GODDARD NEWS

GODDARD SPACE FLIGHT CENTER / GREENBELT, MARYLAND

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GODDARD'S DEDICATED MERCURY 'PROS' PERFORM FLAWLESSLY IN REAL TIME FOR MA-6 MISSION

For the past 30 months at Goddard, a 153-man team of mathematicians, engineers, communications experts and computer specialists have studied problems, conducted many flight simulations and have integrated their individual efforts into a molded, well-oiled mechanism. As individuals dedicated to the success of a never-to-be-forgotten orbital flight, their hours were long and grueling and dividends in personal recognition seemed small. But on February 20th, their single-minded response to the overall Project Mercury mission paid a handsome reward—to the program, to the Nation and to the morale of the Free World.

Headed by Niles "Buck" Heller, Manned Spacecraft Support Division chief, a crew-cut engineer with greying temples and a laugh in his eyes, Goddard's Mercury Flight Operations specialists are a group of proud and capable professionals, mated to their machines through a responsiveness honed to a millisecond edge.

The Key Figures

While every man and woman in this team is a key figure in the successful operation of such a vast system, a few individuals are critically important to the mission:

Jim Donegan, Goddard Mercury Operations Director; Herb Stotler, Goddard Site Director; Cal Packard, Flight Director; Sid Lechter, CADFISS Director; Walt Adams, Pre-Flight Director; Jim McDowell, Communications Director.

Computers Monitors

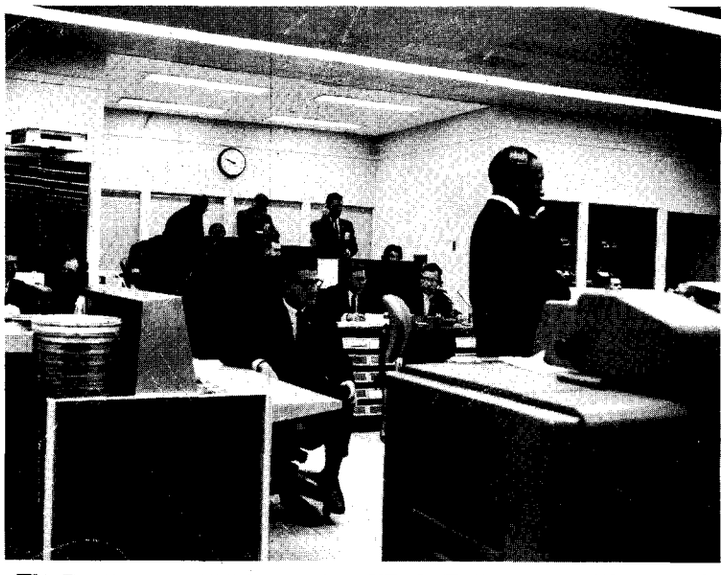
Orbit, flight and re-entry: Jim Stokes and John Morton.

Launch: Lynn Dunseith and Perry Chambers.

"C" Computer

Leon Waldorff, Paul Williams, Chester Eddington, Ernie Hairston, Beverley Kane, Leon Keller.

GRAND TURK ISLAND . . . Astronaut John H. Glenn, Jr. after world orbital flight, surrounded by fellow Astronauts M. Scott Carpenter and Donald K. Slayton.



WAITING FOR BOOSTER ENGINE CUT OFF . . . All eyes of Goddard's Mercury Flight Operations specialist are on the X-Y Plot Boards for the "GO or NO GO" critical launch parameters. (seated left) Jim McNeese, Computer Operator and (standing right) John Morton, Computer Monitor.

SCAMA Voice Systems

Duane "Robbie" Robertson.

Communications

Bill Atkins, Facilities Control Supervisor; George Cassels, Communications Network Monitor; Bob Plaumann, Teletype Systems Supervisor; Ed Wrightsman, Computer/Communications Coordinator.

ASR Operators

Joe Kendall, Carl Peters.

Patch Teletype

Mark Silverman.

Computer Operators

Bill Knapp, Jim McNeese.

IBM Operator

Bob Furner.

CADFISS

Don Sobel, Paul Federico, Frank Sitton.

Engineering

Monty Dellinger, Art Brouard, Doug Schoch, George Hopf, Stu Van Wart, Don Roberts, Fred Thompson.

Time Standards

George Stewart

Impact Prediction Near-Perfect

At 3:04 P.M. EST, as the "Friendship Seven" Mercury Capsule was being secured to the deck of the Destroyer USS Noa, smiling faces throughout Goddard were evidence of the

(See MA-6, Page 2)

MA-6

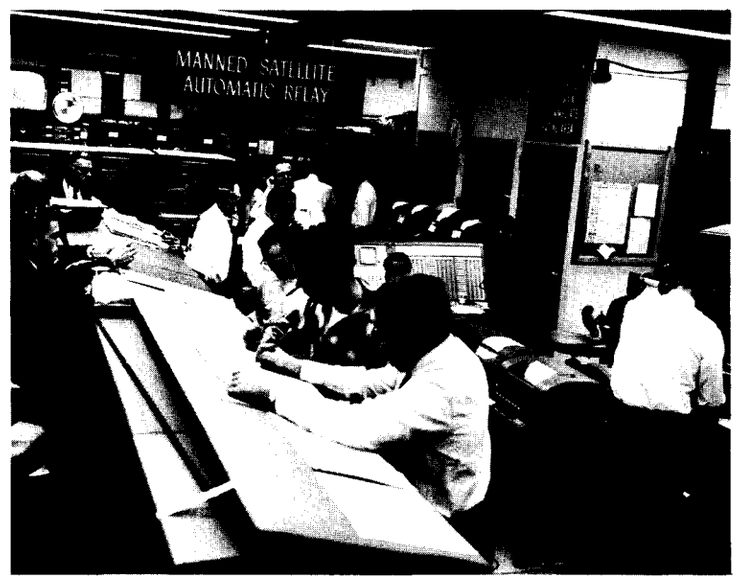
(Continued from Page 1)

incredible system performance. Standing in front of the X-Y Plot Boards, Jim Donegan, Cal Packard, Walt Adams and John Morton talked about the flight as they waited for Mission Review to begin. "How close was impact point to our landing predictions?" Cal asked. "Within two miles, I think," someone answered. "We got good solid telemetry today from all of the stations. And the V-Vr vector was within six feet per second of nominal velocity. We were solid "GO" all the way."

In the adjacent Communications Center, Jim McDowell, Bob Ritch, Bill Atkins, George Cassels and Bob Plaumann were catching their breath for the first time in over five hours. The conversation was easy, free of tensions that had been building for weeks. "Outside of a few minor equipment problems which were overcome manually, our operation went smoothly," Jim said. Bob Ritch, NASA Communications Branch Chief, added: "the entire Mercury communications network performed extremely well, in fact, even better than in previously successful missions."

The Global Mercury tracking sites also functioned like Swiss machinery from launch to recovery. Jim Donegan stated: "The Range played like a symphony today. Tracking was tremendous. The actual mission played better than any simulation yet held." At the moment that Astronaut John H. Glenn, Jr. was being plucked from the South Atlantic Ocean, Donegan removed his headset, and turned to Walt Adams, Herb Stotler and others gathered near the Mercury Command Console. "This launch will be known as the 'shot heard around the World in REAL TIME'," he said. "Let's get ready for MA-7!"

DURING MA-6 MISSION . . . Sid Lechter, CADFISS Director, turns to report to Jim Donegan, Mercury Operations Director, on the latest mission developments.



COMMUNICATIONS CENTER . . . (left) Jim McDowell, seated at the Command Communication Console said: "Our Operation went smoothly." (right) The Communications Center was humming during the entire MA-6 mission.

NEVADA AREA SELECTED FOR NUCLEAR ROCKET DEVELOPMENT STATION

The National Aeronautics and Space Administration and The Atomic Energy Commission announced that the Jackass Flats area of the Commission's Nevada Test Site has been designated as the Nuclear Rocket Development Station. The Station is centered on that part of the NTS which has been used since 1959 for ground tests of KIWI reactors in the joint NASA-AEC program to develop a nuclear powered rocket. It will be under the management of the joint NASA-AEC Space Nuclear Propulsion Office.

The Station will be used for ground testing of reactors, engines and stages which will be required in the development of nuclear rocket systems. Located at the Station are testing facilities which are being used by the Commission's Los Alamos Scientific Laboratory in the development of the reactor in the nuclear rocket program. Additional facilities, including test stands for the NERVA engine and the RIFT (Reactor in Flight Test) stage, are under construction or planned at the Station.

The NERVA (Nuclear Engine for Rocket Vehicle Application) is being developed under an NASA-AEC contract with Aerojet-General Corporation as the prime contractor and Westinghouse as the principal subcontractor. Steps are now being taken to select the RIFT contractor.

GSFC TENPIN LEAGUE STANDINGS

(As of February 20, 1962)

	Team No.	Team Name	Games Won	Games Lost
1.	14	Hi-Five	64	32
2.	12	Split Fits	64	32
3.	3	Bleebs	61	35
4.	17	Odd Balls	59	37
5.	24	Atom Spheres	57½	38½
6.	10	Rackets	55½	40½
7.	23	Flap Doodles	54½	41½
8.	19	Oscillators	52	44
9.	9	The Junto	52	44
10.	15	Mogenbaiters	50½	45½
11.	18	Hi-Lows	50	46
12.	11	Colt 45's	47	49
13.	22	Second Stage	45½	50½
14.	7	Vibrators	44½	51½
15.	4	Orbiting Elements	44½	51½
16.	8	Coolies	44	52
17.	1	Guided Muscles	43	53
18.	16	A-OK's	41½	54½
19.	13	Fumbling Five	38½	56½
20.	20	Twenties	38	58
21.	2	Honey Potters	38	58
22.	6	Aborters	37	55
23.	5	Integrators	36½	55½
24.	21	Lechers	29	67

NASA ANNOUNCES PLANS FOR PROJECT FIRE

The National Aeronautics and Space Administration recently announced plans for a high speed reentry heat research program called Project FIRE. Purpose of Project FIRE is to obtain data on materials, heating rates and radio signal attenuation on spacecraft reentering the atmosphere at speeds of about 24,500 miles per hour.

Information from the program will provide the future technology required for protecting manned and unmanned spacecraft from blazing destruction upon reentry from lunar missions. This environment cannot be duplicated in any known ground facilities.

Project FIRE calls for sending instrumented spacecraft on ballistic flights downrange from Cape Canaveral, Florida. During flight and reentry information will be obtained by telemetry, radar and optical tracking systems. Recovery of the spacecraft will not be attempted.

An Atlas D booster will launch the reentry spacecraft weighing approximately 200 pounds and a velocity package which contains guidance components and the Antares solid-fuel rocket motor (third stage of the Scout vehicle). After the Atlas boosts the payload to its peak altitude the velocity package provides the additional speed and spacecraft orientation in its descending flight.

During the next two years NASA plans to launch two Project FIRE spacecraft, each of which will carry different instrumentation systems.

The NASA Langley Research Center's Flight Reentry Programs Office will have management responsibility for Project FIRE, including mission objectives, spacecraft procurement and adaptation of the Scout vehicle components. Herbert A. Wilson, Jr. is Manager of the Langley Office. About 25 firms attended a bidders briefing on the Project FIRE spacecraft systems at the Langley Center February 15 and 16.

At NASA headquarters Milton B. Ames, Director of Space Vehicles, Office of Advanced Research and Technology, is responsible for overall direction of the program.

US Navy Photo

HARDGROVE RETIRES FROM NAVAL RESERVE . . . William F. Hardgrove (left), Test and Evaluation Division receives a Plaque from his Naval Air Reserve Commanding Officer, Captain C. H. Shild, USNR on the occasion of his retirement from the Naval Reserve after 20 years outstanding service. The plaque was engraved: "From officers and men of Squadron 661 for loyal devoted duty and a job well done."

ROSENTHAL APPOINTED AS GSFC HISTORIAN

ALFRED ROSENTHAL

Alfred "Al" Rosenthal has recently been appointed as Goddard's Historian in the Office of Public Information.

Prior to joining Goddard Mr. Rosenthal served as Information Officer with the U.S. Army Chemical Corps and the Corps of Engineers. In his capacity as Information Officer for the Army Engineers he directed information activities in connection with the construction of the St. Lawrence Seaway project and other multi-million dollar water resources and military projects.

He received two Outstanding Performance Ratings from the Army. He is also the holder of the Army's Sustained Superior Performance award.

Before entering Federal Service, Mr. Rosenthal was managing editor for a number of Southwestern publications.

In 1943 he won first prize in the photo contest sponsored by the Associated Press in Texas. He won the National award in 1937 for the best natural science motion picture made in Czechoslovakia.

Mr. Rosenthal attended Charles University in Prague, Czechoslovakia.

Mr. and Mrs. Rosenthal and their three children reside in Rockville, Maryland.

PROJECT VANGUARD 4th ANNUAL PARTY

Saturday, March 17th—7:00 P.M. to 12:30 A.M.—in the Crystal Room of the Officers Club, Naval Weapons Plant, Washington, D. C. Cocktails at 7:00, buffet dinner at 8:00, and dancing 9:30 to 12:30. Informal.

Charge of $4.50 per person includes tax and tip. Drinks are pay-as-you-go. Give check (payable to "Officers Club, Naval Weapons Plant") to anyone of the following persons:

NAME	BLDG.	ROOM	EXT.
Robert Baumann	6	S212	5116
Phil Carbaugh	3	146	4754
Marie De Novens	3	123	4674
Mike Harloff	5	W213	4955
Robert Mackey	6	W101	4096
Laura Smith	1	Off. of Dir.	5066

Cut-off for payment to the above Goddard contacts is 10:30 A.M., March 9th. Spread the word to Vanguardians expected to be in Washington on St. Patrick's Day.

Who'd Have Thought?...

A space research instrument has been redesigned to save skiers buried under avalanches.

It will be demonstrated Sunday by scientists from Varian Associates in Palo Alto at a National Ski Patrol rescue meeting at Soda Springs.

The instrument is a highly sensitive portable magnetometer—a hand-carried version of one that is placed aboard orbiting satellites to measure the strength of the earth's magnetic field.

In the ski-rescue version, a skier would wear a tiny permanent magnet—possibly imbedded in the heel of his boot—and the Varian magnetometer would pick up the signal through as much as ten feet of snow.

Two ski patrolmen will be buried under a simulated avalanche at Soda Springs, and a Varian team will use their magnetometer to locate them. Dr. Harry Weaver, one of the instrument's developers, has already tested it successfully in Switzerland.

Reprinted from the *San Francisco Chronicle Sporting Green*, Feb. 6, 1962.

GODDARD NEWCOMERS

Aeronomy & Meteorology Division
Hericsina, Marie
Huston, Wilber B.
McHugh, Daniel C.
Oseroff, Harold
Shapiro, Ralph B.

Spacecraft Systems and Projects Division
Colburn, Theodore R.
Foster, Emily M.
Hughes, Lonnie Lee, Jr.

Test & Evaluation Division
Holley, Frank J.
Stockel, Joseph F.

Fabrication Division
Glunt, George E.
Moubray, Charles F.

Spacecraft Technology Division
Federline, Robert E.
Kunst, James William
Stephens, James E.

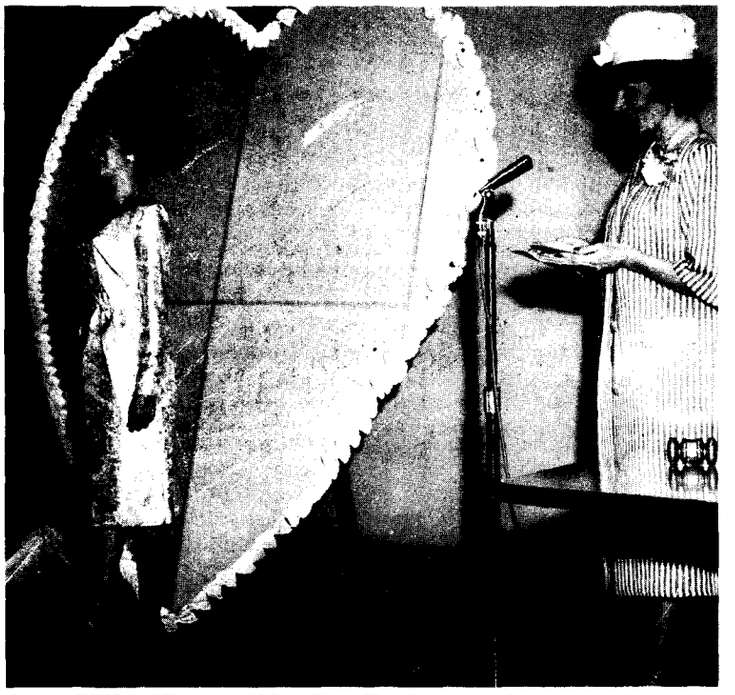
Office of Patent Counsel
King, William H.

Tracking Systems Division
Brown, Howard H.
Gatto, Richard J.
Woodward, William H., Jr.

Project Support Office
Harris, Mildred L.
Lookabill, Sylvia R.

Operations and Support Division
Wiberg, Richard E.

Data Systems Division
Davenport, Paul B.



A PRETTY GIRL . . . Mrs. Kay Kniffen models a printed sheath. (right) Mrs. Rose Marie Jung describes the dress to the audience.

WHAT WILL BE THE LATEST . . . Modeling some of the latest fashions to be worn this Spring are: (left to right) Mrs. Elaine Fawler, Mrs. Dorothy Wright, Mrs. Mary Bohler, Mrs. Janice Melchi and Mrs. Betty Vaccaro.

SWEETHEARTS ON PARADE

February 14, St. Valentines' Day, was celebrated with "Sweethearts on Parade" at the Goddard Wives' Club meeting. A fashion show featuring the Goddard Wives as models highlighted the evening.

Some 180 Goddard Wives attended the fashionable meeting. The Lucile Fashion Shop presented the show and Mrs. Rose Marie Jung, a professional model, described the latest spring creations.

On March 22 the Club has planned a tour of the White House. The tour will begin at 8:50 A.M. at the East gate of the White House, Executive Avenue, across from the Treasury building. For reservations and further details contact Mrs. Jean Mazur, Chairman of the Sightseeing Committee, 622-2278.

GSFC DUCKPIN LEAGUE STANDINGS
(As of February 20, 1962)

Team Standings	Games Won	Games Lost
1. Bluffers	45	24
2. Wood Choppers	40	29
3. Alley Cats	40	29
4. Quicksilvers	38	31
5. Flintstone "5"	38	31
6. Untouchables	36	33
7. Bob Cats	33	36
8. Hi Vacs	32	37
9. Ducklings	29	40
10. What You Says	28	41
11. Stumblebums	28	41
12. Space Katz	27	42

GODDARD NEWS

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FINALE—SPORTSWEAR . . . Front row (left to right): Mrs. Millie Johnson, Mrs. Dorothy Wright, Mrs. Mary Bohler, Mrs. Janice Melchi, Mrs. Kay Kniffen, Mrs. Betty Vaccaro and Mrs. Rose Marie Jung. Back row (left to right): Mrs. Cathy Ziegler, Mrs. Roxanne Stevens, Mrs. Elaine Fawler and Mrs. Frances Isley.