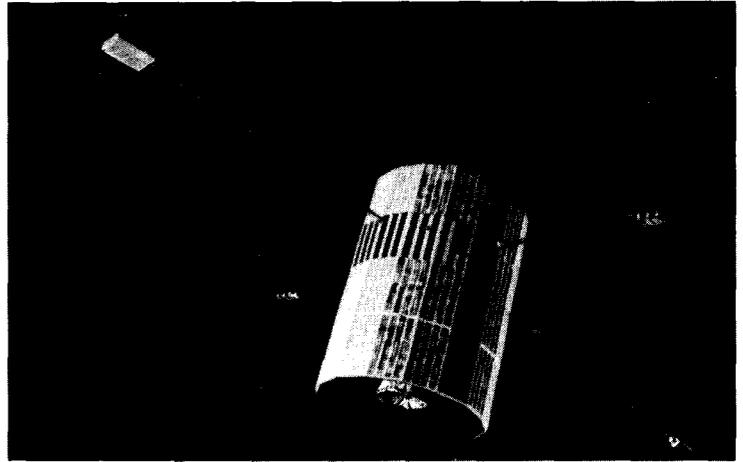


**HAPPY BIRTHDAY ALOUETTE.** John E. Jackson (left), Project Manager and Project Scientist for Alouette-1, and E. Dale Nelsen, ISIS Project Manager, inspect a full-scale model of the Canadian satellite on display in a place of honor in the Building 1 Lobby. Alouette-1 was launched on September 29, 1962 and is still in operation.



**EXPLORER 47**

## Alouette-1 Going Strong After Ten Years in Orbit

Alouette-1, launched in 1962 for Canada's Defence Research Board, passed its tenth birthday on September 29 and is still producing excellent data, reports Project Manager John E. Jackson. The satellite was first of the topside sounders designed to study electron density distribution in the ionosphere. It was the first NASA launch from WTR and the first satellite designed and built by a country other than the U.S. or the USSR.

To celebrate the anniversary of Canada's entry into the space age, the Canadian Communications Research Centre has invited Alouette team members from NASA Headquarters, Goddard and other NASA centers to attend the grand opening of its new spacecraft assembly and test facility in Shirley Bay, Ottawa. About six people from Goddard attended the affair which included a business meeting on September 28 followed by the ceremony, luncheon and tour the next day.

Alouette-1 currently holds the longevity record for all NASA and Russian satellites. The satellite also holds the record for the greatest number of scientific papers (well in excess of 300) based upon data from a single satellite. Incidentally, Alouette-2, launched in 1965, is also doing well, being in fifth place publication-wise after OGO-1, OGO-3 and Explorer 22.

Another interesting aspect of the Alouette/ISIS program is the interest it has created in the international scientific community. The program was planned and conducted as a joint effort between Canada and the United States, but other nations have also played an important role. England has been active since 1962; France, Japan and Norway since 1966; New Zealand, India and Australia since 1971. These nations provide both scientific participation and operational support. This international cooperation has led to the Alouette/ISIS telemetry network, a group of 16 stations outside of the STDN, most of which were created specifically to support the Alouette/ISIS program.

## Latest IMP in Orbit

Goddard's largest and most complex Interplanetary Monitoring Platform (IMP-H) achieved its planned operational orbit more than half-way to the moon after a series of maneuvers that were completed on September 25. The 390-kilogram spacecraft, now named Explorer 47, was launched into a transfer orbit at 9:20 p.m. EDT on September 22 by a three-stage Delta rocket from Cape Kennedy.

On September 25, the apogee kick motor on board the IMP fired, sending the spacecraft into its operational orbit with an apogee or high point of about 236,000 kilometers and a perigee or low point of 202,000 kilometers. The period of the orbit, which allows scientific measurements to be made in and out of earth's magnetosphere, is about 12 and one-third days.

Shortly after the orbit was achieved, IMP Spacecraft Manager William Limberis said, "Everything looks fine. Spacecraft checkouts and experiment turn-on will continue for about three weeks and should be complete by mid October."

Explorer 47, ninth spacecraft in the IMP series, will continue the study of interplanetary radiation, solar wind and energetic particle emissions and magnetic fields in earth's environment. The primary mission of the automated space physics laboratory is to provide a more detailed understanding of the dynamics of the regions discovered and broadly surveyed by the previous seven earth-orbiting IMPs and the lunar IMP (Explorer 35) by obtaining scientific data during the decreasing period of solar activity.

Scientific results from the IMP program to date have greatly expanded man's knowledge of the turbulent space environment and defined the nature and extent of the magnetosphere. IMP spacecraft have provided and will continue to provide warnings of possible solar flare radiation events to astronauts for the Apollo and Skylab manned exploration programs.

Explorer 47 carries 13 scientific experiments to obtain measurements of energetic particles, plasmas, and magnetic and electric fields. Experiments are provided by universities throughout the nation, industry, the National Oceanic and Atmospheric Administration, the Atomic Energy Commission and Goddard. The four Goddard experiments are Dr. Frank B. McDonald's Cosmic Ray Experiment, Dr. Thomas L. Cline's Solar Electrons Experiment, Dr. Norman F. Ness's Magnetic Fields Experiment, and Dr. Keith W. Ogilvie's Ion Composition Experiment.

Three engineering tests to be conducted by the IMP are a Thermal Coatings Engineering Test to measure several thermal coatings for change in solar absorptency due to the space environment, a Data Systems Engineering Test to qualify a high data-rate capacity data

(See Page 2)

**Fire prevention is everybody's business.**

—See special section Pages 5-8.

**EXPLORER 47 . . . From Page 1**

multiplex unit and a data processing unit for use as the central data handling equipment on future IMP missions, and a Solar Cell Engineering Test to determine the operating efficiency of integral glass solar cells.

The twofold scientific objective of the IMP mission is: To perform detailed and near continuous studies of the interplanetary environment for orbital periods comparable to several rotations of active solar regions, and to study particle and field interactions in the distant magnetotail including cross sectional mapping of the tail and sheet. In addition, the spacecraft will form the earth reference point for interplanetary survey baselines with the Pioneer 10 and Pioneer G missions to Jupiter and Mariner missions to Venus and Mercury in 1973-74.

Detailed mapping of earth's magnetic field on the night-side by previous IMPs revealed the development of a significant and permanent magnetic tail that does not corotate with earth. This tail appears to play a dominant role in various terrestrial phenomena, storing energy from the solar wind and releasing it suddenly to cause auroral disturbances. From its present orbit, Explorer 47 will be able for the first time to measure both the region of the geomagnetic tailsheet and its relationship to the solar wind.

A series of IMPs has been launched since November 1963 to study and monitor the plasmas, magnetic fields and energetic particle populations of interplanetary space and have provided the first accurate measurements of the interplanetary magnetic field, the magnetosphere boundary, and the shockwave associated with the interaction of the geomagnetic field and solar wind. The detection of the extended geomagnetic tail-plasma sheet represents the most important result with respect to earth's magnetic field.

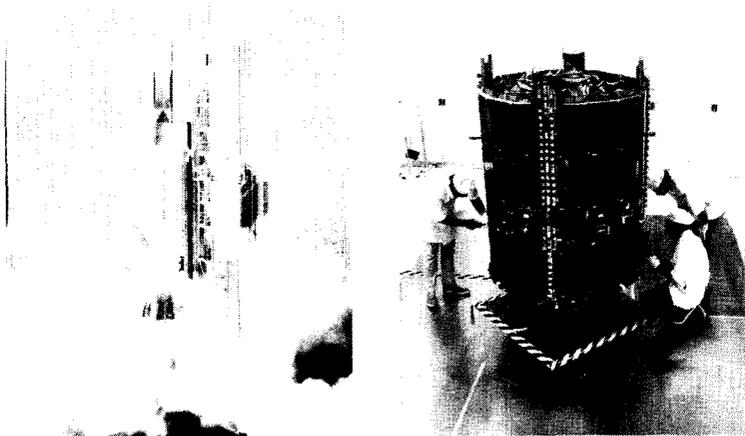
Included in the IMP program are two Anchored Interplanetary Monitoring Platform spacecraft, AIMP-D (Explorer 33) and AIMP-E (Explorer 35), launched in 1966 and 1967 respectively. Explorer 35 was placed into a lunar orbit. It still orbits the Moon, transmitting very useable data for correlation with Apollo Lunar Surface Experiment Packages on the lunar surface. Explorer 33 went into an orbit around both earth and the moon, and contributed a wealth of data on cislunar space. The two made significant contributions to scientific knowledge and understanding of the near lunar and interplanetary environment, including the finding that the moon has a negligible large scale magnetic field and that a solar wind cavity void exists behind the moon.

One more mission is planned for this series, IMP-J. Plans have also been announced for a cooperative mission with the European Space Research Organization involving the launch of two earth-orbiting spacecraft (mother/daughter) and a heliocentric spacecraft in the late 1970's. The mother/daughter spacecraft will make repeated passes through the boundaries of earth's magnetic field to measure fine-scale and time variations while the interplanetary heliocentric spacecraft records simultaneous variations of the incoming solar wind.

**Goddard IMP Project Officials**

Paul Butler  
 Jeremiah Madden  
 Dr. Norman Ness  
 Dr. James Trainor  
 William Limberis  
 Martin Davis  
 Stephen Paddack  
 Leonard Ripley  
 Ernest Doutrich  
 Ton Eng  
 Theodore Goldsmith  
 William Schindler  
 Thomas Moore  
 John Quill  
 Robert Coady  
 Daniel Muhonen  
 Gerald Repass  
 John Kaskaske

Project Manager  
 Assistant Project Manager  
 Project Scientist  
 Assistant Project Scientist  
 Spacecraft Manager  
 Experiment Manager  
 Projects Operations Director  
 T&E Test Manager  
 Quality Assurance  
 Mechanical Systems  
 Electrical Systems  
 Launch Vehicle Manager  
 Mission Operations System Manager  
 Network Support Manager  
 Flight Director  
 Mission Analyst  
 Attitude Computations Engineer  
 Orbital Computations Engineer



A THREE-STAGE DELTA ROCKET

AT CAPE KENNEDY, EMR technicians prepare the IMP for spin tests.



IMP COUNTDOWN UNDERWAY. Jerry Madden, Assistant Project Manager (right) with IMP Spacecraft Manager, William Limberis and Glen Linsey, Program Manager for EMR-Aerospace Sciences, IMP Integration contractor.



IMP PRE-LAUNCH PRESS BRIEFING participants include (from left) Mr. John Neilon, Director, Unmanned Launch Operations, KSC; Dr. L. D. Kavanagh, Jr., Program Scientist; Jerry Madden, Assistant Project Manager; Raymond Miller, NASA Deputy Program Manager, Explores and Sounding Rockets; and Charles Hollinshead, Public Information Officer, KSC. Participating, but not shown, is William Schindler, Goddard Delta Project Manager.



MARY BUBB, wire service reporter at Cape Kennedy traditionally wears a hat symbolizing satellites launched from the Cape. In this case IMP is quite obvious.

## Last Apollo Set for Night Launch



**END OF THE LINE.** An arrow indicates the Taurus-Littrow region, destination for man's last scheduled trip to the Moon. The Apollo 17 lunar module is expected to reach the surface at 2:55 p.m. EST on December 11.

What may be man's last journey to the Moon in this century is scheduled to begin with a night launch, the first in the manned space program, on December 6 at 9:53 p.m. EST.

The final Apollo mission will be the longest in the series. The trip will last 12 days, 16 hours, and 31 minutes.

Following the return of Apollo 17, the United States, like the Soviet Union, will restrict its manned space exploration to orbits around the Earth.

One of the last two men to visit the Moon aboard an Apollo spacecraft will be a civilian scientist — the first to make the journey.

Dr. Harrison H. "Jack" Schmitt, a specialist in lunar geology, will pilot the lunar module. Dr. Schmitt received 53 weeks of flight training at Williams Air Force Base, Arizona.

Before joining NASA as a scientist-astronaut in 1965, Dr. Schmitt worked for the U.S. Geological Survey. The 37-year-old bachelor instructed earlier Apollo crews in lunar geology, surface navigation, and feature recognition on the Moon.

Apollo 17 will be commanded by Navy Capt. Eugene Cernan who piloted the lunar module in its initial flight test during Apollo 10. Aboard the command module orbiting the Moon will be Navy Commander Ronald E. Evans.

Cernan and Schmitt will spend three days exploring the Moon. Using the lunar roving vehicle for seven-hour trips on December 11, 12, and 13, the team will investigate the Taurus-Littrow region.

The valley in which the lunar module will land is covered with a dark material very different in appearance from most of the Moon's surface. Scientists believe it may be composed of volcanic ash.

Surrounding the valley are mountainous highlands. The Apollo team will collect samples from the steep sides of the mountains.

Geologist Schmitt explained at a recent interview that the last Apollo mission is expected to fill in gaps in our knowledge of the recent history of the Moon.

While the first five expeditions collected materials dating from 3 to 4.1 billion years ago, near the time of the Moon's creation 4.5 billion years ago, photographic and chemical evidence gathered during earlier missions indicate that the Taurus-Littrow region may contain rocks less than two billion years old.

By studying the untouched geological records on the Moon, scientists also learn about the development of Earth.

"The first billion years of Earth's history have been eroded away," Dr. Schmitt said, so man must now depend on his knowledge of the Moon to reconstruct the lost history of Earth.

While Schmitt and Cernan explore below, Evans will conduct a series of experiments aboard the command module overhead. Among new investigations to be performed from orbit is a probe of the Moon's surface to a depth of one mile.

The probe is capable of pinpointing sub-surface water, though it is believed that no quantity of water will be found on the Moon.

Splashdown for Apollo 17 will be in the Pacific Ocean south of the Samoa Islands on December 19 at 2:24 p.m. EST.

## Nuclear Reactions Discovered on Sun

An instrument carried by NASA's Orbiting Solar Observatory 7 (OSO-7) detected the first direct evidence of nuclear reactions on the Sun's surface during flare events last month, according to a group of physicists from the University of New Hampshire headed by Professor Edward L. Chupp.

The evidence came from two gamma-ray emission lines — distinctive radiation indicators of nuclear processes — that the satellite recorded during the solar flares on August 4 and 7. This is the first observation of these radiations from the Sun, which the satellite has looked for since its launch on Sept. 29, 1971.

The significance of the new finding, reported in detail by Dr. Chupp today at a Symposium on High Energy Phenomena on the Sun held at Goddard on September 28 through 30, is that physicists now have proof that nuclear reactions do occur in large solar flares. Flares are explosive events that raise the temperature of a small part of the Sun's surface to 30 million degrees Kelvin (50 million degrees Fahrenheit) for a few minutes at a time. Understanding how the nuclear reactions are produced on the Sun may contribute to the long-sought goal of generating pollution-free electrical power from sustained thermo-nuclear reactions in the laboratory.

Gamma rays are a form of light, similar to the photons of visible light, but vastly more energetic, with energies ranging on upwards from 1,000,000 times the energy of visible light photons.

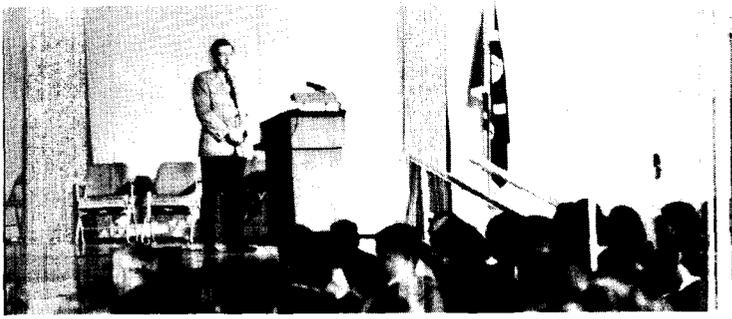
Gamma rays from the Sun and other objects in space cannot be received at Earth's surface because they are absorbed in the atmosphere above. Therefore the hunt for these radiations has to be carried out with instruments launched on satellites and high altitude balloons.

The instrument built by Dr. Chupp at the University of New Hampshire and flown on OSO-7 weighed 33-kilograms (74 pounds). During the August 4 and 7 solar flares, it detected gamma ray line radiation at two characteristic energies. At 511 keV (511 thousand electron volts), it recorded radiation from the mutual annihilation of electrons and positrons. The positrons are the anti-particles of the electrons and must have been produced in the solar flares because they could not exist in the ordinary matter of the solar gases. Dr. Chupp's explanation is that nuclear reactions in the flares created unstable radioactive isotopes of carbon, nitrogen and oxygen, which promptly decayed to stable forms, releasing the positrons as a by-product. At 2.2 Mev (2.2 million electron volts), the OSO-7 instrument detected radiation from heavy hydrogen (deuterium) produced by nuclear reactions in the flares.

The three-day symposium at the Goddard Center brought together scientists from the U.S., Australia, Great Britain, France, and Japan to hear 45 speakers present the most recent findings on high-energy solar astrophysics.



**DR. REUVEN RAMATY** (right), Chairman of the organizing committee for the recent Symposium on High Energy Phenomena on the Sun, chats with (from left) T. Takakura, Dr. Robert Stone, Head of Goddard's Radio Astronomy Branch; and Paul Wild of the Australian Commonwealth Scientific and Industrial Research Organization. Mr. Wild gave the Goddard Scientific Colloquium lecture on "Solar Radio Astronomy" as part of the symposium.



DR. JOHN F. CLARK addresses the ERTS Symposium on September 29.

## ERTS Symposium September 29, 1972

Preliminary findings from analyses of observations by the first Earth Resources Technology Satellite (ERTS-1) were the topic of a day-long symposium held in the Building 8 Auditorium on September 29.

The meeting got underway with welcoming addresses by Goddard Director Dr. John F. Clark and Charles W. Mathews, NASA Associate Administrator for Applications. Discussions of the performance of the ERTS spacecraft, ground systems, and sensors were given by Wilfred Scull, ERTS Project Manager; Dr. William Nordberg, ERTS Project Scientist; Luis Gonzales, Ground Systems Manager; and Dr. Stanley Freden of the Laboratory for Meteorology and Earth Sciences.

"First look" analyses of early ERTS investigations were covered in presentations by Dr. Nicholas Short, of Goddard's Laboratory for Meteorology and Earth Science; Dr. Paul Lowman, of Goddard's Planetology Branch; and speakers from the University of California, Berkeley; LARS/Purdue University; the Department of Energy, Mines and Resources, Ottawa, Canada; the Canadian Forest Service; the U.S. Geological Survey; Dartmouth College; the U.S. Army Corps of Engineers; Long Island University, New York; the National Oceanic and Atmospheric Administration; the Department of the Interior; the U.S. Army Cold Regions Research and Engineering Laboratory; the University of Delaware; the University of Michigan; American University; General Electric; and the Natural Resources Management Corp.

## SCIENTIFIC COLLOQUIA

- Oct. 13 — Tetsuya T. Fujita  
Department of Geophysical Sciences  
University of Chicago  
Chicago, Illinois  
TORNADOES
- Oct. 20 — Robert W. Noyes  
Smithsonian Astrophysical Observatory  
Cambridge, Massachusetts  
ULTRAVIOLET OBSERVATIONS OF THE SUN
- Oct. 27 — Harold Masursky  
Center of Astrogeology  
U. S. Geological Survey  
Flagstaff, Arizona  
MARINER 9 EXPLORATION OF MARS
- Nov. 3 — Robert H. Dicke  
Department of Physics  
Princeton University  
Princeton, New Jersey  
GENERAL RELATIVITY AND THE SOLAR OBLATENESS
- Nov. 10 — Gordon H. Pettengill  
Haystack Observatory and  
Department of Earth and Planetary Sciences  
Massachusetts Institute of Technology  
Cambridge, Massachusetts  
PLANETARY RADAR ASTRONOMY
- Nov. 17 — William Nordberg  
Chief, Laboratory for Meteorology  
and Earth Sciences  
Goddard Space Flight Center  
RESULTS FROM THE EARTH RESOURCES TECHNOLOGY  
SATELLITE

## GODDARD AROUND THE WORLD



CARNARVON, AUSTRALIA. The smiling S-Band antenna welcomed 2,500 visitors to the station during its Open Day on September 1. The event, which lasted eight hours, was held in support of the town of Carnarvon's annual Tropical Festival. Station Director Ray P. Jacomb reports that the "antenna modification was effected using colored paper and sticky tape." Below is part of the mile-long queue of vehicles waiting to enter the station.



## Key Personnel Changes

Dr. Leslie H. Meredith has been appointed Goddard's new Assistant Director. Formerly Deputy Director of Space and Earth Sciences, Dr. Meredith now serves in the Office of the Director as principal advisor in areas relative to the planning and development of the Center scientific, applications and technological programs.

John T. Mengel, formerly Director of Mission and Data Operations, has been appointed Senior Tracking and Data Scientist in the Office of the Director. He serves as the Center's principal advisor regarding policy and planning of the Goddard spacecraft tracking, communication and data acquisition program development activities.

Albert G. Ferris has replaced Mr. Mengel as Director of Mission and Data Operations. He was formerly M&DO Associate Director for Mission Operations.



INDIVIDUAL WINNERS of ZERO IN on Safety awards are shown with Dr. Vaccaro (center). From left are Robert Stewart, Albert Fitch, John Boeckel, Eula Paseur, George Karras, Stanley Patro, William Mitchell and George Griffin.

## ZERO IN on Safety Awards

The first Goddard awards in the new government-wide ZERO IN on Safety program were presented by Dr. Michael J. Vaccaro, Associate Director for Management, during the Health and Safety Council meeting on September 21 in the Management Conference Center.

The aim of the Goddard ZERO IN on Safety Program is to reduce the number of injuries and other losses to Goddard personnel and property by identifying and correcting the causes of the Center's greatest accidental losses. The program is designed to pinpoint problem areas and develop special efforts to control them.

The ZERO IN awards were presented in three categories — directorate, division and quarterly awards to an individual in each directorate who have made the most significant safety contributions. Directorate and division awards were based on the number of injuries per 100 employees and the number of housekeeping discrepancies per 100 personnel assigned. The two items are given equal weighing by using a factor to correct for the relatively larger number of housekeeping discrepancies vs. injuries.

Top Directorate was the Systems Reliability Directorate. Best divisions in each directorate were the Manpower Utilization Division, the Test and Evaluation Division, AE Project, the Computation Division, the Laboratory for Extraterrestrial Physics, the Mechanical Division, and the NASA Communications Division.

Individual awards for the first quarter in 1972 went to: **Robert H. Stewart**, of the Plant Operations and Maintenance Division, for his work in increasing the safety awareness of shop personnel; **Albert E. Fitch**, of the Test and Evaluation Division, for his many useful contributions to T&E's SAFE program; **Mrs. Eula "Sunny" Paseur**, of the Mission and Data Operations Directorate, in part for her concentrated efforts in cleaning up the Building 12 Penthouse area; and **George J. Karras**, Assistant Director of the NTF, in part for the development and implementation of the NTF Loss Prevention Training Program.

Second quarter awards went to: **Stanley Patro**, of the Experimental Fabrication and Engineering Division, for his work in correcting a problem with bacteria growth in machine tool coolant which had caused dermatitis to machine operators; **George F. Griffin**, of T&E, for his many suggestions to improve safety conditions in the Test and Evaluation area; **William F. Mitchell**, of the Network Facilities and Services Division, for developing a formal program for fire and accident prevention; and **John H. Boeckel**, Chief of the Mechanical Division, for his development and implementation of an outstanding division and building accident prevention program.



## Fire Prevention Week, and Every Week, Fire Safety Is Everybody's Business

The week of October 8-14 has been declared National Fire Prevention Week by United States President Richard Nixon. The purpose of the week is to help each of us "become aware — not for a single time, but for all the year — of what he or she can do to prevent fires."

At Goddard, the week is being marked by special events that will show how all Goddard directorates, special groups and local fire departments have all had a hand in developing a Center program to help make us all fire safe. Events include demonstrations of fire equipment by neighboring fire departments and rescue squads, and a film presentation on "How to Protect Yourself from Fire in a Multi-Story Building" by Kenneth L. Stanton, Senior Instructor in the University of Maryland's Fire Service Extension Department. Everyone is urged to attend.

**How can we help?** The first rule in preventing fires is to use caution and common sense. The four biggest fire hazards at Goddard — careless use of smoking materials, improperly installed wiring, poor housekeeping, and misuse of flammable liquids—should be easily prevented. The big problems are:

- Wastebasket fires — Would you believe some employees toss lighted cigarettes into trash-filled baskets with predictable results. Cigarettes should be crushed out in ash trays, and ash trays should never be dumped in trash.
- Do-it-yourself wiring — All wiring should be properly installed and most inspected. This problem includes improperly used extension cords and too many appliances on one electrical outlet as well as faulty wiring in laboratory equipment.
- Poor housekeeping — Trash and boxes left in the wrong places can not only lead to fires, they can block exit routes during emergencies. A neat office or lab is not only more pleasant to work in, it is safer.
- Flammable liquids — Many flammable liquids not only pose an obvious fire hazard, their fumes are often poisonous.

**Dial "O" in emergencies** is the first step in reporting fires. The "break-the-glass" type fire alarms do not tell the exact nature of the emergency and should not be used unless immediate evacuation is necessary. When you dial "O", the Goddard Health and Safety Engineering Office learns immediately the nature of the emergency and where it is. Then help can be dispatched fast.

When you notice a fire or safety hazard report it to the Facility Operation Manager for the area in which it occurs. FOM names, areas and phone extensions are listed in the back of the Goddard Telephone Directory. An up-to-date list appears on page 8 of this paper.

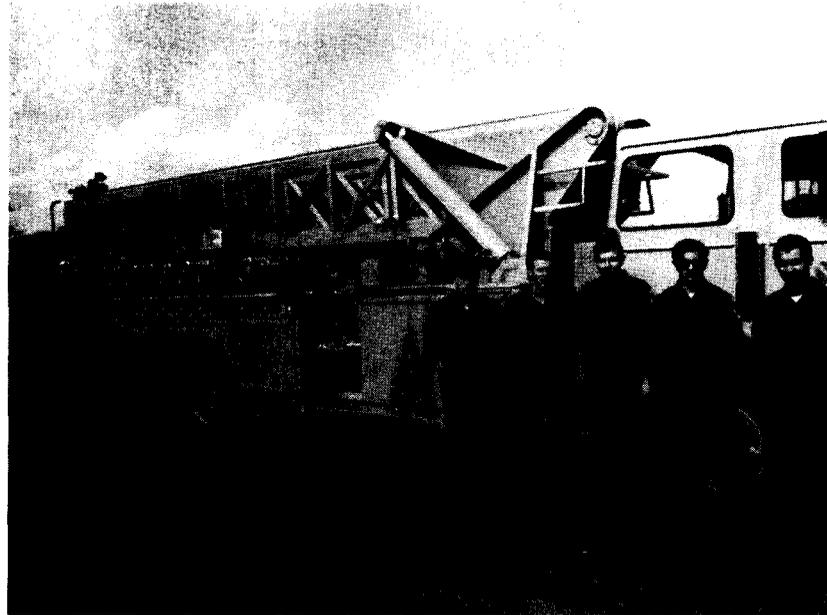
(See Page 6)

DR. MICHAEL J. VACCARO (fourth from left) presents division and directorate ZERO IN on Safety awards. Men accepting the division awards are (from left) John New, Chief of the Test and Evaluation Division; Raymond Sumser, Chief of the Manpower Utilization Division; David Walden, accepting for the AE Project; Donald Schmitting, Chief of the NASA Communications Division; John Boeckel, Chief of the Mechanical Division; George Abid, accepting for the Laboratory for Extraterrestrial Physics; and Chesley Looney, Chief of the Computation Division. Not shown is Merland Moseson who accepted the award for the Systems Reliability Directorate.

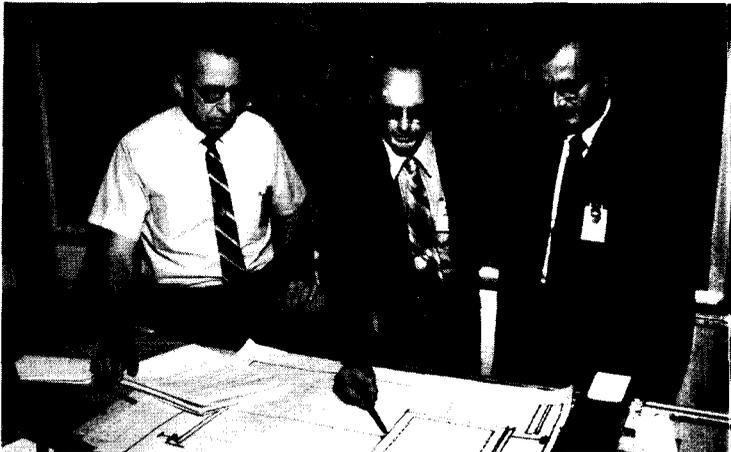
# Fire Safety Is. . .



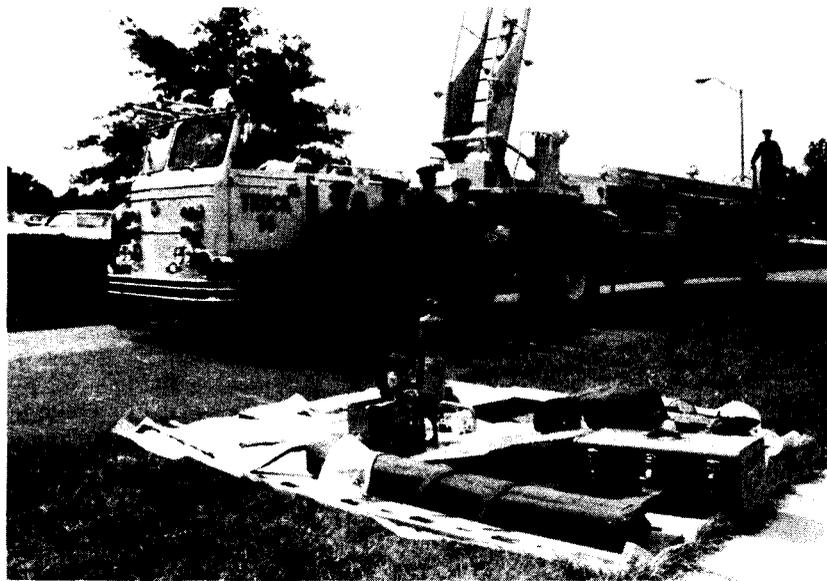
**EDUCATION.** University of Maryland Fire Service Extension instructors have provided training in the proper use of fire extinguishers at Goddard. Over 1200 Center employees have received this training. Have you?



**DISPLAYS** of responding fire equipment used by local fire departments (top, below) at Goddard last year. They are being repeated during this year's Fire Prevention Week.



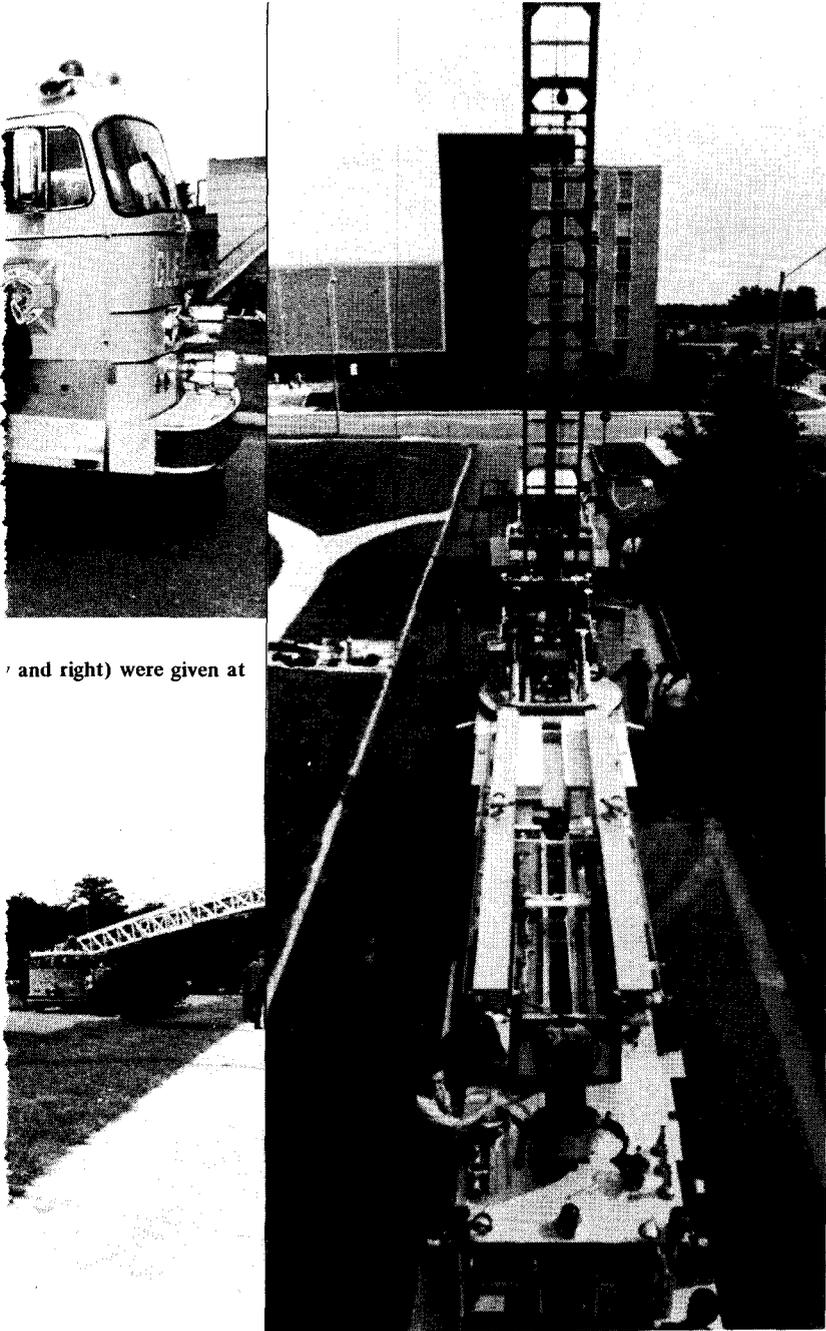
**ENGINEERING.** John C. New (right), Chief of the Test and Evaluation Division, Matthew A. Opeka (left), T&E Facility Operations Manager, discuss the early stage or drawing board phase of equipment installation with George Morgan of the Health and Safety Engineering Office.



**ENFORCEMENT.** James W. Ryland and Dr. Henry E. Frankel, Building 22 Facility Operations Manager, conduct an area inspection to discover unsafe conditions and effect corrective action.



**FIRE PREVENTION** includes using the right materials. Burning tests have been conducted on various common plastics to show burning characteristics.



MINI PUMPERS FOR TRACKING STATIONS. With support from the Glen Dale Fire Department, a high pressure skid mount pumping unit is put through its acceptance test before being shipped overseas.



GODDARD COMMITTEE FOR FIRE PREVENTION WEEK, members are (from left, seated) Adolf Lekebush, Robert J. McCaffery, James Fava, Ben Pagac, and Malcolm J. Tarlton. Standing are Deputy Chief Dutton of the Greenbelt Fire Department, H. F. McCord, Darrin Gridley, Sergeant Poole of the Prince George's County Fire Department, and George Morgan.

## Fire Prevention Week 1972

By the President of the United States of America

### A Proclamation

One American home catches fire every 56 seconds. The toll in human sorrow, in shattered dreams and plans, in pain and fear overshadow last year's three billion dollars in property loss.

Approximately 12,000 persons lost their lives last year because of fires. Destructive fire knows no prejudices. Its victims come from every neighborhood, from every income bracket, from every race and ethnic group. Yet the burden does not fall evenly because its principal victims are the poor, the very young and the very old.

We have long needed a national focus on fire prevention; and now that focus is being provided by the National Commission on Fire Prevention and Control which I appointed a year ago to study and recommend ways to reduce fire disasters. I endorse the preliminary findings of this Commission which emphasize the need for improved public education, for early detection and alarm, and for better protective equipment for firefighters.

The Commission on Fire Prevention and Control has made a good beginning, but it cannot do our work for us. Only people can prevent fires. We must become constantly alert to the threat of fires to ourselves, our children, and our homes. Fire is almost always the result of human carelessness. Each one of us must become aware — not for a single time, but for all the year — of what he or she can do to prevent fires.

NOW, THEREFORE, I, RICHARD NIXON, President of the United States of America, do hereby designate the week beginning October 8, 1972, as Fire Prevention Week. I urge every citizen to make this the first week in an entire year of fire awareness and of the ways in which he can eliminate fire hazards and prevent fires.

Our firefighters are selfless public servants. Yet they are too often subjected to physical attack and abuse while on their missions. I call upon all citizens to participate in the fire protection activities of the various governments and of the National Fire Prevention Association. In addition, I urge every citizen to visit his local fire company and to find out what he can do to help our firemen in their difficult but essential work.

I also encourage all Federal agencies to participate in Fire Prevention Week, in cooperation with the Federal Fire Council, by conducting effective fire prevention programs, including fire exit drills and other means of training employees.



IN EMERGENCY, dial "0" says Goddard Queen Linda Vietch.



AND THE WORK GOES ON. Men install a sprinkler system in an operating high value area. Over 50% of the Center is now protected in this way.

CLIP AND SAVE

## Facility Operation Managers

Building	Name	Ext.
1 Cafeteria	Thomas J. Karras	6335
1	Dr. Theodore G. Northrop	4441
2	Dr. Frank B. McDonald	4801
3	Darrin H. Gridley	4655
4	Milton Schach	5115
5	Maurice Levinsohn	5051
6	George Kambouris	4573
7, 10, & 15	Matthew A. Opeka	4747
8	Robert J. McCaffery	2369
Main Gatehouse	Captain of Guards	4661
11	John H. Boeckel	5118
12	Walter La Fleur	4958
14	Darrin H. Gridley	4655
16	Raymond J. Sumser	5025
16A	Robert C. Cowan	4011
17	Stuart Snyder	6100
18	Joseph B. Bourne	5220
19	E. C. Humphrey	5182
20	Dr. Isidore Adler	5759
21	Nelson W. Spencer	5001
21 Library	John J. Boggess	6245
21 Cafeteria	Thomas J. Karras	6335
22	Dr. Henry E. Frankel	2531
23	Frank A. Keipert	6124
Power Plant	Malcolm J. Tarlton	4640
NTTF	George J. Karras	5216
26	James J. Fava	2354
Antenna Test Range	Julius A. Kaiser	4976
Construction Field Office	Benedict B. Pagac	2233
Glen Dale Bldgs. I & II	Karl R. Medrow	4813
Glen Dale Bldg. III	Raymond V. Capo	6830
Ground Plane Test Facility	Dr. Robert S. Stone	4631
Magnetic Test Site	Leland C. Parsons	6305
Optical Research Facility	Sol H. Genatt	5300
Propagation Test Facility	I. C. Prillaman	4298
Propulsion Research Facility	Altert A. Yetman	5021
Aircraft & Facilities		
Martin Airport	Francis I. Glynn	4586
Old WWV Bldg.	Jacques D. Knox	5186
GSFC Road Net, Unoccupied		
Grounds	Jacques D. Knox	5186
GSFC Utilities, Facilities		
Areas	Malcolm J. Tarlton	4640
Tracking Stations	Station Directors	



GODDARD recently hosted a National Fire Protection Association Committee meeting. This group is charged with developing standard # 75, Electrical Computer Systems.

## Geoffrey Lowe: Co-op Student



**GEOFFREY LOWE**, a Co-op student from the Rochester Institute of Technology, spent his first quarter at Goddard working in the Test and Evaluation Division.

Geoffrey Lowe, a mechanical engineering student at the Rochester Institute of Technology (RIT) in New York, has been a member of the Goddard Cooperative Work-Study Program since last June. Although he is deaf, Geoff has done a top-notch job during his first quarter in T&E's Structural Dynamics Branch.

On the Rochester campus, Geoff is enrolled in the National Technical Institute for the Deaf (NTID), an organization established by Congress in 1965 as the nation's first post secondary technical program for the deaf. Designed to give deaf students the technical training needed to find meaningful employment, NTID is a "first effort to educate large numbers of deaf students within a college campus planned primarily for hearing students." Qualified NTID students take standard courses in the RIT programs of their choice.

Geoff is the first RIT student at Goddard and also Goddard's first deaf Co-op.

Gladys Chasnoff, Goddard's Co-op Coordinator, says that "Geoffrey was recommended by the RIT placement coordinator as a fully qualified Co-op. He received no special concessions in his selection because of his handicap, and after we met him, we knew he needed no extra considerations."

On the job at Goddard, Geoff's four assignments have been a simple OSO-1 vibration analysis problem, VISSR temperature preparations and calculations and two tasks involving analysis of the structural characteristics of ATS F&G antenna rib models. All the assignments used Goddard's NASTRAN structural analysis computer program.

Geoff reports that his "introduction and acquaintance with the NASTRAN program has served as a great experience to give me a fuller understanding of how theoretical research is used to evaluate large and complex engineering problems."

Geoff, a RIT senior from Hinsdale, Illinois, returned to classes in September but will be back at Goddard this December. After graduation in June 1973, he hopes to pursue a career in engineering, perhaps in the rapidly expanding aeronautical field of vertical and horizontal takeoffs.



**SAMUEL W. KELLER** (left), Director of Administration and Management, discusses technical opportunities for the deaf with Co-op student Geoffrey Lowe and Goddard Co-op Coordinator Gladys Chasnoff.

## Goddard Helped PG County Top Blood Quota

Goddard Civil Service and contractor employees who took part in the Red Cross Blood Program have helped Prince George's County pass its blood quota for the past fiscal year says Mrs. Robert P. Beaver, Chairman of the County Blood Program.

"Because you helped," she wrote in a letter to Gertrude Law, Goddard Bloodmobile Coordinator, "Prince George's County Chapter recruited 13,674 units of blood and surpassed the annual quota of 13,600 with 100.54 percent. There are 35 Red Cross chapters participating in the Washington Regional Blood Program. I am happy to report, Prince George's County Chapter is fifth in the region and third in the metropolitan area. For 1972-1973 our quota has been raised to 14,600 units of blood. This is quite a challenge."

The next Bloodmobile will be at Goddard on November 1 in the Building 8 Auditorium. We need 175 more pints to meet our quota of 900 pints for calendar year 1972. Since about 10% of donated blood may be rejected by the laboratory that checks each sample for purity, we need nearly 200 people to give in November to insure a free supply of blood for Goddard and contract employees and their immediate families.

For information and to register, call Gertrude Law on ext. 4757.



**NATURE STUDY.** Everyday life in a hornet's nest was an attraction in Building 8 this summer. The insects had built their spiral nest against the outside glass of the back stairway between the third and fourth floors, and anyone willing to crouch down for a look could watch their comings and goings in safety.

# Guys and Dolls

## MAD's First Dinner Theatre



MAD PLAYERS in the up-coming production of "Guys and Dolls" are (from left) Lloyd Carpenter and Carolee Wende, who will play Nathan Detroit and Adelaide; Lillian Keegan and Lou Walter, who will play Sara Brown and Sky Masterson; Charles McCarty and Catherine Lacey, who will play Arvide Abernathy and General Cartwright; and Doris Clemons and Vince Arillo, the Cuban Dancers. Not shown are Crapshooters Chuck Vest, Chuck Wende, John Schnieder, Gene Smith and Jack Libby.

Tickets are now available for the MAD Dinner Theatre production of "Guys and Dolls," to be presented at the Goddard Recreation Center on November 3, 4, 10 and 11. The musical stars Lou Walter as Sky Masterson, Lillian Keegan as Sarah Brown, Lloyd Carpenter as Nathan Detroit, and Carolee Wende as Adelaide. Supporting roles are played by Jack Libby, Chuck Vest, George Pieper, Catherine Lacey, Gene Smith, Chuck Wende, John Schneider, Charles W. McCarty, Sandy Morey, the Hot Box Girls, the Crapshooters, and a cast of over 50.

Prices are \$6.00 per person, or \$5.00 per person in groups of ten or more on the same evening. This includes buffet dinner provided by Szabo Foods (Warren Funderburk, General Manager) consisting of Roast Beef au jus, Ham Aloha, Fried Chicken, Rice Pilaf, Roast Potatoes, Green Beans Holiday, Buttered Corn, Salads, Relishes, Dessert, Beverages; beer; setups (BYOL), and the show.

Tickets and table reservations (tables seat 4 or 10) are available from Cheryl LaDow, ext. 4902, Building 11, Room S216, or Laurrie Weimer, ext. 4443, Building 1, Room 105. Tickets may also be obtained from Sandy Morey, Building 8, Room 140, or any member of the cast.



HOT BOX GIRLS and other players are (from left) June Pennoyer, waitress Linda Blauth, Sandy Sadowsky, Janet Willingham, Sandy Cascio, Jaylee Mead, who will play Agatha; Arlene Dennis, Linda Smith, and Linda Vietch. Not shown is Sandy Morey who will play Mimi.

# Day Care Center Planned

## Help Wanted



DAY CARE CLUB OFFICERS are (from left) treasurer Marybeth Budd, president Ann Merwarth, vice president Barbara Lowrey, and secretary Grettchen Burton.

Have you ever had the frustrating experience of not being able to find good day care arrangements for your child? Well, you are not alone in this experience; many Goddard employees who have had this problem have formed a Day Care Club. Their first order of business is to establish a day care facility on-site for preschool children. The club is working on a proposal for a facility, consisting of an educational play program with accredited teachers to provide the learning experiences so vital to children from 2½ to 5 years of age. The center is being planned for an early 1973 opening.

To make the day care center a reality much help is needed in all areas. Whether or not you anticipate a need for such a facility, this is an excellent opportunity to make a contribution to the work and planning now in progress. In particular, start up costs of a good Day Care Center are substantial and can be reduced by donation or fabrication of toys and equipment. A detailed list of needed items can be had from the club officers listed below.

Other areas of interest in the Club are in expanding to establish a summer recreational program for elementary school children and a babysitter referral service.

Anyone interested in participating in the effort should contact any of the following officers of the Club listed here with their home phone numbers:

President, Ann Merwarth, 262-2055;  
Vice President, Barbara Lowrey, 336-7830;  
Secretary, Grettchen Burton, 262-1607;  
Treasurer, Marybeth Budd, 997-1152.

Day Care Club meetings are announced in the Bulletin and anyone interested in attending is extremely welcome.

NASA HISTORICAL DIVISION  
MAIL CODE AAH  
NASA HEADQUARTERS  
1 COPY

GODDARD NEWS is published monthly by the Public Affairs Office of the Goddard Space Flight Center, National Aeronautics and Space Administration, Greenbelt, Md. 20771. Deadline for contributions is the last Thursday in the month.

Editorial Staff

Nancy Mengel

Mrs. Patricia Ratkewicz, Ext. 4141

Jim Kukowski