

# STATION NEWS



ENGINEERING EXPERIMENT STATION • GEORGIA TECH

VOLUME 3 NUMBER 11

DECEMBER, 1974

## Another Good Year For EES

EES Productivity Program - building put on top of Baker Building - Blue 3 - Area 2 new building - "Because we know you're no crier, Our ABOU recipient this year: Fred Dyer" "Females should make more dough, This award goes to Betty Yarborough" - Art (George Dodson) Bookwall with suggestions on how to survive the Baker Building cold climate - Archie Corriher hiding behind the papers on his desk - Bob Mason's Energy Conservation Study: was it ever used? - New degrees to Henry Cotten, William O'Dowd, Nelson, George Ewell Conference for Whirlpool executives - Nick Poulos' Show-and-Tell brochure OD increasing interna- tional air line profits tional air line profits w did the softball team do, Neal Alexander and m Cofer? - Together in '74 IEEE/MTT Symposia . Pollution Control, Bob Ingols - Love in th bs with Joe and Mary Lupton - Nelson Wall executive Vice President of AIIE - John Husted, resident kaolin expert - "Wait Til the Sun Shine D. Walton" - Jerry Birchfield and Sherman dley listen to trees - Grog Shop, the home awa om home - Ila Benson, hobbieist - Gilbert Bone sited for the summer - Martha Ann Deadmore edi- all industry develop- ment network newsletter Garrett retired - Jack Spurlock appointed - L apleton and the poultry machine - Energy Assis ince Program - Olga Kilpatrick profiled - irijuana testing device shows promise - Richar eppart joins mechanical R&D - Bill Ward enjoys fe - Fast contract action for Sam Alford d Bill Dittman - Tom Jones dimmed the light ggers Notorious - J.W. Dees and Jim Schuchardt ork with ATS-F satellite Ports impact study make ig splash for Dave Clifton and Larry Edens rant for laster studies to Al McSweeney - Solid state group Walter Cox, Earl Meeks, Charlie Rucker, Gerald Hill, John Amoss - Tornados by Greneker and Hank Jenkins - Several international visitors - Bob Collier heads community workshops - Junior achievement judges Chart Bonham and Rudy Yobs - Aid to Korean University by Ben James and Herb Eller - Reactor converted to 5 MW - COMSAT ground station working - Al Becker moved to the Photo Lab - EDA renews grant of Hardy Taylor - Remote sensing for river navigation - Pace-maker research continues by Jim Toler, Fred Williams, B. Jenkins - Cobb County field test facility under construction - Pictures by Mike Blumensaadt - Dick Johnson and Allen Ecker won Sigma Xi award - Tom Grimland joins HTMD - Tze Chiang continued wood studies



## Affirmative Action

At the Director's monthly staff conference on 2 December, the primary agenda item was the topic of Affirmative Action. **Betty Yarborough**, Head of the Reports and Procedures Office, presented a paper and comments on the current status of Affirmative Action policies and progress at EES to the department and division representatives attending the meeting.

A video presentation was shown depicting an HEW field representative interviewing a university department head with typical questions about hiring practices, attitudes and equal opportunity for females and minority personnel.

It was pointed out that all responsible administrators should be cognizant of Affirmative Action policies and be able to verify that they are, in fact, complying and, furthermore, are taking positive steps to promote equal opportunity and to attract all qualified personnel to employment opportunities at EES when they exist.

## University System Sick Leave Policy

In order to comply with the Board of Regents' policy, classified employees are no longer allowed to overdraw their sick leave account. If an employee takes more sick leave than has been accrued, the excess must now be deducted from that month's pay.

After Reports and Procedures received the weekly time cards, notice will be sent to the divisions with people having such overages. A Personnel Action Form to deduct the excess sick leave will have to be returned to R&P.

R&P Head Betty Yarborough said it is important that employees know of the change so there are no unexpected shocks when checks arrive.

This same policy applies to employees who take more than their earned vacation time.

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## New Projects

Harry Diamond Labs to SSD (**W. J. Dittman**) for brassboard radar antenna — Tooke Engineering Assoc. to PSD (**J. L. Brown**) for powder patterns on hydrated portland cement — Ford Motor Turbine Research to HTMD (**J. N. Harris**) for evaluation of shell moulding techniques — National Science Foundation to SSD (**R. M. Goodman**) for verification testing of the transette personal rapid transit system — Pilot Engineering Company to PSD (**J. L. Brown**) for electron microscopy study of fine particle material — Wright Patterson Air Force Test Wing to PSD (**N. W. Cox**) for impact diode chip level combining — Emory School of Medicine to RD (**C. P. Burns**) for electromagnetic thawing of frozen granulocytes — Rome Air Development Center to RD (**J. D. Adams**) for broadband antenna measurement techniques —



## Telephone System Changes

On December 28, EES will join other state offices on the GIST, Georgia Interactive Synoptic Telecommunications Network. This will provide nationwide WATS-type service for certain EES telephone extensions. An attempt has been made to provide a sufficient number of such lines so that all personnel needing to make business long distance calls will be able to do so. This service is being used in an attempt to reduce our extremely high telephone bill; therefore, it is requested that all personnel make long distance calls from extensions which are hooked into this line. Manager of Services **Tom Jones** said EES should realize very substantial savings in long distance tolls by the use of this service. A list of available extensions will be published soon.

Eventually, all state-wide government offices will have a number that can be used to call other offices within the state or to receive calls from out of state.

The Director, **M. W. Long**, extends best wishes for a healthy, happy and successful New Year to all members of the EES staff and extends thanks for all the good work performed in 1974.

## ALUMINA FROM KAOLIN DEVELOPMENTS

**John Husted**, TAG, and **Bill Ward**, IDD, were in Boulder City, Nevada, November 18-20 to observe the continuous operation of the nitric acid process for producing alumina from kaolin at the U.S. Bureau of Mines mini-plant operation. Since the duo's first visit last June, changes and refinements have been made to increase the efficiency of the process. Equipment for the hydrochloric acid alumina-from-kaolin process should be installed during the first quarter of 1975, and the Bureau will begin test runs to determine which process is more economical. The Bureau of Mines expects the project to yield definitive data on costs, material balances, and environmental effects. Here at home, an updated version of Husted and Ward's best-selling "Alumina from Kaolin" study for the Georgia Department of Community Development is hot off the press.

Y'all come —

to the EES Christmas Party in the Baker Building auditorium, 3-5 PM, Friday, December 20th. End the year with some cheer.

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## IDD NEWS

**Nelson Wall**, IDD, will be in the Philippines and South Korea December 5-18, evaluating organizations in those two countries for possible participation as counterparts in an Asian Institute of Technology (AIT) project entitled "New Perspectives for Industrialization in Asia." AIT has asked IDD to be responsible for two of the eight problem study areas when the project gets under way: small-scale industry development and regional dispersion of industry.

"Wind and Solar Energy Research at Brace Institute" was the IDD International Development Seminar topic on December 2. It was presented by Tom Lawand, a representative of the Canadian organization, part of McGill University in Quebec.

Tom Glanton, former IDD employee who headed the West Georgia field office in Carrollton several years ago, recently was elected to the Georgia House of Representatives.

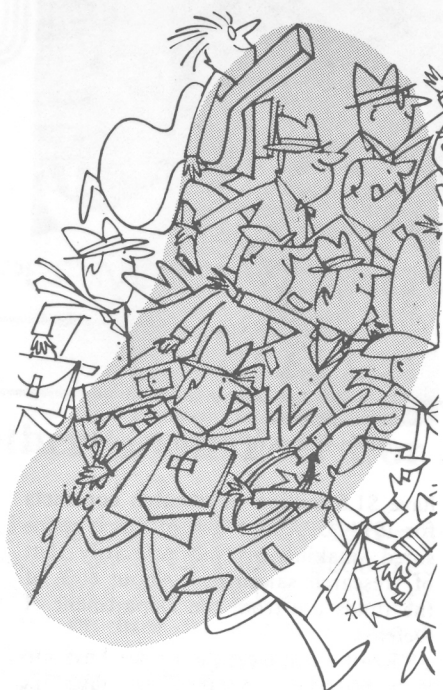
**Bob Cassell**, IDD, lectured on "Plant Location Factors" for the third year in succession at the University of Illinois' Basic Industrial Development Short Course in Urbana November 5. On November 15, he addressed a conference of the New England Economic Project, held in Hartford, Conn., on the subject, "Industrial Development in the Southern States."

**Phil Potts**, IDD, presented a lecture November 3 on "Improving Small Business Management" at the Southeastern Hobby Association meeting in Atlanta.

**Edwina Udunka**, IDD, was at the Technology and Development Institute of the East-West Center in Honolulu November 9-23 working on audiovisual documentation of IDD's international activities.

**James B. Owens, Jr.**, Electrical Engineering graduate student, started working with the solid state devices group Nov. 21.

## EES People on the Move



**R. J. Johnson**, NBSD, attended the Executive Committee meeting of the Education Division of the Am. Nuclear Soc. in Washington Oct. 26-Nov. 2...**J. W. Dees**, S&TD, attended NEREM in Boston Oct. 29-31...**J. D. Walton** and **S. H. Bomar**, HTMD, conducted calibration studies and preliminary work with the White Sands Solar Furnace and discussed the Solar Energy Seminar at NM State U. Oct. 29-31...**N. W. Cox**, PSD, attended NESC review at Watkins-Johnson Co. in Washington and San Francisco Nov. 4-6...**R. B. Cassell**, IDD, participated in the annual basic development course at the U. of IL Nov. 5-6, then participated in a rural development seminar in Nashville sponsored by the agricultural extension service Nov. 10-11 and spoke to the New England Economic Conf. in Hartford, CT. on industrial development Nov. 13-14...**C. T. Rucker**, PSD, was in Long Island for an engineering design study at Sperry Gyroscope Co. Nov. 6-8...**F. L. Cain**, S&TD, spoke to the fall technical conf. of the IEEE at the U. of SC Nov. 7-8...**N. L. Faust**, S&TD, went to Silver Springs, MD for pattern recognition symp. Nov. 10-13...**E. W. Udunka**, IDD, was in Honolulu Nov. 10-24 to review

audiovisual presentations made in Brazil and Korea...**R. W. Hammond**, IDD, attended an AID and Arthur D. Little jointly sponsored conf. in Washington Nov. 11-14...**R. M. Mason**, NBSD, attended FEA/Industry symp. in Washington Nov. 12-14...**K. E. Auciello**, IDD, visited AID in Washington Nov. 14-17.

**M. V. Davis**, RO, spoke at the Natl. Academy of Science in Downingtown, PA Oct. 20-23 and attended the Am. Nuclear Society winter meeting in Washington

## IDD Helps With Manpower Utilization

**Bill Howard** and **Larry Edens**, IDD, are in the midst of an occupational needs study for the City of Savannah. The three-pronged study involves:

(1) a survey of industry's skills and training needs — now and in the next two years.

(2) analysis of unemployment by numbers and skills of the unemployed.

(3) an inventory of existing training facilities, programs, and services to determine what the needs are.

The results will assist the Savannah Manpower Development Department, the Savannah Area Vocational-Technical School, and others in matching up people and jobs.

The first of Howard's Title I Seminars on "Better Distribution of Human Resources" was held in Monroe on December 4. Others will be scheduled later in Americus, Toccoa, and Vidalia. The idea is to bring community and industrial leaders together to seek common solutions for manpower problems.

## Thanks to Friends

IDD's Appreciation Day Brunch, an annual event to thank its contractors and others who have been especially helpful to the Division, was held on November 16 this year at the Ansley Golf Club. Among the distinguished visitors were Henry Arnold of the U.S. Agency for International Development and Hugh Miller of the National Academy of Engineering.

## PERSONALITY

### He's Home

H. Allen Ecker feels at home at EES. The Radar Division Chief is a 1957 Tech graduate and a former EES graduate research assistant. He also coached freshman football, a natural thing to do for an Academic All-American (that's based on grades as well as football skill). As a graduate student, he worked under then Radar Branch Chief, M. W. Long and Jack Kelly, a technician who is now executive vice president of Scientific-Atlanta.

Allen chose Tech over his hometown University of Georgia because he wanted to play football for Bobby Dodd and with his nationally ranked team. Each year he played, the team was in the Top 10 and received bowl invitations. Allen also made All-Southeastern Conference as a guard and linebacker. He played both positions because teams were not allowed to have two platoons as is common now.

He is optimistic about the future of Tech football. "Pepper will do a good job. He's a good motivator and is building a good, representative team. As he's able to recruit for his system, he will improve the team. Eventually, it will be able to stand up to any team in the country."

After his graduation, Dr. Ecker went on active duty with the Air Force in its Research and Development Command. He worked in electronic countermeasures, radar, antennas and systems analysis; and he has found the experience to be valuable in his current work.

He stayed with the Air Force Systems Command as a civilian employee at Wright-Patterson Air Force Base in Dayton, OH, eventually becoming chief of the Operations Research Branch of the Systems Engineering Group. He also obtained his PhD at Ohio State, emphasizing electromagnetics, antennas and signal processing.

In the fall of 1966, Dr. Ecker returned to EES to work in the Radar Branch, headed by now Assistant Director R. C. Johnson. Allen became head in 1969, and Radar became a division recently. Dr. Ecker said the Division has grown 300% in the last five years and will



Allen Ecker of Radar Division

have \$1.5 million in research contracts for 1974-75. About 90% of this is sponsored, making his job primarily that of "research salesman." About 80% of the funds are from the Department of Defense.

"Really, calling it the Radar Division is a misnomer because we have six technical areas: radar, electronic countermeasures, systems analysis, biomedical engineering, electromagnetic effects and advanced technology. Each started from a project and built upon experience and background. We also have been conducting the Radar Short Course for the past six or seven years. It's a very important thing; we usually have to turn people away."

Dr. Ecker's goals for Radar for the next five years are for the technical areas to grow into branches and to develop their expertise, to become large enough to be more stable in sponsored research, to gain more national recognition (which he thinks they're doing), to develop new areas and to diversify from complete dependence upon DoD.

The current economic situation doesn't worry him too much. "The Federal government will be cutting the number of large systems such as the F-111 and B-1 that are so expensive. But they will be putting more money into research and development to keep from lagging behind in technology. They will spend to find the best techniques for a system before building it."

He is active in the Institute of Electrical and Electronics Engineers as national chairman for the Committee on Man and Radiation and as a member of the Radar Systems Committee. He also chaired a session at the Atlanta IEEE International Microwave Symposium this year.

Athletics still play a part in his life. He enjoys tennis or basketball games at lunch, although the competition

sometimes gets rough. Participants in the basketball games have been known to end up with broken arms, legs or separated shoulders. He declined comments whether the injured players were tackled. His older son who is 14 plays Pop Warner football, and he has helped coach. They also play guitar together, the "pickin' and grinnin'" variety. His 12-year-old daughter is a cheerleader for her brother's team.

Allen and his wife Sandra have another son, four. They met when she was a Georgia State student and the first Tech Greek Week Queen. She is now part-time registrar at a private school near their home.

The Eckers are active in the Methodist church. He is chairman of the board of directors of the day care center and chairman of the administrative board. Here, he is vice chairman of the Tech Wesley Foundation board. He also serves on PhD and MS thesis committees and the Georgia Tech Research Advisory Council to plan overall research activities.

After experiencing different areas of research and development, Allen feels EES gives the best combination of advantages: academic involvement with a business orientation. "In the academic environment, you don't get the satisfaction of seeing results and real accomplishment first hand. In industry, the motivation is more profit-oriented than personal-interest motivated. At EES, it's research and development for its own sake. We are applied researchers and problem solvers. After all, applying technology to any problem is what engineering is all about."

### Time Is Running Out

Those employees who have accumulated 45 days or more of vacation should be aware that any accrued vacation in excess of the maximum allowable 45 days will be lost as of December 31. In other words, if you now have 50 days' vacation and do not take any before January 1, you will be allowed to carry forward only 45 of them.

A list of vacation balances was recently distributed and R&P Head Betty Yarborough said another will be sent out the first part of January. If you wish to verify your balance, call 3445.