Computer Education Center in Bldg. 12 to the addition of four rooms for instructor-led training and an independent learning area at Regents Park II.

Under the direction of DPSD Education Coordinator Micki Wiesner and Computer Sciences Corporation Education Administrator Donn Sickorez, computer education and training programs for DPSDsupported software and hardware products are offered daily in each of the five new areas.

At Regents Park, workstations are provided for each student for hands-on experience during each class. A workstation is provided for the instructor to demonstrate the software or hardware applications being discussed. An overhead projection television screen is attached to the instructor's workstation so students can see the actions that produce system responses.

In addition to formal instruction, students are given practice exercises for hands-on experience at their workstations. Videotape facilities, 35mm projectors, and markerboards also are available for the instructors.

Each training room is designed for teaching specific mainframe or C applications.

The host training room, 211, basically is used to teach mainframe plications. Ten student workstations are provided. Classes include introductory and advanced NOMAD2, CMS, and Sperry applications

The PC training room, 204, is the site for stand alone PC classes and instruction on the PROFS electronic mail system. Ten students can be accommodated in this room. Subjects include DOS, Lotus 1-2-3, VP Planner, PFS:WRITE, DisplayWrite 3, EASY, and other advanced courses in selected software.

The Displaywriter training room, 216, is designed to train administative and secretarial personnel in the features and functions of IBM's Displaywriter. Five Displaywriters are available for users. They can learn Displaywriter topics ranging from the simple (Displaywriter PROFS, Introduction to Displaywriter) to the more complex (Chartpack, Column Layout and Advanced PROFS for the Displaywriter).

The lecture/demonstration room, 208, is designed to accommodate lectures or demonstrations of any DPSD-supported software. This



Gathering for a group photo at the Regents Park open house were, left to right, Ken Nickerson, Director of Data Systems Operations for CSC; Pete Boykin, CSC Vice President for Houston Operations; Micki Wiesner, DPSD Education Coordinator; Dianna Schmitz, CSC PROFS Consultant; Ron Cox, CSC Office Support Manager; Anne Stivers of CSC's Independent Learning Facility staff; Donn Sickorez, CSC Education Administrator; and Josephine Jue, Section Chief from DPSD's User Support Branch. In the photo below, visitors examine one of the independent learning facilities at Regents Park.



room can seat 16-20 people and has tion regardless of the technology all the expected lecture/demonstration options-white marker board, 35mm projector, 3/4-inch videotape player, overhead transparency projector, and overhead television projector.

In addition to these instructor-led training rooms, an Independent Learning Facility also is available for students to study and learn at their own paces. A suite of rooms, 200-203, form this facility where users can take a variety of courses such as DOS, Lotus 1-2-3, Networking, dBase III, R:Base 5000, Display-Write 3, NOMAD2, ADABAS, NATURAL, and MultiMate. These topics are presented in a number of formats, from videotapes and audiotapes to newer media such as laser disc and computer-based technology. Each course is arranged so that the user has complete control over the content, pacing, and direc-

used. Independent learning is considered very useful for refresher courses and as preparation for live education courses

The computer education program expands as new products are added. The program itself has expanded to 48 instructor-led classes along with 15 independent study classes. The average instructor-led class lasts three hours per day. Some classes can be completed in one day, while others continue up to five days. Since the education program began, nearly 7,000 students have been trained, totalling approximately 32,600 classroom hours.

Standard classes also are offered in the Building 12 Computer Education Center. For more information on any of the education areas or to register for classes, call the Help Desk at 280-4800. Personnel will be

Keathley honored by GSA

(Continued from Page 1)

but substantial progress has been made at JSC.

One more milestone is expected to be accomplished at the end of the year when the computer network ties into the European Space Agency's computer systems in Europe.

"When we get to that point," he said, "we'll be worldwide."

Keathley said the key to the success of JSC's computer network has been its training program. He said a lot of emphasis has been placed on user training and establishment of help desks. He said the training program at JSC is one of the best in the world. (See related story, Page 2.)

"You can take a person to class and teach him anything, but he needs to be able to apply it," he

Keathley, 52, began work at JSC in September 1964 as a research engineer in the Theory and Analysis Office, Computation and Analysis Division. He was project

times difficult to achieve, he said, Guidance Applications Section, chief of the Simulation Branch, chief of the Engineering Systems Branch and Chief of the Engineering and Special Development Branch. In July 1984 he became Deputy Chief of the Data Process-

manager for the Apollo Guidance ing Systems Division, and in December 1985 he became chief of data processing.

"Today's job I enjoy more than any other job I've had," Keathley said. "It's as exciting as the Apollo days. I couldn't have a more challenging job at the center than I have today.

Roundup plans listing of Christmas events

It's that time of year again, and employees interested in advertising news of Christmas-related events should take note of the Roundup's publication schedule for December.

Roundups dated Dec. 5 and Dec. 19 will reach the desks of on-site employees on Tuesday, Dec. 9 and Tuesday, Dec. 23, respectively.

Because of that schedule, the Roundup encourages employees to submit news of upcoming events by close of business Wednesday, Nov. 26 for inclusion in the Dec. 5 issue.

"If details for an event are not available by Nov. 26, please call the Roundup office anyway and we'll reserve space for your story," said Assistant Editor Kelly Humphries. "We can hold the issue open for a few days beyond the deadline, but we will have to close it out by Monday, Dec. 1 at the latest.'

The first issue of the new year, Volume 26, will be dated Friday,

Jan. 9, 1987.

Awards ceremony

(Continued from page 1)

NASA Distinguished Service Medal: Francis R. Scobee, Michael J. Smith, Ronald E. McNair, Ellison S. Onizuka and Judith A. Resnik.

NASA Distinguished Public Service Medal: Gregory A. Jarvis and S. Christa McAuliffe.

Presidential Commendation, Federal Incentive Awards Program, Night Landing System Suggestion: Charles N. Baker, Dewey T. Brown, Charles F. Deiterich, Frederick H. Hauck, John L. Nelson, Loren J. Shriver, Michael J. Smith and Richard D. Tuntland.



Center Operations Director Kenneth Gilbreath was one of three JSC recipients of the NASA Outstanding Leadership Medal. The others were Joseph P. Kerwin and Thomas L. Moser.

Moser

NASA Exceptional Scientific Achievement Medal: Michael W.

NASA Exceptional Engineering Achievement Medal: Allen J. Louviere, Primitivo Perez and Charles E. Whitsett, Jr.

Kenneth J. Baker, Alfred A. Bishop, Gary A. Coultas, Wayne L. Draper, Cornelius L. Griffith, John A. Kamman, Lee Lawson, Joseph P. Loftus, Jr., Robert C. Ried, Jr.,



Astronaut Rick Hauck accepts a hand-shake from NASA Administrator James Fletcher during the awarding of his Defense Distinguished Service Medal. Hauck, a Navy Čaptain, is the Associate Administrator for External Affairs.

James D. Shannon, Edwin W. Sievers, Jr., Brock R. Stone, Richard Thompson and Lawrence G. Williams.

NASA Group Achievement Award: Entry Aerodynamics/Flight Test Team and Orbiter Logistics and Test Team.

JSC awards included:

JSC Certificate of Commenda-NASA Outstanding Leadership tion: Francis G. Abernathy, Donald Award: Kenneth B. Gilbreath, Andreotta, Larry E. Bell, Frank J. Joseph P. Kerwin and Thomas L. Benz, David W. Camp, J. T. Chapman III, Charles E. Chassay, Douglas R. Cooke, Norman R. Cooper, James D. Derbonne, Patrick M. Duffin, Connie R. Dunaway, Wilbert E. Ellis, Wayne E. Gotsch, Harvey L. Hartman, Charles B. Holder, Edwin W. Hoskins, Elena M. Huffstetler, John NASA Exceptional Service Medal: T. Jackson, Dorothy B. Lee, Fred



posthumously for their "supreme sacrifice.

A. McAllister, Bill J. McCarty, Grady E. McCright, D. William Morris. John D. Norris, Howard L. Renfro, Duane L. Ross, Ralph Schomburg, Irwin D. Smith, James R. Smith, Earl W. Thompson, Chester A. Vaughan, C. W. Vowell, Clarence J. Wesselski, Robert J. Williams, Jr., and Willie E. Wright.

Armed Forces decorations in- Jr., USAF.

cluded:

Defense Distinguished Service Medal: Capt. Frederick H. Hauck,

Defense Superior Service Medal: Col. Richard O. Covey, USAF, and Capt. Daniel C. Brandenstein, USN.

Defense Meritorious Service Medal: Lt. Col. Brewster H. Shaw,

Distinguished Flying Cross: Capt. Robert L. Crippen, USN.

NAVY Meritorious Service Medal:

Cmdr. Donald C. Mautner, USN. Air Force Commendation Medal: Maj. L. Blaine Hammond, Jr., USAF, and Maj. Carl J. Meade, USAF.

Navy Commendation Medal: Lt. Cmdr. Stephen D. Thorne, USN (awarded posthumously).

Two RSOC employees recognized

By Kelly Humphries

Two Rockwell Shuttle Operations Co. (RSOC) Training Department employees recently received that organization's first performance awards since contract consolidation

Roger Lawley, GNC/PROP monitor for Simulation Control Area (SCA) Team 3, received RSOC's first Sustained Superior Performance Award, and Bill O'Keefe. Control Instructor for Shuttle Mission Simulator (SMS) Team 1, received the first RSOC Mission Operations Employee of the Month Award for his September performance. Both work in the Control/ Propulsion Section of MOD's Training Division.

were nominated by Joe Bores, their controller responses to simulated RSOC supervisor. The nominations malfunctions, and record flight were reinforced by letters sent by controller training accomplish-Ron Epps, head of the Control/ ments. He also coordinates the Propulsion Section, to Richard section's instructor certification Fowler, RSOC's Training Depart- program. ment manager, commending

and O'Keefe from among 1,490 RSOC employees.

Bores, the RSOC supervisor assigned to the Control/Propulsion Section, said the two were cited motivation, and technical and operational leadership.

'They're always willing to go the extra mile or the extra hour here, always willing to do what is good for the section," Bores said.

Lawley, 36, began working at JSC in 1983 with Ford Aerospace. His main responsibility is developing integrated simulation training scenarios for propulsion and guidance flight controllers. He works with the four other members of the SCA team to develop simulation The recognition came after they scripts, monitor and critique flight

Lawley said he tries to be con-Lawley and O'Keefe for "outstand- scientious, pay attention to detail O'Keefe said. ing performance of duties." Epps and maintain a sense of the impor-

said the awards single out Lawley tance of his job to the overall success of mission operations.

'On a day-to-day basis, I try to identify problems that need to be worked, work those problems to a satisfactory conclusion and avoid because of their attitudes, initiative, the attitude of just letting it slide," Lawley said.

O'Keefe, 32 came to JSC two years ago with McDonnell Douglas and is now in charge of the SMS Team 1 crew training on the main propulsion, orbital maneuvering, reaction control and flight control systems. He also heads the section's control instructor development program.

O'Keefe said he is always looking for new ways to help crews train, and that he uses the ideas he picks up from other instructors to identify better training methods. He enjoys working with crews and seeing them do a good job during their missions because that reflects on the training they received, he said.

"If my crew doesn't know everything there is to know about (its mission), I didn't do my job,



Rockwell employees Roger Lawley, left, and Bill O'Keefe.

Chorus to perform

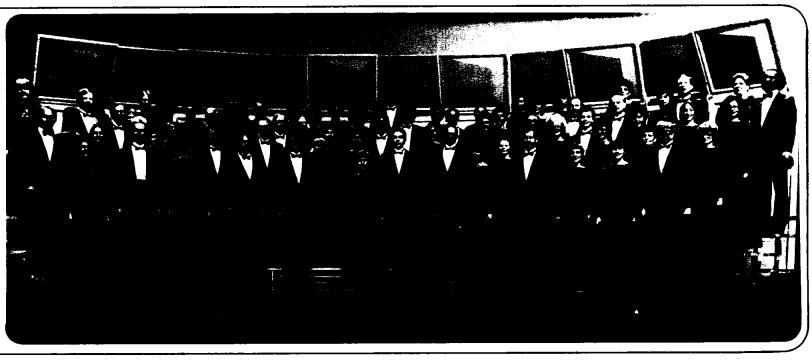
The 80-voice Bay Area Chorus will present two Christmas concerts on Sunday, Dec. 7, at the Teague Auditorium in Bldg. 2.

The free concerts will be held at

3 p.m. and 8 p.m.

Among the selections for this year's concert will be Leonard Bernstein's "Chichester Psalm:" "All Creatures of Our God and King," featuring a brass ensemble; "Carol of the Angels" and "Ave Maria.

The Chorus, which has offered Christmas performances for the past 22 years, has been invited to perform at Carnegie Hall in May 1987. The group is under the direction of Dr. Ray Moore, Professor of Music and Director of Choral Activities at the University of Houston.



Roundup Swap Shop

All Swap Shop ads must be submitted on a JSC Form 1452. The forms may be obtained from the Forms Office. Deadline for submitting ads is 5 p.m. the first Wednesday after the date of publication. Send ads to Roundup, AP3, or deliver them to the Newsroom, Bldg. 2 Annex,

Property & Rentals

Lease: Univ. Trace townhome, 2-2.5-2 CP, all appliances, FPL, security system, 2 pools, sauna, gym, \$475/mo.

Sale: Baywind II 1-1 condo, FPL, mirrored walls, miniblinds, fans, W/D connections, assumable loan, 471-6814.

Lease: 3-2 townhouse, fenced yard, 2-car cov'd. parking, corner unit, quiet neighborhood, pool, tennis, basketball, \$495/mo. 486-4466.

Lease: Clear Lake 1-1 townhouse, appliances, 675 sq. ft., 500 sq. ft. fenced patio, new carpet/tile, miniblinds, near rec. ctr., cov'd. parking, \$295/mo. Martin, x5832 or 488-0949.

Sale: 420 acres near Center, TX, 300 timber, 120 pasture, 1/2 minerals. 482-

Lease: Tranquility Lake condo on FM270, 1 BR, W/D/ FPL, fan, corner unit, downstairs, \$375/mo. 486-4466.

Sale: Camino South, 3-2-2A, formal LR, cov'd. patio w/fan, low equity, \$69,900. Andy or Kevin, 280-1746 or 280-9861.

Lease/sale: Woodforest duplex, good rental, trade for equivalent in Clear Lake area. Townsend, 652-0980 or 488-

Sale: '73 Henslee 65x14 mobile home, 2-2, A/C, W/D, dishwasher, refrig. disposal, attached patio cover, carport, \$5,745. Alvin, 331-9087

Sale: '84 mobile home, 2-2, \$1,000 down and assume \$297/mo. Michelle, 925-7878 or x 516.

Lease: Beaver Creek ski resort, three BR condos, available Dec. 6-13. \$495/wk. each. D. Smith, x6455, 280-

Sale: El Lago 3-2-2, LR, DR, den w/FPL, fenced yard, boat storage, close to elem. school, NASA, pool, tennis. 532-2674

Lease: West Galveston Island beach house, 3-2, furnished, day/wk./mo. Ed Shumilak, x6575 or 482-7723.

Lease: Lake Livingston waterfront house, 3-2, furnished, pier, fishing, skiing, swimming, weekend or weekly rates, 482-1582.

Rent: Glen Cove 4-2-2 house, den, FPL, security lights, fence, Jen Air, W/D, refrig., drapes, fans, water treatment system, private park w/boat ramp. \$650/mo., \$600 deposit. 538-1816 or

Lease: Univ. Green 2-2.5-2 townhouse, refrig., W/D, FPL, miniblinds, microwave, fans, small yard w/deck, \$650/mo. Cindy, x2924 or 486-8266.

Lease: Baywind I condo, 1-1, appliances, pool, game room, tennis, 1 mo. free rent, \$350/mo. Walt Gaylor, x6353 or 4766.

Rent: Pasadena house 3-1-1, den, breakfast area, all appliances, carpet, drapes, landscaped, fenced, no pets, \$400/mo. 941-5908.

Lease: Baywind I condo, 2-2, FPL, W/D hookups, fresh paint, \$380/mo.

Sale: 30 wooded rolling acres near Lufkin, fronts on all-weather road, creek.

Sale/lease: Nassau Bay 2,200-sq.-ft. townhouse, 4-2-2, new carpet, paint, large garage, deck, atrium, FPL, \$895/mo. or \$109,900. Jerry, x3561 or

Rent: Heavenly Valley Lake Tahoe ski condo, 2-1, sleeps 6, FPL, hot tub, 3 mins. to lifts, 10 mins. to gambling/ entertainment, available Dec. 20-27 and March 14-21, 7 nights \$1,500 plus \$300 deposit. Quin Shepperd, 486-7770.

Lease: Seabrook 4-2-2 house, 2,000 sq. ft., cul-de-sac, drapes, FPL, fenced, near schools/pool, \$550/mo. plus \$300 deposit, 333-6660.

Sale: Meadowbend brick 3-2-2, ex cond., appliances, fenced, \$50,900. Glen, x6541 or 486-0462.

Lease/sale: Forest Bend townhouse 2 BR, ex. cond., quiet area, \$35,000 or lease/option. Glen, x6541 or 486-0462.

Lease: Nassau Bay 3-2-2, den, family room, LR/DR, available Dec. 1, \$700/mo.

Sale/lease: El Dorado Trace, 2-2-2.5 2-story townhouse, fully furnished, 2 phones and cable paid, waterbed, linens, towels, kitchen ware, \$54,000 w/9.5% fixed-rate financing, 6-mo. lease \$775/mo. plus electric. 12-mo. lease \$725/mo. plus electric. 483-3751 or 538-2262.

Sale: Friendswood, Wedgewood 3-2-2 house, large gameroom, fenced, fans, W/D, quiet area, more than 2,000 sq. ft., \$70,900. Jeff, x3879.

Lease: Bacliff Villas house, 3-1-1, A/C, new carpet, new paint, drapes, fenced, clean, quiet. 474-4885

Lease: Baywind II condo, 1-1, FPL, all appliances, pool, gameroom, tennis. Jim Wiltz, x5437 or 944-0451.

Sale: Forest Bend townhouse, 3-2.5, LR, den, corner, lots of storage space, quiet, pool, park, \$41,500. 333-2322.

Cars & Trucks

'79 Ford Fiesta hatchback, 4-speed, good cond., AM/FM/cassette, \$1,000 BO. Richard, x5973 or 333-4906.

79 Capri, turbocharged, AM/FM/ cassette, 4-speed, A/C, sunroof, \$2,000 OBO. x5973 or 333-4906.

'81 Olds Cutlass Calais, white, PW, PB, PS, A/C, AM/FM/cassette, \$2,500. Larry, x5269 or 332-3782

'81 Toyota Corolla, 2-DR, liftback, dark blue w/white interior, automatic, AM/FM/cassette, PS, A/C, 61K mi., \$2,850. 474-3389.

'84 Toyota Supra, orig. owner, sunroof, automatic, cassette, stereo, A/C, rine-colored leather interior, ex. cond.,

\$10,500. 282-4981 or 280-9699. '81 Ford Escort hatchback, PS, PB, stereo, A/C, reliable, 58K mi., \$2,500

OBO. Mark, x2991 or 538-3441. '76 Honda Civic, 5-speed, good tires, injection, \$200. x2831 or 485-2165.

'83 Ford LTD Crown Victoria, black, loaded, good cond., \$5,000. Debi, 333-2809 or 486-2090.

'83 F-150 pickup, 6 cyl., A/C, std. cruise, shell, extras, good cond., 38K mi., \$5,500. x6471 or 488-6358.

'59 Chevrolet Bel Aire, 4-DR, damaged, rebuild or salvage for parts, \$100. 201 Stonehenge, Friendswood, 482-

'82 Honda Civic, 1500 DX, ex. cond., 26K mi., auto, A/C, AM/FM, service manual, \$4,200. Mike Lake, 523-2137.

'76 Dodge Aspen V8, AC, new tires,

motor needs work, \$700. 486-7532. '80 Pontiac Sunbird, front drive needs repair, \$650 OBO. Kalk, x2567 or 554-6093

'84 Nissan Sentra hatchback, 2 DR, ex. cond., 5-sped, AM/FM, A/C, \$4,800. 486-8551.

76 Corvette, red, PS, PB, PW, AM/FM/stereo, T-tops, 350/L-48, 50K mi., \$6,000 OBO. David Hughes, 333-

'84 Corvette, silver/gray, manual w/overdrive, loaded, 12K mi., \$16,900. 488-2652.

'75 Chevelle Malibu, 4-DR, gray, 350 V8, A/C, auto, power, 110K mi., new tires, A/C, transmission overhaul, runs

good, \$750. x5554 or 333-2444. '78 BMW 320i, fun to drive. Richard, 538-1854

'81 Honda Accord LX, 3-DR, 5-speed, ex. cond., new tires, A/C, AM/FM, \$4,300. Ann, x3666 or 488-7648.

'80 Toyota Corolia hatchback, \$1,800. Phill, x2541.

'75 Plymouth Duster, 318 V8, 4-speed, orig. owner, clean, no rust, rebuilt A/C, AM/FM/cassette, BO. x6121 or 438-

Two '65 Mustang engines, V8, 302 c.i., used, BO. Nance, x4767 or 488-

'75 Dodge station wagon, sharp, new A/C, new tires, runs good, \$800. League City, 332-8416.

Audiovisual & Computers

Microsoft word software pkge., includes 4 disks and manuals for IBM PC compatible word processing, \$75. Martin, x5832 or 488-0949.

Cobra 40 channel CB base station, 150' antenna line, \$175 OBO. Roy Field,

McIntosh Amplifier, Model MC2100, with manuals, 130 w/ch, \$450. Tom Clark, 482-7872.

PC compatible 640K RAM, 2 floppies, multifunction card, RGB monitor, 5151 type keyboard, Canon 160 CPS printer w/NLQ, power strip, joystick, \$1,500

OBO. Robert, x4606 or 488-5945. Apple II-E, 1 drive, 80 col. card, monitor, \$825. 946-4034.

Apple II-E, 128K, disk drive, monitor, 80-col. card, Hayes 300 baud micromodem, flip file, table and joystick, software, games, \$1,150 OBO. Mike,

333-6246 or 859-1083. Hitachi compact stereo system, 8 yrs. old, needs good cleaning and TLC, tape deck, receiver, speakers, speaker wire, make offer. Karen, x3576 or 520-

Technics turntable w/cartridge, was \$250, now \$100; theft proof motorcycle lock, was \$125, now \$80; Escort radar detector, was \$250, now \$175; Emerson AM/FM receiver w/built in 8-trk. and phono. Kevin, 482-3033 after 3:30 p.m.

Used 3rd party software user manuals, half the book store price, Lotus 1-2-3, MSDos, DBase III, Word Perfect, Don. x2181 or 482-1872.

Boats & Planes

8348.

NOMAD ultralight aircraft with spare engine and prop. enclosed trailer, \$2,500 for aircraft, trailer negotiable, 480-6431.

'83 Hobie Cat 16, special edition, multi-color sails, galvanized trailer, custom boat box, extras, stored indoors, \$2,990. Carla, x2623 or 538-1148.

14 ft. aluminum flat bottom boat, \$115. 482-8827.

16 ft. boat, 100 HP Merc and trailer. \$800. 486-7532.

Hobie 16, '85 world champ, mint cond., black spars, Blue Hawaii sails, all racing gear, custom cover, best you'll find, \$2,995. Rick, 480-9545.

'81 Mirage 20 sloop, swing-keel, 2 sails, lights, battery, 5 HP OB, lots of extras, trailer, \$5,500. Mark, x5425 or 486-5581.

16' open bow boat, motor and trailer motor needs elec. work, \$850. Kalk, x2567 or 554-6093.

Yamaha 80 cc, driven carefully by small girl and stored for several years, good Christmas gift, \$100. Bill Peters, x2313 or 486-9144.

'80 Honda CR 80-R, dirt bike, ex. cond., \$250 OBO. Whitnah, x2258.

81 Kawasaki 440 LTD, chain drive, 11K mi., ex. cond., \$600. Jerry, x3289 or

Mongoose BMX bike, custom frame, forks, rims, with spares, ex. cond., \$150. David, 488-3966.

Benotto Italian-made 10-spd., orange, new brakes, new seat, new tires, ex. cond., \$95. Valierie, x2208.

Household

Double bed mattress, boxspring and frame, good condition, \$25. Brian, x5111

Teak dining table w/4 chairs, expandable, \$550; antique bed w/mattress, \$600; large office desk, \$50. Mark, x6101 486-0909.

Mikasa china, never used, 40-piece service for 8 plus extras, BO. Sandy,

Kenmore gas dryer, avocado color, 6 years old, \$100 OBO. David, 280-1500 x3314 or 338-2368.

Antiques: Walnut buffet, barley twist legs, dated 1870, perfect, \$250; walnut cabinet, barley twist legs, dated 1870, perfect, \$250; oak rocker, reupholstered, \$150; French window bench, \$250, 488-

Maytag large capacity washer w/free Whirlpool dryer, 8 years old, \$85, 488-

Hoover vacuum, answering machine, Octa-Gym, wooden table, desk light, manual typewriter, mattress and box springs, snorkeling equip., bulletin board, iron. Linda, x2411 or 480-3187.

Dinette set, 60x45, smoked glass top, chrome base, smoked plexiglass chairs w/chrome bases and white leather cushions, \$125. x2842 or 485-6959.

Photographic

Speed Graphic 4x5, two shutters, 160 mm lens, case, tripod, flash, \$150 OBO, 488-3941.

Kodak 8mm super-8 movie camera, power lens, built-in indoor/outdoor filter, auto. exposure, BO. Sandy, 326-

Musical Instruments

Alvarez Yari 12-string guitar, hard shell case, no scratches or dings, \$250. Mark, x4926 or 470-8533.

Fender Rhodes 73 stage piano, \$250; Peavey KB300 amp, \$300; Moog Prodigy synthesizer, \$150; Yamaha RX11 drum computer, \$500. Craig, x4231 or 665-

keybord, like new, bench, stand included, was \$3,699, now \$2,384. Jerry, x3289 or 331-5013.

Antique English piano, beautiful, functional, good cond., \$450 firm. Gerry Kraynik, x7447 or 486-0889.

Baldwin Overture organ, "The Fun Machine," like new, bench and manuals, \$1,450. Tom Clark, 482-7872.

Bach Silver Stradivarius trumpet, with trigger, mute, lyre, case and flip folder, used one season, was \$1,035, now \$600. Scott, x2605 or 332-2469.

AKC registered German shepherd female pup, born Aug. 18, tan and silver. Billie, x4105 or 482-4365.

Half Lab, half German shepherd pups, good hunting dogs, \$20. Bonnie, x4048 or Tina, 487-5455.

Wanted

Want step-in snow ski bindings with brakes. Ray, x3954 or 474-4885. Carpool wanted from SW Houston to

NASA, 8 a.m. to 4:30 shift. Jason, x4981 or 622-3956. Want to buy queen size bedroom suite. 471-4183.

Want responsible person to share 3-2-2 house, W/D, garage dr. opener, FPL, fenced, Sycamore Valley of FM 1959/Choate Road, non-smoker, \$295/mo. + 1/2 util. Sarah Jane, 658-3408 or 481-3717.

Want ride to Bldg. 327, mornings from Baybrook Village/Heritage Park area, will share expenses. Larry, x2038.

Want test subjects for experiments in speed recognition. Send name, extension and mail code to Mark, EE2

Want top quality crib, changing table, bassinette, stroller, car seat, infant carrier, high chair, clother, Mary, 480-

Miscellaneous

Barnwood picture frames, various sizes, \$4, \$10, \$15; depending on size. good Christmas gifts. 480-6771

Gympac weight bench, fully assembled, like new, \$140. Mark, x6101 or 486-0909.

IBM electric typewriter, key type, perfect, \$140; cecar cut varnished electric quartz clock, \$40; amber beads and matching earrings, \$100. 488-5564.

Small kennel, never used, \$25. Lee, x3115 or 488-7646. Fitness Master XC-1 exercise machine

for cross country ski simulation, like new, \$250. 326-2805. Collectible Ione Star Beer sign, oval, star in center, 4'×3', blue and white,

\$200 firm, 488-3941. Authentic Defender arcade video game, good cond., \$200. 326-4395.

Wheels pop-up camper, good cond. sleeps 6, AC, awning, new tires, \$750. Charles, x5531 or 476-5511

Utility trailer 7'×4', all metal floor and frame, 12" railing on 3 sides, \$200 OBO. Roy Field, x5238.

Two 33×12.5 tires on GMC 6-hole white spoke mags, \$80. William Lee, x4081 or 534-2056.

Utility trailer, useable, make offer; new disc brake pads for Dodge Tradesman van, \$25; Harlequin romance novels, bundles of 20 for \$2; Harlequin magazines, make offer. Bob, x4734 or 921-1715.

Starcraft pop-up camper. ex. cond., sleeps 7, \$1,900. Dick, 486-1337 or 332-

Camper top, fits std. long bed. aluminum, screened/louvered windows, very good cond., \$175 OBO. Kay, 280-1904 or 480-7396.

1986 Word Book Encyclopedia, new, still in carton, \$495. Max Kilbourn, x4545 or 482-7879.

Beatles collection: Hard Day's Night poster, \$200 firm; UK and US books and magazines, out of print, \$25-\$35; many other rare items; Realistic spkrs., 120 watts, 3 mos. old, \$150; Batman comics from '60s, \$25 for 30; monster mags, '40s to '70s, \$50 for 35; mint K-9 stuffed toy from Dr. Who, \$30. 488-

Ladies all weather coat, sz. 8, by Etienne Aigner, like new, very nice, \$100; ladies dress, sz. 8, pink lace, worn once, \$50. Bob, x3582 or 472-2163.

Chrome mag, 15×10 rims, good cond.,

\$50/pr. Brian, x3161 or 486-5246. Goodyear van tire, H78-15, 8 ply rated polyglass, no patches, good spare or trailer tire, \$10. Bauch, 333-3382.

German Luger pistol, 7.65 cal., American Eagle, \$1,500 OBO. 480-6431. Fly rod and reel, \$14; metal detector, \$120; bed, \$30, 482-8827.

Cookin' in the Cafeteria

Week of November 24 — 28, 1986

Monday - Chicken & Rice Soup; Wieners & Sauerkraut, BBQ Ham Steak, Steak Parmesan, Beef & Macaroni (Special); Green Beans, Carrots, Au Gratin Potatoes. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday — Tomato Soup; Potato Baked Chicken, BBQ Spare Ribs, Mexican Dinner (Special); Squash, Broccoli, Ranch Beans, Spanish Rice. Wednesday — Seafood Gumbo; Liver & Onions, Baked Turbot, BBQ Ham Steak, Baked Meatloaf w/Creole Sauce (Special); Beets, Brussels Sprouts, Green Beans, Whipped Potatoes.

Thursday — Thanksgiving Holiday. Friday — Seafood Gumbo; Pork Chop w/Yam Rosette, Creole Baked Cod, Tuna & Salmon Croquette (Special); Brussels Sprouts, Green Beans, Buttered Corn, Whipped Potatoes.

Week of December 1 - 5, 1986 Monday — Cream of Celery Soup; Braised Beef Ribs, Chicken a la King. Enchiladas w/Chili, Italian Cutlet (Special); Navy Beans, Brussels Sprouts, Whipped Potatoes. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads.

Sandwiches and Pies. Tuesday — Beef & Barley Soup; Turkey & Dressing, Country Style Steak, Stuffed Cabbage (Special), Corn Cobbette, Okra & Tomatoes, French Beans.

Wednesday — Seafood Gumbo; Catfish w/Hush Puppies, Roast Pork

w/Dressing, Pepper Steak (Special); Broccoli, Macaroni & Cheese, Stewed Tomatoes. Thursday — Cream of Tomato Soup; Beef Tacos, BBQ Ham Slice,

Hungarian Goulash, Chicken Fried Steak (Special); Spinach, Pinto Friday — Seafood Gumbo, Liver & Onions, Deviled Crabs, Roast Beef w/Dressing, Tuna & Noodle Casserole (Special); Whipped Potatoes.

Peas, Cauliflower,

Week of December 8 — 12, 1986 Monday - French Onion Soup; Beef Chop Suey, Polish Sausage Yamaha Clazinova CVP5 electronic w/German Potato Salad, Breaded Veal Cutlet (Special); Okra & Tomatoes, Green Peas. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sand-

wiches and Pies. Tuesday — Split Pea Soup; Salisbury Steak, Shrimp Creole, Fried Chicken (Special); Mixed Vegetables, Beets, Whipped Potatoes

Wednesday - Seafood Gumbo; Fried Catfish w/Hush Puppies, Braised Beef Rib, BBQ Plate, Wieners & Beans, Shrimp Salad, Stuffed Bell Pepper (Special); Corn O'Brian, Rice, Italian Green Beans,

Thursday — Chicken Noodle Soup; Beef Stroganoff, Turkey & Dressing, BBQ Smoked Link (Special); Lima Beans, Buttered Squash, Spanish Rice. Friday - Seafood Gumbo; Broiled Turbot, Liver & Onions, Fried Shrimp, Meat Sauce & Spaghetti (Special) Green Beans, Buttered Broccoli, Whipped Potatoes.

Week of December 15 — 19, 1986

Monday — Beef & Barley Soup; Beef Chop Suey, Breaded Veal Cutlet w/Cream Gravy, Grilled Ham Steak, Wieners w/Baked Beans (Special); Buttered Rice, Brussels Sprouts, Whipped Potatoes. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sandwiches and Pies. Tuesday — Celery Soup; Fried Shrimp, Pork Chop w/Applesauce,

Squash, Buttered Spinach. Wednesday — Seafood Gumbo; Fried Catfish w/Hush Puppies, Braised Beef Ribs, Mexican Dinner (Special); Spanish Rice, Ranch Beans, Buttered Peas.

Turkey a la King, Pepper Steak (Special); Au Gratin Potatoes, Breaded

Thursday — Green Split Pea Soup; Corned Beef w/Cabbage & New Potatoes, Chicken & Dumplings, Tamales w/Chili, Hamburger Steak w/Onion Gravy (Special); Navy Beans, Buttered Cabbage, Green Beans. Friday — Seafood Gumbo; Deviled Crabs, Broiled Halibut, Liver & Onions, BBQ Link (Special); Buttered Corn, Green Beans, New Potatoes.