Texas A&M
The Battalion

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WEATHER

TOMORROW'S FORECAST: Sunny and warm with a slight chance of showers in the afternoon.

HIGH: 90s LOW: 70s

Chemist: A&M in 'forefront' of fusion studies

By Richard Tijerina

STAFF WRITER

Texas A&M will continue to have a leading role in cold fusion study and has a research program that rivals any other in the country, a nuclear chemist at the Cyclotron Institute said Thursday.

Dr. Kevin Wolf, a professor of chemistry and one of the researchers who has been conducting experiments in cold fusion at the Cyclotron, said that with 45 scientists involved in the research, A&M's program is "on par" with the University of Utah, where scientists claim to have achieved a sustained nuclear fusion reaction in a simple experiment.

"Right now, A&M's role is at the forefront (of cold fusion research)," Wolf said. "We have a large research conglomerate here that rivals anything anywhere. What's important is having the right people at the right areas, plus having enough people to put the effort on."

The Cyclotron Institute at A&M is the $8 million computer-controlled facility that has the most advanced heavy-ion particle beam capabilities of any university-based research program in the nation and can work with ions ranging from hydrogen to uranium.

Five separate groups have been involved in cold fusion research at A&M, Wolf said. In addition to work at the Cyclotron, cold fusion experiments have been conducted on the A&M campus by two groups from the chemistry department and two groups from the engineering department.

An outside advisory committee recommended July 11 that the Department of Energy not grant the construction of new research facilities by the federal government. However, their report did not recommend to discontinue federal funding for fusion research.

The committee, a group of about two dozen scientists appointed by the DOE's Energy Research Advisory Board to assess cold fusion, found the prospects of cold fusion dim and examined the status of research at A&M about a month ago.

Wolf said the committee was skeptical about the theory of cold fusion when they were at A&M but their final report was more positive than he expected it to be.

"When they were here the members were extremely biased against the whole concept," he said. "They came up with ridiculous statements here. But the final report was not as heavily biased as I expected. They said funding for research should not be shut off, which was a surprise to me they would say that."

Utah scientists said the decomposition of water at room temperature into hydrogen and oxygen by an electric current passing through a palladium electrode leads to the absorption of hydrogen atoms in the electrode, which then fuse to produce helium and large amounts of heat.

Dr. Ramesh Kainthla, an assistant research scientist and a member of Dr. John Bockris' research group in the chemistry department, said if the Utah experiments are correct, cold fusion could create unlimited supplies of alternative energy in the future.

"If the theory is proved and one can get the heat output which the Utah people are claiming, then it may provide a huge source of energy in the future," Kainthla said.

He said that because the cost of palladium is high, alternative materials should be considered.

The fusion of hydrogen atoms to helium liberates a vast amount of energy, but according to accepted chemistry and physics theories, a temperature of millions of degrees is required to trigger it.

Kainthla said his group's research at A&M has centered around looking at the use of various electrodes and measuring the excess heat, if any is given off at all. The next step is to look for nuclear particles — basically neutrons as well as dridium, the heaviest isotope of hydrogen and oxygen.

The problem scientists around the country have had with cold fusion research is the inability to consistently reproduce a reaction that gives off neutrons, heat and dridium.

Experiments at the Cyclotron place more emphasis on the nuclear aspects of cold fusion. Wolf said the problem with the Utah experiments is that they simply measure heat and they have no nuclear information.

"Everything they published on nuclear (fusion) is wrong," Wolf said. "If you simply measure heat, you can't be sure it has anything to do with fusion. Unless you see some signature of a nuclear phenonemon, you can't be sure it has anything to do with nuclear fusion.

"We have to deal with the nuclear aspect of it all. After all, if it isn't a nuclear phenonemon then nobody is interested in just another battery. We have a lot of batteries already."

Wolf said scientists at A&M have seen reactions that produce neutrons and dridium, two of the characteristics of nuclear fusion.

"We've seen both neutrons and dridium here, but the heat (that is given off) does not correlate with anything nuclear," he said. "We've had cells ignite. And we've had cells that had been producing heat but we did not see any nuclear effects."

Kainthla said he agreed with the committee's report, and that as far as A&M is concerned, the opportunity to continue research gives the University more time to solve the mysteries surrounding cold fusion.

"Rather than bombarding us with these committee members coming down here and asking us what is going on, let us do some experiments quietly," he said. "In about six or eight months, we might be able to answer some of these questions."

Bush says Americans must commit to space settlement

WASHINGTON (AP) — Twenty years after man's first step on the moon, President Bush said Thursday Americans must commit to the permanent settlement of space, first returning to the moon and then embarking on a manned mission to distant Mars.

The president offered no firm timetable or pricetag for a program that could cost hundreds of billions of dollars but said it would be worth the cost "because it is humanity's destiny to strive, to seek, to find. And because it is America's destiny to lead."

His proposal was made in a ceremony, on the steps of the National Air and Space Museum, marking the historic moments on July 20, 1969, when American astronauts Neil Armstrong and Buzz Aldrin stepped on the moon's Sea of Tranquility to fulfill a pledge made eight years earlier by President Kennedy.

The two moonwalkers stood with Bush Friday, along with Mike Collins, the third Apollo 11 crewman who said, "We have rested on our Apollo laurels long enough; it's time to get moving again."

Bush's proposal — to establish a U.S. moon base early in the next century and then mount a manned Mars mission — likely will ignite a long national debate both in a budget-minded Congress and among those who believe federal dollars should not be spent on costly space endeavors but on solving more earthly problems.

At a time of huge budget deficits, Congress already is balking at the start-up costs for NASA's $30 billion space station, which Bush said was "a first and necessary step for sustained manned exploration."

Congress, he said, is "where the future of the space station — and our future as a space-faring nation — will be decided."

Bush offered few details beyond his broad goals and said he was leaving it to Vice President Dan Quayle, as head of the National Space Council, and to NASA to come up with "realistic timetables." Putting the space station in orbit has been scheduled for after 1995.

The president chose to look beyond the budget debate over the space station budget.

"We must commit ourselves anew to . . . the permanent settlement of space," he said. "We must commit ourselves to a future where Americans and citizens of all nations will live and work in space."

Richard Truly, the NASA administrator hailed Bush's initiative as "dynamite" and said that if the program is approved, NASA will be ready to establish a moon base "in the dawn of the new century."

Truly said cuts in the NASA budget in recent years have weakened the agency so that in its present structure it could not carry out such visionary plans.

Truly said he had no estimate on how much Bush's program would cost. But he noted that during the heyday of the Apollo program NASA's funding represented more than 4 percent of the national budget compared with about 1 percent now.

He said the job could be done with less than 4 percent.

Other observers have estimated that if Bush's proposal were adopted, NASA's present budget request of $13.3 billion would have to more than double within a few years and that the whole package eventually could cost as much as $800 billion to $900 billion.

Bush will need to forge an alliance with Democratic leaders to win the funding for serious space exploration, and initial skeptical reaction came from Rep. Richard Gephardt, D-Mo., the House majority leader.

"The real test of presidential leadership is not whether he can marshal the words but the resources to restore America's preeminence in space," Gephardt said. "In sum, Mr. President, there's no such thing as a free launch."

Hay! *Photo by Kathy Haveman*

A&M graduate student in psychology Chris Robinson, from Oklahoma City, jogs Thursday on a road extending from Joe Routt Blvd. toward the Ocean Drilling Program Building.

Delta accepts responsibility for 1988 crash

DALLAS (AP) — Delta Air Lines had little choice but to accept responsibility for the 1988 crash of Flight 1141, says an attorney who has filed six lawsuits on behalf of passengers and their families.

"What they've now done is make a statement that's consistent with the physical facts," Dallas attorney Frank Branson said. "Their previous statements were not. They have now acknowledged that the sun comes up in the morning and goes down at night."

Delta said Wednesday that flight crew error led to the Aug. 31, 1988 crash that killed 14 people. The flight crew was later fired.

"The flight crew failed to set the aircraft's flaps and slats in the proper takeoff configuration as required by established Delta practices and procedures," the airline said in a statement from its Atlanta headquarters.

"Accordingly, Delta has accepted responsibility for the accident on that basis," the airline said.

Spokesman Jim Lundy said Delta conducted its own investigation and expects the National Transportation Safety Board to release its conclusions in late summer or early fall.

Sources outside Delta, however, speculated that the airline realized the federal investigation would find the flight crew at fault. National Transportation Safety Board sources say the agency's staff has determined that the three-member flight crew neglected to set the flaps and slats — wing devices that give an airplane lift during takeoff and landing.

Carrying 108 people, the 727 rolled from side to side and got no more than 30 feet off the ground before crashing on takeoff.

Investigators attempt to uncover explanation for crash of United jet

SIOUX CITY, Iowa (AP) — Rescuers and survivors spoke of miracles, and investigators went "inch by inch" through a cornfield Thursday looking for an explanation of the fiery crash of United Flight 232.

At least 76 people were killed, and up to 43 others were missing and believed dead in Wednesday's spectacular crash of a DC-10 jumbo jet.

Rescuers said many of those

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unaccounted for probably were trapped in a large silver- and red-striped section of the charred fuselage that sat amid rows of corn 4 feet tall.

Russell Mack, an airline spokesman, said at midafternoon Thursday that 197 of the 293 people aboard survived.

City Manager Hank Sinda put the number at 174 — which, counting 76 confirmed dead, would put the number unaccounted for at 43.

Some survivors just walked away from the wreckage.

Beginning at daybreak, National Guardsmen began collecting pieces of wreckage and carrying body bags to ambulances and refrigerated trailers.

The plane, crippled by a loss of hydraulic power, pitched violently to its right just a few feet from the ground, scraped its right wing, cartwheeled into a ball of fire and broke into pieces during an emergency landing about 4 p.m. at the Sioux Gateway Airport.

Survivor Garry Priest, 23, of Northglenn, Colo., said those who got out of the plane saw what "looked like a war zone. Bodies, trash, magazines, luggage, and pieces of bodies littered the area. It was the worst thing I've ever seen."

"We could not believe anybody could walk away from it," said Dr. David Greco, director of emergency services for the Marian Health Center and one of the first physicians on the scene.

Greco lauded the passengers and crew for maintaining calm and said the nature of the breakup of the plane largely determined the pattern of injuries.

The three members of the cockpit crew survived the crash, but Greco said the first-class section was devastated.

Passengers in rows nine through 19 suffered no injuries or minor ones, he added, but "there was nothing left of the rear half of the aircraft."

"One section was thrown so far so fast that it never got involved in the fire," he said.

Tales of heroism abounded, beginning with praise for Capt. A.C. Haynes, a 33-year United veteran.

Gov. Terry Branstad visited Haynes' bedside and said at a news conference: "He was quite emotional about the situation and tears came to his eyes when he talked about the number of people who lost their lives. . . . I told him he did a valiant job."

Flight 232, from Denver to Philadelphia via Chicago, carried 11 crew members and 282 passengers.

A&M program offers students glimpse of science, college life

By Cindy McMillian

STAFF WRITER

The Department of Engineering offers prospective students more than the standard tour of campus. The Summer Enrichment Experience in Engineering, a program for high school minority students interested in science and math, includes a special tour of NASA and a trip to Galveston.

Jeanne Rierson, SEE coordinator, said the department hopes to recruit talented minority students while teaching them more about engineering and college life.

"The program gives these students a glimpse at what college will be like and lets them see the different disciplines involved in engineering," she said.

The 37 participants will go to NASA today, where they will take special tours and meet with college students working in co-op programs.

Ricardo Garza, a high school senior from Del Rio, said he was looking forward to the trip. "I've never seen NASA before," he said.

After touring the space center, students will go to Galveston to spend some time on the beach and have dinner.

"Some of the kids from west Texas have never seen the coast," Rierson said. "This trip is usually the highlight of the program."

SEE has been an annual event since 1981, she said, and four or five years ago the engineering department began offering two sessions each summer to accomodate more students. This year's group was chosen from about 300 applicants for their grades and interest in math and science, she said.

The program has proven an effective recruiting tool, she said. More than half of each group ends up attending A&M, she said, and a majority of them go into engineering.

The students learned about engineering at A&M through sessions in their chosen areas of interest. They also attended special lectures and computer labs and toured the Nuclear Science Center and the local Westinghouse plant.

Tracy Bates, a high school senior from Missouri City, said the tight schedule was a lot of hard work but worth it. She said she wants to return to A&M as a student.

Group of Soviet students, professors surprises UH with unexpected visit

HOUSTON (AP) — A surprise visit by a group of Soviet students and professors sent University of Houston officials scrambling to line up social and educational events to entertain their unexpected guests.

"Yes, we are embarrassed" Willie Munson, the university's student life director, said. "We certainly don't make a habit of treating international visitors this way."

Numbering six, the Soviet group from Leningrad State University arrived Tuesday at Houston's Intercontinental Airport eager to embark on their "exchange program." But their trip started slowly since nobody expected them.

After waiting a few hours at the airport, the group was picked up by officials from the university's housing department.

"We are so pleased to have somebody meet us and feed us," Elena Krasnova, 31, a teacher at the the Leningrad university, said. "The people (at the university) are very pleasant."

The mixup stems from a former student leader's personal "exchange program" with the Leningrad university.

Ali Annan, the former students' association president, had corresponded with Leningrad adminstrators for two years. In May, he wrote a letter suggesting that the summer would be an ideal time to visit.

The Soviets received that letter last week, obtained their visas and caught the first available plane. They also sent a letter to Annan telling them about their trip, but he has yet to receive it in the mail.

"I was shocked," Annan, a May graduate, said. "The worst few moments of my life were then. I . . . asked myself if I could be dreaming."

Nevertheless, university officials said they are making the best of the situation.

"They're a very nice group of people, very bright," interim school President George Magner said. "It's their first trip outside of Russia. We intend to give them a very pleasant and productive visit."