

NASA working on life in space

By ANN CERVENKA
Reporter

The possibility of man being able to live in space is more like science fiction than reality to many people. But it may be closer than you think.

By 1992, the National Aeronautics and Space Administration plans to construct an \$8 billion space station where human beings will be able to live.

A space station is a multi-purpose manned permanent facility designed to orbit the Earth. Space shuttles will piece the station together on seven separate trips. The shuttles also will transport crews, which will consist of six to eight members living in space for three month cycles.

"This thing is really different for NASA because it's like building a little Cape Kennedy in the sky," Mark Craig, NASA systems engineering manager, said.

The essence of the space station program is permanent manned occupancy, John D. Hodge said in his article, The Space Station Program Plan. Hodge, deputy director of the Interim Space Station Office at NASA Headquarters, said the station will be flexible and expandable.

"The space station will offer people an opportunity to extend their wisdom and skills to new frontiers and horizons, to stimulate their imagination, to generate new ideas, to nurture their creativity, and to benefit intellectually from the experience of dwelling in weightlessness in a secure research environment," Hodge said.

One of the primary advantages to working in space is that everything is weightless.

"Things that are very easy to do on Earth are very hard to do in space and things that are very easy to do in space are very hard to do on Earth," Craig said. Activities such as exercising, taking showers and eating are extremely difficult in space and must be practiced to be mastered.

Producing some drugs, including interferon, will be much easier and cheaper in space, Craig said.

"Even with those expenses (of sending a station to space), we can still reduce the costs of these drugs by orders of magnitude," he said.

The three major parts of the station are the power generator devices to turn energy into heat, modules where the astronauts live and work, and structures to hold these two parts together.

The proposed model has two modules designed for living quarters, two laboratory modules and one logistic module — which would take necessities back and forth from the station to Earth.

The 40-foot by 15-foot living area modules will include everything necessary to survive, plus a little more to make it "habitable," Craig said.

The station will contain exercise equipment, stereos, television sets, views of the Earth from the windows and a communication system to talk with families.

In an attempt to prevent boredom of the astronauts, plans are being made for the scientists to transmit lectures to university students on Earth, the memorandum said.

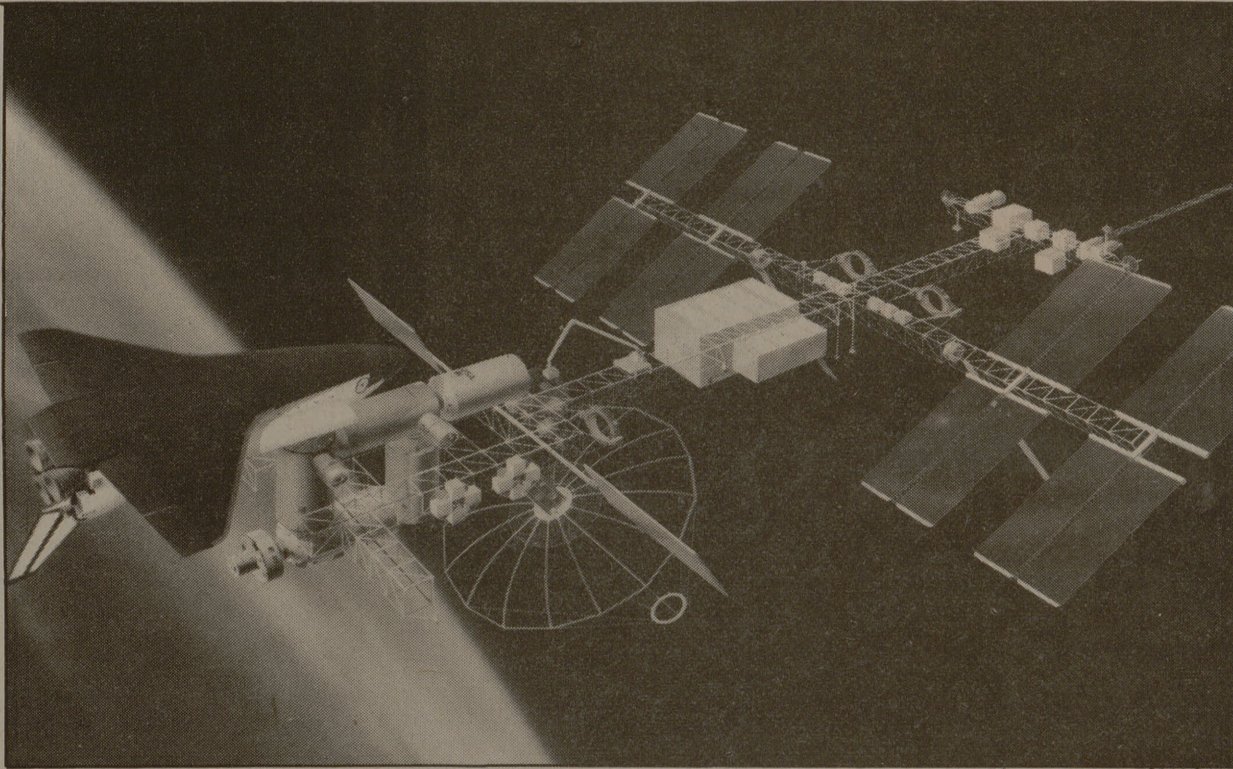
Experimental plants have been made to recycle as much air and water as possible in a closed system, rather than transporting these supplies in logistic modules.

"We want to make space a place to live and work," Craig said. People will be living on the moon in the next 20 years, he said.

In his State of the Union address in January, President Reagan challenged the nation to develop a permanently manned space station within a decade. The government has formed a committee to fund the project and the president emphasized that the station should support research and international communication.

Reagan has invited U.S. allies, including Europe, Canada and Japan, to help with the space station.

In his article Space Station: The Next Logical Step, James M. Beggs said the station will be a key element of our nation's foreign policy.



An artist's concept of NASA's design phase of the space station.

Photo courtesy of NASA

"It lends itself to participation by other countries in both the development and use of an entirely new capability in space," Beggs, an administrator at NASA Headquarters, said.

A special committee has been planning for the space station since April and engineers have proposed a model.

"We will start with this one (model) and evolve over the next four or five years," Craig said.

Doug Cook, head technical analyst at NASA, said the space station will be extremely useful for various technologies and experiments.

Experiments that require a sterile or steady environment will be conducted in unmanned platforms. These experimental platforms are designed to facilitate additions in the future, Cook said.

Craig said people with varied talents are necessary to run the space station.

The Space Station Medical Sciences Concepts memorandum addresses medical problems that could come up at the space station.

The memorandum says, in part:

• Inflight medical care is an absolute requirement.

• Because a rescue could take up to 21 days, not including the trip back to Earth, an illness requiring a rescue mission would probably result in the astronaut's death. Therefore, health care must include prevention, diagnosis and treatment.

• Because exposure to high levels of radiation can shorten life, extra steps must be taken to rid the station of chemical contaminants, improve medical care and shield the station in the event of a solar storm.

Craig said the ultimate question is whether or not someone could live in space forever.

The Soviets have been aggressive in space technology, Craig said.

"They essentially have a space station," he said. The Soviet's Salyut has been occupied by different crews for several years.

However, the U.S. station will be unique because unlike Salyut, the station is not intended for periodic visits, Beggs said. It will be permanently inhabited, but will have "shut-down" capability, he said.

"Starting in the early 1990's, I believe there will always be Americans living and working in space," he said.

The space station will rotate

around the Earth every 90 minutes at 25,000 feet per second in a 270 nautical mile high orbit. The station will orbit for at least 10 to 15 years and maybe indefinitely, Craig said.

Dr. David Norton, assistant director of research for the Texas A&M Engineering Experiment Station said the space station will be beneficial if it is developed to include plans for the future, such as exploration of the moon and Mars.

"If it would be permanent in space, I think it's a good objective," he said.

Norton said the experiment station at A&M has been working on a Space Engineering Research Program for 18 months that would bring together the efforts of Lyndon B. Johnson Space Center and the University. Engineers from A&M sent NASA a proposal to do research in space. The program, which would be funded by NASA, will probably be approved, Norton said.

"We want to make Texas A&M recognized as a leader in space," Norton said. "We are going to be looking at fundamental technology that will enable us to be in space forever."

Food drive for needy underway

By DAINAH BULLARD
Staff Writer

In an effort to improve the holiday meals of the underprivileged, several Texas A&M organizations are sponsoring canned food collections and food delivery programs.

Today is the final day to make contributions to the Mosher Hall collection. Moshers' collection will be combined with the collection sponsored by the Student Y Association.

The Student Y's "Push for Canned Goods" will be Nov. 25 through Dec. 1. Canned goods from these collections will be donated to the Twin City Missions, which sponsors missions and churches throughout the Bryan-College Station area.

Wednesday is the last day to make contributions to Underwood Hall's canned food drive. Contributions to Underwood's collection will be donated to the Presbyterian food pantry in Temple.

Along with Aston Hall, Underwood is sponsoring a second holiday program. Teams consisting of one representative from Underwood and one representative from Aston will be buying \$5 to \$7 worth of groceries. Each team will deliver groceries to a participant in the Meals on Wheels program before Thanksgiving.

Hart Hall sponsored a canned goods collection with a new twist. Instead of relying on dorm residents to contribute the entire collection, dorm residents volunteered to collect food door-to-door.

Mark Gilbert, a Hart resident who organized the hall's drive, said about 20 volunteers participated in the Nov. 8 effort. The volunteers concentrated on apartment complexes, he said.

"We just knocked on doors and said we were collecting food for Thanksgiving, and asked if they'd like to contribute," Gilbert said.

Hart's project netted four large trash cans — about 800 pounds — of canned goods, Gilbert said. The hall's collection was donated to Aldersgate United Methodist Church in College Station.

Dorm students who wish to participate in similar programs should contact their resident advisors or dorm presidents for information on their dorm's holiday programs.

ARE YOU DREAMING OF A WHITE CHRISTMAS?
MAKE YOUR DREAM COME TRUE WITH MSC TRAVEL!!

WINTER PARK

Jan. 5-12
\$425 or \$445
*Round-Trip Bus Transportation
*5 Nights Lodging
*5 Day Lift Tickets
Two Meals Daily-Family Style
*1 Party
LOTS OF FUN

CRESTED BUTTE

Jan. 6-13
\$320
*Round-Trip Bus Transportation
*5 Nights Lodging
*5 Day Lift Tickets
*2 Parties

Extended Deadline Fri. Nov. 30th
Hurry Now!

For more info. call MSC Travel at 845-1515

THE POLITICS OF POLLUTION

Conoco Inc. vs. Sierra Club

8 p.m.
Tues. Nov. 20

Free
Rudder 601

Memorial Student Center