UFO Approaches Brazilian Airliner

An unidentified flying object, emitting a brilliant bluish glow, maneuvered around a VASP Airlines plane on the night of July 24, 1961, according to the senior pilot, Cdr. Jose Guilherme Saez. (Report via J. Escobar Faria, NICAP Adviser, Sao Paulo, Brazil.)

The VASP "Scandia" was at 7,000 feet over the Ilha Grande when the crew, searching for a Caravelle jet airliner in the area, spotted a luminous object. When they saw it move, they first thought it was a meteor, then it began a series of unusual maneuvers.

"I radioed the Santa Cruz Air Force Base and Sao Paulo Airport," stated Cdr. Saez. "Suddenly the object changed direction, from the left to our right. Then I saw it quite near our Scandia."

Because of the intense glow, the exact shape of the UFO could not be determined, though it was visible several minutes.

"The UFO did not describe curves, but made angular turns," Cdr. Saez reported. "It moved up and down, back and forth, in all directions."

In a 1954 encounter between a UFO formation and a Brazilian airliner, some of the passengers were badly frightened. But this time there was no sign of fear.

"There wasn't any panic on board," said Cdr. Saez. "On the contrary, all the crew and passengers were glad to observe the phenomenon."

Brazilian Government officials are investigating the report.

Continued from page 4, col. 2

objects, appearing like parachute flares, fell from the sky. No traces of the objects were found despite a search. Nor, to date, has there been any answer to this puzzle.

Aug. 29, Wichita, Kansas. A glowing object which descended toward the earth, then headed northeast, was reported to the Wichita Eagle. A witness said she saw round ports, or exhaust outlets, on the UFO.

Aug. 30, Cincinnati, O. About 9 p.m., a red-lighted object which appeared to climb, then explode with a white flash, was seen by many citizens.

Sept. 3, San Francisco, Calif. A cylinder, or projectile-shaped UFO, with two bright lights was reported hovering over the western edge of the city, in the early morning hours. According to the Enterprise Journal, photographs were taken and they will be evaluated by "military authorities."

Sept. 5. Cincinnati, O. An explosion, similar to the Aug. 30 case, was reported at 9 p.m. by Robert Knaugh.

Sept. 10, Cincinnati. A red-lighted object, like the Aug. 30, UFO, was seen arcing across the sky at 8:30 p.m. Report by Dorothy Lefler.

Sept. 21, Transpacific jet airliner reports. Page 1.

Oct. 3, Salt Lake City pilot-UFO chase. Page 3.

(Other sightings for this period, held for more details, will be reported later.)

ACCIDENTAL-WAR DANGER INCREASING

In a recent statement, Vice President Johnson declared:

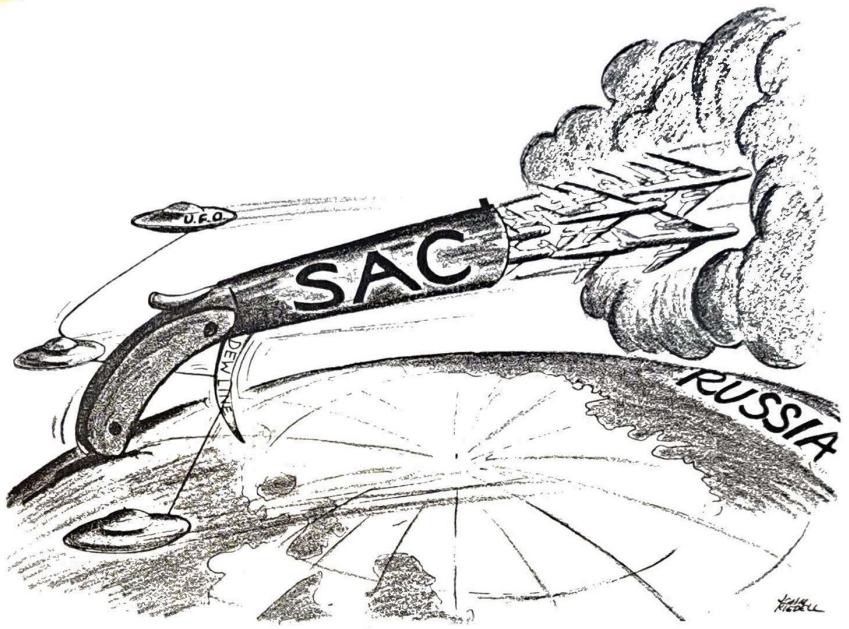
"The western allies must be prepared for every possible eventuality--deliberate or accidental."

Three weeks ago, the Vice President sent the Senate Preparedness Subcommittee an urgent NICAP report on one increasing hazard: The danger of mistaking UFOs for Soviet bombers or missiles.

There is an equal danger that Russia might fatally mistake UFOs for a U.S. attack. If our Government spotlighted this risk, it might cause the Kremlin to take similar steps to end confusion over UFOs.

mutual disaster was inevitable, both fleets might warily circle, well out of range, then return to their bases. But if high-speed UFOs were tracked, heading for either country, it could cause a fateful decision. Several UFOs have been tracked at missile speeds--one at 18,000 m.p.h., by Navy scientists at White Sands, two at over 9,000 m.p.h. (Goose Bay AFB, and by AF B-29 radar.) If either side mistook UFOs for H-bomb missiles aimed at their cities and bases, war would be almost inevitable.

The risk is there, and growing. Even if it is only a tiny fraction of 1%, it is still too great.



The following steps show how UFOs might trigger World War III:

1. U.S.-Canada radar picks up unknown, high-speed flying objects heading for this continent. Many defense-radar personnel fully accept denials that UFOs exist; when all radars show such solid objects in large formation or groups, obviously under intelligent control, these operators are likely to conclude: Probable Soviet attack. SAC (Strategic Air Command) bombers are launched. By AF admission, this situation has already occurred.

2. Soviet agents near SAC bases see the launchings, secretly radio Moscow. Soviet bombers are launched, missile bases alerted.

3. As SAC bombers head toward Russia, checks are swiftly made to confirm or disprove the alarm. Intelligence has no word of sudden Soviet preparations. But, because of the Berlin crisis, Russia is known to be in at least partial war-readiness. This could be a surprise attack.

4. At a certain point, SAC pilots are prepared to turn back uness they receive coded signals that the President has ordered attack. Presumably, the Soviet has a similar system. By now, both U.S. and Soviet radar have picked up the other side's bombers. This would not make war certain--realizing that

"The confusion about UFOs among our defense personnel should be ended promptly," warns the NICAP Board. "All available information, including methods of distinguishing UFOs from ordinary missiles or aircraft, should be released at once."

Many members already are backing NICAP's attempts to reduce UFO-secrecy dangers. But the average American still does not realize the risk of accidental war from mistaking UFOs for Soviet missiles or bombers. This danger has been greatly increased by Khrushchev's threats and ruthless Soviet efforts to intimidate the United States. We urge all members to help spread word of this hazard--not just as a patriotic duty, but to increase our chance of survival as Communist-inspired tension menaces the free world.

Questions and Answers

Q. Does NICAP accept claims of electro-magnetic interference by UFOs? Has this been blamed for any accidents?

A. There is strong evidence of E-M interference with radio, television, and lights in homes and cars, also car ignition. Several pilots have reported radio interference; one stated his radio-navigation equipment burned out. No known accidents.

Continued on page 8, col. 1

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New York Times

December 1, 1957

THE NATION

Q. & A. on Missiles

"It looks like a new version of an old game—missile, missile, who's got the missile?" In those words Lyndon Johnson, chairman of the Senate Preparedness subcommittee, last week summed up three days of confusing, sometimes conflicting testimony on the status of the nation's missile program.

The testimony was presented at the Preparedness subcommittee's investigation of the missile situation. The scene of the investigation was the Klieg-lit Senate caucus room. The witnesses—all of them recognized authorities in their own fields—included Dr. Edward Teller, physicist and "father of the hydrogen bomb"; Dr. Vannevar Bush, wartime head of the Office of Scientific Research and Development; Lieut. Gen. James H. Doolittle, chairman of the Air Force Scientific Advisory Board; Neil McElroy, Secretary of Defense; Donald A. Quarles, his deputy, and Allen W. Dulles, head of the Central Intelligence Agency.

For the most part, the witnesses addressed themselves to three questions: How far ahead is Russia? Why did the United States fall behind? What can the U. S. do to catch up? These were the highlights of the testimony:

How far ahead is Russia? Most of the witnesses agreed that Russia was ahead of the U. S.—some said far ahead—in long-range ballistic missiles. "The rate of Russian progress is much rapider than ours," said General Doolittle. "The Russians are far along, very far along, in rocket development," said Dr. Teller. In closed sessions C. I. A. Director Dulles detailed what committee members described as "a sad and shocking story" of Russia's advances.

McElroy Testifies

But the Pentagon officials—Secretary McElroy and Deputy that [Russia] started sooner. She started in 1946 and we did not start a coordinated effort until 1953." Dr. Bush said: "Our difficulties are three, as I see them: First, organization * * * service rivalries * * *; second, * * * the absence of over-all planning * * * the Unification Act has never worked * * *; third, * * * the fact that we have been complacent and we have been smug." Dr. Teller said the United States effort "is not good enough."

What can the U. S. do to catch up? These were the major recommendations:

(1) Jack up defense spending. "We need * * * an immediate, substantial increase in our military budget," said General Doolittle. Secretary McElroy maintained that a "moderate" increase in spending was needed.

(2) Relax secrecy requirements. Dr. Teller said: "The situation is dangerous enough to justify, in fact absolutely to require, the fullest cooperation with our allies in the * * * application of science and technology to the development of weapons. * * * Cooperation means that some of our secrets will be lost a little faster, [but] we will, on the other hand, by cooperating with our allies, produce new secrets faster."

Defense Rivalry

(3) Coordinate defense planning and eliminate inter-service rivalry. General Doolittle said: "The Secretary of Defense * * * should be provided with an advisory military staff to assist him in resolving the honest differences of opinion that now occur between dedicated military people. * * *"

(4) Improve scientific education in the U.S. and stress the importance of science to security. Mr. Dulles told the committee that, in contrast to the U.S., "every Russian student, by the time he finishes high school, has had five years of physics, five of biology, four of chemistry and ten of mathematics."

On Wednesday the hearings recessed until Dec. 13. Apparently they have already had some effect. During the week the Administration made a series of moves that seemed designed to show the committee it is sparing no efforts to bolster the missile program.

First, Secretary McElroy announced the decision to put two intermediate-range ballistic missiles—the Army's Jupiter and the Air Force's Thor—into production. The Secretary told the committee that neither Jupiter nor Thor is a "thoroughly proved missile." But, he said, the requirement for speed is too great to delay production any longer.

Second, the White House upgraded the President's Scientific Advisory Committee by moving it from the Office of Defense Mobilization to the President's office and appointing five new members to it —including General Doolittle.

Anti-Missile Missile

Third, after committee witnesses had urged strengthening the Stategic Air Command, the Air Force announced that its long-range missile programs would be transferred to S. A. C. The Air Force also confirmed that it was at work on an anti-missile missile called the Wizard.

The timing of these announcements underscored the political aspects of the missile situation. Each party is seeking to blame the other for the lagging U.S. defense program; each wants to convince the committee—and through the committee the voters—that its record is clear. Although Senator Johnson has promised to keep the hearings "completely non-partisan," the prospect is that, as the committee delves deeper into the missiles issue, the political overtones will grow louder.

SQUARE DEAL: New York City's Lincoln Square project is a $205,000,000 plan for creating a housing development and a cultural and collegiate center in a deteriorating thirteen-block area north and west of Columbus Circle. The plan includes a Performing Arts Center that will house the Metropolitan Opera and the Philharmonic Orchestra; a new home for the Juilliard School of Music, a downtown campus for Fordham University and 4,500 apartments. The city will pay $14,000,000 of the total cost, the Federal Government $28,000,000 and private interests the rest. Last week the New York Board of Estimate unanimously approved the project and the city moved to start condemnation proceedings. If there is no further delay, the job will take about five years. But opponents of Lincoln Square, mainly business men and families who will be displaced, will go to court tomorrow seeking an injunction to block the project.

RETREAT: The U. S. Internal Revenue Service recently contrived a new maneuver in its eternal war against tax evaders. The agency added a line [6 (a)] to the income-tax form and said taxpayers were to use it to list the business expenses for which they were reimbursed by their employers. The objective was to help spot income cloaked as "expenses" for such items as yachts and trips to the Kentucky Derby. Last week the Government retreated. Internal Revenue Commissioner Russell C. Harrington said that because taxpayers had complained that the order came too late in the year for them to go back and round up documents proving their expenditures, "taxpayers will not be required to answer line 6 (a) * * *." But the reprieve will apply only to 1957 income, he added. After that, taxpayers will have to fill in the line and have the documents to support their answers.

Austin American-Statesman

December 15, 1957

Experts Propose Space Race Push

Satellite Station In 10 Years Seen

WASHINGTON, Dec. 14 (AP) — Rocket expert Wernher von Braun today proposed that the United States embark on a 10-year project for a manned space station, in the race with Russia for a foothold in the firmament.

He said it could be handled by a national space agency with a spending budget of about 1½ billion dollars a year over at least 10 years.

The German-born space scientist, who is now working for this country, agreed with Maj. Gen. John B. Medaris that pentagon red tape has hampered and delayed America's missile-statellite program while the Russians aim for "control of outer space."

Testifying before the senate preparedness subcommittee, Von Braun suggested that the 10-year program include a 5-year project to "have a man orbiting the earth on a returnable basis." He said space stations could be used for reconnaisance, bombing, and for a jamming radar fences thrown up against intercontinental ballistic missiles (ICBMS).

Among their more peaceful uses he cited long range weather forecasting and control and high speed mail delivery, handled through tape recording devices. Six satellites picking up and transmitting messages as they orbited the earth "could put all of the Post Offices in the world out of business," he said.

Von Braun said there is no doubt the Russians have developed the ICBM to a point where they can send atomic or hydrogen warheads anywhere on earth.

"This is not a question of argument but of figuring it out with a slide rule," he said.

Sen. Lyndon B. Johnson (D-Tev), the subcommittee chairman, said the Russians' success with sputnik II indicated they "could put a hydrogen bomb on top of the capitol dome."

Von Braun said there was a question of accuracy.

Johnson said this country had consistently underestimated Russian capability and again asked Von Braun to speculate about soviet ability to "put a hydrogen warhead on the city of Washington."

Von Braun then conceded this was possible.

He said the Russians now have rocket and missile engines "many times more powerful" than those of the United States and are at work on even more powerful new designs.

Sen. Symington (D-Mo) asked Von Braun if it was correct that people have been told there has a big speedup on missiles but actually there has been none because of lack of funds.

"That is correct, sir," the witness replied.

At one point Von Braun said: "The termites got into the system."

Medaris spoke of "profound psychological" handicaps imposed by defense department decision wavering.

Von Braun is the German-born scientist now serving as technical director of the army ballistic missiles center at Huntsville, Ala., and Medaris is commanding general at the center.

Both testified at the second day of public hearings by the senate preparedness subcommittee.

Medaris said a start on the army's Jupiter, a 1,500-mile intermediate range ballistic missile (IRBM) was delayed at least a year by lack of funds in the defense department. Even after it got started, late in 1955, Medaris said only "superhuman efforts" kept it going on schedule in the face of pentagon impediments.

Von Braun said the Jupiter program was "seriously impeded" by a system of advisory committees in the pentagon, on which secretaries depend before making decisions.

These advisory committees of scientists are a good thing while a project is being kicked around in the early stages, Von Braun said, but once a decision to go ahead has been reached "the interference should stop."

After the ballistic missile center was established at Huntsville in February, 1956, Von Braun said, things went smoothly for a while — "we had everything we asked for."

But after a year or so, he said, "The termites got into the system again."

Von Braun said there was continual delay on decisions because of the advisory committee system, and as things have worked out he and Medaris have to make frequent trips to Washington to confer with the committees.

Medaris said the United States must seek "at least parity" in the race for space with Russia.

He said it was a mistake to try to divorce the satellite and missile programs because both involve propulsion into outer space with guidance systems.

"They are not divorced in our (Army) program because we are using weapons to launch a satellite," he said.

The Army has recently been ordered to proceed with the launching of an earth satellite. The Navy's Vanguard project failed to loft a test moon earlier this month but further Navy attempts will be made.

Medaris said the Army could have put up a satellite long before this if it had been allowed to go ahead. He said an Army offer to launch a satellite with instruments aboard was rejected in August, 1955. The Navy was told to go ahead with project Vanguard instead, he said.

Sen. Saltonstall (R-Mass) asked why the Army offer was turned down.

"I don't know," Medaris replied. "The whole business has been somewhat incredible to me."

Medaris supported a proposal of Lt. Gen. James Gavin for a reorganization of the joint chiefs of staff but he opposed the creation of any single new agency for controlling satellite, missile and related developments.

"We already have too many committees and commissions," he said.

Medaris said the missile-satellite program should be placed under control of one man "of great ability and courage." He said:

"I think there should be a power of decision that rests with a man who will ride with his own answers."

Despite what he called the psychological handicaps imposed by the defense department, Medaris said development of the Army's entry in the intermediate range ballistic missile (IRBM) field, the Jupiter, is not only on schedule but ahead of schedule.

He said the psychological handicap developed from uncertainty over whether the Jupiter would be replaced by the Air Force's Thor, also a 1,500-mile range missile.

"We were sort of in the position of the patient who had been given a death sentence by the doctor and just refused to die," he said.

Sen. Symington (D.-Mo.) asked Medaris if he was satisfied with the Jupiter.

"I think it's not only a good missile, I think it's a rather incredible missile," Medaris replied.

He said he definitely believes the Jupiter is superior to the Thor, but he added he believes it is worthwhile to go ahead with both missiles. With two projects the sense of urgency is a little greater, he said, and may lead to development of a missile sooner.

Medaris also told the subcommittee he has not yet been able to pry loose from the defense department 8 million of the 25 million dollars appropriated for the Jupiter this year.

"I know it's in there and it won't come out," he said.

Sen. Stennis (D.-Miss.) asked what he was doing to get the money, which Medaris said was needed for laboratory and testing projects at Huntsville.

"I beat on the head of the man I know who had it last," Medaris replied.

Medaris said he protested a Pentagon directive of last Aug. 13 restricting overtime work on missiles.

"I never did put it into effect," he said, adding that the order was lifted four days after Russia fired its first sputnik into space.

Medaris also tol dthe subcommittee that:

1. The United States doesn't have under development a rocket engine of the type Russia used to shoot her 1,000-pound Sputnik II into space; one should have been started three years ago.

2. Lack of funds in 1954 delayed for at least a year the Army's plans to speed development of the Jupiter.

3. The Army has solved the re-entry problem—the problem of bringing the nose cones of missiles back into the earth's atmosphere undamaged by friction heat.

Medaris said the Army overcame the re-entry problem in two tests. One of the nose cones that passed through the heat barrier was displayed by President Eisenhower on a nationwide radio-TV broadcast recently, he said.

A second nose cone survived a test, he said, but was lost in the ocean. Medaris said the re-entry problem was solved with the help of German scientists.

Testifying at the second consecutive day of public hearings, Medaris said:

"There is no high thrust, advanced type rocket engine under development today and it should have been started three years ago."

In response to questioning by Chairman Johnson, Medaris said he was talking about the kind of engine he believes the Russians used in the first stage of their half-ton, dog-carrying Sputnik II.

He said there is a high thrust engine in the engineering stage at North American Aviation but its development is not being pushed.

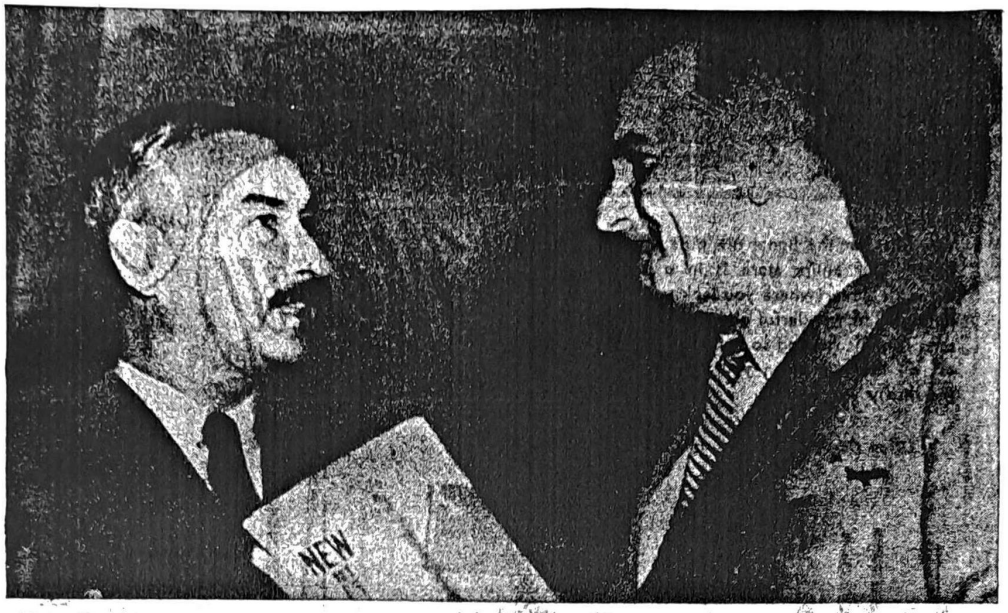
"It should be developed on a crash basis but it is coasting along," he said.

He said the reason for this is that no one can prove how the engine might be used.

At the outset Medaris said the Army was convinced in 1954 that

Austin American-Statesman

December 15, 1957



United Press Telephoto

Major General John B. Mederis (left), commander of the Army Ballistic Missile Agency at Huntsville, Ala., testifying before the Senate preparedness subcommittee in Washington Saturday, said the Army had kept its Jupiter missile program on schedule while protesting and ignoring restrictions imposed by the Defense Department. Gen. Medaris is shown with the subcommittee chairman Senator Lyndon B. Johnson as he arrived to testify.

"we could go for the 1,500-mile missile" and started work on the Jupiter. But, he said:

"The financial situation would not permit us to go ahead."

He said it was not until October, 1955, after a study by a committee headed by Dr. James R. Killian, that the Army received a go-ahead signal. Killian now is Eisenhower's scientific adviser.

The Army Ballistic Missile Agency at Huntsville was set up early in 1956 to develop the Jupiter under high priority. The 1,500-mile range Jupiter is the missile that has been promised to U.S. Allies in Western Europe, but there have been official statements that it will not be available for this purpose until late 1958.

Medaris testified the Army needs missiles for its own use beyond the 200-mile range now imposed by defense policies. Under these policies the Army is working on longer range missiles but when perfected they would be turned over to the Air Force.

Medaris said the successful Army Redstone missile was actually designed for about 450 miles but this was cut to 200 miles because of the heavy weight of the warhead.

Sen. Saltonstall (R.-Mass.) asked more details on this.

Medaris said part of this information was classified but his public testimony indicated that early heavy nuclear bombs caused the cutback in range. He added that improvements in warheads since would permit the longer range.

Medaris said the Jupiter intended for 1,500 miles, actually had been fired more than 3,000 miles.

HOUSTON CHRONICLE
December 6, 1957

Johnson Draws All Groups Together at Testimonial Dinner

The testimonial dinner given Sen. Lyndon B. Johnson by Houstonians at the Rice Hotel was impressive from several viewpoints. It drew one of the most representative audiences seen here in many years. It signified a composite pride of Texans in their senior senator, who is the majority leader of the United States Senate and one of the most powerful men in the nation today. The dinner manifested a political cohesiveness unusual in the Democratic party in Texas in recent years.

The right wing, the middle-of-the-road and the liberal wing were well represented at the dinner. Rising above partisanship, some of the top Republicans in Houston were present. Gov. Price Daniel, Lt. Gov. Ben Ramsey, Railroad Commission Chairman Ernest O. Thompson, other state officials and a number of members of the Legistlature were present. Labor and big business were represented.

The gathering evoked thoughtfulness. If Johnson can find a middle ground which a majority of all factions can accept in national politics, he will have accomplished the seemingly impossible.

While the views which Johnson expressed on national security were not especially fresh, they were gathered into a group which the senator believes is necessary if the United States is to catch and surpass Russia in scientific developments for war.

One of Johnson's points was particularly interesting. He said, "we must revise our methods of teaching and our curricula so that science and technology are no longer underrated." It would appear that the senator is in sympathy with the movement to restore in the public schools an emphasis on the fundamentals, which are essential basic subjects for later specialization in science and technology.

Johnson made another point which merits much consideration, that in meeting the challenge we must tap the reservoir of talent and ability among people who have retired. This is a trained man-power pool which is being overlooked by private industry as well as government.

The senator suggested that a space academy may be needed. This is similar to some other suggestions made in Washington, about the possibility of a science academy.

Johnson advocated placing the responsibility for scientific developments associated with government in a new or existing agency. A number of members of Congress have been critical of the Eisenhower administration's handling of this problem and have called for a special agency, possibly similar to the Manhattan project which developed the atomic bomb.

Johnson stayed away from domestic issues, which might have caused differences among members of the audience and marred the great show of unanimity at the dinner.

Pointing the Way

WASHINGTON POST-TIMES HERALD

December 13, 1957

Hearing Today On Missile Lag

By Robert C. Albright
Staff Reporter

A special Senate Preparedness Subcommittee today will resume hearings on lagging United States missile-satellite programs with testimony by a management expert on methods of speeding up advanced-weapons output.

Prof. J. Sterling Livingstone of Harvard's School of Business Administration will be asked why it takes this country roughly twice as long as the Soviet Union to plan and produce certain new weapons.

Livingstone was called in to testify, just ahead of William M. Holaday, Defense Department missiles chief, as Senate Majority Leader Lyndon B. Johnson flew here from Texas last night to open the latest series of hearings.

In these other developments:

• Sen. Ralph Flanders (Vt.), a Republican member of Johnson's Subcommittee, proposed that James R. Killian, President Eisenhower's special assistant for science and technology, be placed in full charge of the U. S. missle program "with nobody over him." Flanders also urged that the United States shift its missile-satellite testing to a Pacific Ocean island to avoid publicity on failures.

• In New York, Secretary of Labor James P. Mitchell defended public disclosure of the Vanguard satellite test. Describing a free press as basic to democracy, Mitchell told the Life Insurance Association of America, "The fact of public knowledge is far more important to the strength of democracy than any technical achievement could ever be."

Hearings Next Week

The second round of Senate Preparedness Subcommittee hearings will run through today and Saturday and through next week, possible longer. Indications are that a third series of hearings may be set for early in January. In the present round, the Subcommittee will hear from a long list of Army, Navy and Air Force witnesses, including Wehrner von Braun, the Army's missile expert.

Flanders yesterday, in criticizing the publicity accompanying the Vanguard rocket-satellite experiment, said the next launching site should be moved to the remote Pacific area where hydrogen bombs are tested. He said Americans "talk too much" and "seem to depend on threatening and bragging."

Mitchell in his New York speech said, however, that "there is far more to fear from concealment than there is from technical failure, as far as our moral strength as a Nation goes." Said Mitchell: "Some persons insist on hearing about it, and then act as though they wish they had not. I can only call such attitudes childish and illogical."

Expects "Hundreds" Soon

In an interview with the International News Service's Telenews, after his press conference, Flanders predicted that the United States will have "scores and hundreds" of 1500-mile intermediate range ballistic missiles "in a few months."

His statement came in answer to a question on how soon this country will have IRBM's, and how many. He said the Air Force's first IRBM, the Thor, is "going into operational production" and on short notice can be stepped up to a mass basis.

Christian Science Monitor

December 6, 1957

Johnson Proposes 'Department of Outer Space'

By Courtney Sheldon

Staff Correspondent of The Christian Science Monitor

Washington

Is it time for a "Secretary of the Exterior?"

Signs of uneasiness are accumulating over the adequacy of existing agencies to exploit the new day of outer space.

The search for the answer is clearly evident in a Houston speech of Senator Lyndon B. Johnson (D) of Texas, Majority Leader in the Senate. With penetrating simplicity he declared:

"What is really before us is something that should have a deep appeal to the American soul. It is a new frontier—a new age that is exciting and challenging."

The senator, who is also now heading a Senate subcommittee inquiry into missiles and satellites, urged that "we lodge—either in a new or an existing agency — specific responsibility for the physical, economic, and legal problems of exploring outer space."

A question that the senator did not specifically raise is whether the Department of Defense should be given ultimate control over outer-space developments. Should mankind's great adventure into space be solely for military purposes?

Arms Efforts Backed

There is no dispute over whether the military in the present state of the world should prepare itself with all possible haste to defend free-world interests in any potential outer-space battlefield.

Senator Johnson placed high priority on stepping up "the development of weapons which will assure our survival." He also warned that Americans could ignore Soviet progress in natural science and technology only at great peril.

But the standout theme of his Houston talk was that "there is something much bigger in front of us than a few pieces of military hardware."

Killian Role Assessed

One suggestion by Senator Johnson was that the United States intensify its research into "the physical and biological problems of outer space—perhaps through a space academy."

It is significant that the senator's recommendations followed the close questioning by his committee of the Eisenhower administration's plans for outer-space projects.

Initial testimony has made it clear that Dr. James R. Killian will be operating largely in an advisory capacity, that he will not be given sweeping orders or administering gigantic undertakings.

Though his presence may be of tangible value to the White House, the existing lines of authority and administration apparently remain unchanged.

A similar pattern is found at the Pentagon. It is the new Secretary of Defense, Neil H. McElroy, who, if anyone is, is the missile czar.

Under him are the director of guided missiles and the advance research projects agency. The latter will handle military outer-space projects under a single manager and then turn over operational control to one of the services. There is also a separate agency set up to coordinate Air Force and atomic-energy programs for a nuclear-powered aircraft.

Obviously not everything that will be uncovered will have military application. Who will see to it that such programs are extracted from the military mill and properly financed and administered?

It is recognized now that the United States was beaten by the Soviets in launching a satellite moon because the Pentagon did not rate the United States program highly enough to give it overriding priority.

The problem is more pressing than it may appear. Who, for example, could the White House assign to look into and then shepherd such upstream projects as those proposed by the American Rocket Society?

The society has suggested the establishment of an agency analogous to the Atomic Energy Commission and the National Advisory Committee for Aeronautics.

According to Comdr. Robert C. Truax, the society's president, an initial annual budget of about $100,000,000 would be required. The society's plans were sent direct to President Eisenhower Oct. 14 and made public by the society Dec. 4.

Among the projects suggested were launching earth satellites with instrument loads up to one ton within five years; satellites with loads of several hundred pounds up to and around the moon within 10 years; research comets to Venus and Mars within 10 years; manned satellites to circle the earth within 10 years; manned vehicles to the moon in 15 years and landing on it in 20 years.

Nonmilitary benefits to the country would include improved weather observations, television and radio transmission links, and multiplication of man's knowledge about the physical universe.

demands that the relations between our two countries be as reasonable and as constructive as we know how to make them. It is also our obligation that we make it possible for other countries to live in peace with each other if this can be done. (Toast at a Luncheon Honoring Chairman Aleksei Kosygin, Glassboro, New Jersey, June 23, 1967). [736

. . . **Interests.** The common interests of the peoples of Russia and the peoples of the United States are many—and this I would say to the people of the Soviet Union: There is no American interest in conflict with the Soviet people anywhere. (Remarks, Cook County Democratic Party Dinner, Chicago, Illinois, June 3, 1965). [738

. . . **People.** The Russian people have a desire for peace, in my judgment; but they have a different philosophy from ours. . . . And if we are not to be buried, if we are to survive, it's going to be not because of the number of our people or the wealth of our resources or the measurement of our acres. It's going to be because we have a better system of government. (Remarks at a Reception for Small Businessmen, the White House, August 20, 1964). [739

. . . **Responsibility.** There are deep and very serious differences in our two societies, but one thing we do have in common, as Chairman Kosygin himself said when he addressed the United Nations, is a grave responsibility for world peace in a nuclear age. Every crisis in the last 20 years has necessarily invoked that common responsibility and repeatedly we have seen the dangerous consequences of incomplete understanding. (Remarks at the President's Club Dinner, Los Angeles, California, June 23, 1967). [740

SPACE EXPLORATION

. . . When we ask what this nation or any nation expects to find from exploration in space, the answer is one word: knowledge—knowledge we shall need to maintain Earth as a habitable environment for man. The resources of this planet are already taxed to support human existence. Now and even more each day, as the family of man increases so rapidly, fertile soil, clear water, clean air and a safe atmosphere all become more precious to men and nations than the metals and jewels of ages past. The quest for gold and silver, and diamonds and rubies, once led men to explore the Earth seeking enrichment for themselves and their nations. So now the realities of this and future ages require that nations pursue together the exploration of space within this galaxy, seeking new knowledge and new capabilities to enrich the life of all mankind. The future leaves no option. Responsible men must push forward in the exploration of space, near and far. Their voyages must be made in peace for purposes of peace on earth. (Message to the Senate Regarding Ratification of the Outer Space Treaty, February 7, 1967). [741

. . . **Cooperation.** Men who have worked together to reach the stars are not likely to descend together into the depths of war and desolation. . . . Barriers between us will fall as our sights rise to space. (Remarks at Presentation of NASA Exceptional Service Awards, the White House, June 17, 1965). [742

... **Cooperation.** We intend to live up to our agreement not to orbit weapons of mass destruction and we will continue to hold out to all nations, including the Soviet Union, the hand of cooperation in the exciting years of space exploration which lie ahead for all of us. (Remarks at a News Conference, the White House, August 25, 1965). [743

SPACE PROGRAM

... In the brief span of less than ten years, the United States Space Program has advanced from small and hesitant beginnings into a large and vital national effort. Today, its achievements provide daily testimony of our country's leadership in space capabilities, in their applications to peaceful practical purposes, and to the advancement of scientific understanding of the world in which we live. (Statement Upon Releasing the Report of the President's Science Advisory Committee, January 11, 1967). [745

... The space program of the United States today is the largest effort ever undertaken by any nation to advance the frontiers of human knowledge. What we are discovering and building today will help solve many of the great problems which an increasingly complex and heavily-populated world will face tomorrow. (Message to Congress, January 31, 1966). [746

... As our space program continues, the impact of its development on everyday life becomes daily more evident. It continues to stimulate our education, improve our material well-being, and broaden the horizons of knowledge. It is also a powerful force for peace. (*Idem.*) [747

STATE

... In this century of contest, it is well for us all to remember that the harder the contest is, it remains always whether the man shall serve the state or whether the state shall serve men. (Remarks at the Presentation of the President's Award for Distinguished Federal Civilian Service, the White House, June 2, 1965). [748

... **And Individual.** Once, the ancient world accepted the idea that the individual was unimportant to the state; most men were slaves and vassals. That has changed as the idea has increased of the individual's freedom in a society which he serves of his own free will. That is our way today. It is to go beyond individualism without uprooting the individual. It is to build vital communities and neighborhoods in which men live not by bread alone, but by a shared sense of responsibility to one another in freedom and security. (Remarks, Dayton, Ohio, September 5, 1966). [749

STATES RIGHTS

... The American system is the fortunate one of federalism. James Madison called it the happy combination. Both the Federal Government and the States have always exercised leadership in solving the problems of the Nation. They are not, they must not be, rivals for the citizens' taxes and loyalty. They are separate agencies, each with special resources, each with special capabilities, but both joined in a united attack on the enemies of our country and on our common problems. (Remarks at a Luncheon for a Group of State University Presidents, the White House, August 13, 1964). [750

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L.E. Johnson Space File

December 10, 1963

20a

Dr. Jerome B. Wiesner

Dr. Donald Steininger

Safety probabilities relative to SA 5 test.

In SA5 the Saturn I will put into orbit its second stage (SIV) and a dummy payload which consists of 13,600 lbs. of sand and a 1200 lbs. Jupiter nose cone. Total weight in orbit is 38,000 lbs. Other characteristics are:

Orbit perigee and apogee: 140 n mi. x 345 n mi.
Lifetime: can be anywhere between 0 and 340 days with nominal of 148 days
Orbital inclination: 31.6°.

To determine probability of a person getting hit by a decaying fragment, NASA obtained services of Lockheed to analyze the reentry to determine number and size of fragments and area of dispersion; and NRL to calculate probabilities. The results of the Lockheed calculations are summarized in the attachment and seem reasonable.

The probability calculation made the following assumptions:

1. There is an equal probability of a fragment impacting anywhere between +31.6° and -31.6° of latitude.

2. Of the total population between these latitudes, 1/3 are asleep and therefore under cover and, of those awake, 2/3 are under cover. Therefore, 2/9 of total population is exposed.

3. Even distribution of exposed population.

The probability calculations compared the total area offered by exposed persons and the area of impacting fragments with total area of earth between +31.6° and -31.6°; and the probability of getting hit by one fragment was multiplied by the number of fragments. This resulted in the probability of hitting a person of 2 in 100,000.

If an inhabited area is defined as an area having population density of 39 persons/sq. mi. (Kansas has 25), then NASA finds that at 5% of the total area between +31.6° and -31.6° falls in this category. So the chances of the fragment actually falling on such an area is about 1 in 20.

[illegible]

[illegible] observations seem pertinent:

1. [illegible] orbit [illegible] the Jupiter and [illegible] [illegible]. The only way [illegible] is to [illegible] more [illegible] to the stage. This [illegible] weight (which NASA [illegible] cannot be [illegible]) and [illegible]; and would require about 2 years and $6 to 7 million to develop. NASA maintains this would mean a considerable delay in the program. This argument seems reasonable.

2. The Soviet Union in their Vostok launches place a stage in decaying orbit about the same size as that we are now considering.

3. Present routinely acceptable safety probability at AMR is 1 in 100,000. There have been many occasions when waivers have been permitted by AMR for higher probabilities, and in several instances as high as 1 in 700 over Cuba. (The latter information is from NASA and I have not yet been able to verify it.)

4. Although not formally announced, the forthcoming launch of the large payload, has been anticipated by the press. It would seem unwise to cancel because we consider safety problems too great, when we face acceptance of similar risks in many future tests.

5. The calculations are conservative because:

   a. The actual probabilities are such that impact along 31.6° latitudes are more probable than along equator. (This means greater probability of landing on water than was assumed.)

   b. All areas were treated as being of equal political concern. If selected areas of particular concern were picked out, and probabilities calculated, the chances of impact and injury would be much lower.

6. NASA has done its best to reduce hazard, for example by using a [illegible] payload, and perforating the Jupiter nose cone so that it will be destroyed during reentry.

Finally, the only immediate remedy to the situation for SA-5 if [illegible] are unacceptable, is to cut off engines before orbit. NASA [illegible] the following information is desired and would not be obtained:

1. Precision of orbital velocity.

2. Determination of tumbling rates (NASA says this information will be useful for SA-6 which will have a micrometeorite payload).

Although the value of these from a technical standpoint may, perhaps, be questioned, a more important consideration, in my opinion, is the fact that in future tests requiring orbit we will face the same risks.

I believe that we should recommend to the Secretary of State that these risks should be considered as not unusual and to be necessary if present Apollo program is to proceed on schedule. Since there are so many assumptions necessary in the calculation of these probabilities, it would be useful for Mr. Rusk or his representatives to talk again to the NASA people and specify areas of concern. If, for example, only a few areas are of real concern to the Secretary, then the probabilities above would not apply and actual probabilities would no doubt be much less.

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NATIONAL .RONAUTICS AND SPACE ADMIN. TRATION

~~CONFIDENTIAL~~

16-b

RESPONSE TO QUERIES'

RE: SA-5 Fragment Return Possibilities

A. Prior to any impact:

This problem has been very carefully studied. The possibility of a fragment from SA-5--or any other space vehicle--endangering human life or property, while, it exists, is very remote and difficult to measure. Discussion of such an improbable incident would be heavily conjectural. The likelihood of damage is much less than that from natural meteorites.

B. After a reported impact:

Under no circumstances does this agency (government) conjecture on the origin of an object. Rather, it desires to obtain, analyze, and attempt to establish the origin of such an object.

C. After it is known that a fragment is to be delivered to us:

The object will be subjected to study and prompt public announcement will be made when analysis has been completed.

IMPORTANT:

All additional responses will be made by the Administrator, the Deputy Administrator, or the Associate Administrator. Queries requiring such additional responses should be referred to them.

Julian Scheer
Assistant Administrator
for Public Affairs

Arnold W. Frutkin
Assistant Administrator
for International Programs

January 27, 1964

~~CONFIDENTIAL~~

1036

Space

~~SECRET~~

COPY NO. 58

Department of State

Policy Planning Council

Room 7261

33

PLANNING IMPLICATIONS FOR NATIONAL SECURITY OF OUTER SPACE IN THE 1970'S

BASIC NATIONAL SECURITY POLICY

PLANNING TASK I (1)

January 30, 1964

GROUP 2
Exempted from automatic downgrading
By Raymond L. Garthoff
Special Assistant for Soviet Bloc
Politico-Military Affairs

~~SECRET~~

1584

PREFACE

This Report was prepared by a committee drawn from the interested Departments and Agencies, and has been reviewed at the Secretary of State's Policy Planning Meeting, and by the Planning Group. There are individual points or formulations with which one or another of the contributing committee did not fully share, and the formal concurrence of the heads of the Agencies concerned has not been sought. Nonetheless, differences of view in the course of preparation of the study were resolved by agreement, and there are no recorded dissents, though we would have presented such if they had remained. The Terms of Reference of the study are appended as Annex A.

With the passage of time since this Report was prepared, developments have moved decidely forward two of the main points raised in the study. United Nations General Assembly Resolution 1884 (XVIII) on October 17, 1963, with co-sponsorship and accompanying declarations of policy intent by the US and USSR Representatives, gave form to a US-USSR agreement to ban the stationing in outer space or placing into orbit of nuclear weapons or other weapons of mass destruction, as recommended by this Report.

President Kennedy in his address to the UN General Assembly on September 20, 1963, proposed further US-USSR cooperation in joint space ventures, including the possibility of a joint expedition to the moon. Further study of this possibility is now underway in the US Government. The conclusion of this Report recommending study of the possibilities of later US-USSR cooperation in inter-planetary exploration remains for further consideration.

Among the useful purposes of this study has been the identification of certain related matters requiring further examination. Two particular examples deserve note. First, the opportunities and dangers which direct space-to-home communications deserve, and are now receiving, close attention in the Department. Also, the subject of weather manipulation, which space activities relate to only indirectly, is now also being further studied.

Finally, I should like to note that this has been a pioneering study, the first to relate the scientific-technical, intelligence, and political factors involved in our future space policy relating to national security problems. As time goes on, continuing review will be necessary. One cannot, at this time, predict when a comprehensive review will be required, but in the meantime recipients can use this study as background and foundation.

I should like to thank the members of the Committee responsible for preparing this useful study.

W. W. ROSTOW

Committee on "National Security Policy Planning Implications of Outer Space in the 1970's, "Basic National Security Policy Planning Task I (1)

Mr. Garthoff, State (G/PM), Chairman
Col. Armstrong, State (S/P)
Mr. Frutkin, NASA
Mr. Gardner, State (IO)
Mr. Gathright, ACDA (IR)
Mr. Graybeal, CIA
Dr. Golovin, OST
Mr. Herron, State (P)
Mr. Hunter, NASA
Col. John, Defense (ISA)
Mr. Keeny, OST
Mr. Mackay, State (G/PM)
Mr. Meeker, State (L)
Mr. Moffitt, State (IO)
Capt. Moore, Joint Staff
Mr. Morris, NASA
Mr. Packard, State
Mr. Plaster, CIA
Col. Saunders, Defense (ISA)
Mr. Wiedemann, State (INR)

of the world, however, such a "race" is in progress. Therefore, barring some prior Soviet achievement of a magnitude that would preempt or overshadow a moon landing, the nation that is first to place a manned expedition on the moon will be regarded as the victor in a contest having major implications. In looking ahead to the 1970's, it would accordingly seem important to consider what effects might have followed from one country or the other having finished first, and how subsequent activities related to the moon and to planetary and interplanetary explorations might best be conducted.*

a. Achievement of a manned lunar landing will be an historic and dramatic event of the first magnitude. How much this event will have weighed in the over-all balance of United States-Soviet relations at the time depends to a large extent on what may happen in other areas between the present and the period when the moon becomes directly

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(Footnote continued from page 15)

Assuming that a "race"for a manned lunar landing is in progress, the possibility exists that the Soviet Union might unilaterally withdraw (ostensibly to devote its resources to more "humanitarian" ends), if it thought it might lose the "race" or if the burden on its resources became too great. Under such circumstances, it is not inconceivable that, after the United States had borne most of the costs of a lunar program, the USSR might display a desire for "cooperation" by offering to merge efforts with the United States.

Another possibility which should be recognized is that, rather than participate in a race of uncertain ultimate value, such as a manned lunar project, the USSR might be devoting its national resources toward attainment of some other space goal of competing international appeal but capable of earlier accomplishment and, perhaps, broader exploitation, such as a large manned orbital space station.

* The weight of informed judgment is strongly against the likelihood of sentient life existing in the solar system, so we do not consider in this paper the hypothetical question of the security effects of the discovery of allies or enemies on other planets.

accessible to United States astronauts and Soviet cosmonauts. Nonetheless, it is probably safer to assume that the event will have had a significant impact than to assume that it will not, and it is useful to consider, inter alia, its impact on United States-Soviet relations in the post-lunar period.

(1) The course of Soviet post-Sputnik diplomacy clearly indicates that triumphs in space are not substitutes for triumphs on the earth. Nonetheless, it can also be argued that the Soviet Union might have fared even considerably less well without the buoyancy imparted by its successful exploits in space. The latter enabled the Soviet Union to command attention and no little respect, and the Soviet Union skillfully parlayed its exploits into an image bigger than life (an image that has, however, to a large extent been deflated by the self-confidence demonstrated by the United States during the past two years). But, other things being equal, a Soviet first could be viewed as signaling the continuing (or renewed) vitality of the Soviet system and the Soviet form of Communism, and as demonstrating Soviet ability to win a prolonged race with the Capitalist United States. The Soviet version of manifest destiny would derive some additional impetus from these considerations. Even if such gains accomplished nothing more than partially to off-set possible losses in other areas, there would be little reason to believe that the course of United States-Soviet relations would run more smoothly than before.

If a manned lunar first should happen to supplement Soviet successes in other areas, the event would not be disastrous for the United States, but it would make more difficult the United States advancement of its own objectives.

(2) For its own part, the United States has been attempting to recoup some of the psychological losses incurred in the opening phases of the early space age. For the United States, coming in first in the moon race would tend to confirm the general disposition to believe that once the United States makes up its mind to do something it follows through. It would be generally useful to cultivate this belief, and we would lose something if the belief were shaken. However, as in the Soviet case, the net value of a United States "first" would clearly depend on the situation in other areas. If we should have the Soviet Union on the run, a United States first would help keep matters moving in the same direction. If not, a United States first in this area might at least cause perturbations in continuing Soviet efforts to advance its objectives at our expense.

(3) Assuming that a moon race exists, regardless of Soviet plans, winning the race offers attractive, if not necessarily invaluable, prizes. However, winning the race will be a costly matter, and the difference between first and second prize will probably be very great. It is difficult to foresee a set of circumstances under which a

joint effort might come about,* or to describe its technical or operational character. It is questionable why the country leading at the time would wish to be quite so generous as to share honors with (or underwrite the cost for) the other. Technically, it is unlikely that the two programs could be fitted neatly together if this were at all practical, and shared control or participation would clearly present operational difficulties. Despite these considerations, a joint effort might reinforce any broader reconciliation of the interests of the two countries, and cannot be completely ruled out.

b. It is not entirely clear what man is going to do on the moon after he gets there,** but following initial landings, the period of the 1970's is likely to see additional manned and unmanned explorations, a growth of the continuing population of unmanned devices, and possibly the establishment of semi-permanent bases for periodic manned occupancy. From the national security standpoint, there will arise questions as to the pace at which such matters should be pressed (that is to say, the amount of resources that should be devoted to this end), and additional questions as to the ground rules which should govern further exploration and ultimate use of the moon.

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* Although some philosphers of the early space age have hoped that the challenge of space would have a unifying effect on earth, this has not proved to be the case, and the view taken here is that a joint effort to reach the moon would more likely be a reflection of, rather than the cause of, a rapprochement.

** It is assumed here that, in view of action already unanimously taken by the United Nations General Assembly, one thing that will not be done is to attempt to put forward claims of national sovereignty.

efforts. However, only if subsequent lunar activities were conducted entirely on a joint basis would cooperation offer a complete solution (one which would, of course, involve substituting one set of problems for another). Another alternative, particularly relevant to continuation of national efforts, would be to reassess the applicability to the moon of the approach that has been taken to the Antarctic. That approach has not proved applicable to outer space as a whole, but it might well offer a useful precedent in the specific case of lunar exploration and use.

c. If the USSR should clearly have been scratched in the moon race, the pace of our own lunar landing program could be adjusted. It is not likely, however, that this could be established with sufficient certainty beforehand. If in the event we land first relatively uncontested, it would ease some of the above problems of coordinating or regulating use of the moon and give the US the chance to demonstrate its readiness to share the scientific fruits of lunar exploration.

d. And what of planetary and interplanetary exploration? Assuming no relatively low cost propulsion developments, the incentive for further races would seem at this distance to be fairly low; if that proved to be the case, cooperation may also be facilitated. If lunar exploration and use can be placed on a footing of international cooperation, international arrangements might be extended to cover planetary and interplanetary efforts. In the eventthat a moon race

and subsequent lunar activities were conducted on a competitive national basis, the question of international arrangements for other space exploration missions would still need to be considered. If it should turn out that the USSR was not really competing in a race to land on the moon, a less urgent US program for planetary exploration would be especially feasible. Questions of US-USSR or other international cooperation in such exploration could then be considered in the light of political and other circumstances existing at the time.

2. Communications Satellites. During the 1970's, the communications satellite will be technically capable of fully demonstrating what is now only a potential impact on intercontinental communications. It will not be merely a redundant extension of existing means of communication. On the contrary, it will probably have become the major carrier of intercontinental (or very long distance) communications traffic. Its capability of handling a tremendous volume of traffic and of linking distant areas and points directly, reliably, and promptly will have opened the way for marked changes in both the total volume of communications and the traffic patterns along which communications flow. Development of a high capacity synchronous orbit communications system providing global telecommunications or perhaps a random orbit system could provide the technical basis for such changes. (However, the effect of recent high capacity conventional cable developments on

c. Insofar as interception is concerned, initial intercept capabilities would have employed earth-to-space systems. As the geometry of the problem became more complex because of the increased volume in which spaceflight was conducted, it would have been necessary to seek corresponding improvement of earth-to-space intercept capabilities and perhaps to consider more seriously the desirability and feasibility of a space-to-space intercept capability, although the latter type of capability would presumably not have been introduced unless and until it had been determined that earth-to-space capabilities were inadequate to meet the threat. Non-nuclear destruction or neutralization techniques may be available. The size of the required force of anti-satellite weapons would have become a problem, particularly if the orbital nuclear delivery vehicle had been introduced or was considered an imminent or dangerous threat. The size of the force would tend to be determined in part by the success or lack of success in the development of techniques for identifying the functions of spacecraft, and in part by the number of spacecraft which might be considered potential targets under various circumstances. At least in theory, all unidentified objects and all known military support systems might fall in this group, though widespread use of decoys could present very great problems. It is conceivable that civilian support systems might also be considered potential targets in an extremity.

The commitment does not have to be made in one sweeping decision to proceed with or to reject all space weapons. The real problem in arriving at decisions on specific space weapons is to be as certain as possible what kind of commitment is being made and where it may lead.

Whether a significant degree of arms control and disarmament can be achieved by the 1970's, which seems questionable, space activities can contribute in a variety of ways to the keeping of the peace. In the context of the total peacekeeping problem, the contribution of any single space activity will not be decisive. However, it is clearly in the national and international interest to ensure that this aspect of space activities, as well as others, be fully explored and that possible contributions be fully realized.

Moreover, the long-term direction in which space activities are moving is one tending to encourage increased openness, interchange, and interdependence among nations. Although a world characterized by these conditions will have its own problems and vulnerabilities, such a world is more likely to be conducive to the achievement of stabilized peace than a world in which a shoring up of the walls of national separateness has taken place. The trend toward increased openness, interchange, and interdependence is not irresistable, but the walls are not immovable. In any event, spacecraft will offer more than one way of hurdling them.