

Frosch visits Goddard, speaks on policy

"The rules of management policy were not revealed to Moses any more than were the laws of science and engineering," said NASA Administrator Dr. Robert A. Frosch here at Goddard on March 30.

He was addressing an open auditorium of Goddard employees on "Some NASA Policy Problems," as part of the Center's continuing Management Colloquium series.

During his one-hour talk, Dr. Frosch examined the role of NASA in basic and applied research as it relates to our charter—the Space Act of 1958. For some, his comments provided an interesting perspective of the decision-making process in the research and development field.

Some of the areas examined by Dr. Frosch included:

Continued on page 6

Solar Observatory eyes giant Sun flare

Shortly before the giant April 11 solar flare that was responsible for communications interference here on Earth and for brilliant displays of Northern Lights, a University of Colorado science team observed "a violent motion of matter from the solar atmosphere back toward the Sun."

The observations at that time were directed by University of Colorado (Boulder) scientist Dr. Bruce Lites using NASA Goddard Space Flight Center's Orbiting Solar Observatory-8 satellite to observe the same region on the Sun from which the giant flare erupted.

According to Lites, the sequence of solar events suggests that some mechanism, possibly a sudden change in the Sun's magnetic field, could be a precursor to solar flares.

What Lites and his group saw was a massive amount of matter, some 1500 km (930 miles) above the solar surface, begin traveling downward toward the Sun at the tremendous speeds of 60 km per second (134,000 MPH). This was observed about 10 hours before the giant April 11 flare.



Uemura mashes his dog team northward to the pole. At right, Uemura near the pole shows strain of arctic environment.



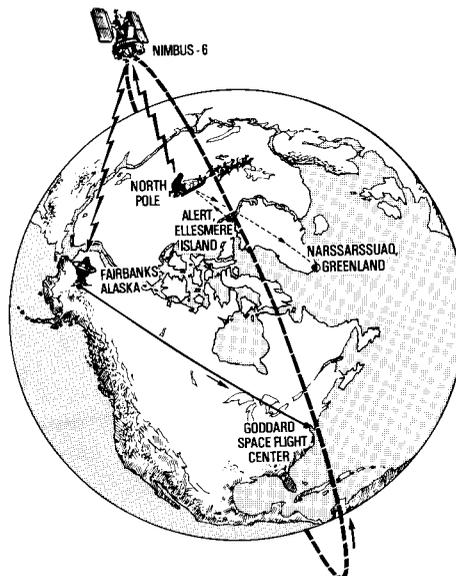
Arctic explorer reaches North Pole alone but for dogs and a satellite

Today, the North Pole can be crossed at 30,000 feet as casually as the equator. It is no longer the high goal that dizzies the exploratory mind. So says a 1962 "Life Nature Library" publication entitled "The Poles."

Try telling that to 37-year-old Naomi Uemura of Tokyo, Japan. Even at this moment, he quietly revels in the self-satisfaction of having conquered the North Pole alone by dog-sled. He is the first man to accomplish such a feat.

Uemura reached the North Pole about 8:25 p.m. EDT on Sunday, April 30, after having crossed some 500 miles of frozen Arctic Ocean. He followed the same general route used by American explorer, Robert Peary, whose group discovered the pole on April 6, 1909.

Artist's rendering of Uemura's six-month arctic trek.



NASA G-78-01015

Although alone and often out of radio contact with his base camp in Canada's far Northwest Territories, Uemura's position was generally known, thanks to a 10-pound satellite beacon on his sled. Signals from the battery-powered unit were relayed by NASA's Nimbus-6 satellite to the Fairbanks, Alaska, tracking station and thence to Goddard for processing.

During his 55-day trek, Uemura survived two attacks by a marauding polar bear, fought his way against drifting ice and a blinding snow storm, and was forced to take arduous detours around impassable ice ridges and open water.

In the middle of his journey, one of the Huskies gave birth to a number of puppies. Uemura had to help mother them until a supply plane rendezvous relieved him of the surviving pups.

A full, first-person account of Uemura's trial by ice will appear in an upcoming issue of the National Geographic,

Continued on page 7

Landsat goes public in a nationwide, state applications program

Images and digital data from NASA's Landsat Earth-sensing satellites have potential application in areas of natural resource management and environmental monitoring throughout the world.

Each year finds more and more scientists, city planners, oil and mineral researchers, and others discovering the value of Landsat data to the solution of their problems.

Often, though, the process of transferring the valuable Landsat data from the processing lab to the user is not simple. Due to the technical nature of the data, its true value too often cannot be discerned immediately.

It was to help give state government, private industry, and universities across the country a "view from the Landsat terrace" that NASA established the Regional Remote Sensing Applications Program in October last year.

Goddard, the Ames Research Center in California, and the Earth Resources Laboratory in Mississippi each share in the responsibility of implementing this program nationwide.

Goddard advises 19 states

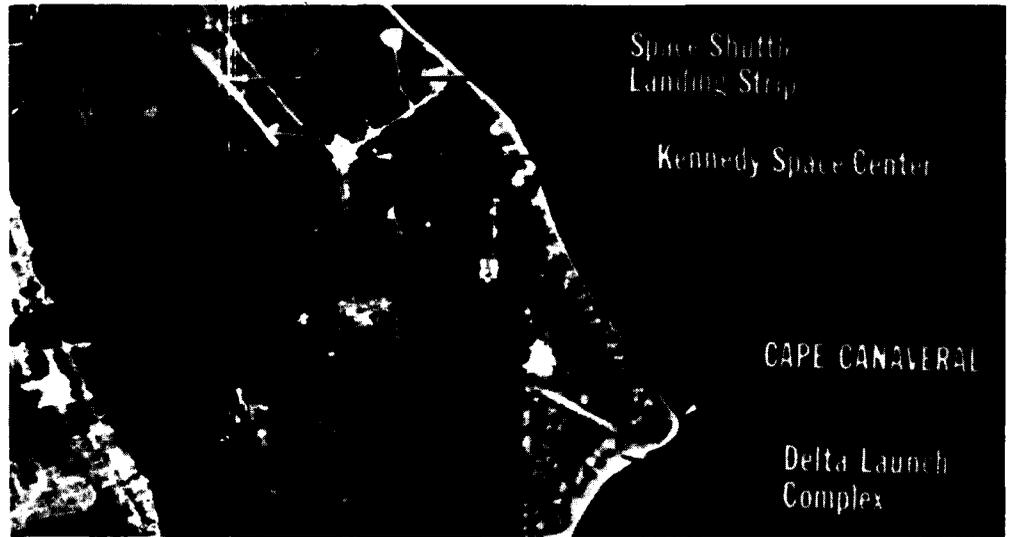
Goddard's area is a 19-state region covering the northeastern and midwestern region. It is called the Eastern Regional Remote Sensing Applications Program (ERRSAP).

ERRSAP is managed by Dr. Stanley C. Freden, Head of the Center's Mission Utilization Office (Code 902). Dr. Philip Cressy is the Program Manager.

Services provided by ERRSAP include program planning and development assistance, technical training on Landsat data applications, and information processing systems. The training of state agency personnel can be conducted in either their respective states by ERRSAP staff or at ERRSAP's training center located in Goddard's Building 16W.

Michigan, Wisconsin, and Illinois, for example, are planning to conduct feasibility programs to evaluate the value of Landsat data to their water quality assessment projects. If these states are satisfied with the results, the programs will be used as building blocks for more ambitious programs to serve a broader range of information needs.

ERRSAP hopes to achieve the goals of the Regional Program in its region of responsibility by the early 1980's. If successful, ERRSAP will, in essence, be putting itself out of business.



This is Cape Canaveral as seen through the "eyes" of the new Return Beam Vidicon camera system aboard the LANDSAT-3, launched last March 5. Resolution of this RBV camera is double that of previous LANDSAT RBV cameras. Objects no larger than two adjacent city lots can be spotted. The improved resolution of the LANDSAT-3 RBV should provide more accurate measurements of agricultural fields to improve their crop yield production, among other things.

All April launches successful

March may have been a busy month for Goddard people with the launching of LANDSAT 3, yet April showed no signs of letting up the pace.

On April 7, a Japanese Broadcasting Satellite for Experimental Purposes (BSE) blasted into orbit aboard a Delta rocket from Cape Canaveral.

However, before the Delta Launch Vehicle could be cleared for liftoff, a special investigation had to be made into the leak detected in the fuel system during flight of the LANDSAT 3 Delta on March 5.

Scientists finally traced the leak to a device which suppresses vibrations in the fuel system during flight. After special tests and the installation of a new component, the Delta was qualified for flight.

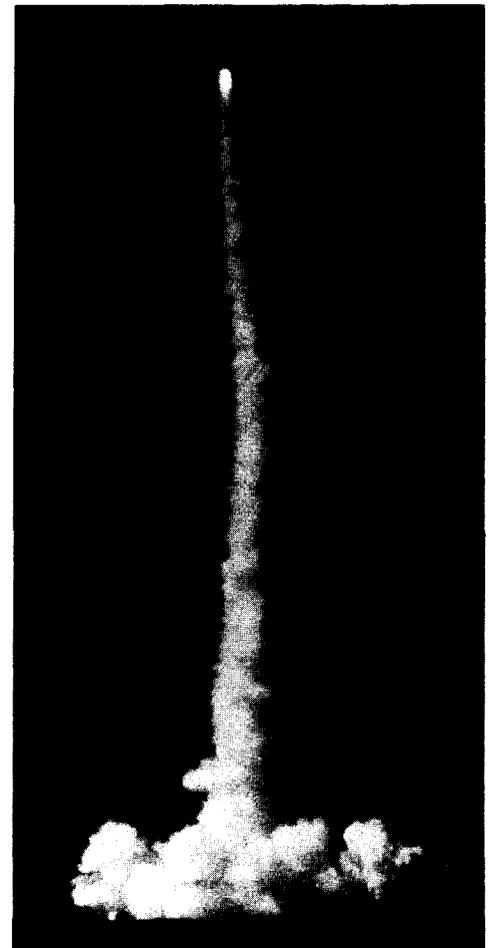
Then, "the bird flew right down the pipe," said David Grimes, Delta Project Manager. "The satellite's in perfect orbit."

The Japanese satellite was followed into space on April 26 by NASA's Applications Explorer Mission-A (AEM-A). The new NASA satellite, which was launched aboard a Scout Rocket from California, is designed to detect temperature differences on the Earth. Goddard not only was responsible for the design, integration and testing of the satellite but will handle its data processing as well.

The satellite's thermal infrared channel operates day and night. A second channel for visible light images operates only during the day.

"We had great launch, technical and resources crews behind the satellite so I knew everything was going to work,"

said Carl Wagner, AEM-A Project Manager. "But now that it's in orbit, everything is working even better than specifications."



Goddard's Delta 139 streaks spaceward from the California launch site, driving LANDSAT-3 into polar orbit this past March 5.

Baltimore Applications Project

Goddard offers science-aid to city

"Every Center of ability has a responsibility to help its community," says Tom Golden, Director of the Baltimore Applications Program (BAP) at Goddard.

And that, he claims, is largely the philosophy behind the BAP, a first of a kind, experimental effort to provide technological advice from Goddard to Baltimore City. The project begins its fifth year this month.

Under the program, Goddard volunteers scientific expertise to help the city define its technical problems and develop new programs to remedy them.

"In effect, Goddard acts as a Research and Development agency for the city," says Golden. Goddard is asked to advise Baltimore on the "state of the art" of technological know-how, and to help look for solutions to problems and suggest options. The city then makes decisions.

Golden believes that it is "user pull," one on one relationships and informality that make the program unique and successful. Many government schemes to transfer its agencies' technology to the public have failed, he noted, because they "pushed" technology and became product oriented. The BAP also tries to keep a low, experimental profile to keep expectations "rational."

Golden, with part time assistant Phil Yaffee of Goddard's National Needs

Office, hears the city's problems then canvasses the space center for scientists whose skills best match with the problems in Baltimore." The scientists are asked to take time from their regular work to tutor city officials in comparing technical options to best reach their goals.

The BAP is located in the Mayor's office and has a full time liaison in the Mayor's Coordinator for Physical Development, Bernard Berkowitz.

To date, the BAP has researched 13 city projects. They range from Landsat utilization to a City Hall waterclock. Now Golden expects the program will focus on implementation of programs, such as conservation of energy in Baltimore's industrial park and developing a speedy Fire Department dispatch system.

The program has also put Baltimore "way ahead of other cities in developing an energy program," says Golden. The space agency and the city share the expense of a full-time energy coordinator, Chess Luney, also of the National Needs office who administers the energy conservation programs of the city.

The BAP has been recognized as successful by the National Academy of Public Administration, which has recommended trying limited applications of the program in other cities in Maryland.



NASA Astronaut Frederick Gregory participated as the guest speaker in "Future Years Toward the 21st Century." Mr. Gregory presented a slide show on the Space Shuttle.

Scientists exhibit work at Bowie State College

By Susan Bennett

Space Science never fails to create wonder about what the future will bring.

With this idea in mind, Bowie State College hosted a two day program in March to display some of the many advances already made in leaving Planet Earth.

The College's Career Development Center and Goddard's Educational Programs Office co-sponsored *Future Years Towards the 21st Century*, held March 8 and 9 in the Martin Luther King Auditorium on the campus. Through the efforts of Bowie State College's program coordinator Mary Johnson, dozens of exhibits, displays and speakers from NASA and space-oriented industries were made available to students and visitors.

Goddard provided seven demonstrations by its scientists: Computerized Medical Records Systems (Donna Minor, Technology Utilizations Office), Space Craft Microcomputers (Bill Holmes, Computer Applications Branch), Space Technology and Hypertension (Harry Taylor, Laboratory for Planetary Atmosphere), The Lixiscope (Dr. Lo I. Yin, Astrochemistry Branch), Magnetically Suspended Reaction Wheel (Phil Studer, Electromechanical Branch), Monitoring Earth Resources from Space (Lurie Shima, Educational Programs Office), and The Space Shuttle (Ernest Ott, Sounding Rocket Division). Lloyd Aronson, of the Aerospace Education Services Project, lectured on NASA Aerospace Science.

Goddard also supplied exhibits of three NASA satellites and the film "Universe".



April 3 marked the opening date of the new International Ultraviolet Explorer (IUE) telescope operations center to visiting astronomers, here at Goddard.

Goddard and Headquarters personnel participated in the opening event. NASA Deputy Administrator, Dr. Alan A. Lovelace (center seated) views ultraviolet data on distant stars as relayed to the Earth by the recently orbited IUE. Operator Ruth Ehlers is on his right and Goddard's Dr. Sara R. Heap (Code 681) is seated on his left. Standing (left to right) is: Dr. Robert W. Hobbs (685), Dr. Seigfried Bauer (600), Goddard Deputy Director, Ed Smylie, Dr. Donald K. West (685), Dr. John C. Brandt (680), Center Director, Dr. Robert S. Cooper, and David Williamson, Jr. of NASA Headquarter's Office of Special Projects.

*"Close Encounters of the MAD Kind"***MAD prepares for Spring show**

Sure as the flowers that bloom in the Spring, Goddard's MAD folk—Music and Drama—are back with a blossoming Spring Benefit, "Close Encounters of the MAD Kind."

Friday, May 19, and Saturday, May 20 are the dates. Building 8 auditorium is the place, and 8:00 p.m. is the time. Tickets are \$2.00.

Gayle Jacobs, the show producer, describes this year's show as a variety revue, with drama, dance, solos and the ever-popular mixed chorus.

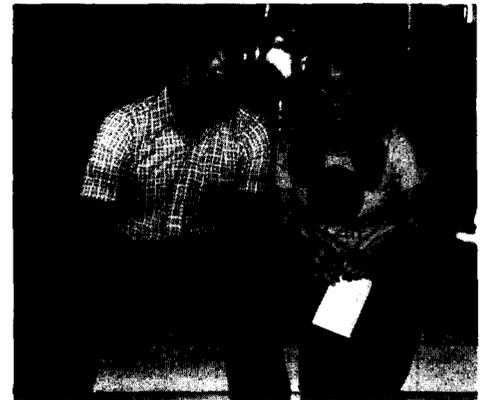
The dramatic parts are MAD's most ambitious yet, according to coordinator Jaylee Mead. From Gene Smith's "Lion in Winter" to the enduringly popular "You Can't Take It With You" directed by Ginny Zanner, there is mature drama

and belly laughs, sophisticated comedy and a bit of slapstick.

Mixed chorus director Randy Barth does it again with "76 Trombones," a medley from "Fantastiks," "Thank God I'm a Country Boy" and "Lullaby of Birdland." "And that ain't the half of it," says Randy.

MAD's newest action is the Dance Workshop run by Alda Simpson, doing four new show numbers.

"The opening number, 'Rhythm of Life,' by the dancers and mixed chorus, is worth the whole admission price by itself," added Gayle.



Don Walton and Rita Kirkham compare notes on MAD's upcoming Spring Benefit.

Archery Club plans open-house for May

Goddard employees who are interested in learning more about the Archery Club will have a chance to tour the target range on two Saturdays, May 6 and 13. The range is behind the tennis courts at the Recreation Center.

On these Saturdays, club members will be conducting their annual range clean-up, providing new targets for the 14 target range and replacing worn out ones. The club offers archery instruction to GSFC government and contract personnel and their families.

For further information call: Fred Kallmeyer X4692, Darrel Williams X4860 or Jack Koslosky X6836.



Rehearsing a chorus scene from "Close Encounters of the MAD Kind." Men (left to right) are: Don Walton, Jerry Simpson, Steve Brodeur, Randy Barth, and Bob McGuire. Women (left to right) are Priscilla Struthers, Fran McGowan, Cindy Peslen, Diana Mead, Rita Kirkham, Dottie McCaleb, Letty Erney, Noran Haley, and Ginny Zanner.

A club where m

The Goddard Art Club is planning to hold some basic classes soon in sketching and painting to acquaint anyone interested in joining the club with their work. Dates will be announced in the near future.

Meanwhile, the club's art work may be seen on the wall of the cafeteria in Building 21. It is a whole new collection that does not include any of the paintings photographed here.

The Art Club has been a part of Goddard since 1968. Its weekly meetings are held on Tuesdays in the Farmhouse (off the Recreation Center road), and after taking up any business on hand, the group enjoys several hours of work in some art form.

Members have worked in a number of media: oil, watercolor, pen and ink, and woodblock, and are now learning the art of printmaking from metal plates. From time to time they have had demonstrations of other art forms such as silver-



Five of the Goddard Art Club's members gather beside a painting of bears about to hibernate for the winter. From left to right (front): are Kay Smith, Mary Hammersley, Alice Lohr and (back) Larry Pack and Jim Bridger. The bears appear courtesy of Larry Pack.

Black History Month celebrates roots, achievements, projections

Goddard conducted several activities in observance of the 1978 Black History Month-February. The theme was: Roots, Achievements, and Projections.

Mr. R. E. Smylie, Center Deputy Director, "kicked off" the ceremony by recognizing contributions made by Blacks at Goddard, and introducing the keynote speaker, Dr. Lewis Gist, Director, Scientific Personnel Improvement of the National Science Foundation.

Dr. Gist spoke on issues generic to Blacks and their roots, and reviewed their achievements in science and technology. He projected thoughts and ideas that would increase the awareness and opportunities for young people in the scientific fields.

An art exhibit was displayed in building 8 auditorium, consisting of "Living Legends in Black," by J. Edward Bailey.

Also included in the exhibits were art works by Goddard's Maceo Leatherwood, Johnny Dunn, and Tony Dyson. Other art included works by local Black artists James A. Fairfax and Henry Marshall.

To close the activity, a Soul Food Buffet Disco Dance was held and was well-attended by families and friends of on-site contractor and GSFC employees.

Dr. Robert S. Cooper, Center Director, and Mr. R. E. Smylie, attended this closing activity.

Goddard mourns . . .

Al Talbott, manager of the Center's building #1 cafeteria for the past 10 years. Talbott passed away on April 19 after a period of sickness.

A number of Goddard employees expressed their condolences to his wife, Christine Talbott.

"I cannot thank them enough for their support at a time like this," said Mrs. Talbott.

A.G.U. honors Bauer

Dr. Siegfried J. Bauer, Goddard's Associate Director of Sciences, has been elected as one of this year's eight new Fellows of the American Geophysical Union. He is the only NASA employee so honored in the last three years.

Federal Trap League

The 1978 Federal Trap League started on Wednesday, April 19, 1978, at the joint Goddard Trap and Skeet Club's and Fort George G. Meade Rod and Gun Club's range.

Any federal agency can enter as many teams as they want. A team is made up of five shooters plus a substitute. All shooters must be a federal employee, contract employee of a federal agency, veteran, or member of the armed services. The league is conducted under ATA rules and regulations except each team shoots together as a team. Handicaps are determined on a team basis.

This year Goddard expects to have three teams entered in the Federal Trap League. All employees are invited to participate and/or use the trap and skeet range on Wednesday, from 5:00 PM to 9:00 PM and on Sunday, from 1:00 PM to 5:00 PM located at Fort George G. Meade.



Students from Beacon Heights Elementary School admire art by Black artists.

Members paint, print and post art

crafting and woodcarving by individuals working in these crafts.

For the past year, members have exhibited their handiwork every six to eight weeks in the cafeteria of Building 21. In the future they hope to expand the exhibits to include the cafeteria of Building 1 as well. They have also held displays in the Credit Union.

This year's president of the Art Club is Mary Hammersley.



Top (right): "Mayan Print" (woodblock) by Ernest Hilsenrath. Top (left): "Spanish Door" (oil) by Kay Smith. Left: "Harbor Scene" (oil) by Jim Bridger.



GODDARD NEWS is published by the Office of Public Affairs at the Goddard Space Flight Center, Mail Code 202, National Aeronautics and Space Administration, Greenbelt, Maryland 20771.

April Editor: Don Witten
 Editorial Assistance by Charles Recknagel, University of Maryland
 Patricia Ratkewicz, Secretary,
 Phone 4955

Frosch speech

Continued from page 1

1. Determining NASA's R&D posture;
2. Deciding the proper balance of basic and applied research;
3. Selecting what problems to solve; and
4. Attaining the proper balance between in-house and contracted effort.

Deciding what basic research to do and the relationship of that effort to future applications is a difficult problem, according to Dr. Frosch.

His theory of why this subject poses special difficulty to NASA is centered around a paradox: NASA is in the business of producing change, but that the really interesting changes are not predictable from past experience.

"The interesting things happen because somebody not only changes the idea of how to solve the problem but questions the basic problem," said Dr. Frosch.

"Thus," he continued, "The R&D problem faced by the applications part of our Agency is that of trying to do work that not only satisfies the perceived mission questions, but will change the nature of the mission, or change the nature of the problem."

About half of the NASA Administrator's talk was devoted to the Agency's possible role in future operational systems.

"This subject has been looming in NASA's future for a number of years, but has not really come to the fore until the past several years," said Dr. Frosch.

The NASA Administrator said that he sees no great difficulty in NASA doing certain operational things with judicious interpretation of the Space Act.

He indicated, however, that there are many questions about whether NASA would operate national systems in the given organization of the U.S. Government.

Sign language interpreter passes on Frosch's speech to deaf

Dr. Frosch's March 30 address to all Goddard employees was just that, a speech to all employees, including the hearing and visually impaired.

This was the first time Dr. Frosch addressed Goddard's personnel in a public forum. It was also the first time a sign language interpreter has been used at Goddard to translate a speaker's words for the deaf in the audience. In addition, Braille invitations to the colloquium were provided to all blind employees of the Center.

The Management Colloquium Committee invited Dr. Frosch to Goddard to discuss "Some NASA Policy Problems."

The members of the committee had long felt that some employees, in particular, the hearing and visually impaired, were not able to participate in forums as they had been traditionally conducted. So they decided to take action and contacted Don Parker, President of Goddard's Advisory Committee of Handicapped Employees for assistance.

As a result, when Dr. Frosch was on stage speaking, a professional sign

language interpreter, Mike Hartman, was also on stage, translating Dr. Frosch's speech for the hearing impaired employees in the audience. Dr. Frosch's oral and 'signed' remarks were carried live on Goddard's closed circuit television.

For the visually impaired employees, a braille announcement advertising the colloquium was prepared using a special computer program.

Mike Hartman (right) interprets NASA Administrator Dr. Robert A. Frosch's (left) speech into sign language for the deaf.



Where is all of NASA's R&D effort with applications satellites leading us?

"We are thinking about trying to put all of this effort together into an evolving global information system," Dr. Frosch stated.

"But if we do this, and it is to become useful, then it will have to be an operating system," he added.

"I think we are going to play two roles in such a situation. One of these is to do the R&D to improve such a system and the other is to take the leadership role of making sure that the valuable research gets turned into an operational system which delivers data in a reasonable way," said Dr. Frosch.

"Although I think it still is an open question, I believe that we do not want to become the operators of such a system. In order to insure that operations begin in a useful way, however, NASA might have to play a major role in the early stages. We may even have to be the initial operator with the intent of early transfer to another operator—either another government agency or a contractor," added the NASA administrator.

"The temptations posed by the continuing, large, and every-day operations might lead us into difficulty in remaining a lively R&D organization," Dr. Frosch concluded.



Dr. Robert A. Frosch (at podium), NASA Administrator, speaks to Goddard personnel on "Some NASA Policy Problems." Behind him is sign language interpreter Mike Hartman.

At the top of the world

Continued from page 1

one of the supporters of his expedition. October is scheduled as the tentative publication date.

Uemura had planned to continue his one-man journey by recrossing the Arctic Ocean towards Greenland to then take on the arduous task of trekking the ice spine of that massive ice plateau. But, because the polar ice is breaking up earlier than expected, he was airlifted to Greenland's northern coast in mid-May to start his new trek.

There, he will have to climb an ice mountain nearly 10,000 feet high before attempting to become the first man to traverse the island's 1,678-mile length. He expects to complete this trek by late August.

Uemura is an accomplished mountain climber and Arctic traveller. He already has trekked about 7,500 miles from Greenland to Alaska solo by dog sled. And he has conquered the highest peaks in five continents, all of them alone with the exception of Mt. Everest.

The sled tracking experiment was requested by the Smithsonian Institution which is interested in comparing sa-

tellite-derived positions with Uemura's sextant readings. Design of the Nimbus-6 tracking system does not provide for pinpoint accuracy in locating the sled. Best resolution in the polar areas is plus or minus five kilometers (three miles).

Uemura also will be tracked down Greenland, using the satellite beacon which he purchased. Minimal costs are being incurred by NASA which is tracking over 130 buoys in oceans around the world.

Goddard's focal point for coordinating all tracking experiments with the Nimbus-6 system is Bill Conant of the Communications and Navigation Systems Applications Branch (952), headed by Charles E. Cote.

Conant not only helps new experimenters get started, but he helps interpret the data while keeping track of experiment progress and results.

Two other Goddard people contributed to the new experiment in its early phases. They are Gene Gilbert and Al Arndt, both of Code 952.

Starting time for the sled trek was critical because the warming rays of the Sun are reaching farther northward every day. Even the Arctic Ocean melts in places.

Despite a major snow storm in New England, GTE Sylvania of Massachusetts delivered special cold region batteries just in time for military air flight to Thule, Greenland. Successful tests were conducted with the battery-powered unit on the sled near Thule.

Right from the start, the world press has followed the story with heavy interest. The Goddard Office of Public Affairs receives daily calls from the media wanting to know "how's it going" with the North Pole explorer.

Nimbus Operations tracks Arctic explorer

Things could get really hectic, trying to track an arctic explorer with the Nimbus 6 satellite at the same time you're getting ready to send up Nimbus-G. Especially when the new satellite is scheduled to be launched on the same day the explorer hopes to finish his trek—August 31.

But Goddard seems to have it under control with the fine touch of Ralph Shapiro who heads up Nimbus Operations.

Both Uemura and Shapiro have one thing in common: neither could accomplish his task without help.

Carl Westman is the NASA Manager of the Nimbus Control Center and John Shawhan is the NASA Manager for the Nimbus Data Processing Facility here at Goddard. Both lead teams of contract support.

Ben Palmer is General Electric's Manager for the team in the Nimbus Control Center. Key among his people is Bill Seechuck who manages the Nimbus-6 data collection and location system which supports 40 users throughout the world. The Japanese explorer is just one of these.

On-line operators who work around the clock in the Control Center include Karl Sorg, Chuck Smith, Walt Allen, Mike Le Fleur, Joe Otero, Bob White, and Art Jackson. Off-line personnel providing system support are Dick Stephenson, Dong Han, and Ed Rethowski. All of these people also do data analysis.

It is the RCA team, headed by Manager Warren McCarn, that keeps the data flowing through the Nimbus Data Processing Facility. Al Milton is his Manager of Computer Operations. The operators are: Gloria Perry, Karen Jacob, Ed Van Sickle, and Mike Fleischer.



Above: Uemura (left) and Gilbert attach beacon to dog-sled in Greenland. Below: Cote (left) meets Uemura.



Pam DeMaseo and Bill Seechuck examine latest Nimbus-6 tracking data on Japanese dog sledge expedition.

New PAO for Goddard

Gene Guerny, a veteran Public Affairs Officer of over 20 years, has been named Goddard's Public Affairs Officer, effective May 1.

He comes to Goddard from the Office of the Secretary of Defense where he was Public Affairs spokesman for Secretary Brown on logistics, nuclear activities, safety and health hazards, procurement, and solar energy.

Prior to DOD, Guerny was in Public Affairs with the Federal Highway Administration, the Federal Energy Administration, and the Cost of Living Council.

A University of Maryland graduate with advanced degrees, Guerny was a Public Information Officer and a Command Pilot in the U.S. Air Force from 1957 to 1973.

As an author, he has written a number of books, several of which are on space subjects. They include: SPUTNIK, AMERICANS IN ORBIT, A WALK IN SPACE, ROCKET AND MISSILE TECHNOLOGY, AMERICANS TO THE MOON, and COSMONAUTS AND THE SOVIET SPACE PROGRAM. Three of his books were Literary Guide selections.

As a pilot, the new GSFC PAO still holds the transcontinental jet transport flight record of three hours and 43 minutes from Los Angeles to New York, set in 1958.

Space Shuttle symposia

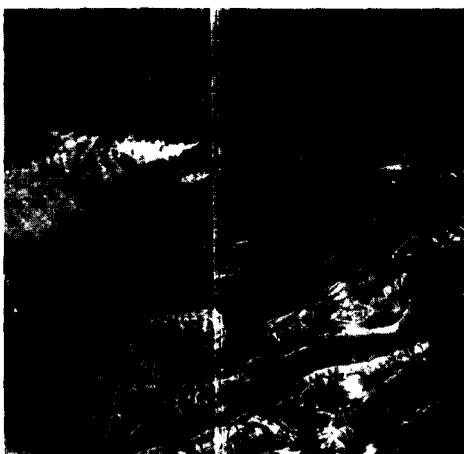
Ed Smylie, Deputy Center Director, addressed two major conferences on the subject: "Are You Ready For the Space Shuttle?" during March and April.

Both conferences were jointly sponsored by the American Institute of Aeronautics and Astronautics and the Technical Marketing Society of America in nearby Virginia and later in Los Angeles.

Included in his illustrated talks was an overview of the observational content of the orbital flight test program of the Shuttle and the Spacelab 1, 2, and 3 flights. He also reviewed how the Shuttle/Spacelab would be used.

Mr. Smylie detailed projections for the follow-on Shuttle/Spacelab and Shuttle-launched, free-flying, observational satellites. He also described the new, large class of observational instruments planned and underway for Shuttle deliver to space. These include the Space Telescope and the Solar Optical Telescope, both made possible by the Shuttle concept.

"I think the planning is beginning to take shape and that we will be ready for the Shuttle decade," said Mr. Smylie.



August 1



August 2

Landsat helps to assess Alaska fire

A Goddard scientist has used the repetitive, synoptic viewing capabilities of the Landsat to help assess wildfire damage to the tundra and permafrost areas of Alaska's North Slope oil exploration areas.

Dorothy Hall of Goddard's Hydropheric Sciences Branch conducted the study in cooperation with colleagues from the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL), Hanover, N.H. Drs. Jerry Brown and Larry Johnson, both of CRREL, conducted ground truth studies of the burned area shortly after the fire occurred.

Because of the increasing activity in the North Slope area, CRREL is vitally interested in ascertaining the environmental response of the region to fire, other natural events, and man-induced disturbances.

The study was concentrated on a fire that grew to major intensity along the Kokolik River of northeast Alaska's Seward Peninsula during the dry summer of 1977.

Presumably started by lightning, the fire ultimately spread to about 11,000 acres after burning for about 18 days. High winds that changed direction drastically, first spread the fire rapidly to the west, but ultimately helped extinguish it by whipping the fire towards natural firebreaks to the east. Landsat images of the fire area superimposed over topographic maps of the Kokolik River area showed that the fire finally was contained almost entirely by streams.

Thanks to the cooperative effort between Goddard and the Cold Regions Research Laboratory, the study revealed invaluable data on the spread of the fire, its ultimate extent, and its short-term effects on the local vegetation and permafrost.

Further studies will be conducted this summer to analyze the regeneration of the burned area along with the effects of the fire on the permafrost. A comparison of Landsat imagery taken during the fire and again this spring and summer will be used for regrowth studies.



Deputy Center Director Ed Smylie addresses Shuttle conference in nearby Virginia on March 17. The conference was jointly sponsored by the American Institute of Aeronautics (AIAA) and the Technical Marketing Society of America.