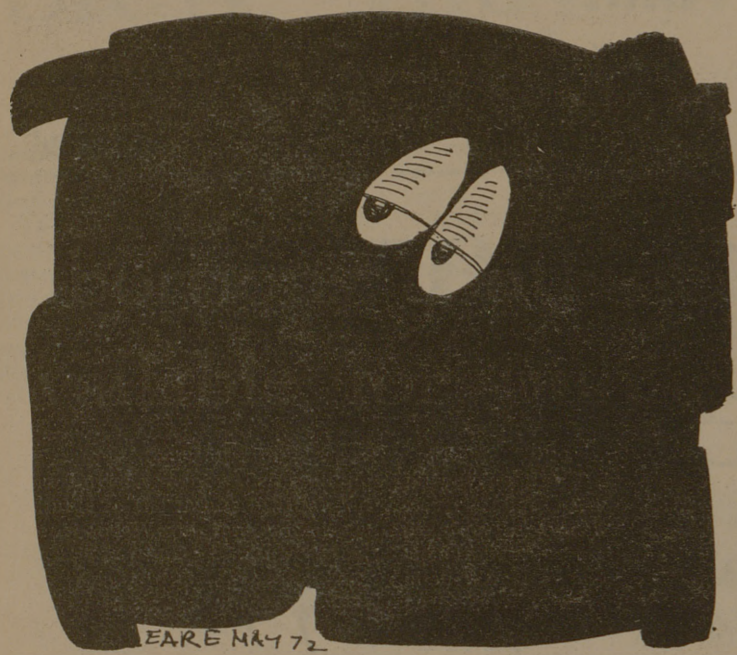


CADET SLOUCH by Jim Earle



"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

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.

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.

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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 Tangal, 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-

ters and more than 241 clubs in the major colleges and universities in the United States and Canada. Sigma Xi, with an active membership of 110,000 scientists, sponsors 20 national lectureships, publishes American Scientist and in the academic year 1970-71 made awards in support of research totalling \$78,893.

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.

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