

Dam satellites... A&M developing orbiting water sensor

Satellites may soon predict floods, crop yields and runoff while telling us when and where to irrigate and how to build dams.

University of Kansas scientists have joined TAMU researchers in developing what they call a brand new concept in environmental monitoring. They have two complementary systems that basically give readings on soil moisture. The radar devices eventually have the capability of being mounted on satellites. A primitive version in fact

went into space with the Skylab mission.

The two groups have joined forces to spend the summer perfecting their devices on an A&M farm by monitoring different soil types and crop growths.

Dr. Cliff Harlan and Richard Newton of the TAMU Remote Sensing Center and Dr. Fawwaz Ulaby, director of the U. K. Remote Sensing Laboratory, head their respective groups. The effort is aided by NASA equipment operated by a Lockheed Electronics crew.

Their main tools are large parabolic dishes strapped to spindly booms that range through specially cultivated rows of maize, pulsing information to monitoring crews in nearby electronic vans.

The TAMU-NASA crew operates a passive device that measures naturally emitted heat radiation. The amount of water in the soil causes the dielectric constant (an expression of electric properties) of the soil to change. The sensors pick up the change and convert it into information on the water content of

the soil.

Harlan noted, "We know we can see relative changes in soil moisture. Now we are attempting to measure how much water there is. A less sophisticated version of our thermo-microwave measuring device on Skylab took 60 square mile readings of soil moisture. Many of these same KU students took soil samples across Kansas that produced excellent correlation with the readings of the satellite."

The Kansas group uses an active system that sends a radar pulse into

the ground and catches the reflections. This in turn is computed into moisture information. Their measurements probe under the ground to find the amount of water in the root zone.

Ulaby pointed out that by using the two systems in the same place at the same time, "...it eliminates doubt at the end of the project in our findings. They've arranged three fields each with three soil conditions and three stages of vegetation. That way surface roughness and vegetation, which is 85 percent water, can

be accounted for in observations.

"The applications of the technique is vital," claimed Ulaby. "We could figure the runoff for dams accurately. This could save millions of dollars on dams that are now being overbuilt by as much as a factor of ten. Measurements of irrigated areas would tell when farm lands dry out endangering crops. More water could be released but only when needed. This would conserve water and use it more efficiently."

Harlan added, "The amount of moisture is important in planting

some crops. Also these systems would allow us to monitor through clouds, day or night. A hydrologist with soil moisture information could accurately predict floods."

This is the second step of a project that began last year. NASA aircraft and University of Michigan researchers took airborne readings over 100 miles of fields near Phoenix, Ariz. where there was no moisture change except for irrigation. These results were compared with soil samples. The project here is the second step.

New dean for LA announced

Dr. Diane W. Strommer has been named associate dean for student affairs in the College of Liberal Arts, announced Dean W. David Maxwell.

Dr. Strommer joined the college's administrative staff Monday, effective date of appointment. She succeeds Dr. Charles McCandless, now director of academic planning and services in TAMU's academic affairs division.

Most recently an administrator and professor in Boston University's College of Basic Studies, Dr. Strommer has taught and worked primarily on the East Coast.

"Dr. Strommer has a diversity of administrative experience, in television, radio and university administration," Maxwell said. "She



also has had experience in curriculum development and implementation."

The new TAMU faculty member received the B.A. at the University of North Carolina, Chapel Hill, in 1962. Ohio State University awarded both the M.A. in English and Ph.D. in Renaissance drama, the latter in 1969.

Dr. Strommer taught at an Oak Ridge, N. C., junior college, Chapel Hill and Ohio State. At Boston, she was in charge of the basic division. Her TV program, "The Woman's Magazine of the Air," won the North Carolina Broadcaster's Award of Excellence. She conceived, wrote and produced it.

Dr. Strommer was a textbook consultant for MacMillan Co. and has a book on language and politics ready for publication. She has done directing and stage management for the Raleigh Little Theater.

She is married and has two children.

Embrey's Jewelry
We Specialize In
Aggie Rings.
Diamonds Set—
Sizing—
Reoxidizing—
All types watch/jewelry
Repair
Aggie Charge Accounts
9-5:30 846-5816

shells shells shells
beads beads
beads
& things to
string them
on

custom house
319 patricia

one block from the post office
open at noon tues. - sat.

FOLKS! HOWDY

IT HAS BEEN THE POLICY OF YOUR PIGGLY WIGGLY SUPERMARKET TO OFFER TO OUR CUSTOMERS THE LOWEST POSSIBLE MEAT PRICES

CONSISTANT WITH THE HIGHEST QUALITY... THAT YOU HAVE COME TO EXPECT. ONLY WHEN IT WAS ABSOLUTELY NECESSARY WERE PRICES RAISED IN THE PAST. THIS WILL CONTINUE TO BE OUR POLICY, NO MATTER WHAT THE FUTURE BRINGS.

IF WE WORK TOGETHER, WE CAN WORK IT OUT

JIMMY DEAN 12-oz. Pkg. 79¢

SAUSAGE

DECKER'S TENDER WIENERS 12oz. pkg. 59¢

Shop PIGGLY WIGGLY

BREASTS Fryer lb. 79¢

DRUMSTICKS Family Pack Fryer lb. 69¢

FAMILY PACK FRYERS 37¢ lb.

Swift Proten* FULL CUT ROUND STEAK \$1.28 lb.

Swift Proten Heavy Beef bone in lb.

FRYER THIGHS Family Pack lb. 59¢

SPLIT BROILERS for B.B.Q.ing lb. 44¢

SWIFT PROTEN BONELESS TOP ROUND STEAK lb. 1.38

SWIFT PROTEN ROUND STEAK tenderized lb. 1.48

SWIFT PROTEN RUMP ROAST bone in lb. 1.28

SWIFT PROTEN BREAKFAST STEAKS lb. 1.78

FOOD PRICES For a Bang-up 4th

HORMEL'S MEDIUM SPARERIBS lb. 77¢

BOSTON BUTT PORK ROAST lb. 69¢

DECKER'S QUALITY BOLOGNA 12oz. pkg. 77¢

DECKER'S QUALITY SALAMI 12oz. pkg. 77¢

SUASAGES lb. 77¢

HOT LINKS OWEN'S PURE PORK SAUSAGE lb. 99¢

CURE '81 HALF HAMS lb. 1.79

HOSTESS HALF HAMS \$1.69 lb.

MINUTE MAID FROZEN ORANGE JUICE 4 6oz. cans 1.00

BIRDSEYE FROZEN CUT CORN 4 10oz. pkg. 1.00

PIGGLY WIGGLY HUSHUPPIES 16oz. pkg. 49¢

BISCUITS Bonnie Baker 10ct. can 10¢

SWIFT PROTEN SAVOY STEAK lb. 1.29

SWIFT PROTEN CHARCOAL STEAKS lb. 1.19

SWIFT PROTEN CHUCK STEAKS lb. 88¢

SWIFT PROTEN RANCH STYLE STEAK lb. 99¢

SWIFT PREMIUM SLICED BACON 1 lb. pkg. 89¢

KRAFT MAC. DINNERS 4 7 1/4 oz. pks. \$1.00

BUSH'S FRESH BLACK EYE OR PURPLE HULL PEAS 5 15oz. cans \$1.00

BAMA P'NUT BUTTER 18oz. jar 69¢

BAMA GRAPE JELLY 18oz. jar 49¢

SUNSHINE VANILLA WAFERS 11oz. pkg. 39¢

SWEET SUE 24oz. can 73¢

CHICKEN 'N DUMPLINGS 73¢

PIGGLY WIGGLY BLACK PEPPER 4oz. can 49¢

CRACKER BARREL CRACKERS 1 lb. pkg. 35¢

DELIGHT DOG FOOD 2 16 oz. cans 27¢

HEAVY DUTY PUREX BLEACH 1/2 gal. jug 29¢

AQUA NET 13oz. can 59¢

HAIR SPRAY list 98¢

PEPTO-BISMOL 8oz. btl. 98¢

HAIR TONIC list 98¢

VASELINE list 98¢

AMMEN'S HEAT POWDER 6 1/2 oz. can list 98¢

GOLD MEDAL FLOUR \$1.79 lb. bag

SPECIAL COUPON
20¢ on purchase of 1 lb. can MAXWELL HOUSE COFFEE
without coupon 1.09 with coupon 89¢
limit 1 coupon per family

MAXWELL HOUSE COFFEE 1 lb. can 89¢

WASHINGTON CHERRIES 1 lb. 79¢

CALIFORNIA VINE PINK TOMATOES lb. 39¢

CALIFORNIA SANTA ROSA PLUMS lb. 39¢

LARGE-MEDIUM ONIONS white lb. 19¢

CALIFORNIA ROMAINE LETTUCE Bun 29¢

SWEET CORN Florida fancy full ear 12¢

SUNKIST LEMONS Juicy 3 for 29¢

GRAPEFRUIT Sunkist ruby red 5 for 1.00

NECTARINES California lb. 49¢

WHITE POTATOES California long 5 lbs. 89¢

PINEOIL Pine-o Pine 8 oz. btl. 53¢

MACARONI Skanner's large elbo 12 oz. pkg. 45¢

GRADE 'A' LARGE EGGS dozen 53¢

500 S&H GREEN STAMPS

OLD-TIME VALUES!
WONDERFUL NEW GIFTS WITH S&H GREEN STAMPS
SHOP AT PIGGLY WIGGLY.

PIGGLY WIGGLY STAMP DIVIDEND
500 Free

PIGGLY WIGGLY
THE ORIGINAL SELF-SERVICE

Dr Pepper or Cokes 6 12-oz. Cans \$1.00

THESE PRICES GOOD THURS., FRI., SAT. JULY 4, 5, 6, 1974.

Double S&H Green Stamps every Tuesday with \$250 or more purchase.

4 FINE STORES TO SERVE YOU

- * 4300 TEXAS AVE.
- * 3516 TEXAS AVE.
- * 200 E. 24th ST.
- * #9 Redmond Terrace

COLLEGE STATION & BRYAN TEXAS
Quantity Rights Reserved