

The Honolulu Advertiser

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MONDAY, NOVEMBER 4, 1957



Russ May Fire

Rocket to Moon in Week

Animal Lovers Assail Experiment

NEW YORK, Nov. 3 (UP) — Animal lovers throughout the world charged the Russians with cruelty today for sending a dog into space in an effort to find out whether rocket travel would be safe for man.

The American Society for the Prevention of Cruelty to Animals spearheaded the protests with the announcement that it will ask the U.S. State Department to make a formal complaint to the Soviet government.

ONE OF THE FIRST to object was Mrs. Irene Castle Mc-

NEW YORK, Nov. 3 (UP) —The world's first space traveler, a female Siberian Husky, was described today as a breed of animal ideally suited to riding in a rocket.

Dog experts said that the Husky, due to the insulation of its soft double coat, can withstand very hot as well as very cold temperatures. It does not get nervous or upset easily. It is comparatively small.

Laughlin Enzinger, former member of the pre-World War I dance team of Vernon and Irene Castle and more recently an ardent champion of the rights of dumb animals.

There were protests from societies for the prevention of cruelty to animals in Britain and in Singapore. In Los Angeles, the California Pet Owners Protective League expressed shock at what the Russians have done.

MRS. ENZINGER, founder of the "Orphans of the Storm" animal shelter in Deerfield, Ill., charged the Russian use of a dog in a rocket was "disgraceful and cowardly.

"After all, they (dogs) have no chance to speak up as to whether they want to be used in these experiments," Mrs. Enzinger said in Little Rock, Ark.



United Press Radiophoto.

MOSCOW, Nov. 3—Meet "Malyshka," the mutt Russia claims is an experienced space traveler. The Reds say, however, she's not the one inside Sputnik II. The outfit Malyshka's got on is a space suit and helmet.

ROME, Nov. 3 (UP) — The dog inside Sputnik II has been trained by the Pavlov theory of conditioned reflexes to feed itself only when an automatic bell rings inside the satellite, the Communist party newspaper L'Unita said today.

The paper's Moscow correspondent said the dog was one of many which were put through an intensive training program of space travel.

"It's morally, spiritually and ethically wrong.

"The Russians say the dog is still alive. Isn't that horrible? He's probably whining, lonely

and petrified with fear of the dark."

MRS. D. KIBBE RIDDEL, president of the Bide-a-Wee Home Association, Inc., an organization dedicated to the protection of animals, sent her protest straight to Soviet Ambassador Georgi N. Zaroubin in Washington.

"According to scientific opinion, there is neither the intention nor the possibility of a safe return to earth of the helpless dog imprisoned in the Soviet's latest earth satellite," she said. "Your government has once again proved its inhumanity.

"On behalf of friends of defenseless animals the world over... I condemn this atrocity."

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Missiles Plant Strike May Be Reconsidered

BROWNSVILLE, Tex., Nov. 3 (UP)—The head of a union threatening a strike which could stop all work on the Cape Canaveral, Fla., missile testing grounds said Russia's announcement of a second satellite may cause a change in strike plans.

* * *
WALTER T. COLEMAN made the statement tonight as he arrived at International Airport here for a Monday meeting of the union's directors. The announced purpose of the meeting is to set a date for the strike, which the union already has authorized.

"Such a strike would stop completely all missile activities at Cape Canaveral. I am in no position to say how such a stoppage would affect this nation's defense effort or our place in the missile race with Russia," Coleman said.

* * *
IT IS CONCEIVABLE that the shock of Russia's announcement that it had another satellite in the sky may have an effect on the board. The members are all intelligent men, each a war veteran and each with a keen feeling about this nation's security," he said.

New Sputnik's Radio Voice Much Stronger

LONDON, Nov. 3 (UP) — Sputnik II is on the air with signals just like those transmitted by his elder brother.

But his radio voice is much stronger, a spokesman at a London monitoring station said this morning.

Signals from the new Russian satellite were picked up in London not long after the Moscow announcement of the launching.

* * *
THE SPOKESMAN said the signals were clear and obviously given off by a stronger transmitter than that carried by the first earth satellite, which went silent after its batteries were exhausted.

The United Press monitoring station at Bickley, Kent, said a "very strong" signal was heard from 0741 to 0749 GMT.

The signals were heard again briefly starting at 0917 GMT.

The British Broadcasting Corp. listening post at Tatsfield, Surrey, also picked up the Sputnik signals, which were recorded and broadcast over the BBC domestic news service.

* * *
PROFESSOR H. S. W. MASSEY, chairman of the Royal Society's Gassiot Committee

which is directing Britain's rocket research program for the International Geophysical Year, said Sputnik II "is a most fantastic development.

"It just shows again how seriously one must take what the Russians say," he said.

Massey said the greater weight of the new satellite "is really most extraordinary.

"The business of the dog is very interesting, as one of the unknown factors about travel-

ing in space is whether living things can stand certain types of cosmic radiation," he said. "It could only be tested by having a living thing in space for some time."

* * *
MASSEY SAID details of getting information about the dog's livelihood and reactions "are a little beyond me.

"It would be very much easier if the dog could be got back

to earth but I think this would be extremely difficult," he said. "The Russians could make a good number of observations, however, while the dog is in space. Things like blood pressure could be observed."

Massey said that although the Russians told Western scientists in Washington that they had two satellites, "I am a bit surprised at the vast scale of this."

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Tracking Centers Across US Tune in on Sputnik II

CAMBRIDGE, Mass., Nov. 3 (UP)—Smithsonian Astrophysical Observatory early today received a report of the first American pickup of Sputnik II's radio signal.

A spokesman for the Army Engineers Corps at Ft. Monmouth, N.J. said equipment at the signal center picked up the signal from the second satellite between 2:50 a.m. and 3:20 a.m. EST and a second time from 4:29 a.m. to 4:30 a.m. EST.

The naval research laboratory in Washington reported that engineers at Ft. Monmouth told them the first signal was picked up on both frequencies and was a steady signal, unlike the "beeps" of the first satellite.

RCA ENGINEERS at Riverhead, New York, reported they picked up the satellite signal at 4:27 a.m. EST and that it consisted of a "beep, beep" sound, thus conflicting with the report from Ft. Monmouth.

RCA also announced that its listening post in Tangiers, Morocco heard the Sputnik signal on 20,005 megacycles at 2:49 a.m. EST and again one hour

and 33 minutes later. Tangiers also reported the "beep, beep" type of signal.

William S. Cooper of Massachusetts Institute of Technology reported he heard the radio signal at 2:02 a.m. EST between 20 and 20½ megacycles.

With satellite information pouring into the laboratory headquarters in Washington, scientists said they soon hoped to complete a rough computation of the satellite's orbit.

SCIENTISTS and astronomers flocked to Smithsonian observatory, world headquarters for satellite tracking operation Moonwatch, within an hour after Russia disclosed it had hurled its second satellite into space. Sputnik II carried a dog as a passenger, the Russians said.

Dr. Fred L. Whipple, observatory director, said the 150 Moonwatch stations throughout the world including 100 in the United States would be formally alerted until more is known about Sputnik II.

HOWEVER, in Washington, the naval research laboratory

put its world wide tracking system into operation and U.S. military installations were alerted to track the satellite. The Federal Communications Commission and the American Amateur Radio Relay League also were informed of Sputnik II.

Whipple said the Russian announcement that it is taking Sputnik II 102 minutes to girdle the earth is "roughly consistent" with their statement on satellite's maximum and minimum height.

"We have no information as to the orientation of the orbit path for the new satellite," Whipple said. "We will not ask moonwatch teams to look for the satellite until we have reasonable assurance that they can observe it."

OFFICIALS said they expected to receive information throughout the early morning hours. Many scientists were called back to the naval laboratory in Washington and prepared their equipment for the task of keeping up to date on the new satellite.

'Moons' Take Spotlight From Internal Troubles

Propaganda Windfall for Kremlin

WASHINGTON, Nov. 3 (UP)—Russia may reap an extra propaganda dividend from Sputnik II by diverting some world attention from such Soviet internal problems as the ouster of Defense Minister Georgi Zhukov, officials said today.

It was noted here that Soviet citizens were told of the new conquest of space on a special radio broadcast at the same time Sunday morning newspapers were announcing that Marshal Zhukov had been stripped of his top party posts.

THERE WAS NO inclination,

however, to play down the importance of the new Russian achievement either from the psychological or propaganda standpoint.

Officials said it understood the fact that Russia is a first-class scientific and military power which will give Soviet leaders additional prestige and a stronger vantage point in their dealings with other nations.

ON THE OTHER hand, it was said, the second satellite launching might get President Eisenhower to get Congress to

go along with his proposal to suspend U.S. curbs on exchanging atomic data with friendly allies. Many congressmen have spoken out in favor of the President's proposal as a means of speeding allied missiles and atomic development. Others have protested that such information would leak out to Russia.

Officials said Sputnik II also made it more likely that Congress would go along with any administration proposals to step up the pace of this country's various scientific programs.

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Damka's Doings Scatter Skeptics

Doubters in Doggonedest Dilemma

WASHINGTON, Nov. 3 (UP)—When the Russians reported three weeks ago that they planned to put a Muttnik in a Sputnik, some people here thought they were just woofing.

As it turned out, however,

Lost Girl, 7, Found Dead

VENTURA, Calif., Nov. 3 (UP)—A seven-year-old girl, lost overnight in freezing, snowy weather in Los Padres National Forest after wandering away from her parents' fishing camp, was found dead today.

LITTLE Jill Hatch, daughter of Mr. and Mrs. William Hatch of Santa Barbara, had been the object of a huge search by 400 men, aided by airplanes and bloodhounds.

The girl, wearing only light clothing, wandered away from her parents' vacation fishing camp yesterday in the Reyes Creek area about 50 miles north of here off State Highway 399.

The search got underway late yesterday as snow and rain began to fall. It continued through the night as temperatures dropped to freezing in the rugged area.

AUTHORITIES had expressed doubts that the child could have survived the night, but had pressed on in rain and snow today.

U.S. Tandem Moon Rockets Proposed

LAFAYETTE, Ind., Nov. 3 (UP) — A Purdue University rocket expert today said American scientists would like to send two rockets in tandem to the moon.

Dr. M. J. Zucrow said the first rocket would explode dust from the moon's surface to be collected by the second and be brought back to the earth for analysis of the dust's content.

these skeptics were barking up the wrong tree.

Today's announcement that the new Soviet satellite contained a live dog put U.S. scientists further in the doghouse. Now they will be hounded to launch an American canine into the cosmos.

IN FACT, THIS satellite competition between the United States and the Soviet Union could turn into a real dog fight.

The Soviet space traveler was identified as a little black and white pooch named Damka. Although her breed was given as a Husky, some Washington wags, who are never caught with their puns down, suggested she might be an Airdale.

Others figured she must be a bird dog. At any rate, it was generally agreed that Damka was no bull.

THE SATELLITE CONTAINS a lot of electronic equipment for measuring Damka's reactions as she chases her tail around the world.

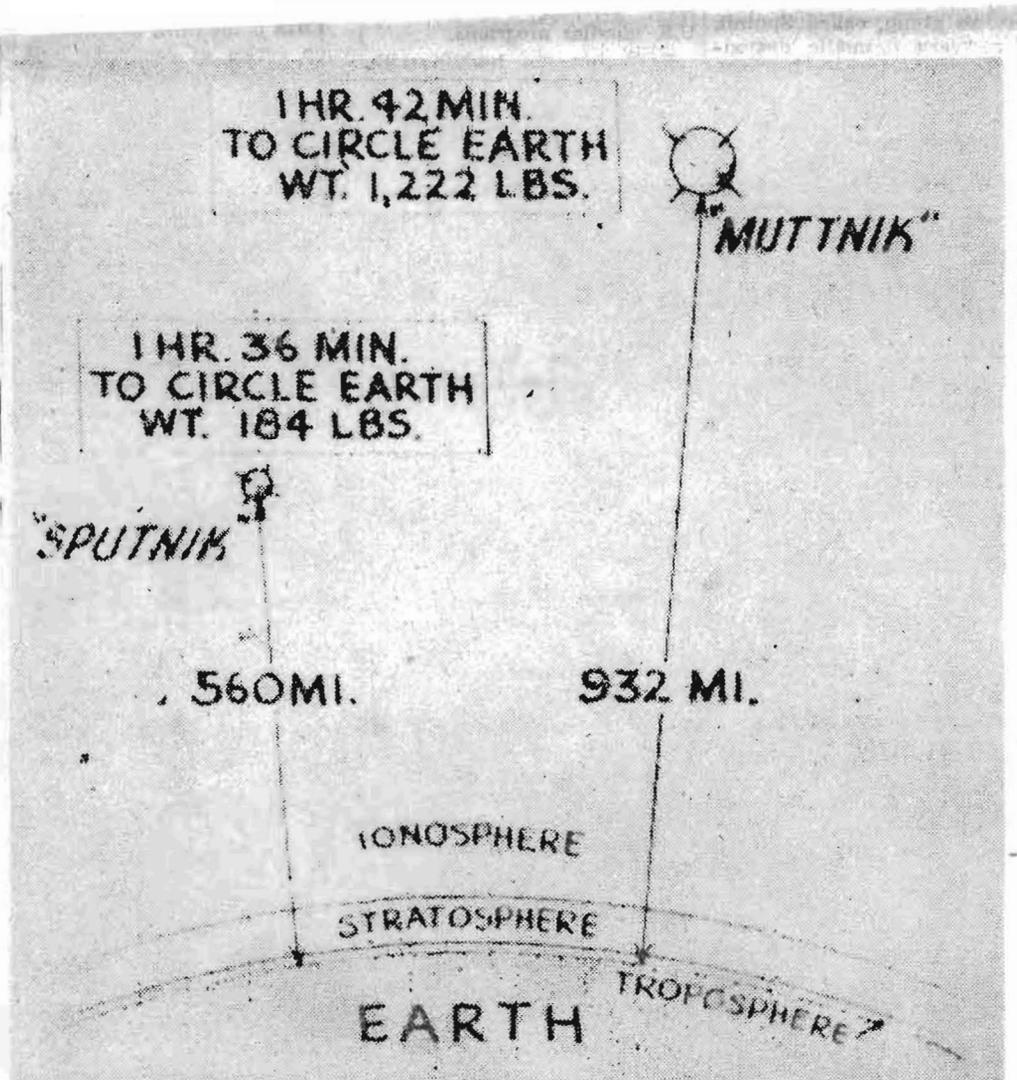
If Damka gets lonesome up there in space, maybe she can strike up an acquaintance with Sirius, the dog star. If she gets thirsty, there is always the Big Dipper nearby.

According to a Moscow newspaper, Damka already had experience in space. She previously was rocketed 60 miles into the stratosphere in a sealed container.

After the excursion, Damka floated back to earth on a parachute, but this time she may not be so lucky. When Sputnik II starts down, it will burn up in the lower atmosphere and Damka may become a hot dog.

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United Press Radiophoto

THIS SKY CHART shows comparative positions of "Sputnik" and "Mutt-nik," (Sputnik II) as based on fragmentary information received thus far. Exact direction of the second satellite's orbit has not yet been established, although U.S. radio hams believe it to be east-to-west. Sputnik passes over America on a northeast-to-southwest course.

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More Soviet Satellites Are Forecast

WASHINGTON, Nov 3 (UP)—Dr. John P. Hagen, head of the U.S. satellite program, said today the rocket that hurled Russia's dog-carrying Sputnik II into space apparently was the "same sort" used to launch the first Soviet satellite.

Hagen said the launching of the second Russian moon apparently did not signal any significant new advance in Soviet rocketry. But he said it did tend to show the Soviets were capable of launching at least one satellite a month. He expected another in a month or two.

DR. JOSEPH KAPLAN, chairman of the U.S. International Geophysical Year, termed the new launching "a significant scientific achievement." He said American scientists "look forward" to a full exchange of data on the part of the Russians.

There was every indication the United States would adhere to its present schedule which calls for the launching of four small test satellites next month followed by the real thing next March.

THE WHITE HOUSE HAD no comment other than that the launching "had been anticipated since the Russians had announced it in advance." It said President Eisenhower planned no special conferences with U.S. officials. The State and Defense Departments also declined comment.

Loud Beep Signals Fade Away

Hawaii Won't be Seeing 'Muttnik' for Awhile

"Muttnik" won't be visible from Hawaii "for some days yet," according to the best scientific data.

Russia's second satellite was last heard here at 11 o'clock yesterday morning, when its beep changed into a continuous tone and then faded altogether, according to the RCA Communications' listening station at Kokohead.

DR. WALTER STEIGER, who is chief of Hawaii's satellite trackers, said his "moon-watchers" were at their Makapuu observatory from 4:30 to 6:30 a.m. yesterday, but didn't see a thing.

The University of Hawaii scientist said he was later advised by the astrophysical lab-

Honolulu communications men attempting to monitor the "Muttnik" satellite were disconcerted early yesterday morning when they picked up a three-word message in Morse code.

It was.../---/---;---/---/---;---/---/---.

Translated: "Bow, wow, wow."

oratory in Cambridge, Mass., that "Muttnik" won't be visible from Hawaii for some time.

Dr. Steiger said the second Russian satellite should be easier to sight because of its larger size, but not easier to spot than the third-stage rocket of the first satellite, which was very bright, he said. (But not visible from Hawaii).

THE RCA Communications'

Koko Head station first picked up Muttnik's beep at 11:05 Saturday night, about three hours after it was first heard on the east coast of the United States.

The Honolulu station picked up the beep signal again yesterday morning, and at 6:15 it was at its strongest.

But by 11 o'clock, the beeps had turned into one continuous signal (which a ham radio operator gets by holding his key down). Then the RCA station lost contact with it altogether.

Soviet Moon Tanks Are Not Welcome

MOSCOW, Nov. 3 (UP) — A reliable source said tonight that a Soviet scientist was dismissed because of his "fantastic" ideas for launching an unmanned baby tank to the moon via a rocket.

He was identified as Yuri Khlebtsevich, former chairman of the Soviet technical committee for radio and television guidance of rocket.

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Scientist Sees Early Launching

CAMBRIDGE, Mass., Nov. 3 (UP)—A key scientist in the "operation moonwatch" effort to track the new Soviet satellite said today the Russians may be able to send a rocket to the moon within the next week.

He called for a "crash program" to get a U. S. satellite into the sky as "a matter of national pride."

"No matter what we do now, the Russians will beat us to the moon," said Dr. John Rinehart, associate director of the Smithsonian Astrophysical Laboratory.

"I see no reason why they shouldn't be successful reaching the moon. I would not be surprised if the Russians reached the moon within a week."

OBSERVATORY scientists discussed their preliminary findings with newsmen as amateurs and experts around the world reported hearing the double signals of Sputnik or seeing the satellite which was launched from Russia early today.

From what they had gleaned so far, the scientists said the new Sputnik apparently was launched with a force of more than 1,250,000 pounds—enough to send a smaller object all the way to the moon. They said it was broadcasting on two channels—40 and 20 megacycles.

DR. FRED L. WHIPPLE, American moonwatch director, said Sputnik II's elliptical orbit brought it around the globe at altitudes ranging from 104 miles to 1,056 miles. He said he based the estimate on reports from radio Moscow.

"I certainly would think its larger size means it will be more easily visible to the naked eye," said Dr. J. Allen Hynek, also an associate director of the Smithsonian observatory.

"The biggest surprise to me was the tremendous size of this new satellite. The Russians have demonstrated that they can put an object of tremendous weight into the sky, and it looks like they are that much closer to the ball park."

Scientist Urges US To Take Second Look

SAN ANTONIO, Tex., Nov. 3 (UP)—Dr. Harold Vagtberg, president of Southwest Research Institute, called today for "an agonizing reappraisal" of the scientific research program of the U. S. in light of Russia's second satellite launching.

"The Russians are running rings around us with their satellites and there is reason to believe we can expect more evidence of their progress within the near future," Dr. Vagtberg said.

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Russ Unveil Super Jet; More to Come

MOSCOW, Nov. 3 (UP)—All Moscow newspapers today published photographs and descriptions of Russia's new TU-114 jet airliner which the Russians say can carry 170 people and boasts a restaurant accommodating 48.

Moscow radio said the plane designed by a team headed by veteran Soviet aircraft designer Andrei Tupolev, is powered by four turbo-jet engines twice as powerful as similar foreign engines.

"It will take from 10 to 12 hours from Moscow to Vladivostok, Peiping, Rangoon or New York," the broadcast said.

The TU-114 is a larger and improved version of the TU-104 which already is being used by the Soviet airline Aeroflot.

MEANWHILE, Sputnik II whizzed over Moscow tonight, a scientific tribute to the 40th anniversary of the Bolshevik revolution, a challenge to the West and a prelude to bigger things to come.

The Soviets set out to make this anniversary week one the world will never forget.

The downgrading of former

Defense Minister Georgi Zhukov was cast aside momentarily as Muscovites craned their necks for a glimpse of Sputnik II with its Husky dog passenger.

The people gaped in awe at reports their scientists had pitched a half-ton object into space with a velocity that indicated they were well near their announced goal of reaching the moon.

The Kremlin has been pointing for this week for many months. On Thursday will come the climax when the great of the Communist world assem-

ble in Red Square for the anniversary parade.

NIKITA S. KHRUSHCHEV himself said last month that along with the intercontinental ballistic missile, and the Sputnik, the Russians have "more things up our sleeves."

There was considerable speculation that the anniversary parade would feature new-type planes and new rockets.

Already, canvas-shrouded objects have been parked under guard in the streets for the parade. One measured 80 feet long.

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CAMBRIDGE, Mass., Nov. 3 (UP) — Meteor expert John Rinehart said tonight the Russians "certainly will be able to bring" their globe-circling space-speeding dog back to earth alive.

Dr. Rinehart, associate director of the Smithsonian Astrophysical Observatory here, said it was "simply a matter of working out the technology" in planning the dog's safe return.

The dog, he said, can live for several weeks.

(A later broadcast monitored outside the Soviet Union reported the satellite was taking 103.7 minutes to circle the earth.)

The radio also said the new satellite, launched at an angle of 65 degrees to the equator, "was given a greater velocity in its flight at the time of reaching its orbit with a view of prolonging its life."

Transmitters with a strong signal were working normally.

APPARENTLY THE new satellite was not a sphere. A Moscow announcement described it as "the last stage of the carrier rocket housing containers with scientific instruments and radio transmitters."

The original satellite, launched Oct. 4 and still orbiting the earth with its fellow-traveling rocket, carried only a radio transmitter which went dead Oct. 26.

The latest space vehicle, launched in honor of the 40th anniversary of the Bolshevik revolution next Thursday, carried apparatus for measuring the radiation of the sun, short wave, ultra violet and X-rays. Its instruments measured the effects of space travel on the sturdy female husky dog enclosed with food in an air-conditioned chamber of the satellite.

ITS SIZE FAR overshadowed the planned American satellite of 20 pounds to be launched next March.

The successful launching of such a heavy object into space at such tremendous speed recalled Soviet scientists' statements after Sputnik I was launched that the new Soviet goal was to reach the moon, and that that goal was not far off.

(In London, space scientists guessed that the force of the rocket was enough to carry a smaller rocket to the moon.)

Sputnik At 1,056-Mile Altitude

MOSCOW, Nov. 3 (UP) — Russia's new half-ton satellite, encasing a Husky dog, today relayed to earth a wealth of information on mysterious space and its effect on living things from a height of 1,056 miles. Its speed and altitude indicated the moon was within man's reach.

A special Moscow Radio broadcast said "preliminary data show that the animal behaved calmly during the first few hours of flight and its general condition was satisfactory."

A scientist indicated an attempt would be made to bring the dog, the world's first space traveler, safely back to earth.

AT FIRST IT WAS announced that Soviet scientists had hurled the 1,222-pound Sputnik into an elliptical orbit whose maximum height was 932 miles. However, it later was announced the rocket's maximum altitude was 1,056 miles roughly 500 miles farther out in space than the original 184-pound Sputnik.

Speeds were relatively the same for both space vehicles — five miles per second.

BUT THE GREATER altitude of Sputnik II, with half a ton of scientific equipment aboard, revolved around the world in 102 minutes, almost seven minutes longer than it has been taking its predecessor.

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Mars Ship Would Start in Space

EDITOR'S NOTE: This is the second of a three-part scientific study of a trip to the planet Mars. It is condensed from "Space Journal," a quarterly published by the Rocket City Astronomical Assn. in Huntsville, Ala., whose members are the biggest names in the field of rocketry and space travel.

By **ERNST STUHLINGER**
Director, Research Projects
Office, Army Ballistics
Missile Agency

(Distributed by NEA Service)
The space ship for man's trip to Mars will be assembled in the satellite orbit close to the space station.

All components of the ship, its equipment, and the fuel needed for the round trip, must be carried into the satellite orbit by the three-stage commuter rockets.

These carrier rockets must overcome the earth's gravity and atmospheric drag, and they must impart to their payloads the orbital velocity of about five miles per second.

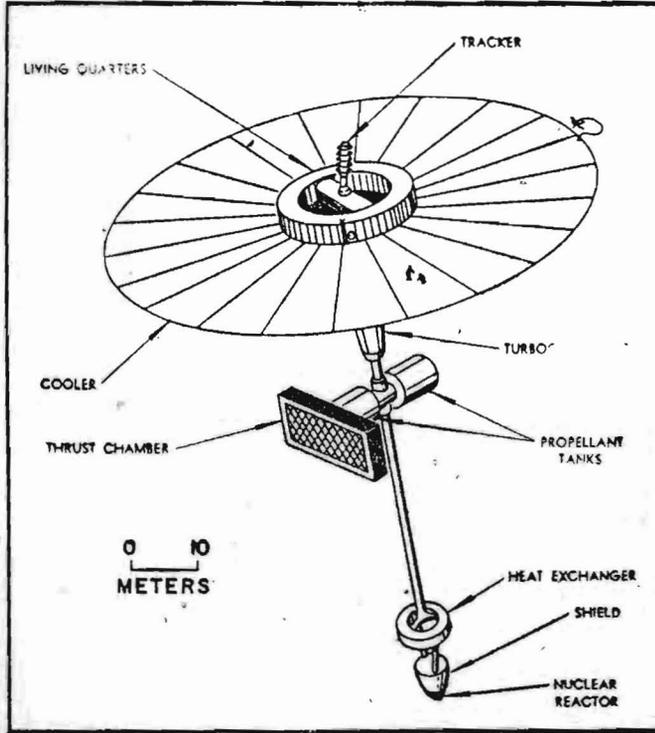
THIS EARTH-ORBIT operation proves to be the most costly part of the entire Mars expedition. For every pound of payload, about 160 pounds of take-off weight must be invested in the commuter rockets. The space ship designer will, therefore, make the greatest effort to build his vehicle as light as possible.

Furthermore, he will plan the expedition in such a way that any components which become unnecessary during the voyage, such as empty tanks, containers, supports, and even instrumentation, can be disposed of immediately.

Ship and crew should finally arrive back in the earth satellite orbit with a bare minimum of equipment and reserves.

BY FAR THE largest part of the take-off weight of such a space ship will be made up of the propellants. The attempt to reduce the mass of a space ship, therefore, leads immediately to an investigation of its propulsion system.

There is not much hope that the performance of



Outer Space Ship as proposed by Author Stuhlinger.

chemical rocket motors can be improved much beyond the point at which we have arrived today.

It seems, however, that another type of reaction motor holds some promise for use in an interplanetary vehicle.

A detailed study of the feasibility of an electrical propulsion system has already been made. This study has proved that an electrical system is feasible and that an electrically propelled space ship would be much lighter than a ship with a chemical propulsion system.

THE ELECTRICAL system would however, be definitely traveling between satellite orbits because the thrust of an electrical propulsion system would always be so small that it could never lift the vehicle from the surface of a planet against the gravity forces.

The basic assumptions underlying the design of the electrical space ship are a payload of 150 tons, including the crew, with equipment and sufficient supplies of oxygen, water, food, living quarters, observation instruments, and the landing

craft with equipment for the crew to subsist on Mars.

The structural design of the ship will take into account the absence of atmospheric drag and appreciable acceleration forces. Structural elements will be very light. The proposed design is symmetrical around the longitudinal axis, with the reactor at one end and the living quarters at the other.

AS SOON AS turbine and generator start to turn, the entire ship revolves slowly in the opposite direction.

The rotation of the ship, which continues as long as the turbo-generator turns, is very desirable, because it makes the condensed fluid in the cooler flow to the outer rim, from where it can be pumped back conveniently to the heat exchanger.

Also, the crew in the toroidal living quarters will sense at least a little gravity, stimulated by the centrifugal force.

The electrical ship's trajectory will not follow an elliptical path, but segments of spirals.

AT FIRST, the ship spirals around the earth, and its dis-

tance from the satellite station increases very slowly (after two hours, it will not be more than 20 miles away). After 100 days of steady spiraling, its distance from the earth will be 100,000 miles — about half-way to the moon—and it will have completed 376 revolutions around the earth.

A few days later, its speed and distance from the earth will have become so large that the ship is no longer restrained by the earth's attractive force. Its trajectory will flatten out, making a transition to a large spiral around the sun.

On the 195th day, the thrust unit will be rotated through 180 degrees and the ship starts to decelerate.

If it did not, it could never be captured by the Martian gravitational field. The deceleration leads the ship gradually into the Martian ellipse, about the sun.

ON THE 276TH DAY, the thrust will be switched again to acceleration, and this last maneuver carries the ship gently into the Martian ellipse.

It arrives there on the 347th day. If the entire trip has been timed correctly, the ship will approach a point on the Martian ellipse where Mars is located at that time.

If the ship should arrive too late or too soon, it will merely turn its thrust vector slowly toward the sun or away from the sun. By doing this, it manages to stay in the Martian ellipse with overspeed or underspeed.

On the 402nd day, the ship will have descended on its spiral to an altitude of 600 miles above the surface of Mars.

The crew shuts off the motor and prepares for the exploration of the planet. The correct time to start the return trip will be the 472nd day.

This long waiting period gives the crew ample time to observe Mars closely by telescope and rocket probes, to descend to its barren surface with a winged landing craft, to explore its landscape and study its mysteries, and finally to return to the orbiting space ship by means of the rocket-powered central part of the landing craft.

(Next: The trip home.)

Sputnik's Size, Weight Surprise to Washington

WASHINGTON, Nov. 3 (UP) — Russia's boosting of another satellite into outer space came as no surprise to official Washington today. The Russians had served advance notice that more developments were in the making.

But the size and weight of Sputnik II obviously was a surprise. And the new launching has brought more heated talk from Democratic members of Congress about this country's satellite program.

THERE WAS NO comment from the White House, the Defense or State departments. But Dr. Joseph Kaplan, chairman of the United States Committee for the International Geophysical Year, called the launching of the second satellite "a significant scientific achievement."

Sen. Joseph O'Mahoney (D-Wyo.) said President Eisenhower should recall Congress in special session immediately. He said Russia has taken the lead away from the Eisenhower administration, which he charged with "putting money first and defense and progress second."

Sen. Estes Kefauver (D-Tenn.), said "we really have got to get down to business."

Sen. Frank Carlson (R-Kan.) predicted that the next session of Congress will "take proper action." Said Carlson—"When

we get shocked, we do something about it . . . We did at Pearl Harbor and we will do it now."

Sen. Henry M. Jackson (D-Wash.), a member of the Armed Services' committee, proposed that Eisenhower name an all-powerful missiles czar, step up output of manned bombers and launch a "bold program" for increasing scientific and engineering training.

Sen. Richard B. Russell (D-Ga.), chairman of the Armed Services group, called Sputnik II a "very dramatic demonstration of Soviet achievements" in the missile-rocket field. He also said "it is time for us to end our complacency."

BUT RUSSELL and some

other lawmakers questioned the need for a special session of Congress. The Georgia Democrat said Congress already had given the administration "all the money and authority" it had sought for missiles and satellites.

The news of Russia's second successful satellite launching reached here as key members of Russell's Armed Services committee were en route to Washington for a special top-level briefing tomorrow on U.S. missiles programs.

Following the huddle with Defense Secretary Neil H. McElroy and his top aides, the committee members will meet to determine the group's next step.

Khrushchev Doubts War 'In Near Future'

MOSCOW, Nov. 3 (UP) — Soviet Communist party chief Nikita S. Khrushchev said in an interview released today he believes war is unlikely "in the near future."

Khrushchev said he could not declare categorically there would be no war. But he said

the international situation was not comparable to that existing before World War II.

THE COMMUNIST PARTY leader made the statement in an interview with Peter Dempson of the Toronto Telegram. The interview was printed in the Soviet magazine Meshdunarodnaja Zhizn, and released by the official news agency Tass.

In the interview given recently, Khrushchev again accused the United States and Turkey of planning an attack on Syria. He warned that intercontinental rockets with atomic and hydrogen bomb warheads could be fired to "any point on earth."

ASKED IF THE danger of war was greater now than one or two years ago, Khrushchev said:

"Such conditions exist in the world that the start of a new war can not be expected in the near future.

"One can say that the peoples want peace, that the present situation is not a pre-war stage—such a pre-war stage, let us say, as existed before World War II."

Confab Will Seek Answer To Sputnik

BOSTON, Mass., Nov. 3 (UP) — New England manpower experts will meet later this week to find ways to use the nation's scientists and engineers more effectively in meeting the new Russian challenge.

The two-day conference, on Thursday and Friday, will be attended by representatives of key industries, laboratories, and universities in the New England area.

THIS is the third in a nationwide series of meetings held under the auspices of President Eisenhower's committee on scientists and engineers. It is sponsored by the Engineering Societies of New England and the Massachusetts Society of Professional Engineers.

Dr. Howard L. Bevis, chairman of the President's committee, said the Boston conference was a "timely indication that industry is awake to the urgent national need . . . to keep from falling behind the Communist bloc in the fierce competition for technological supremacy which is shaping the world of the future."

"Since there is simply no way in which we can produce more scientists and engineers overnight," Bevis said, "our only recourse is to make the fullest possible use of our existing supply."

THE MEETING will be opened by Mayor John B. Hynes, until recently a member of the President's committee.

Twining Wants More Information

WASHINGTON, Nov. 3 (UP) — Gen. Nathan F. Twining said today he did not know whether Russia's new satellite signaled important new advances in Soviet rocketry or required a speed-up in the U. S. missiles program.

Twining, chairman of the joint chiefs of staff and the nation's top uniformed military leader, made the statement when asked by a reporter whether Sputnik II would force a reappraisal of the American program.

"We will have to sift this thing down first," he replied. "We don't know enough about it yet."

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By ERNST Director, Re Office, Ar Missil

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