Louis H. Brennwald

Louis H. Brennwald, former Vice President of Northrop Aircraft Corporation, in charge of Puerto Rico operations, has assumed his new duties as Director of Administration for Ames Research Center.

For the past 23 years, Mr. Brennwald has been associated with the aircraft and missile industry. Eighteen of those years were spent with Northrop where his career covered a broad spectrum in engineering administration and management. He has planned and executed a variety of aeronautical and space projects for the Corporation, including supervising early test activities of the Navy Mistletoe Weapon System at Alamogordo, New Mexico, and Cape Canaveral, Florida. One of the most recent assignments was as Program Manager of Northrop’s sub-contract work for Boeing on the 747 aircraft.

In his last position with Northrop, Mr. Brennwald managed airport development activities in Puerto Rico under a planned joint-venture with the Ralph M. Parsons Co. He prepared the preliminary plans for the joint venture agreement and conducted liaison and coordination activities with the FAA, various Puerto Rico government agencies and the major airlines. He was also responsible for the overall administrative framework of the operations.

Mr. Brennwald comes to his first government assignment with a keen understanding of technical support services operations, especially as they relate to NASA Centers. Direction of contracts for several of Northrop’s programs of this type has given him an intimacy with most of the NASA Centers. Not only is he familiar with their operations and missions, but their problems as well.

He talked recently about his new assignment at Ames and assessed his Directorate as ‘principally a service organization’. He said, ‘Our objective is to perform services to the satisfaction of the people to whom we provide them. We will do some self-examining and if there is a better, or more efficient system, we will work it out together.’

Mr. Brennwald, 49, was born in Chicago, Illinois, but moved to Southern California at an early age. He attended preparatory school in Switzerland and was graduated from the University of California at Berkeley with a B.S. degree in electrical engineering. Following his graduation from the university he was commissioned in the U.S. Navy Reserve and while on active duty he attended the Harvard University Graduate School of Business Administration. More recently he participated in the executive program at the UCLA Graduate School of Business Administration.

His professional affiliations include Associate Fellow of the American Institute of Aeronautics and Astronautics.

Mr. Brennwald and his wife, Laura, and their two children, Lisa, 14 and Larry 12, will make their home in Saratoga.

HONORED AS A NASA NOMINEE . . . for the 1971 Federal Woman’s Award was Ames research scientists Mrs. Marcelline C. Smith of the Illiac Project Office. Here she and Loren G. Bright, Director of Research Support, view the Certificate of Nomination presented by the Board of Trustees who administer the Award. This is the first government-wide award established exclusively for the purpose of honoring top-caliber career women in government who have made, and are making, outstanding contributions to the quality and efficiency of the Federal career service. Mrs. Smith was cited for her contributions to Ames in developing the requirements for and implementing the installation of one of the most effective research-oriented computer facilities in the Federal Government.
WATER VAPOR MAKES HYDROGEN AND OXYGEN . . . A prototype water vapor electrolysis system developed at Ames reclaims oxygen from water vapor in the air. Dr. Theodore Wydeven, Environmental Control Research Branch, research scientist and developer of the new system, breathes oxygen-enriched air exhausted at the back of the machine. The prototype machine shown here can produce enough breathing oxygen, about two pounds daily, for one person. Although the unit was developed as a possible life support system for future space missions, it has potential for medical and industrial applications.

(Leo Jones photo)

Oxygen Reclaimed from Water Vapor

Astronauts on future space missions may breathe oxygen reclaimed from moisture in their own breath and perspiration. A prototype water vapor electrolysis system developed here at Ames by Dr. Theodore Wydeven, Environmental Control Research Branch, has successfully completed more than 2,000 hours of testing, a period equivalent to an 80-day space mission. The new system converts moisture in the air directly into hydrogen and oxygen and releases the reclaimed oxygen back into the air.

The average person breathes about two pounds of oxygen daily, but he puts back into the air about three pounds by expiration and perspiration. The extra pound comes from water taken into the digestive system by eating and drinking. The Ames conversion system, when fully perfected, may mean that bulky and heavy tanks of breathing oxygen will be unnecessary on future long-duration space missions. It would have the additional advantage of reducing the load on humidity control equipment by removing excess water vapor from the cabin atmosphere.

Dr. Wydeven, a research scientist in the Life Sciences Directorate, points out that “although the water vapor conversion system was conceived in research for future space missions, it has potential usefulness in other areas. In aviation, it might be used as an on-board oxygen system; in medicine, it might be a portable oxygen generator for hospitals and homes; and it might be a commercial air conditioner and freshener in mines and caves, air raid shelters, or any place where air might need oxygenation.”

Tests indicate the system is capable of high reliability and would be suitable for use in a regenerative life support system. It has only one moving part, an electric fan which pulls air across a sponge-like material which holds an acid electrolyte. The acid absorbs moisture from the air, and when electric current is passed through it, the water in the acid solution is electrolyzed or broken down into its basic components. Oxygen is liberated on one side of the cell, hydrogen on the other. A microporous membrane prevents intermixing of the two gases.

In space craft cabin application, the oxygen would be put into the cabin airstream for breathing, and the hydrogen either used for spacecraft systems or jettisoned into space.

Dr. Wydeven’s unit used in the basic development program produces enough oxygen to sustain one man. It measures about 15 inches square and 27 inches deep. Another package, approximately the same size, contains the power supply and electronic controls. Dr. Wydeven believes a light weight unit could be built which would weigh about 35 pounds and take up 1.3 cubic feet of space, including the control and power supply system.

Sixth Aerospace Symposium at Ames

The 6th Aerospace Mechanics Symposium will be held at Ames, September 9 and 10. This is the only symposium in the United States devoted exclusively to the interchange of information relative to aerospace mechanisms. Sponsors for the symposium are Ames, Lockheed and the University of Santa Clara.

Charles A. Hermach, Reproduction Services, is the Ames Symposium Chairman. J. Lloyd Jones, Research Assistant to the Director, will act as Master of Ceremonies at the Symposium Luncheon.

Among the participants will be, Louis Polsaski, Vehicle Guidance and Control, and John E. Hewitt, Experiment Development Office, who will conduct a morning session September 9 on “A Space Qualified Radiation Source Holder.”

Dimeff to Chair 1972 Conference

John Dimeff, Chief of the Instrumentation Branch at Ames, has been named chairman of the Executive Committee for the 1972 Research Conference on Instrumentation Science.

The Conference, sponsored each year by the Research Committee of the Instrument Society of America, is held at Hobart and William Smith Colleges in Geneva, New York. The objectives of the week-long scientific meeting are to stimulate instrumentation research in universities, research organizations and governmental and industrial laboratories through informal meetings comprised of discussion groups and presentations.

 Attendance at the Conference is by application or invitation and is limited to 100 persons. This small group of participants allows a free and informal exchange of ideas and extends the frontiers of instrumentation science. The programs provide timely state-of-the-art information in actively developing fields and are planned to bring experts up to date on the latest instrumentation applications.

NASA has formed a new office within its Office of Advanced Research and Technology to provide program management for the Experimental STOL Transport Research Airplane.

The new Transport Experimental Programs Office will exercise program direction of the planned quiet STOL aircraft. Major airframe manufacturers were asked by NASA early last month to submit proposals for the design and fabrication of the aircraft by October 15.

The aircraft will be used in a flight research program intended to provide the technical data and experience for developing environmentally acceptable, economical and safe fan-jet STOL transport systems.

Gerald G. Kayten will direct the new office, reporting to the Associate Director of Aeronautics, Roy P. Jackson.

In making the announcement, Jackson stated, “This new office, in addition to providing internal program management, will act to strengthen NASA’s relationships with the Department of Transportation, the Federal Aviation Administration, and the U.S. Air Force with respect to the STOL program.”

Related activities that had been underway in the STOL Technology Office and the Super-critical Technology Office were integrated into the newly established Office.

Project responsibility for the Experimental STOL Transport Research Airplane was assigned to Ames Directorate of Aeronautics and Flight Systems headed by Dr. Leonard Roberts. The research and technology effort will be conducted under the direction of Woodrow L. Cook, Chief of the V/STOL Projects Office at the Center. Elements of the work will be assigned by the Ames Project Office to the Flight Research Center, including flight research cooperations; to Lewis Research Center, including propulsion research; and Langley Research Center, including wind tunnel testing.

Quiet STOL Program Office Formed

NASA has expressed interest in testing a subsonic fan-jet STOL transport airplane that would be used as a test bed for future development of quieter STOL transport aircraft. The Office was established to provide a nucleus for this activity.

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**Calendar of Events**

**TECHNICAL PAPERS**

- Sept. 24-26—D.P. Williams, XXII Astronautical Congress, Brussels, Belgium.
- Sept. 27-29—J.C. Arvesen, XXII International Astronautical Congress, Brussels, Belgium.

**MINORITY FIRM CONTRACT**... Officials of Dunbar Systems, Inc., of Palo Alto, Ames Research Center and the Small Business Administration, sign a new federal contract with the minority-owned and operated firm. Alvin S. Hertzog, (left), Chief of Ames' Procurement Division, will administer the contract for Clifford D. Ryan (right), Procurement Chief for the SBA, under a special provision which allows the SBA to negotiate federal contracts with qualified minority firms without competitive bidding. Charles A. Jones, Vice-President of Dunbar, signed for the firm. The contract for $26,000 is to provide Ames with computer software services in support of the Center's role to develop advanced aeronautics and space technology. (Lee Jones photo)

**Job Leads for RIFd Employees**

Reduction-in-force notices were issued two weeks ago on August 18 to 78 Ames employees in several job categories. Included in the group are mechanical engineers, aerospace engineers, electronic and materials engineers, physicists, mathematicians, and physiologists.

Any job leads through friends, neighbors, clubs, associations, churches, etc., for those in the categories listed may be reported to Jeanette Remington, ext. 2022. The more leads the better prospects will be for finding jobs for those employees who are scheduled for reduction-in-force on October 2.

**BATEAM FORMED** (Continued from Page 1)

the joint research efforts of Stanford and Ames. As lead NASA center in life sciences research, Ames will be a key technology resource for the new team.

Dr. Harrison and his staff have worked closely with Ames for the past several years, with many clinical innovations resulting. In April, a Stanford-Ames team devised a computer system to watch a movie of the beating of a patient's diseased heart-identifying dead spots or scar tissue in the heart wall, aneurysms and other malfunctions.

**CONCLUSIONS**

(spokesman to be announced)

**PROGRAM OPEN TO ALL AMES EMPLOYEES AND THE GENERAL PUBLIC**

**ROOSTING DAYS AT AMES**... are over for Leland (Lee) J. Goularte, Metals Fabrication Branch, who retired recently after 20 years at the Center. Lee, as a master rigger, has been a familiar figure as he maneuvered the cumbersome mobile crane throughout the Center. He was especially noted for his ability to place a model in the test section of the 40-by-80-foot Wind Tunnel — pinpointing the site without visual contact. He was equally adept at setting up intricate exhibits for public display wherever the commitment dictated. To remind him of this achievement a handmade model of the crane with cargo (shown here) was one of the gifts presented during a farewell party in his honor. Some 120 friends and fellow workers gathered to wish Lee well and watched with pleasure as he received a much-wanted chain saw. This will get plenty of use around his retirement home located in the Sierras at Twin Bridges. (Lee Jones photo)

**Public Affairs Staff Aids Apollo Mission**

Two of the Ames Public Affairs staff, Larry King and Kathy Stimson, worked "behind-the-scenes" during the Apollo 15 mission to assure smooth operations. Mr. King was the NASA Senior Public Affairs Representative on the recovery ship, the USS Okinawa. As such, he was responsible for the coordination of all press coverage of the recovery.

Commenting on the Russian trawler which hovered near the Okinawa throughout the recovery, Mr. King said; "They were very cooperative." He added that they sent over a congratulatory message when the astronauts had been safely brought aboard which was "sincere and complimentary."

Mrs. Stimson acted as protocol officer in the home of Brig. Gen. Tom Scott, USAF ret., and Mrs. Scott, in La Jolla. It was her responsibility to cushion the Scotts, parents of astronaut David R. Scott, from outside distractions during the mission by answering their phones, questions and handling the press.
Art Exhibit at Main Library

An art exhibit of Chinese brush paintings is presently on display in the Ames Main Library and will continue throughout September 17.

The one-man show is being presented by Mrs. Judy Chu, a native of Taiwan, China, who has studied under many outstanding Chinese artists. She is a member of the Santa Clara County Artists’ Guild and is currently teaching Chinese brush painting in the Los Altos and Santa Clara areas.

CSC WINS AGAIN

The CSC basketball team that finished first in last year’s Ames Basketball League, has again proven itself a winner.

On August 19, CSC defeated Intersell, 57 to 48, for the league championship in a Mountain View-sponsored summer basketball program.

Team members include: Dave Jones, Ron Wieland, John Streeter, Bob Deisher, Tom Secco, Gary Black, Virgil Nolan, Bruce Erickson and Don Baker.

Computer Sciences Corporation (CSC) has been a major contractor at Ames since September 1970.

JOGGERNEWS

On July 31 Jim Woodruff ran the Half Moon Bay to Belmont Marathon, a 26 mile run with some hills, in three hours and 35 minutes. It was a beautiful run from the ocean beach Skyline, down through Huddart Park, up to the Pulgas water temple, and over the hills to Belmont, but the runners were relieved to finally reach the finish line at the entrance of Marine World and accept a ride to Belmar Park where there was a swimming pool for cooling off and relaxing.

On August 14 a seven man Jogger team ran in a 72-mile relay race around Lake Tahoe. The Joggers were Ted Passeau, who started out at South Tahoe and continued past the Gambling Casinos at Stateline, Jim Woodruff, Rudy Dreassonforfer, Vito D’Alia, Dale Shuto, Bruce Castle, and Paul Schenlen, who crossed the finish line blowing a colorful party whistle he had cached in a tree a few hundred yards before the finish.

FINALIZE—Finish it.

STATISTICIAN—A guy who draws mathematically precise lines from an unwarranted assumption to a foregone conclusion.

WANT ADS

The Antigrost’s oil section is to proceed on personal, non-commercial services to Ames employees. All advertisements are accepted by mail, exclusive of registration. The same name may be used on different dates of the same month. Ads must be submitted on the Antigrost, N 24404, by Thursday, a week prior to publication. Westerner’s house ads, whose name must be provided as a point of contact; must be submitted on the Antigrost, N 24404, by Thursday, a week prior to publication.
The creative efforts of Ames staff members were recognized recently when Dr. Hans Mark, Ames Director, presented invention awards approved by the NASA Inventions and Contributions Board. The largest of the awards, $600, was presented to Hubert C. Vyukal, Environmental Control Research Branch, for an invention which relates to a space suit. The improved suit has greater freedom of waist and torso movement than was possible in the past and facilitates many stooping and bending operations. The invention is equally adaptable to either hard or soft suits.

Gordon J. Deboo and Roger C. Hedlund of the Electronics Research Branch, shared a $200 award for inventing a self-tuning bandpass filter. The new filter provides narrow band filtering with improved signal-to-noise ratio resolution and works well in a noisy environment. The invention also provides a constant center frequency gain over a wide range of frequencies.

A metallic intrusion detector system invented by Robert D. Lee, Electronics Research Branch, was awarded $890. The system is useful for distinguishing between the presence of ferrous and nonferrous objects in an area from which such objects are proscribed. For instance, it can detect metal particles in foodstuffs such as cereals; or detect guns or other weapons carried by persons passing through an area under surveillance.

CHECK YOUR DECAL!

Ames employees with vehicles registered with a NASA Moffett Field identification sticker are reminded that it is their responsibility to ensure that the decal does not expire.

The date tab is issued for a period of up to three years, depending on the expiration date of the driver's license. Therefore, decal holders are asked to keep track of the expiration date and renew the tab at the Ames Security Office, Room 11B, Administration Management Building, 241.

Armstrong Leaves NASA To Teach

Neil Armstrong, the first man to set foot on the Moon, is leaving NASA to join the University of Cincinnati as its first University Professor of Engineering, effective about October 1. He will continue to serve NASA in the capacity of special consultant.

US-USSR Docking Meeting

The USSR Academy of Sciences and NASA have confirmed the results of Joint Working Group meetings held at the Manned Spacecraft Center, on June 21-25, on the development of compatible space rendezvous and docking systems.

The Working Groups considered the technical requirements for compatible systems including the general methods and means for rendezvous and docking, radio and optical reference systems, communications systems, life support and crew transfer systems and docking assemblies.

The Working Groups agreed in principle or in detail on a number of technical solutions and requirements. A number of other problems require additional development and discussion.

Studies will be made of the technical and economic implications of experiments that might be conducted to test the technical solutions for compatible systems. The Working Groups agreed that further development of simulation models should be undertaken to test the suitability of the agreed technical requirements and solutions.

The Soviet provided data on the manned orbital scientific station Salyut and the Americans provided data on Skylab. The next meeting of the Working Groups is expected to be held in Moscow in late November, hopefully to complete agreement on technical requirements for compatible systems.

The Working Groups agreed in principle to confirmation within two months by the Academy of Sciences. Dr. George M. Low, Deputy Administrator, has approved the summary of results for NASA and Academician MV. Keldysh has approved the summary of results for the USSR Academy of Sciences. The Working Groups minutes are available at NASA Headquarters, Room 6-94, 400 Maryland Ave., S.W., Washington, D.C. 20546.

The bilateral Working Groups responsible for this work were established under an agreement signed in Moscow on Oct. 29, 1970 by representatives of the USSR Academy of Sciences and NASA.
Space Technology Aid to Handicapped

The question of applying space age technology to diagnosis, treatment and rehabilitation of neurological disorders was confronted by a group representing Federal and state governments, research institutions and industry meeting at Ames last week, Sept. 8-10.

Under sponsorship of the United Cerebral Palsy Research Foundation and NASA, the three-day meeting brought together physicians, scientists, and engineers to survey "Technology and the Neurologically Handicapped."

The sessions were opened by Dr. William Berenberg, Chairman of the United Cerebral Palsy Research Foundation's Research Advisory Committee; Dr. Lee Arnold, Chairman of the Department of Aeroshmetics and Astronautics at New York University; and Dr. DeMarquis Wyatt, Assistant Administrator for Planning, NASA Headquarters.

Dr. David L. Winter, Deputy Director of Life Sciences at Ames, was co-chairman of the first afternoon's session where technical papers covered such subjects as "Current Therapeutic Techniques in Rehabilitation from Neurological Disorders", "Problems and Perspectives in Paraplegia", and "Coping with Brain Damage."


Friday's session included papers by Dr. John Billingham, Chief of the Ames Environmental Research Laboratory and NASA's Environmental Health Program; Dr. Ray Fontes, "Molding Procedure for Metal Casting of Alloys"; Robert C. Vyzonkal, Metal Fabrication Branch, "Interconversion of Binary and Decimal Numbers"; Robert M. Munoz, "A Topological Approach to Computer-Aided Sensitivity Analysis"; and William A. Page and Ellis E. Whiting, "A New Solid-State Logarithmic Radiometer".

The Personnel Division has the better the prospects will be for finding those employees who are scheduled for reduction-in-force on October 2.
Dr. Berry Assumes New NASA Duties

Charles A. Berry, M.D., has been named NASA Director for Life Sciences at NASA Headquarters in Washington, D.C.

Dr. Berry, presently Director of Medical Research and Operations at the Manned Spacecraft Center, succeeds James W. Humphreys, Jr., M.D., who left NASA to become secretary-treasurer of the American Board of Surgery in Philadelphia.

Dr. Berry will retain his responsibilities at the Manned Spacecraft Center until his successor has been appointed.

As NASA Director for Life Sciences, Berry will be responsible for the management of all life science activities in the Office of Manned Space Flight, including medical and biocode research, associated flight experiment definition, advanced life support and protective systems, man-machine integration and advanced biomedicine. He also will have overall responsibility for integration of the total NASA life sciences program, which includes activities in other NASA offices.

Credit Union 90-Day Special

In cooperation with the President's new economic policy the Moffett Field Employees' Credit Union is offering a "90-Day Special" for financing new automobiles.

The rate during this limited offer period is 3/4 of 1%, or 0.5 per annum on the following basis:

- New cars financed at the Credit Union for the months of September, October and November;
- Maximum time of loan is 36 months;
- Credit Union will finance 75% of purchase price.
- The same terms are also available on share secured loans.

ATS-3 Transmitting Weather Pictures

Weather pictures are again being received from the synchronous orbit Applications Technology Satellite-3 (ATS-3) after about a month in which no pictures could be transmitted because of a locked improperly phased antenna control system.

NASA officials believe the 805-pound spacecraft gets heated up when the Sun is north of the equator in the summer causing the drive or control system of the antenna to overheat and stop spinning. The antenna normally spins in the opposite direction the spacecraft spins and at almost the same speed to keep the antenna pointed toward Earth.

Now, although the spacecraft is still not working properly, it is transmitting cloud cover photos of the western hemisphere so important to the National Oceanic and Atmospheric Administration. These photos from ATS-3's "stationary" orbit at 70 degrees W. Longitude, 22,300 miles over Colombia are still not working properly, it is transmitting cloud cover photos of the western hemisphere so important to the National Oceanic and Atmospheric Administration. These photos from ATS-3's "stationary" orbit at 70 degrees W. Longitude, 22,300 miles over Colombia are especially useful to NOAA's weather forecasters at the National Hurricane Center in Miami.

First NASA Quiet Engine Tests

NASA continued its attack on jet aircraft noise as the first ground tests of an experimental, quiet jet engine began recently in southern Ohio.

The full scale test engine was built for Lewis Research Center under a contract with the General Electric Company's Aircraft Engine Group. The initial noise tests will be conducted by GE at its Peebles, Ohio, site.

The goal of the Quiet Engine Program is to develop a 22,000-pound thrust engine that will be 15 to 20 decibels quieter than engines in current subsonic air transports such as the DC-8 and 707 jets.

Project officials hope to accomplish the reduction by use of a high bypass ratio engine with a low noise fan and by installing in the flow passages, a honeycomb-like, acoustic material to muffler sound. To date no comparable tests on candidate fans for the Quiet Engine have shown that it will be possible to meet or surpass this noise goal.

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NASA FLYING CLUB . . . .

AMES AIRINGS

by Jeanne Richardson

SONIA BERNARD, Computation Division, just returned from a tour of the Hawaiian Islands. She said she enjoyed every trip more than her previous visits because this time she took a tour. And the tour was great, complete with a retired beach boy tour director.

DEL P. WILLIAMS, Materials Research, went home to Washington for a short visit two weeks ago.

GEORGE DEWERT, JOE MARVIN, both of Fluid Mechanics, and TOM COAKLEY, Hypersonic Aerodynamics, went back packing together up immigrant Pass in Yosemite the last week in August. They had a great time, coming back with a lot of trout and sore feet. STUART BROWN, Systems Analysis, also went back home recently.

BOB PIKE, Office of the Deputy Director, went to his cabin in the Sierras with his family last weekend. Bob was recently remembering his boyhood days at his parents cabin on South Shore, according to Bob, when he was little Bobby Pike, he would climb on his sled at the top of the hill above Raley's Market - which of course wasn't there then - slide down through what is now Raley's parking lot, across Highway 50 and crash just short of the beach. He said he never had trouble getting across Highway 50 then, because cars only passed every hour or so.

Hmmm, wonder if little Bobby read across Highway 50 then, because on his way south, the 7/23, drivers got in the way.

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JOGGERNEWS

The 61st annual Dipsea Handicap Finish Race from Mill Valley to Stinson Beach was run on August 29 with 1135 runners finishing. The first Joggernaut to cross the finish line was Paul Sebesta, who placed 166, followed by Jim Woodruff, 187. Vito D'Alola placed 185. Other Joggernauts to complete this classic were Tom Carson, Roger Hedlund, Don Kirk, Art Mandell, Ted Passau, and Dale Shute.

The next weekend Vito D'Alola ran the 7.2 miles Emerald Hills Run finishing 143 out of 439.

Then on Sunday, September 12 four Joggernauts, all past 40 years of age, completed the Double Dipsea from Stinson Beach to Mill Valley and back to Stinson Beach. The heat made this the most difficult race of the year. Several runners failed to finish. The Joggernauts and their finishing places were Jim Woodruff, 38; Dale Shute, 70; Ted Passau, 74; and Vito D'Alola, 84.

Dale Shute may be our best example of what jogging can do for a man. He looks better, feels better, and keeps improving his performance. He runs for fun, not to try to prove anything, and so far has not had any problems of over stress.

For Sale-Oldsmobile 3.5ly 3 cyl deluxette model, stainless steel shell, solid axle timer, water tank universal. $50. call M. Hansen, 232-9169.


For Sale or Trade-Selvage in acceptable outside of frames, in addition with paved roads, electricity, water and no hazards or assessments. Asking $5400. Call 906-6252.


Robert Pike, Chairman of Ames C.F.C.

Robert L. Pike, Staff Assistant to the Deputy Director, has been named Ames Chairman of the 1972 Santa Clara County Combined Federal Campaign (CFC).

ROBERT L. PIKE

The campaign will begin Monday, October 4, and will continue through October 8. During that one week Ames employees will have an opportunity once again to share in the support of the many agencies which benefit each year from this community effort.

The CFC is the single annual drive conducted at Ames and other Federal agencies to obtain funds which help to support programs and services of the United Fund, the National Health Agencies, and International Service Agencies.

Contributions to the CFC benefit 119 voluntary agencies which are working to make the community and the Nation a better place in which to live. These agencies complement and reinforce tax-supported institutions in a manner that is vital to all. Their worthwhile efforts merit generous contributions from all Federal personnel and the continued support of all Ames employees.

"The needs of the agencies supported by the CFC are very real and deserve our thoughtful consideration," said Mr. Pike, discussing the forthcoming campaign. "In addition to the worthiness of the cause itself a secondary but very important consideration is the Center's involvement in activities of the surrounding communities. The degree to which we at Ames participate in the campaign is acknowledged by both the local communities and the federal establishments in this area. The campaign affords us the opportunity to assist the community in an activity recognized by community leaders both as necessary and meaningful."

Mr. Pike emphasized that, "giving should be considered a personal matter. No one can say how much an individual should give. We ask only that each employee participate and contribute as generously as possible."

Ames has completed acceptance tests on a vertical take-off and landing (VTOL) aircraft which can duplicate, or simulate, the hovering flight characteristics of most existing and proposed VTOLs.

The new NASA research aircraft, the X-14B, is a major modification of a veteran NASA-Ames VTOL research aircraft, the Bell X-14A. The X-14B is believed to be the first digital-computer-driven VTOL flight simulation aircraft yet developed. It promises to be an important tool in VTOL aircraft research.

The conversion to flying flight simulation was performed by the Northrop Corporation, Hawthorne, under a $1.2 million contract.

The plane carries a small general-purpose, aircraft-type digital computer with a capacity of 16,000 16-bit data words. Into the computer are programmed the flight characteristics of the VTOL aircraft to be simulated. When researchers wish to convert flight characteristics of the X-14B to those of another aircraft, they simply put into a new computer tape.

A major part of the research planned with the plane will be to determine optimum handling qualities for any VTOL. Piloting a VTOL has been described as "like balancing on top of a huge beach ball in a rough sea." Hence handling qualities of these aircraft are critical.

"Because the X-14B can produce virtually all pilot-handling qualities for any VTOL," says X-14B project engineer, Frank Pedulli, of the Ames Flight and Systems Research Branch.

The Ames researchers plan to use the X-14B to study several control systems previously developed in ground-based simulation. Future plans call for use of the airborne computer to simulate advanced systems designed to allow the pilot a choice of handling characteristics. Different characteristics would be selected depending on whether the pilot is in hovering flight or in the transition from vertical to horizontal flight. This idea can be extended further to systems that automatically select the best piloting characteristics for each type of flight.

Flight simulator aircraft extend the results of ground-based flight simulator tests. These ground-based devices are motion-generating machines which are "flown" down on the ground by research pilots. They are programmed by computer to duplicate the flight maneuvers of a wide range of aircraft. Designers use them to study piloting qualities of new aircraft in the early concept stage. Test maneuvers can be "flown" on the ground in a large building without hazard to pilots, and information can be gained far more cheaply than by building a prototype aircraft to test each proposed design. However, still further realism can often be obtained by flight simulator pilots.

Like a ground-based simulator, the X-14B can duplicate the flight maneuvers of a wide range of aircraft. Since it can fly, its movements are not artificially restricted, and it can more realistically duplicate the piloting qualities of new airplanes.
Dr. Charles Sonett Presents Papers

Charles P. Sonett, Deputy Director of the Astronautics Division, presented a paper before the NATO Advanced Study Institute on Lunar Studies in Patras, Greece, September 18. The paper entitled "Electrical Properties of the Moon and its Interaction with Solar Winds," was based on his research with the lunar magnetometer. The institute was attended by leading scientists from all over the world.

On October 8, Dr. Sonett will speak at the University of Calgary in Alberta, Canada on the "Recent Lunar Surface Magnetometer Measurements." He will discuss the properties of the moon's interior, as indicated by recent data returned by the Apollo 12 lunar surface magnetometer and the Ames Explorer 35 magnetometer.

L. Scherer Named Director of FRC

Lee R. Scherer has been named Director of NASA's Flight Research Center, Edwards, California. Before joining NASA, Scherer served as Deputy Director of the California Institute of Technology's Jet Propulsion Laboratory. The institute was responsible for the development of the Voyager spacecraft that studied the outer planets of our solar system.

NASA-Ames Facilities To Aid FAA

The Federal Aviation Administration of the Department of Transportation and NASA announced on Monday (September 29) the signing of an agreement for joint participation in flight simulation research and development projects at Ames.

"This joint venture will give FAA immediate access to the most technologically sophisticated manned flight simulation laboratory for aeronautics existing today, and will provide NASA with a new, challenging direction for its own research and development projects. The FAA will provide its own technical personnel and Resident Director who will coordinate FAA R & D projects with Dr. Hans Mark, Ames Director.

Some of the FAA projects planned at Ames in the near future relate to the continuing study of aircraft such as the short take-off and landing (STOL) transport being developed for use by U.S. air carriers."

SIMULATION FACILITIES

Under the agreement, NASA will make the Ames simulation facilities and supporting services available to FAA for its own and for joint research and development projects. The FAA will provide its own technical personnel and Resident Director who will coordinate FAA R & D projects with Dr. Hans Mark, Ames Director.

RETIRED DINNER

A retirement dinner honoring Virgil L. Force and James R. Neely of the Mates基 Processing Branch will be held at the Sunnyview Club, Mt. View, on Wednesday, October 15, at 7 p.m. Friends and fellow employees interested in attending may contact Bay Ehm, Ext. 3016, Ralph Schlager or Bill Angwin, Ext. 2234.

ON DISPLAY . . . A full-scale Lunar Rover model, a replica of the Apollo 15 Lunar Rover, was on display on the Ames cafeteria patio, Sept. 16-17. It was viewed by many Ames employees during the lunch breaks, five of whom were caught by Ames photographer, Emerson Shaw's camera.

While visiting Ames the Rover underwent repair at the model shop between shows at Cal Expo and the L.A. County Fair.

PREVENTION BEST PROTECTION

Fire Prevention Week, Oct. 3-9

The week of Oct. 3-9 has been designated Fire Prevention Week by President Nixon. The week will be observed at Ames with efforts to inform employees of fire prevention and safety procedures. The Safety Office will conduct "general housekeeping" actions in fire prevention with the NAS Fire Department.

CHECK extinguishers

John Habermeyer, Safety Officer, has asked that all fire extinguishers be checked. If the seal, a thin braded wire, is broken, the extinguisher should be considered inoperable. All inoperable extinguishers should be reported to Gerald E. Hall, extension 3196, Mechanical Services Branch.

BURN TREATMENT

While discussing Fire Prevention Week, Mr. Habermeyer mentioned a treatment for burns which he has taught and used for several years and which has recently been adopted by the Red Cross. The treatment is simply cold water.

Cold water has long been known as a means of relieving the pain of burns. Recently it was also recognized as a means of "healing" burned tissue.

The theory behind the treatment is; if burned tissue is immediately immersed in cold water it will cool quickly, preventing further damage to the skin. If cold towels or water are not applied, the skin will retain the heat of the initial burn for some time, allowing further damage. Mr. Habermeyer cited several incidents where serious damage had been avoided by quick application of cold water.

For information on fire prevention and burn treatment, contact John Habermeyer, Safety Officer, extension 2983, Bldg. 241, Room 130.

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GOVERNMENT-INDUSTRIAL RELATIONS

Ames Employees' Association Activities

The Ames Employees' Association held a Labor Day celebration July 2 to honor the 40th anniversary of the Labor Movement. The celebration was held on the lawn of the auditorium with food and music provided by the Ames Band. The week included several activities to celebrate the union movement.

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Good Data From Ames Magnetometer

The Ames Lunar Surface Magnetometer placed on the moon in late July during the Apollo 15 mission has returned excellent lunar magnetic field data continuously as the moon circles the Earth.

The instrument is an improved version of a similar instrument placed on the moon during the Apollo 12 mission, and which a year later continues to operate about 40 percent of each lunar day. Both instruments were developed by Ames scientists: Dr. Charles P. Sonett, Deputy Director of Aeronautics; Dr. Palmer Dyal, Special Projects Office; and Dr. Curtis W. Parkin, Theoretical Studies, and were built by Philco-Ford Corporation in Palo Alto.

Data from the two instruments, along with local magnetic field measurements made during the Apollo 14 mission and data from a small satellite left in lunar orbit during the Apollo 15 mission, are being studied in an effort to learn more about the origin and composition of the moon.

Electric currents circulate deep beneath the lunar surface every nine hours, creating a sudden change in the solar wind magnetic field every 500 miles, which these fields decay after the sun, new deductions are being drawn regarding some of the moon’s deep structural features hundreds of kilometers beneath the surface.

Aviation In The 70’s” 6-Week Symposium

A special six-week symposium entitled “Aviation in the 70’s” will be offered at Branham High School, 1570 Branham Lane in San Jose beginning Sept. 30. The symposium which will meet each Thursday night from 7:30 to 9:30 p.m., is sponsored by NASA, the Federal Aviation Association and the Metropolitan Adult Education Program.

Ames scientists will conduct four of the meetings which are designed for the layman. Anthony Cook, Office of the Director of Aeronautics and Flight Systems, will speak on the Ames’ research program in Short-Take-Off-and-Landing (STOL) transports and long-haul transportation. Jay V. Christensen, Guidance and Navigation, will conduct the second session on “What kinds of systems (Independent Landing Monitor) are being developed to help pilots guide the next generation of aircraft.”

The third meeting will focus on “New Trends in Flight Simulation,” and will be conducted by George A. Ruther. Next in the series will be a meeting devoted to “Safety and Accident Prevention” led by an F.A.A. official.

The fifth session will deal with “Long Range Forecasts for General Aviation.” Hubert Drake, Aeronautics Division, will be the speaker.

Ames Employees Voted to AIAA Posts

Several Ames employees were recently elected as committee members and officers of the San Francisco Section of the American Institute of Aeronautics and Astronautics. The section boasts a membership of 1,200, of whom 200 are Ames employees.

THREE TECH BRIEF AWARDS... were presented to Robert D. Lee (left), Electronic Research Branch, during a recent ceremony. C.A. Syvertson (right), Ames Deputy Director, made the presentation with the assistance of Esperanza Pereida (center), a summer employee who worked in the Center's Technology Utilization Office under the Neighborhood Youth Corps Summer Program. Mr. Lee, one of 20 employees receiving Tech Brief awards, was recognized for his “Intruder Detection System,” “Metal Detector System,” and a miniature implantable instrument which measures and transmits heart function data.

Awards Presented For DOT-NASA Study

Sixty-nine certificates of appreciation have been presented in connection with the recent study of civil aviation designed chiefly to reduce aircraft noise and airport area congestion. Fifty-seven were received by individuals and 12 by groups.

The study, recommended by Congress, was made jointly by DOT and NASA, with assistance from the Department of Defense, Civil Aeronautics Board, and eight other Federal agencies. A special advisory committee from the National Academy of Engineering provided representation from the nation’s airline, airport, aerospace, academic, and financial sectors. C.A. Syvertson, Deputy Director of Ames, served as chairman.

Among other things, the study concluded that aircraft noise abatement deserves the highest priority because of widespread concern for the environment and because the success of the noise-abatement program will affect the solution to aviation’s other problems. It was recommended that time-phased research goals be established, seeking reductions of at least 10 decibels each 10 years until aircraft noise is suppressed into community background noise.

The certificates were awarded to the following Ames individuals:

- Charles W. Harper, Office of the Director; Hubert M. Drake, Aeronautics Division; Gerald E. Nitzberg, Office of the Deputy Director; Richard H. Petersen, Aeronautical Mission; C.A. Syvertson, Deputy Director; Jeanette Louis, Technical Services Division.

Group awards were presented to the Ames Manuscript, Graphics and Exhibits, and Reproduction Services Branches.

A Chinese Cultural Fair featuring oriental entertainment will be held Sunday, October 3, 11 a.m. to 4 p.m. at Cubberly High School Pavilion, 4000 Middlefield Road, Palo Alto.

Supported by the Stanford Area Chinese Club and the Multicultural Education Office of Palo Alto Unified School District, the day’s events will include folk dancing, arts and crafts show, kite making, miniature gardening, tea tasting, mandarin and cantonese cooking, and elephant checkers.

Performances of the folk dances, Gung Fu (the art of self-defense), and oriental exercises called Tai Chi, will be held from 2:30 to 4 p.m.

Donations are 50c for adults and children 12 years of age and under, 25c. Tickets may be purchased from Guy Wong, Los Altos Hills, 941-1939.
BICYCLE CLUB

by Mike Loves

The first meeting of the bicycle club was held recently and attracted twenty-five Ames employees.

The members heard Bob Hackinger of Lockheed's Pedicela Wheeler talk on the organization of his club and Pat Heitkom of the Triple-E Cyclery in Mountain View, who talked about items to look for in good bikes and how to maintain bikes.

The interest of those present seemed to be oriented toward touring. Because of this, it was decided that the club would publish a newsletter containing a compendium of the various cycling activities conducted by other clubs in the area.

One of the first activities available for members is a wine-tasting cycling tour in the Napa valley on Oct. 10. The preliminary information on the tour is that it will be about 25 miles round trip, include stops at two wineries (Charles Krug and Christian Brother's), stops at a cheese and salami shop, and at the Olive Oil Manufactory, where a variety of palate-pleasing deli foods can be purchased.

The next time you send me a letter in an ordinary envelope you can slip in a few sheets of single-cycle semi-log paper? Neither the school nor the stationers has any, I think with that and some reasonably smooth pieces of wood I could devise usable slide rules -- the school can't afford them, (15 shillings each for 203-6.

Emerson's idea is to collect any old slide rules or appropriate text books and send them to Albertr.. If you have any items that could be used please contact Emerson at Building 203, Room 101, N 203-6.

To all of those who will be leaving Ames next week, "We'll miss you - and good luck.

BENEFITS FROM SPACE ....

WANT ADS