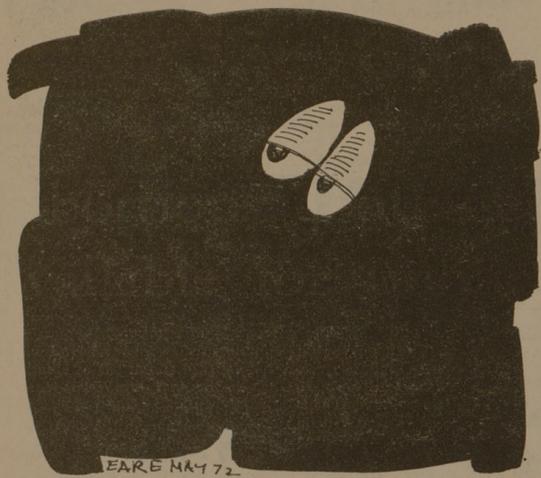


CADET SLOUCH by Jim Earle



"It's good to get back on the summer schedule of one cartoon per week. Next week we'll get organized."

A&M's radar system to be transferred for use in West Texas weather project

A&M's 10.3-centimeter radar antenna system will be transferred to a federal agency June 1 for use in the San Angelo Cumulus Project, a weather modification project to put water in West Texas reservoirs.

Known as the TAM-1 by Meteorology Department personnel, the 15-foot antenna, pedestal and possibly the drive mechanism will go to the Bureau of Reclamation, prime contractor in the San Angelo project.

The Texas Water Development Board and Meteorology Research Inc. of Altadena, Calif., also are involved in the project, the latter in flying and seeding cumulus clouds to trigger rainfall.

Dr. Robert A. Clark, TAMU meteorology professor, is involved in hydrologic evaluation of the project.

A new radar system will be installed atop the 15-story oceanography-meteorology building for use in TAMU meteorological research.

"It will be a vastly improved, multi-frequency radar system, the only one of its kind in the world," explained Dr. Vance E. Moyer, meteorology head.

With three coaxial antenna on a common pedestal, the new system will operate at 10.3 and 3.2 centimeter wavelengths, frequencies of the present matched system, and also at 1.25 cm.

"The 1.25 radar has a narrower beam and will improve resolution," Moyer explained.

Components of the present installation at Goodwin Hall other than the pedestals, antennae and drives will be incorporated into the new system, Clark said.

Moyer emphasized that none of the equipment going to San Angelo could be used in the new system.

"We will probably be without radar coverage for six months, the time required for some equipment to be transferred to the new building and incorporated with the new equipment," Moyer indicated. "We will try to be

Pioneer 10 will enter space never visited by spacecraft

Pioneer 10, bound for Jupiter, will cross the orbit of Mars on May 25 and will then enter space never before visited by a spacecraft.

According to Pioneer officials at NASA's Ames Research Center, Mountain View, Calif., the spacecraft will have crossed the 50 million miles separating the orbits of Earth and Mars in 12 weeks compared with about five months for previous Mars-bound spacecraft.

Pioneer has just entered a region named by some scientists the "Great Galactic Ghoul" that may contain unusually high amounts of meteoroids and cosmic dust. In this region, just inside the orbit of Mars, several previous Mars-bound spacecraft have encountered difficulties, believed by some to be due to impact by high-velocity meteoroids.

The Pioneer 10 spacecraft is the fastest man-made object ever flown. Its curved flight to Mars' orbit is 136 million miles long, and it has moved along this flight path at an average speed of about 120,000 kilometers 75,000 miles an hour. During the later parts of its 22-month flight to Jupiter next year, solar gravity will slow the spacecraft to around 25,000 miles an hour. It will speed up again near Jupiter.

Pioneer 10 has now covered about 124 million miles of its 620 million mile flight path to Jupiter, and is 31 million miles straight-line distance from Earth.

Pioneer 10 will enter the Asteroid Belt to make man's first probe of this unexplored region on about July 1. It will take about seven months to cross this 175 million-mile wide belt of rock fragments and cosmic rubble between the orbits of Mars and Jupiter.

All the spacecraft's 11 on-board scientific instruments now have been turned on and are functioning well.

In recent days, Pioneer flight directors have turned on the last of those, the infrared radiometer, which will make measurements of heat radiation emitted by Jupiter. Instrument readings of background heat radiation in space, used to check out the instrument, were at expected levels.

The meteoroid instrument and the four asteroid-meteoroid telescopes continue to see unusually large numbers of meteoroids and dust particles. Experimenters now are completing calibration of the optics of the four asteroid telescopes, using sightings of Jupiter. These calibrations will allow measurements of meteoroid speed and direction, using the precisely-known overlaps of the fields of view of the telescopes.

The imaging photopolarimeter back in operation by the 1973 tornado season." Installation at the new building will begin this summer, he said. The new antenna and mounting, built by Scientific Atlanta Inc. of Atlanta, Ga., to department specifications, is now in storage at the Texas A&M Research Annex. The 15-foot dish of the present system was purchased through a National Science Foundation grant to Dr. Moyer. The pedestal, modified by the department's radar engineer, Jake Cangelose, was surplus acquired at Holloman AFB, N.M. The Goodwin Hall matched radars have been employed with precipitation measurements from the East Yegua Creek basin west of Caldwell in studies to correlate rainfall amounts with radar-acquired data, among other research projects. It has been used several years in a severe weather alert system.

has made its first observations of Mercury and Jupiter. The polarimeter has measured the intensity and polarization of light from these planets, showing some characteristics of their atmospheres or surfaces.

Pioneer 10 will reach Jupiter Dec. 3, 1973, and will pass about 87,000 miles from the giant planet's surface. It may well pass behind Jupiter's orange satellite Io, the most reflective object in the solar system, allowing studies of Io's atmosphere if it has one.

Jupiter is 1,000 times as large as the Earth, may contain life and has its own energy source.

After its swing by Jupiter, the spacecraft will be the first man-made object to escape the solar system. Project officials hope its communications system will return data out past the orbit of Uranus, about 2 billion miles from the Sun, a point it will reach about 7.5 years from now.

Dr. Paul B. Crawford, A&M petroleum engineering professor, shared top honors for a paper presented at a computer simulation conference in Boston.

The paper, "A Comparison of Numerical Methods for Solving Large Sets of Simultaneous Equations," was co-authored by Dr. Crawford and Gerald N. Pitts, a recent Ph.D. graduate of TAMU.

Dr. Crawford, who also serves as assistant director of the Texas Petroleum Research Committee, said the paper notes methods for minimizing the expense and use of manpower in solving large numbers of scientific equations with a computer. The material is especially applicable to the petroleum industry, he added.

A&M professor honored for paper

Dr. Paul B. Crawford, A&M petroleum engineering professor, shared top honors for a paper presented at a computer simulation conference in Boston.

The paper, "A Comparison of Numerical Methods for Solving Large Sets of Simultaneous Equations," was co-authored by Dr. Crawford and Gerald N. Pitts, a recent Ph.D. graduate of TAMU.

Dr. Crawford, who also serves as assistant director of the Texas Petroleum Research Committee, said the paper notes methods for minimizing the expense and use of manpower in solving large numbers of scientific equations with a computer. The material is especially applicable to the petroleum industry, he added.

LAKEVIEW CLUB
3 Miles N. On Tabor Road
Saturday Night: Nat Stucky & Band
From 9 - 1 p. m.
STAMPEDE Every Thursday Nite
(ALL BRANDS BEER 35¢)

MS MASTER NEWSPAPER SYNDICATE, INC.
136 West 52nd Street, New York, N.Y. 10019

YELLOWSTONE CENTENNIAL

THIS YEAR YELLOWSTONE PARK CELEBRATES ITS 100TH ANNIVERSARY. THE FIRST NATIONAL PARK TO BE ESTABLISHED, IT IS THE LARGEST, ENCOMPASSING NEARLY TWO AND ONE HALF MILLION ACRES.

NOT ONLY DOES YELLOWSTONE PRESERVE MAGNIFICENT SCENERY OF FORESTS, MOUNTAINS, STREAMS, WATERFALLS AND HOT SPRINGS BUT IT IS ALSO THE HOME OF MANY VARIETIES OF WILDLIFE INCLUDING OVER SIXTY SPECIES OF MAMMALS.

MOTORISTS WERE FIRST PERMITTED TO USE THE ROADS IN YELLOWSTONE IN 1917 WHEN SERVICE FACILITIES WERE LIMITED. TODAY VISITORS TO THE PARK CAN HAVE THEIR CARS SERVICED AT ANY OF 12 CONOCO SERVICE STATIONS CONVENIENTLY LOCATED IN OR NEAR THE PARK.

Abortions contrasted in film available for public rental

A unique abortion film, "Each Child Loved," is now being made available to the public by Planned Parenthood-World Population.

The first film of its kind, "Each Child Loved" dramatically contrasts safe legal abortion with illegal abortion. It is mainly the story of Carol, a young mother who becomes pregnant at a time when neither she nor her husband are ready for a second child.

Carol decides on abortion, and her experience is documented from the time she and her husband are counseled by a clergyman, through the operation itself and post-abortion counseling.

The film stresses the right of each woman to have children only when she is ready to love and care for them. It also emphasizes the use of contraception as the best way to limit births and the necessity for competent medical abortion as a backup technique when contraception does not work.

"Each Child Loved" is a 16 mm color film. It runs 37 minutes. Commentary is by Candice Bergen. Frank Kavanaugh wrote and directed the movie.

The film was produced by Arlie Productions in cooperation with the Medical and Public Affairs Department of George Washington University Medical School, the National Clergymen's Consultation Service on Abortion and Planned Parenthood-World Population.

"Each Child Loved" may be purchased for \$225 by writing Peter Tangel, Audio-visual Coordinator/Information and Education Department, Planned Parenthood-World Population, 810 Seventh Ave., New York, N.Y. 10019.

Thomas H. Rennie given study award by Sigma Xi

The Society of the Sigma Xi announced last week through the chairman of its grants-in-aid of research committee, Dr. Harold G. Cassidy, an award to Thomas H. Rennie of A&M.

This award has been made to Rennie to assist him in his study of "The zooplankton community of two Texas bays: Spatial-seasonal distribution, abundance and initial effects of a thermal effluent."

In making the announcement, Cassidy said "Sigma Xi each year makes a number of grants to promising scientists at critical points in their research careers. We recognize that many needs are relatively too small for the large foundations to consider, yet to the scientist himself the need may be critical. It is to meet these needs that our research fund is maintained."

Founded in 1886, the Society of the Sigma Xi now has 178 chap-

The movie may be rented by writing PPWP Film Library, 267 W. 25th St., New York, N.Y. 10011. The cost is \$14 for one day, \$21 for two days and \$35 for one week.

Glover receives grant

Dr. George I. Glover, assistant professor of chemistry at A&M, has received a \$38,000 National Science Foundation grant to study how cells transport selected nutrients through cell walls. The two-year study is entitled "Affinity Labeling of Amino Acid Transport Proteins." Collaborating with Dr. Glover are Dr. Clint W. Magill, assistant professor of genetics, and Dr. Roy Jensen of the Baylor College of Medicine, Houston.

The Battalion

Opinions expressed in The Battalion are those of the student writers only. The Battalion is a non-tax-supported, non-profit, self-supporting educational enterprise edited and operated by students at a university and community newspaper.

LETTERS POLICY

Letters to the editor must be typed, double-spaced, and no more than 300 words in length. They must be signed, although the writer's name will be withheld by arrangement with the editor. Address correspondence to Listen Up, The Battalion, Room 217, Services Building, College Station, Texas 77843.

Members of the Student Publications Board are: Jim Lindsey, chairman; H. F. Eilers, College of Liberal Arts; F. S. White, College of Engineering; Dr. Asa B. Childers, Jr., College of Veterinary Medicine; Dr. W. E. Tedrick, College of Agriculture; and Layne Kruse, student.

Represented nationally by National Educational Advertising Services, Inc., New York City, Chicago, Los Angeles and San Francisco.

The Battalion, a student newspaper at Texas A&M, is published in College Station, Texas, daily except Saturday, Sunday, Monday, and holiday periods, September through May, and once a week during summer school.

MEMBER

The Associated Press, Texas Press Association
The Associated Collegiate Press

Mail subscriptions are \$3.50 per semester; \$6 per school year; \$6.50 per full year. All subscriptions subject to 5% sales tax. Advertising rate furnished on request. Address: The Battalion, Room 217, Services Building, College Station, Texas 77843.

The Associated Press is entitled exclusively to the use for reproduction of all news dispatches credited to it or not otherwise credited in the paper and local news of spontaneous origin published herein. Rights of republication of all other matter herein are also reserved. Second-class postage paid at College Station, Texas.

EDITOR JOHN CURYLO
Staff Writers Sue Davis and Hayden Whitsett

HELP STOP HIGHER PRICES

SAVE on our LOWER PRICE VALUES

PRICE APPLIES ONLY WITH THIS COUPON

Pillsbury's BEST FLOUR WITH COUPON 39c
WITHOUT COUPON 59c
5 LB. BAG
Good only at: BROOKSHIRE BROS.
Coupon expires MAY 20, 1972

STARKIST CHUNK TUNA 6 1/2 oz. CAN 43c

PILLSBURY FLOUR Limit 1 WITH COUPON 39c
5 LB. BAG WITHOUT COUPON 59c

HUNTS CATSUP 20 oz. BOTTLE 39c

CRISCO 3 LB. CAN SHORTENING WITH \$5.00 PUR LIMIT 1 69c

TROPHY SLICED STRAWBERRIES 4 10-oz. PKGS. \$1

WESSON OIL 24 oz. BOTTLE 69c

SCOTT PAPER TOWELS 3 BIG ROLLS 1.00

JOHNSON BABY OIL 4 oz. BOTTLE 65c

USDA GRADE A WHOLE FRIERS LB. 29c

Brookshire Bros. THE BEST FOR LESS

PRICES GOOD MAY 18-19-20, 1972

ALL QUANTITY RIGHTS RSVD