

Station News

Georgia Tech Engineering Experiment Station

VOLUME 10 NUMBER 5

JUNE 1980

Grace Wiltse & Dees Visit Electronics Labs In The Soviet Union

When **Jim Wiltse** and **J.W. Dees** began to organize a tour of European and Soviet electronics laboratories for a group of American scientists, they had no idea that Russia would invade Afghanistan or that a boycott of the Moscow Olympics would be called by President Jimmy Carter.

The widening of tensions between America and the Soviet Union resulted in a smaller delegation than planned, but in all, the trip has been termed "a great success" by both EES electronics experts.

Wiltse, associate director for EES electronics laboratories, and Dees, director of the Electromagnetics Laboratory, initiated the trip through "People to People" International, a private organization in Kansas with no ties to government.

Founded by President Dwight D. Eisenhower in 1956, the organization works to reduce international hostilities by fostering friendships and understanding among people in the same professions in all nations.

With "People to People", Wiltse and Dees planned the itinerary that would take American microwave scientists to electronics laboratories in the Netherlands, West Germany, Denmark, Norway and the Soviet Union on April 12 - May 3.

"The response to the trip was overwhelming at first," said Dees, who reported that nearly 100 scientists initially wanted to sign up for the tour. Then, in the early part of this year,



J.W. Dees (far left) and Jim Wiltse (second from right) visit with scientists in Moscow at the Institute of Radio Engineering and Electronics, USSR Academy of Sciences. Wiltse, Dees and EES Director Don Grace (not pictured) also visited the A.F. Ioffe Physico-Technical Institute in Leningrad.

when hostilities grew between the United States and Russia, all but 14 of the delegates cancelled their reservations. EES Director **Don Grace** was among the group who took the trip.

After careful thought — and conferences with leaders of "People to People", IEEE and the State Department — the EES engineers decided to keep Russia on the tour. The reason, they said, was "the Americans were to be briefed by the Russians on the state of their microwave electronics. There were no plans for the delegation to brief the Russians on the state of America's microwave technology."

Today, after completing a very "satisfying and enlightening" tour of two laboratories in Moscow and Leningrad, Wiltse and Dees agree they are glad they kept Russia on the itinerary.

"The Russians were by far the warmest and friendliest of all the scientists we saw. One gentleman I had met on an earlier trip to Russia even embraced me as if I were a long lost friend," said Wiltse.

When asked about the state of Russian electronics technology, Grace replied, "In some areas they are more advanced than we are. In other areas they lag far behind the United States."

"In the development of some millimeter wave tubes — carcinotrons — I believe they are far ahead of the rest of the world. They are building these tubes at frequencies higher than 1,000 GHz," said Wiltse.

"On the other hand," says Dees, "our computer capabilities far out-

(Continued On Page 2)

STATION TO STATION

The new fiscal year is fast approaching and with it the annual process of reviewing salaries and allocating raises.

Many of you already know the 1981 overall payroll budget increase will be 11.5 percent. This figure has been approved by the State Legislature and the Regents for University System Personnel. It defines the total amount of dollars which EES can use to cover annual salary increases for all employees.

The annual Station-wide salary review is a complicated process involving many factors. For personnel in classified positions, we are generally bound to the wage ranges set for each job title by the Georgia Tech Personnel Office. The review process for professional research positions takes into account national surveys of salaries

for engineers and scientists.

For each employee, we must then consider increases based on performance, responsibilities, seniority, the cost of living and external job market trends. Sometimes, a larger "one time" adjustment is given to bring an employee's salary more in line with his/her peers.

First round increase proposals were made by your immediate supervisor. He/she has faced hard decisions. For every raise given above the norm, someone else's had to be below it. Each proposed raise was then reviewed at all levels up through my office. Senior staff raises were reviewed by the vice president for research and the president of Georgia Tech. This process was recycled at least once (and usually more often) for each unit in EES to arrive at the



EES Director Don Grace

fairest possible raises.

In June, you will receive written notification of your FY81 salary increase. I'm sure your supervisor will be most willing to discuss it and explain the factors which determined your raise. After that, my door is open.

Soviet Laboratory Visits, Continued

distance anything we saw in the Russian laboratories. Likewise, their laboratory facilities and equipment did not appear to be as modern as ours."

"In fact, some of their facilities looked more like graduate student labs in the basements of old college buildings," said Wiltse, who explained that several scientists remarked they had been offered more modern facilities, but had turned them down in fondness for the old research labs.

"We also saw a lot of homemade equipment and some equipment from other countries," said Grace, "but the research was really first class."

"In fact," said Dees, "the equipment looked well-worn and well-used."

Wiltse, Dees and Grace quickly add that their judgments are based only on the three laboratories they saw.

"We have no idea what other facilities are like in the country, or whether or not we saw the best examples of their

technological developments," said Grace.

American Embassy personnel in Russia told the men that Russia has a much larger research budget than the United States. Yet, dollar-for-dollar, their output is less than that of the United States.

"When they do focus on one area, however, like the carcinotrons, they really plow in and get results," said Dees.

When asked how the Soviets viewed the United States' embargo on technology exports to Russia, Wiltse commented, "They told us if they couldn't get equipment and parts from us, they would make it themselves. They also said we may be forcing them to develop technologies they otherwise would not have worked on."

"The trip was successful both in our interactions with the Russians and in what we learned about their work," said Wiltse. "The purpose of the trip was also fulfilled. It was a peaceful mission that furthered understanding among microwave scientists in both countries."

R & D Projects

CHEMICAL & MATERIAL SCIENCES LAB

J.A. Knight, Preparation and Handling of Fifteen Barrels of Pyrolysis Derived Fuel, Teledyne CAE Turbine Engines, \$475.

J.W. Goodrum, An Improved Metallic Coating System for High Strength Torsion Bar Springs, U.S. Army Tank-Automotive R&D Command, \$35,214.

S.B. Smith, Lab Tests on Activated Carbon - JPL, J.G. Boswell Co., \$500.

J.L. Brown, Metallurgical Tests and Studies, TVA, \$10,000.

ECONOMIC DEVELOPMENT LAB

R.L. Collins, A Program of Technical Assistance to the City of Rome, Georgia, in the Area of Productivity Measurement, Georgia Department of Community Affairs, \$13,856.

ELECTROMAGNETICS LAB

C.E. Barnett, Simulation Systems Definition, U.S. Army Missile Command, \$11,961.50.

R.A. Bohlander, A Far Infrared Radiometer Spectrometer (FIRRS) to Survey Up-Welling Radiation, Air Force Systems Command, \$262,309.

N.W. Cox, Technical Services Related to Microwave Semiconductor Device and Integrated Circuit Technology - Phase II, Naval Research Laboratory, \$9,990.

J.D. Knight, RDF-12 System Studies, Test Data and RF Environment, U.S. Army Missile Command, \$180,000.

Staff Receives Honors, Presents Papers At Meetings

CHEMICAL & MATERIAL SCIENCES LAB

Mahendra Bery presented a paper entitled "Factors In The Selection Of An Anaerobic Digestion System" at the Energy in Agriculture Conference held in late April in Pikeville, Tenn. The paper was co-authored by **Dan O'Neil**, EES senior staff member.

COMPUTER SCIENCE & TECHNOLOGY LAB

Ken Perry attended the IEEE Computer Society Workshop on the Application of Personal Computing to Aid the Handicapped in April at Johns Hopkins University in Columbia, Md.

ECONOMIC DEVELOPMENT LAB

Edwin Bethea served as a panelist at the May 5 Southeastern Conference on Minority Economic Development at the American Motor Hotel in Atlanta.

ENGINEERING EXTENSION LAB

Ed Jacobson recently traveled to Brazil and Bolivia to lecture on "Energy in Developing Countries and Its Economic Aspects."

SYSTEMS ENGINEERING LAB

Kathy Schlag presented a paper entitled, "Two-Platform Emitter Location System" at the Western Region Technical Meeting of the Association of Old Crows at the White Sands Missile Range on April 22-24. The paper was coauthored by Schlag, **Gary Lunsford** and **William McJunkin**.

TECHNOLOGY APPLICATIONS LAB

A "Waste Heat Recovery" workshop at Georgia Tech on April 3 was directed by TAL engineers **Danny Reed**, **Ralph Lamade** and **Gary Richardson**. Richardson, **Norris Garmon**, **Doug Moore** and **Hank Jackson** also conducted a workshop on "Industrial Energy Conservation" at the Macon Chamber of Commerce on April 22.

TAL engineer **Larry Banta** attended the American Power Conference in Chicago, Ill. on April 22.

The Wood Energy Systems Branch conducted a "Wood Energy Economics" seminar at Georgia Tech on April 30. **Carol Aton**, **Mike Brown**, **Grant Curtis** and **Bad-**

arinath Dixit presented papers at the conference.

Jerry Birchfield, TAL director, presented a paper on "Residue for Wood Energy in the Southeast USA" at the Bio-Energy '80 conference held in Atlanta April 21-24. The paper was coauthored by **Bill Bulpitt**, head of TAL's Wood Energy Systems Branch.

Bo Hendrix, **Gary Richardson**, **Bill Boykin** and **Richard Combes** attended the 1980 Conference on Industrial Energy in Houston, Tx. on April 15. Hendrix and Richardson coauthored a paper for the conference on "Industrial Waste As A Fuel." Hendrix also presented a paper on the "Application of Useful Analysis for Evaluating Industrial Energy Utilization." Boykin presented a paper coauthored by Combes entitled "Heat Recovery and Thermal Storage in Poultry Processing."

Research engineers **David Keith** and **Hank Jackson** were participants on WTBS-TV's nationally broadcast "Energy Expo Forum" on April 26. They answered questions from viewers across the country.

EEL Changes Due At End Of FY 80

Several organizational changes will be made in the Engineering Extension Laboratory by July 1, says **Rudy Yobs**, EES associate director for Resources Laboratories.

EEL Director **Gerald Hein** has resigned and will leave the Station by June 30 to become manager of photovoltaics marketing for the Exxon Corporation. Yobs will head the laboratory until a new director is found.

The International Programs Division will be redesignated as the International Programs Office. The office will be separated from EEL and report directly to Yobs. **Nelson Wall**, chief of the International Programs Division, will head the office.

Ben James, chief of the Industrial Extension Division, will move into a new staff position as a senior resource person in manufacturing technology.

Yobs says the changes will be accompanied by an expansion of EES' current industrial extension activities. More emphasis will be placed on technology transfer to Georgia industries through seminars, short courses and demonstration projects.

Escalate With New EES Contracts

V. Covington, MBE Layers of GaAs on Semi-Insulating GaAs, Naval Research Laboratory, \$1,500.

ELECTRONICS TECHNOLOGY LAB

B.M. Jenkins, EMI Investigations on Cardiac Pacemakers, Valleylab, \$7,000.

L.W. Pickering, Army Data Distribution/INTACS Update, Department of Army, Harry Diamond Laboratories, \$195,974.

C. Ryan, Out-of-Band Reflector Antenna Model, U.S. Army Research Office, \$51,901.

ENERGY RESEARCH LABORATORY

C.T. Brown, FY80 Operations of the U.S. DOE Advanced Components Test Facility (ACTF), Midwest Research Institute, \$600,300.

R.A. Cassanova, Experimental Support of the Development of a Nitrogen Pressurization System for Extinguishing Fires in Confined Spaces, Office of Naval Research, \$17,232.

ENGINEERING EXTENSION LAB

H.T. Johnson, A Program of Technical Assistance, Southland Industries of Valdosta, \$5,852.

R. Junk, Proposal for a Study to Determine the Feasibility of Upgrading the Physical Facility of the Augusta-Richmond County Data Processing Center, Augusta-Richmond County Data Processing Commission, \$5,344.

L.L. Lewis, Analysis of M&M Mars

Production Area, M&M Mars, \$6,000.

S.L. Dudley, The Need for an Area Vocational-Technical School, Heart of Georgia Area Planning & Development Commission, \$3,720.

RADAR & INSTRUMENTATION LAB

J.F. Kinney, Validation/Verification of Computer Models for Pressure Minesweeping, Naval Coastal Systems Center, \$16,720.

W.A. Holm, OV-1D Mohawk Configuration Analyses and Definition Studies, USAERADCOM, \$292,914.

J.L. Eaves, Target and Environmental Data Base Development for Terminal Guidance Weapons, U.S. Army Missile Command, \$75,000.

SYSTEMS ENGINEERING LAB

L. Holland, AN-ALR 46/69 EEPROM Study, Warner Robins ALC, \$400,000.

SYSTEMS AND TECHNIQUES LAB

C.P. Burns, Project Almond, Maryland Procurement Office, \$79,991.

TECHNOLOGY APPLICATIONS LAB

J. Birchfield, Advanced Technology Development Service to W.G. Morrison, William Glen Morrison, Open.

G.W. Kelly, A Cooperative Rehabilitative Engineering Program, Veterans Administration Medical Center, \$139,413.

B. Nolte, Establish a Wood Burning Appliance Code and Regulation Review Service, TVA \$24,678.

Promotions Given To Staff Members

EES extends congratulations to 16 employees who have been promoted in recent months. They are:

To Principal Research Engineer:

Jerry L. Birchfield	TAL
James D. Echard	RAIL
Nelson C. Wall	EEL
James J. Wang	ETL

To Senior Research Engineer/Scientist:

Dale W. Covington	EML
William A. Holm	RAIL
Albert C. Nelson	STL
Akkihebbal R. Ravishankara	EML
Eric S. Sjoberg	RAIL

To Research Engineer/Scientist II:

Michael G. Ellis	STL
Robert M. Goodman, IV	RAIL
David A. Keith	EEL
Carlos E. Seminario	ERL
Richard S. Smith	STL
David C. Stallings	RAIL
George R. Whitley	STL

Need For Security Rises This Summer

All employees with security clearances who will be traveling in communist countries — or to conferences attended by communist personnel — are urged to call **Al Becker**, security manager, before leaving the city.

Tech Honors Eight Station Employees

Eight EES employees were honored at Georgia Tech's annual Retirement and Awards Dinner on May 27. The dinner recognized both retiring members of the staff and those who have worked at EES for 25 years.

Among those who are retiring from EES are **Nick Poulos**, principal research engineer, Energy Research Laboratory. The Station also is bidding a fond farewell to **Harriet Linton**, bookkeeping machine supervisor, Accounting and Budgets Department; **John Parker**, assistant manager, Facilities Management Department; **Dil-mus McWhirter**, instrument maker, Mechanical Services Department; and **Lorenzo Calhoun**, stores clerk, Mechanical Services Department.

Three EES employees received their Gold-T pins for 25 years of service. Congratulations to: **Joe Harris**, senior research engineer, Chemical & Material Sciences Lab; **Ann Mintz**, senior administrative secretary, Office of the Director; and **Dennis Brooks**, graphics photographer, Printing & Photographic Center.

EES Welcomes New Employees

CHEMICAL & MATERIAL SCIENCES LAB

CMSL welcomes **Patricia Reonas**, senior secretary.

COMPUTER SCIENCE & TECHNOLOGY LAB

David Millard, research engineer II and **Janet Myrick**, senior secretary, have joined CSTL.

ECONOMIC DEVELOPMENT LAB

Charles "Red" Provost has joined EDL as a technical writer/editor. EDL also welcomes **Verna Hankins**, senior secretary.

ELECTROMAGNETICS LAB

Three new staff members have joined EML: **John Nicovich**, research scientist I; **Janice Davis**, administrative secretary and **Jo Ann Benight**, senior secretary.

ENERGY RESEARCH LAB

The Solar Energy Research Branch welcomes **Melissa Egle**, secretary and **Dalip Sondhi**, research engineer I.

ENGINEERING EXTENSION LAB

EEL welcomes **Paul Middendorf**, industrial hygienist, to the Savannah office.

RADAR & INSTRUMENTATION LAB

Neal Alexander, former division chief with STL, has transferred to RAIL as a senior research engineer. **John Shaeffer** has joined the Modeling & Analysis Division as a senior research scientist. RAIL also welcomes **Janet Meredith**, administrative secretary and **Joe Lindsey**, electronics technician I.

SYSTEMS ENGINEERING LAB

Seven new staff members have joined SEL: **Gordon Gibby**, research engineer I, **James Lansford**, research engineer I, **Barbara Hamilton**, draftsman, **Bill Youngblood**, research engineer II, **Ken Zolnowski**, research scientist II, **Clara Galleshaw**, administrative secretary and **Ann Cope-land**, research scientist II.

SYSTEMS & TECHNIQUES LAB

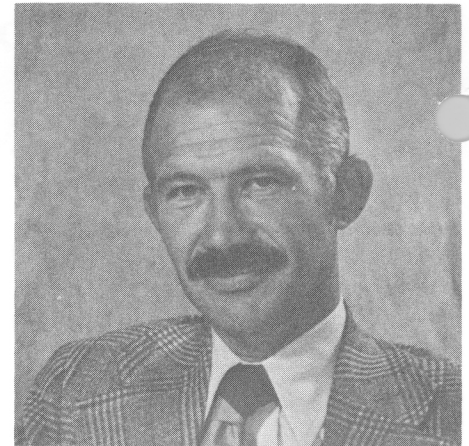
C. Patrick Burns, senior research engineer, has been appointed acting chief of the Microwave Systems Division.

New STL staff members include: **Thomas Vincent**, electronics technician III, **Kerry Pullen**, research scientist; **Georgie Riggs**, senior secretary; **Linnea Minor**, mechanical technician I and **Glenda Powell**, senior secretary.

TECHNOLOGY APPLICATIONS LAB

Carol Aton, former research engineer in the Wood Energy Systems Branch, has been appointed to head TAL's Technology Transfer Group.

Mike Ehrhardt has also joined TAL as a research engineer I.



New Lab Director Appointed For CMSL

Dr. Hans O. Spauschus has joined EES as director of the Chemical and Material Sciences Laboratory after a distinguished career with the General Electric Company in Louisville, Ky.

Since 1968, Spauschus has served as manager of GE's Physical Sciences Laboratory. He has extensive experience in many areas of applied physics, chemical analysis and chemical research and development.

Based on his long-standing involvement in new refrigeration and air conditioning technologies, Spauschus was recently appointed vice president of the Scientific Council of the International Institute of Refrigeration. He is now responsible for the air conditioning, heat pump and energy conversion programs of the institute.

Spauschus received a Ph.D. from Tulane University. He has authored more than 60 professional research papers.

Station News

Vol. 10 No. 5

June 1980

Published monthly for employees of the Engineering Experiment Station, Georgia Institute of Technology, Atlanta, Georgia.

Editor

Jackie Erney 3405

Associate Editors

Dee Ramunno, OD 3400

Charlotte Irvine, CMSL 3460

Pauline Hampton, CSTL 3417

Elizabeth Cohen, EDL 3841

Margaret Textor & 3800

June Wilson, EEL 3836

Doris Schulze, EML 3500

Ginny Gross, ERL 3589

Gayle Hudson, ETL 3542

Maggi Rampling, RAIL 424-9621

Janice Manders, SEL 3519

Dorothy Brown, STL 424-9605

Ken Wieder, TAL 3412