GODDARD NEWS

GODDARD SPACE FLIGHT CENTER / GREENBELT, MARYLAND

VOLUME 1, NUMBER 11 | THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | OCT. 27, 1961

A UNITED GODDARD FAMILY . . . FOR UNITED GIVERS FUND

UGF KICKOFF . . . Dr. Harry J. Goett delivers the 1961 UGF Kickoff address to 103 Goddard Keymen. Campaign leaders on the stage are (left to right) Herbert Fivehouse, Ronald Surgen, Leopold Winkler, Grace Ann Murphy, Dr. John W. Townsend, Jr., Eugene W. Wasielewski, John Mengel, Bernard Sisco, Clarence Pickett and Leo Smith.

UGF FLIGHT PLAN

General Operations

At 1400 GMT on October 11, 1961 the UGF Satellite was launched by the Goddard Space Flight Center Director and Campaign Chairman Dr. Harry J. Goett with 103 keymen in 4 separate divisions playing a vital part in this orbital shot. Charged with the responsibility of reaching a record apogee of $30,000, the vehicle obtained maximum velocity shortly after launch and reports from the four major Goddard campaign divisions responsible for Tracking and Telemetry indicated a green "Go" condition.

Flight Objectives

The nominal apogee of $30,000 represents contributions to approximately 150 charitable organizations in the Metropolitan Washington Area. In Prince Georges County such organizations as the Red Cross, Salvation Army, Help for Retarded Children, Mental Health Association, Boy Scouts and Girl Scouts of America, Camp Fire Girls, Boy's Clubs, YMCA, YWCA, Armed Forces Hospitality Committee, the Florence Crittendon Home, together with hospitals, nurses associations, clinics and special services groups anxiously awaited post launch read-outs from this vital experiment.

Performance

While it will be sometime before a final orbital determination can be made, the latest evaluation of the vehicle flight performance as of October 19, 1961 indicated that position and velocity vector was A-OK. The first stations reporting with 100% participation and 100% of their quota were Office of Public Information, Management Services Division, the Program Coordination Office, and the Test and Evaluation Division.

All other stations in the Goddard UGF tracking network are expected to "Lock-on" the vehicle.

GODDARD NEWS WILL BE PUBLISHED BI-WEEKLY

Starting with this issue, the Goddard News will be published bi-weekly.

An official publication of GSFC, the Goddard News is published in the interest of all employees. Therefore, all contributions and suggestions are welcomed.

Address news contributions and suggestions to: The Editor, Goddard News, Building 1, Room 7, or call news to extension 4955.

Deadline for all contributions is 4:00 P.M. on the Thursday following publication of an issue.

UP IT GOES . . . Boosting the UGF satellite from its launching pad toward its apogee of $30,000 is raven-haired beauty Jean Werking, Operations and Support Division.

GODDARD — BEHIND THE SCENE PLAYS A VITAL ROLE IN THE MERCURY MISSION

In the dramatic and glamorous "Real Time" operation of the manned space mission of Project Mercury, there is a tendency to over look the crucial role played by the Goddard Space Flight Center; tracking —communications activities in support of the shot.

In reality, the Mercury Project operation at Goddard is as complex and vital to the success of the Mission as the much publicized operation at Cape Canaveral.

A typical Goddard Mercury operation begins at midnight before launch day. At this time the pre-flight check-out of computers, equipment and data lines is begun by Walt Adams, Director of Pre-Flight Operations. During this period, engineers run special computer tests and trials for the computer-related equipment, high speed data lines between the Goddard Space Flight Center and Cape Canaveral, and data transmission and receiving equipment at the Cape. Tests are conducted by IBM engineers under the direction of Monty Dellinger.

During this pre-flight period CADFISS (Computer and Data Flow Integrated Sub-system) tests are also run. These tests are designed to check out the flow of data from radars at all of the remote sites in the network to the Goddard computers, and the data flow from the Goddard Space Flight Center to Cape Canaveral. Sid Lechter (NASA) is CADFISS director. Results of the CADFISS tests are relayed to the Network Status Monitor at the Cape. The results of these tests are integrated with other reports from the Mercury Network to determine whether the sites in the network are ready to support the mission.

During the pre-flight count down two trajectory confidence runs are made. These are simulated launches with high-speed data being played into the GSFC computers from Cape Canaveral and Bermuda. These runs are made at T-175 minutes and T-75 minutes.

At T-7 minutes, the Mercury operational programs are loaded into the GSFC computers and cycling is begun. During this period the computers are made ready for the lift-off signal from the Cape. As data begins to flow to GSFC, the computers transforms this data, immediately shuttling it back to the Cape's Mercury Control Center (MCC). At MCC this information is displayed on plot boards and digital displays which are used to determine whether the flight is proceeding as planned.

During the mission, the GSFC Operations Director is James J. Donegan, Jr. who has the overall responsibility for the entire Goddard Mercury Operation. Goddard Site Director is Herb Statler, who is responsible for the operation of all GSFC equipment. GSFC Flight Director is Cal Packard, charged with the operation of the computers and programs during the mission. Monitoring the computers and manual input and teletype equipment are Lynn Dunseith (S.T.G. Langley Field) Launch, John Norton (GSFC), Launch, & Orbit Re-entry, Dick Hanrahan (IBM) Launch & Orbit Re-entry, Perry Chambers (GSFC) Launch, Jim Stokes (GSFC) Orbit & Re-entry, Mark Silverman (GSFC) and Joe Kendall (GSFC).

Communications facilities at Goddard, under the direction of J. W. McDowell, are also very active in the support of any manner satellite operation. This was graphically illustrated during the recent MA-4 launch.

The Communications Network linking all Mercury stations by teletype lines via GSFC, to MCC and by voice to ten of the Mercury stations, was established and operating at the pick-up of count-down, T-6 hours.

Key positions at Goddard within the Communications Center are Communications Network Monitor, Mr. G. A. Cassels; Facilities Control Supervisor, Mr. J. Atkins; SCAMA Voice Network Supervisor, Mr. D. E. Robertson; Computer/Communications Coordinator, Mr. H. E. Wrightsman; and Teletype Systems Supervisor, Mr. R. Plaumann.

All teletype circuits supporting the mission are monitored at GSFC by the Communications Network Monitor. His function is to insure that all messages to and from MCC and GSFC are properly "selected" or "routed" correctly by the automatic switching equipment at GSFC, and that messages arrive on time. He also reports equipment malfunction, operating errors or teletype line troubles, to the Communications Director and the Facilities Control Supervisor.

The Facilities Control Supervisor has the responsibility of restoring circuits in trouble by patching lines at the Control board, reporting troubles to the various commercial facilities, etc. This is accomplished, in part, by use of orderwires linking the technical personnel at London, RCAC New York and Honolulu, Hawaiian Telephone Company at Honolulu, and Sydney, Australia on one "loop" for direct contact by teletype. Other voice orderwires were available to the Washington, D. C. test room, NASA representatives in London and Honolulu and the tech control area at Andrews AFB, Washington, D. C.

The Computer/Communications Coordinator supervises all activities of the Computer/Communications interface and equipments. He reports technical difficulties to the Facilities Control Supervisor, CADFISS test conductor and the Communications Director and assists them in the elimination of problem areas.

The Teletype Systems Supervisor has the responsibility of preparation, transmission and receipt of all messages originating at, or destined for the Goddard Space Flight Center. He assists both the Communications Network Monitor and Facilities Control Supervisor in the detection of circuit and switching troubles and the reporting and elimination of these troubles.

The SCAMA (Switching, Conferencing and Monitoring Arrangement) Voice network supervisor is responsibile for the operation of the World-Wide Voice Net. By constant monitoring of all voice circuits and continuous voice checks with the distant sites, he is able to spot many trouble areas and initiate the proper action for the restoration of circuits or elimination of the troubles. In addition to keeping the Communications Director informed of the status of the entire Voice Net, he also works closely with the Flight Director at MCC. When necessary he assists the Flight Director and patches the voice lines for the voice "hand-over" of radar control.

The Communications Director exercises over-all control of the Goddard Space Flight Center Communications Center. He correlates and evaluates all information within the Communication Center. These reports, which included an evaluation of the ground communications system (network operating conditions as well as status of ground communications equipment at the sites), propagation prediction and status of the GSFC switching center, are made di-

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THE VITAL AND SYSTEMATIC COMPUTING OPERATIONS

I'm Next! I'm Next!! The $%#&$%& You Are—I'm Next!! I'm Next!!

AWARD . . . Managing Editor of Electronic Equipment Engineering magazine, Vin Zeluff, presents a plaque to Whitney Matthews (right), Chief of Spacecraft Technology Division. Looking on is (left to right) Justin C. Schaffert and John N. Libby, Flight R. F. Systems Branch.

AWARD . . . Associate Director, Eugene W. Wasielewski recently presented Dr. Eugene E. Dangle, Spacecraft Systems Branch, with a cash award check received under the Government Employees' Incentive Awards Act of 1954. Looking on are (left) Merland L. Moseson, Head of Spacecraft Systems Branch and (right) William K. Ritter, Associate Chief, Satellite Applications Systems Division. The award was in recognition of an invention, made jointly by Dr. Dangle and two of his co-inventors, at Lewis Research Center, where he was employed prior to transfer to GSFC. The invention entitled "Ion Rocket Engine", has been considered by the Inventions and Contributions Board.

AWARD . . . Director, Dr. Harry J. Goett, Associate Director, Eugene W. Wasielewski, and Safety Officer, Fred X. Hartman accept a replica of the President's 1960 Safety Award to NASA on behalf of Goddard employees. In presenting the plaque, NASA Safety Officer G. D. McCauley (left) pointed out that Administrator James Webb accepted the President's Award with genuine pride on behalf of the employees of NASA, and since the employees made it possible for NASA to receive the award, he felt each of the Centers should receive replicas of the President's Safety Award.

LIBBY AND SCHAFFERT PRESENTED $50 U. S. SAVINGS BONDS

John N. Libby and Justin C. Schaffert, Engineers in the Spacecraft Technology Division recently were presented $50.00 U. S. Savings Bonds by Vin Zeluff, Managing Editor of Electronic Equipment Engineering magazine in recognition of their outstanding circuit, "Ultra-Long Monostable Multivibrator".

The magazine established a Circuit Design Award Program to stimulate engineers to submit, on their own initiative, valuable and useful circuit information for disseminaton to fellow engineers through Electronic Equipment Engineering.

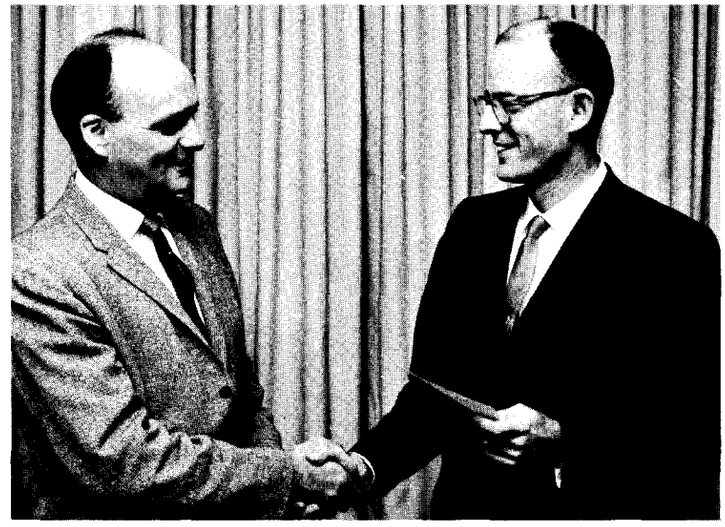
Each month the editors select for publication the best circuits of those received. The readers, in turn, select the most useful circuit by balloting their choices.

Mr. Libby and Mr. Schaffert submitted their circuit and it was published in the May, 1961 issue of Electronic Equipment Engineering.

Mr. Libby's and Mr. Schaffert's winning circuit for May will be entered in competition with the eleven other monthly winning circuits for a Grand Prize Award of a $1,000 U. S. Savings Bond. Grand winners will be announced in 1962.

Whitney Matthews, Chief of Spacecraft Technology Division was presented a wall plaque commemorating the important engineering contribution by Mr. Libby and Mr. Schaffert. The plaque reads as follows:

"ELECTRONIC Equipment ENGINEERING Circuit Design Award presented to NASA-Goddard Space Flight Center in recognition of the outstanding electronic circuit design by John N. Libby and Justin C. Schaffert published in the month of May, 1961 as determined by votes of readers of ELECTRONIC Equipment ENGINEERING, signed: Elmer T. Eberson, Editor."



AWARD . . . Stephen Paull, Flight Data Systems Branch, received a cash award from Assistant Director for Space Science and Satellite Applications, Dr. John W. Townsend, Jr. in recognition of his invention entitled "Variable Frequency Multivibrator Sub-Carrier Oscillator for Telemeter System". The check was awarded by the NASA Inventions and Contributions Board.

Plan for Your Security

The 1961 Savings Bond Campaign provides you with the opportunity to enroll in an easy, safe and systematic plan for accumulating savings. The increased interest registered by Goddard employees in the past has been very gratifying. Invest your money to guarantee the security of your family and your country. Join the PAYROLL SAVINGS PLAN—BUY UNITED STATES SAVINGS BONDS. Call the Goddard Payroll Office and request that a certain portion of your earnings be invested in Savings Bonds. Call them now!

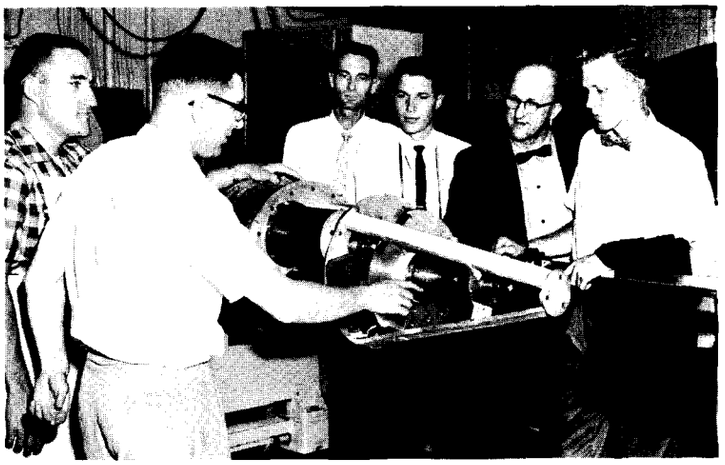
HORTON WINS TOURNAMENT BY SIX STROKES

"Kip" Horton of the Office of Public Information is the 1961 Fall Goddard Space Flight Center Golf Champion. With a bogey and a double bogey on the 16th and 18th holes of the rugged, 6,590-yard University of Maryland Course, Horton posted his winning card of 75, six strokes under runner-up Jim Hines of the Contract Negotiation Branch. In a third place tie for low gross honors were Jack Peake of Flight R. F. Systems Branch and Jerry Longanecker of Systems Integration Branch.

Featuring the days play were many other winners among the 53 Goddard Linksmen participating in the event. Vic Simas of Radio Systems captured the prize for the longest drive with a smash of approximately 275 yards. In second and third place behind Simas' winning clout was Jim Reece of Employee Development and Dave Walden of Spacecraft Systems Project Division. Closest to the pin with an eight-iron shot, about six feet away from the flag on the eighth hole, were Pete Burr of Meteorology Section and Jerry Longanecker with Al Franta of Systems Integration in third place.

Low net honors also went to "Kip" Horton with a net score of 72 with Jim Hines, Jerry Longanecker and W. J. Adams, all within two strokes of the pace. A four-way tie for the Blind Bogey was shared by Jack Libby, Al Timmins, Dave Taylor, and Bob Perry, while the "Poker Hand" award went to George Newlon with R. M. Keefe and Burt Hurlburt in second and third place, respectively.

Golf Committeemen Jerry Longanecker and Tony Buige, elated with the response and success of the tournament, announced that plans for the 1962 event to be held in the spring next year, will soon be formulated. Because of extensive interest in golf at Goddard, plans for a Golf League are now being studied.



WINNERS . . . Mike Gorski of Indianapolis, Indiana, and Kenneth Short Jr. of Odessa, Texas, winners in the NASA National Science Fair Awards, visited Goddard for one day and toured GSFC facilities. (left to right) Don Righter, Structural Dynamics Branch and Earl Yaver, Geophysics Laboratory, Boston, Mass., explain a spin test on a scientific probe to Peter Hitt, (sponsor) Kenneth Short, Jr., Frank Gorski (father) and Michael Gorski.

GODDARD NEWS

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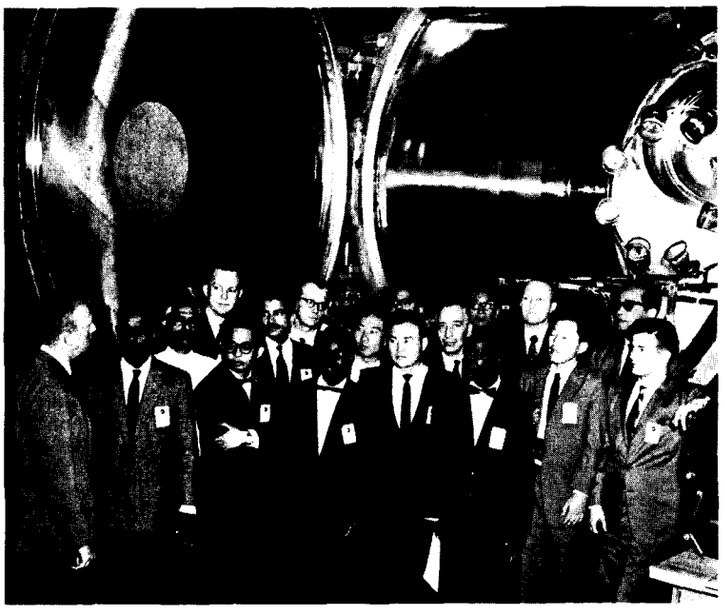
MERCURY

(Continued from Page 2)

rectly to the Network Status Monitor and/or the Flight Director at MCC. The Communications Director also assists the Network Status Monitor at MCC and the CADFISS Test Director at GSFC in the evaluation of the CADFISS test results. Also, by constant surveillance of all messages on the network, a tighter network discipline is maintained.



FOREIGN NEWSMEN . . . Eighteen foreign newsmen from thirteen nations recently toured Goddard. Assistant Director for the Office of Administration, Dr. Michael J. Vaccaro welcomed the group and described GSFC missions. Here, John B. Burcham, Jr., Engineering Design Branch describes the operation of the 8 x 8 vaccum chamber in Building 4.

GSFC TENPIN LEAGUE STANDINGS

(As of October 17, 1961)

Team No.	Team Name	Games Won	Lost
1.	12—Split Fits	21	3
2.	9—The Junto	17	7
3.	19—Oscillators	16	8
4.	18—Hi-Lows	15	9
5.	17—Odd Balls	15	9
6.	1—Guided Muscles	15	9
7.	22—Second Stage	14	10
8.	5—Integrators	14	10
9.	11—Colt 45's	13½	10½
10.	15—Mogenbaiters	13	11
11.	3—Bleebs	13	11
12.	13—Fumbling Five	13	11
13.	8—Coolies	12	12
14.	24—Atom Spheres	12	12
15.	6—Aborters	12	12
16.	14—Hi-Five	10	14
17.	10—Rackets	10	14
18.	16—A-OK's	9½	14½
19.	4—Orbiting Elements	9	15
20.	23—Flap Doodles	8	16
21.	7—Vibrators	8	16
22.	20—Twenties	8	16
23.	2—Honey Potters	7	17
24.	21—Lechers	3	21

GSFC DUCKPIN LEAGUE STANDINGS

(As of October 17, 1961)

Team Standings		Games Won	Lost
1.	Flintstone "5"	12	6
2.	Quicksilvers	11	7
3.	Untouchables	11	7
4.	Bluffers	11	7
5.	Alley Cats	11	7
6.	Ducklings	9	9
7.	Bobcats	9	9
8.	Hi Vacs	8	10
9.	Stumblebums	7	11
10.	What You Say	6	12
11.	Wood Choppers	5	7
12.	Space Katz	2	10

Mrs. Robert H. Goddard visited the Center recently and observed the arrangements being made in the lobby of Building 3 for displaying the bust of Dr. Robert H. Goddard. Accompanying Mrs. Goddard, (left to right), Mr. Harold F. Stimson, a close friend of Dr. Goddard's, Mrs. Goddard, Joseph Anthony Atchison, Sculptor, and Paul Garber, Head Curator and Historian for the National Air Museuem, Smithsonian Institution.