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News Release

GRADUATE RESEARCH CENTER OF THE SOUTHWEST
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RELEASE

ON RECEIPT - YEAR-END REVIEW

CENTER MOVES TO SUBURBAN CAMPUS, SHOWS CONTINUED GROWTH IN PAST YEAR

DALLAS --

October opening of the Founders building, and bringing together of research and post-doctoral education programs on its suburban campus were the top story of the year at the Graduate Research Center of the Southwest. Underlying this achievement, two and one-half years after first operations began, was the continued growth of the organization.

The first major structure on 1,266 acres crossing the Dallas-Collin county line was over-filled as it opened formally on Oct. 29. During the past year, total faculty, scientific staff, and administrative organizations reached 246 persons.

The Center's basic research and post-doctoral education division, the Southwest Center for Advanced Studies, outstripped its parent GRCSW organization in growth -- according to plan -- at 183 persons. Proportion of this scientific faculty and staff will eventually reach 70 per cent of total personnel. About 700 researchers will be working at the Center as it comes to a planned total of 1,000 during 1968.

Within the SCAS grouping of 183, there were 126 full-time faculty and staff members, plus 30 adjunct and visiting scientists as the year closed. This compared to 48 full-time faculty and staff at the end of 1963.

Further physical plant expansion will be made as private funding permits. The non-profit Center has depended entirely on gifts of individuals and organizations for its initial land assembly and building funds. At cost, the total investment in facilities was \$6,207,051 on June 30, 1964.

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Research support funding, which stood at a backlog figure of \$2,176,000 as the calendar year closed, has come chiefly from seven granting agencies, five government and two private.

The agencies are the National Aeronautics and Space Administration, National Science Foundation, American Cancer Society, United States Air Force, Office of Naval Research, American Chemical Society, and the United States Public Health Service.

In a total of 27 basic research projects, a Public Health Service grant for biosynthesis studies related to B vitamins is both the latest award to the Center and the first for work in its newest major laboratory, the Laboratory of Molecular Sciences. The third laboratory of the SCAS structure was formed in October.

NASA grants and contracts are the largest element of research support at present. NASA was the first agency to sponsor Center research, as the initial Laboratory of Earth and Planetary Sciences began operations with 16 faculty members in 1962.

In a recent listing of 33 new or supplementary awards by NASA, the Graduate Research Center of the Southwest stood third. First place was held by the Massachusetts Institute of Technology, second by Princeton University.

Highlights of the Center's 1964 record, by months, were:

*- January -- Doctoral candidates began work in a joint geophysics program supervised by combined faculties of Southern Methodist University, Geology department, and the Center's Geosciences division. Degrees will be awarded by SMU, not by the Center.

President Julius A. Stratton of MIT accepted membership on the Center's board of directors.

Prof. Donald B. Owen was named head of Mathematics and Stochastic Systems division, Laboratory of Computer Sciences; he had supervised statistical research at Sandia Corp., Albuquerque, N.M., since 1957.

*- February -- More than 30 world leaders in genetics research conferred at the Center, assisting in the planning for the Laboratory of Molecular Sciences.

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President Lloyd V. Berkner presented the Charles G. Trumbull lectures -- given annually by a distinguished scientist -- at invitation of Yale University. The lectures were later published in the book "The Scientific Age: The Impact of Science on Society," by Yale University Press.

Secondary cosmic ray observations, important to the national space effort, began at the super neutron monitor station on the campus. Data is distributed through Central Radio Propagation Laboratories, Bureau of Standards, Boulder, Colo.

*- March -- Faculty members of Yale University conducted the Eighth Annual Yale Regional Seminar in Dallas. The Center assisted alumni of Yale to bring the seminar to the southwest for the first time. Speakers -- discussing "The Role of Government in Education" -- were headed by President Kingman Brewster.

The Royal Society invited Prof. Anton L. Hales, head of Geosciences division, to speak at the International Symposium on Continental Drift, in London.

*- April -- NASA-Ames Research Center awarded a \$631,060 contract to the Center for cosmic ray anisotropy detectors, to be flown on Pioneer space probes in late 1965. Sub-contracts to regional industry for fabrication of critical assemblies were awarded by the Center.

A super neutron monitor station was installed by Center staff at Fort Churchill, Canada. The Hudson's Bay site is a superior northern hemisphere location for observation of energetic particles arriving from space. Siting near sea level in high latitudes has a telescopic effect, produced by polar coning of the Earth's geomagnetic field and by absorption of particles in the atmosphere. Particles arriving on long slant paths are filtered out. The ground station looks into a smaller and better defined patch of space as it sweeps with the Earth's rotation.

Two executive officers were named for the Center's first laboratories. Charles W. Craig became executive officer, Laboratory of Computer Sciences, and acting director, Data Processing division. David W. Canham was named executive officer, Earth and Planetary Sciences.

President Berkner reported his research on oxygen sources in the Earth's atmosphere at the annual meeting of the Faraday Society. Held at the University of Edinburgh, Scotland, the discussions on atmospheric chemistry and composition included 22 invited reports by scientists from six nations. Prof. Lauriston C. Marshall was a co-author of the paper.

*- May -- "GRCSW is a great educational experiment which can have a salubrious effect on education throughout the Southwestern region, and probably on a much larger segment of the nation," said President Thomas F. Jones of the University of South Carolina in the report of the Center's visiting committee. Chairman Jones, who headed a nine-man committee of industrialists and educators, reported the Center on its way to becoming a vital force in the world of science, and "deserving of commendation and support."

First doctoral candidate from a regional university to receive his degree after doing dissertation research at the Center, Dr. Joseph Zund was awarded the degree at The University of Texas. Doctor Zund studied here in the Mathematics and Mathematical Physics division.

Invitations to Center scientists came from Russia and Poland. Prof. Mark Landisman, Geosciences division, spoke on Earth properties in Moscow, at invitation of President V. V. Belousov, Soviet Academy of Sciences Geophysical committee.

Through the National Academy of Sciences in Washington, Prof. Henry Faul, Geosciences division, was invited by the Polish Academy of Sciences to assist in a study of possible scientific exchanges with the United States.

President Berkner was re-elected to a four-year term as National Academy of Sciences treasurer.

*- June -- Joining the Mathematics and Mathematical Physics division faculty for the summer, and appointed as a visiting professor, was Yuval Ne'man. Professor Ne'man heads both the physics department, University of Tel Aviv, and the scientific program of the Israeli Atomic Energy commission. In February, his prediction of the

of the short-lived Omega Minus particle -- as a needed building block in a new, orderly grouping of sub-atomic particles -- was proved by experimental studies at both Brookhaven National Laboratory and in Geneva, Switzerland.

At mid-year, external structure of the Founders building was completed.

Teaching of relativity, to teachers of undergraduate classes, began at Arlington State College. Center faculty members and visiting scientists assisted.

Prof. William B. Hanson, Atmospheric and Space Sciences division, began a total eight-week lecture program at three institutes held by Indian universities, in Calcutta, Ganeshkind, and Delhi. His appointment was made by the State Department Agency for International Development and the University Grants Commission of India.

*- July -- Faculty and staff total reached 184 as the fiscal year closed. Total investment in facilities reached \$6,207,051. Sponsored research for the fiscal year totaled \$1,893,286, more than three times the total for preceding fiscal year.

President Berkner returned to work following a two-month illness.

High altitude balloon flight experiments at Fort Churchill and seismic reflection experiments at Lake Superior occupied scientific field parties. Cosmic ray and earth crust structural data were obtained.

*- August -- Prof. Francis S. Johnson, first to join the faculty as research operations began in April, 1962, was appointed director, Laboratory of Earth and Planetary Sciences. He previously headed its Atmospheric and Space Sciences division. The laboratory includes Geosciences and Mathematics and Mathematical Physics divisions; it was first to be formed at the Center.

The Laboratory of Computer Sciences, headed by Prof. Carl F. Kossack, began operation of its computer station and Data Processing division.

Prof. Gilbert N. Plass, Atmospheric and Space Sciences division, presented a paper at meetings of the Radiation Commission, International Union of Geodesy and Geophysics, held at Leningrad, USSR. He also attended a symposium at Cambridge University.

*- September -- First moves of laboratory equipment began. Previous site was Science Information Center, Southern Methodist University.

Prof. Ivor Robinson, head of Mathematics and Mathematical Physics, received the medal of the Free University of Brussels for his work in relativity. He presented a series of invited lectures at the university, as well as at Padua, Italy; Hamburg, Germany, and Copenhagen, Denmark.

*- October -- Dedication of the Founders building was held Oct. 29. By a tape-recorded message, President Lyndon B. Johnson said, in part: "The Graduate Research Center of the Southwest helps to fill a very vital need for the vigorous future of Texas and the Southwest. It has long had my admiration and support.

"I am confident that the Graduate Research Center of the Southwest will, through the years to come, play an invaluable role in helping us to fulfill the potential of the human resources of a great nation."

Gov. John Connally of Texas gave the dedicatory address at the ceremonies.

Earlier in the month, the Genetics division was established as first unit of the Center's third laboratory, in Molecular Sciences. Prof. Daniel L. Harris of the University of Chicago was named executive officer of the laboratory, as well as professor in genetics. Prof. Carsten Bresch of the Institute for Genetics, University of Cologne, was named head of the division.

*- November -- More than 25 leading biologists conferred with the Center's administration and Molecular Genetics faculty, in a planning meeting. Plans were made to expand the new laboratory by adding the second division, in biology.

*- December -- "Columbia in Dallas," sponsored by Columbia alumni and the Center, brought four faculty visitors to the city, to speak on "Technology and the American Civilization."

The Second Texas Symposium on Relativistic Astrophysics, held at the

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University of Texas, brought together nearly 500 scientists from 16 nations. Central subject was "quasi-stellar objects," or powerful space radiation sources at vast distances from the Earth. The Austin meeting, organized by Profs. Alfred Schild and Engelbert Schucking of Texas, Professor Robinson of the Center, and Prof. John A. Wheeler, Princeton, continued discussions begun in Dallas a year earlier.

NASA-Goddard Space Flight Center awarded a new grant of \$430,000 to the Center, to supply cosmic ray anisotropy detector units for IMP-F and IMP-G, two Interplanetary Monitoring Platform satellites. IMP flights will follow eccentric orbits, from 200 miles to 185,000 miles away from Earth.

As the year closed, two balloon flight experiments were sent from Dallas to Australia. The space radiation experiments will be flown from Wilkes Base, Antarctica, by University of Tasmania physicists.

In addition, eight members of the Geosciences staff, headed by Professor Hales, began a 30-day exploration of the Cayman Trench, an ocean deep running northeastward from near the Mexican coast, south of Cuba. The Center's program includes seismic recordings, heat flow, and gravity studies related to earth crust structure. Work is being done aboard the Texas A & M oceanography ship "Alaminos." Prof. David Fahlquist and his assistants in the A & M oceanography faculty are conducting a series of experiments in the co-operative venture.

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