

Meteorology Research To Use Differing Radar Wavelengths

Matching radars of different wavelengths, something like a farsighted person exchanging information with a nearsighted individual, will be done in a A&M University project aimed at unlocking secrets of rainfall.

The matched radar approach here is the only one so far as Dr. Vance E. Moyer knows. He is professor of meteorology and director of radar meteorology research.

Feasibility of the approach was determined in studies made here under a \$90,200 National Science Foundation grant. Those studies included a doctoral dissertation, five master's theses and several articles for professional journals.

Now the NSF has granted \$18,900 for modifying two radars already on the A&M campus. The 3.2-centimeter set will have a six-foot reflector or "dish," the 10-centimeter set will have a 15-foot reflector. The changes will result in identical beam patterns for both sets, which already are matched and "married" in other details.

Moyer hopes the system will be operational next spring. "Both sets will look at exactly the same thing," Moyer said. But the sets will respond differently due to the differing wavelengths.

The matched system approach stems partly from insights gained in 1959 when a radar in Southeast Texas failed to show the im-

mensity of a bad weather area. Moyer and two other men returning to College Station by light plane had a fearful flight.

"High frequency radar displays echo from light or small-drop rainfall that is not detected by radar of lower frequency," Moyer explained. But the 3.2-centimeter or high frequency radar impulses may be attenuated or absorbed by heavy rain. The 10-centimeter radar impulse is such that not even record-sized raindrops, about one-fourth of an inch, will attenuate them, but these impulses pass through light rain without detecting it.

"If we can say there is no attenuation in the 10 - cm signal, then we can use that to evaluate the attenuation in the 3.2-cm signal and from this we can evaluate the statistical drop sizes in the echo," Moyer said.

This evaluation plus data on drop sizes could add eventually to the ability to use radar to probe a mass of rainy weather and give insights into the moisture distribution in the clouds. Not only would this be useful in expanding knowledge of cloud physics, but it would have a practical application in hydrology and design of dams.

"And the radar operator stays inside where it's nice and dry," Moyer pointed out.



A Handshake Between GOP Rivals

New York Governor Nelson Rockefeller and Arizona Sen. Barry Goldwater shake hands as they met at sessions of the Governors Conference in Cleveland, Ohio. Both are seeking the Republican Presidential nomination at the GOP National Convention. Watching the meeting at left is Arizona Gov. Paul Fannin. (AP Wirephoto)

May Graduate Wins Contest

William W. Martin of Amarillo, who received his bachelor's degree from A&M University last month, is \$1,000 richer today after winning the "Discovery Toys Competition."

Martin's entry, a tubular "Reflecto Magic" device, received the highest award in the nationwide contest sponsored by the Creative Playthings Foundation of Princeton, N. J.

Students from Wayne University, Maryland Institute College of Art and Cranbrook Academy of Art took honorable mention honors.

The winning entries will go on display in July at the New York World's Fair in the Protestant

and Orthodox Center. They are also scheduled for exhibit at colleges, museums and art institutes.

Martin's entry was created as part of a class assignment in the School of Architecture.

By looking through the "Reflecto" tube one sees unusual three-dimensional and vari-colored designs.

"One particular effect," Martin explains, "is a series of 'inner rooms,' vanishing at oblique angles to infinity, like gazing into a mine with colored walls."

Martin graduated from Amarillo High School in 1955 and enrolled at A&M that fall. After two years at A&M he went to the University

of Denver to acquire a degree in advertising design.

He returned to A&M for his degree in architecture. For the past two years, he also has been employed by Matthews and Associates, architects and engineers, in Bryan.

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Chemistry Prof Receives Welch Foundation Grant

Trustees of the Robert A. Welch Foundation of Houston have announced a \$30,000 grant to Dr. Dwight C. Conway of A&M University for chemical research applying to the study of space and to radiation chemistry.

Dr. Conway is an associate professor of chemistry and a member of the Texas A&M Cyclotron Institute.

The two-year grant will supplement university funds for a mass spectrometer and other equipment and for operational expenses.

Conway's studies concern the measurement of equilibria of ions in the gas phase.

J. W. Sorenson, professor of agricultural engineering will attend the annual meeting of the American Society of Agricultural Engineers June 22-24 at Fort Collins, Colo.

Sorenson is a member of two committees and will participate in meetings of these groups in conjunction with the annual meeting.

Dr. R. E. Leighton of the A&M

University Department of Dairy Science made two talks Thursday in San Antonio.

The professor spoke at the June Dairy Month Barbecue at noon in MacArthur Park on the topic Modern Dairy Developments and Research.

Thursday evening in the Bluebonnet Hotel, Leighton addressed the South Texas Dairy Technology Society, discussing "Agricultural Problems in Pakistan."

The scientist returned recently from a two-year stay in Pakistan.

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Science Lecture Set Thursday

Dr. L. A. Geddes of Houston, associate professor of physiology at the Baylor Medical College and University of Texas Dental College, will lecture on "Engineering in Medicine" at A&M University 8 p.m. today, in the Biological Science Building.

His talk, open to the public, will be presented at 8 p.m. Thursday in the Biological Science Building at A&M.

Dr. Geddes, born in Scotland and educated in Canada, has a doctor of philosophy degree from Baylor Medical College. He has published 70 scientific papers.

Geddes is also director of Baylor's Division of Biomedical Engineering and is a consultant to the U. S. Air Force on respiration and acceleration. He also serves as a consultant to NASA's projects Gemini and Apollo and has worked with Chance Vought Astronautics on special space vehicle studies.

ASC To Host Police School

Approximately 30 North Texas area policemen will attend a four-week training program at Arlington State College June 22 through July 17.

The school, conducted by A&M University's police training center, will feature attorneys, state and federal law enforcement officials as speakers.

The policemen will tackle such subjects as crowd control and mob psychology, sex crimes, arrest techniques, laws of evidence, how a bill becomes a law and other related matters.

The speakers include Joe R. Tunal, Fort Worth police sergeant; George Lumpkin, Dallas deputy police chief; Roland Howerton, Fort Worth assistant police chief; Lynwood G. Elliott of Austin, chief legal examiner with the Texas Liquor Control Board.

Also Charlie Batchelor, Dallas' assistant police chief; Doug Crouch, Fort Worth attorney, and C. C. Benson, manager of the National Auto Theft Bureau in Dallas.

Lewis Berry, editor of the Texas Lawman's magazine, and Forrest V. Sorrels of Dallas, U. S. Secret Service agent, are other guest lecturers.

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