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CHRONOLOGY OF SIGNIFICANT EVENTS AND DECISIONS RELATING TO THE U. S. MISSILE AND EARTH SATELLITE DEVELOPMENT PROGRAMS

SUPPLEMENT I

OCTOBER 1957 THROUGH OCTOBER 1958

Historical Division
Joint Secretariat
Joint Chiefs of Staff
15 December 1958

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Series "B"

30 Oct 57 In response to a request of 18 October 1957 from the Acting Assistant Secretary of Defense (ISA), the JCS forwarded to the Defense Department their views on the advisability of making US guided missiles available to Sweden and of conducting negotiations to this end. The JCS stated that it was militarily desirable to conduct US-Swedish technical discussions on this matter, and that such talks should be restricted to classified technical information then being supplied to NATO. The eventual sale to Sweden of operational missiles might be in the US national interest, but such missile systems should first be offered to this nation's European allies, and the Swedish security system should be carefully assessed before making any transfer of these weapons. It was not militarily advisable to allow Swedish manufacture of US missile systems except under the foregoing conditions regarding their sale to Sweden, plus agreement by Sweden to obtain US approval prior to selling US-designed missiles or missile components to a third country.

(TS) Memo, JCS to SecDef, "Availability of U.S. Guided Missiles for Sweden (S)," 30 Oct 57, derived from (TS) JCS 1620/163, 28 Oct 57. Both in CCS 334 GMC (1-16-45) sec 21.

31 Oct 57 In separate memoranda to the Secretaries of the Army and the Air Force, the Secretary of Defense requested that the JUPITER and THOR IRBM programs be specifically reviewed to ensure that they were aligned to meet the objectives set forth in NSC Action No. 1800, 10 October 1957. He authorized the JUPITER production rate to increase from one missile per month to two, and the THOR rate to remain at two missiles per month. Both projects were authorized to develop a complete IRBM weapons system capable of being produced and deployed, but this authorization did not include the procurement of the hardware necessary to meet the initial operational capability (IOC) requirements. Action on these requirements would be taken prior to 1 January 1958, and decisions reached in this regard would be the basis for any further production-rate increase for either program. The restrictions on overtime for the JUPITER program set forth in the Secretary's memorandum of 13 August 1957 to the Secretary of the Army were rescinded, but the similar restrictions on the THOR program contained in the memorandum of the same date to the Secretary of the Air Force remained in effect, since these restrictions were satisfactory to the THOR contractor. The Joint Chiefs of Staff had been requested to review the Air Force's deployment plans, and the developed weapons systems were to be consistent with whatever deployment decision the JCS reached in this review. The Army and Air Force were to cooperate in a major effort directed toward achieving the greatest practicable interchangeability of ground support equipment for the JUPITER and THOR weapons systems.

(S) Memo, SecDef to SecA, "IRBM Program (U)," 31 Oct 57, (S) Encl A to (S) JCS 1620/164, Note by Secys, same subj, 6 Nov 57, CCS 334 GMC (1-16-45) sec 21. (S) Memo, SecDef to SecAF, same subj, 6 Nov 57, same file.

1 Nov 57 — The last of three Service briefings on guided missile programs was given to the Director of Guided Missiles, OSD, by the Deputy Chief of Staff, USAF, Development, who outlined the Air Force missile program and presented Air Force views. The Army presentation had been given on 28 October by the Army's Director of Guided Missiles, and the Navy presentation on 25 October by the Deputy Chief of Naval Operations for Air. These briefings had been requested by the Director of Guided Missiles, OSD, on 6 September, in order to assist him in a review, directed by the Secretary of Defense, of the nation's guided missile program and "overlapping" aircraft programs.

(TS) Memo, Chairman's Staff Gp to Twining, "Service Presentations on Guided Missile Programs," 5 Nov 57, CJCS 471.94 (1957), OCJCS files.

3 Nov 57 — The Soviet Union successfully launched a second earth satellite. The second satellite, much larger than the first, weighed 1,120 pounds, circled the earth at 17,840 miles per hour and at a maximum altitude of 1,056 miles, contained measuring instruments and two radios, and carried a small dog.

NYT, 4 Nov 57, 1:8; text of two Soviet announcements, 8:1-4.

4 Nov 57 — In response to a request from the Secretary of Defense, the Chairman, JCS, submitted to the Secretary his views on the proposed base structure and dispersal aspects of the IRBM deployment to the UK. In a memorandum discussing the problem, the Chairman concluded that the US should deploy either THOR or JUPITER IRBMs to the UK at dispersed but unhardened bases as an interim measure, accepting the risk of these vulnerable sites until they could be hardened. These bases should be hardened as soon as possible without interfering with the program for IRBM deployment to the UK.

(TS) CM-34-57 to SecDef, "Deployment of IRBM to U.K.," 4 Nov 57, CJCS 471.94 (1957), OCJCS files.

5 Nov 57 — Secretary of State Dulles, at a press conference, acknowledged that the USSR was ahead of the US in some respects in the missile field, but said he felt assured that the US could catch up. He also indicated that the US would seek to equip more of its allies with IRBMs.

NYT, 6 Nov 57, 1:2, text, 14:1-8.

7 Nov 57 — In response to NSC Action 1691-b-(2), 4 April 57, the Security Resources Panel (Gaither Panel) of the ODM Science Advisory Committee transmitted to the NSC its report for the President entitled "Deterrence and Survival in the Nuclear Age." Circulated as NSC 5724, the report presented "broad-brush" opinions on measures required to strengthen the US deterrent and offensive capabilities and to protect the US civil population.

Major recommendations of the report relating directly to the subject matter of this chronology visualized: 1) increases in the IOC of both IRBMs and

ICBMs; 2) provision of an active missile defense for SAC bases against bombers and ICBMs, using available weapons; 3) acceleration of the IOC of the POLARIS/submarine IRBM system and increased emphasis on the R&D program to improve the Navy's anti-submarine effort, including defense against submarine-launched missiles; 4) a program to develop and install an area defense against ICBMs, and 5) a rapid phasing in of hardened bases for ICBMs.
(TS) NSC 5724, "Deterrence and Survival of the Nuclear Age," 7 Nov 57.

7 Nov 57 — After noting and discussing the Gaither Report the NSC requested the heads of various agencies and departments to study its conclusions and to submit to the Council on or before 15 December 1957 their initial comments and recommendations. Pending receipt of his initial comments and recommendations, the Secretary of Defense was requested, in making his presentation to the Council on US Military Programs for FY 1959, to indicate the extent to which the conclusions in the report would or could be implemented in the FY 1959 programs. (NSC Action No. 1814, approved by the President on 8 November 57.)
(TS) NSC Action No. 1814, 7 Nov 57.

7 Nov 57 — President Eisenhower, in a radio-TV address to the nation, announced that: 1) he had appointed Dr. James R. Killian, Jr., to the newly created post of Special Assistant to the President for Science and Technology, 2) the Director of Guided Missiles, OSD, would be given the full authority of the Secretary of Defense in directing the guided missiles program, 3) any new missile or related program would, whenever practicable, be put under a single manager and administered without regard to the separate Services; 4) Congress would be asked to remove the legislative barriers to the exchange of appropriate technological information with friendly countries; and 5) if the necessary authority were granted him, the President would support the organization within NATO, and possibly within SEATO, of a scientific committee to carry out an "enlarged" effort in research. During his speech, the President also exhibited the nose cone of a missile that, he said, had been fired into outer space and had been recovered intact. This, the President stated, was proof that the US had solved the re-entry problem.
NYT, 8 Nov 57, 1:8; text, 10:1-8.

7 Nov 57 — Dr. Paul D. Foote, Assistant Secretary of Defense (R&E), in testimony before the House Civil Service Subcommittee on Utilization of Manpower in Government, conceded that the US had been behind the Soviet Union in missile development for years, but declared that now "we are very close to the position Russia is in." He stated that interservice rivalries had stimulated, rather than hampered, the program.
NYT, 8 Nov 57, 1:7.

8 Nov 57 — Secretary of Defense McElroy directed the Army to proceed with preparations for launching a scientific satellite by use of a modified JUPITER-C test vehicle.

The directive represented a switch in basic policy that heretofore had assigned the launching of a satellite solely to the Navy.
NYT, 9 Nov 57, 1:8; text of Secretary McElroy's announcement, 2:5-6.

10 Nov 57 Dr. Wernher von Braun, Director of the Development Operations Division, Redstone Arsenal, said in an interview published on this date that it would take the US "well over five years" to catch up with the Soviet Union in missile development.
NYT, 10 Nov 57, 1:6; text, 36:1-8.

12 Nov 57 A National Intelligence Estimate, "Main Trends in Soviet Capabilities and Policies 1957-1962," contained some changes in the previous estimate of Soviet progress in the guided missiles field (NIE 11-5-57; see item of 12 March 1957). The new estimate tentatively advanced from 1960-1961 to 1959 the probable date when the USSR might have about ten prototype missiles with a range of 5,500 nautical miles and a CEP of about five nautical miles. A re-evaluation of the Soviet IRBM program indicated that the USSR had probably elected to develop a 1,000 nautical mile ballistic missile, with a probable operational capability in 1958. There were no indications of Soviet development of IRBMs beyond this range, and the estimates for other missiles remained substantially the same. In discussing surface-to-air missiles, the NIE stated that the USSR would not be able to place in operation by mid-1962 a weapons system capable of successfully intercepting ballistic missiles. The NIE also noted that a Soviet reconnaissance satellite, previously estimated for 1963-1965, might be available considerably earlier.
(TS) NIE 11 4-57, "Main Trends in Soviet Capabilities and Policies 1957-1962," 12 Nov 57, pp. 26-28, J-2 files.

13 Nov 57 The Navy announced the successful testing of a REGULUS II guided missile. It called the test a "major milestone toward introducing REGULUS II to the fleet."
NYT, 14 Nov 57, 9:3.

13 Nov 57 President Eisenhower, in a speech on future security, proposed adoption of a formula for decisions on undertaking space projects, which would include the following criteria:
"If the project is designed solely for scientific purposes, its size and its cost must be tailored to the scientific job it is going to do.'
'If the project has some ultimate defense value, its urgency for this purpose is to be judged in comparison with the probable value of competing defense projects."
NYT, 14 Nov 57, p. 14, cited in (U) US Cong, HR "The National Space Program," Report No. 1758, 85th Cong, 2d sess (Washington, 1958), p. 218.

14 Nov 57 The UN General Assembly adopted, by a vote of 56 to 9 (15 abstentions), a Western disarmament resolution that, among other things, called for a disarmament agreement that would include a joint study of an inspection system

to ensure that the sending of objects through outer space would be exclusively for peaceful and scientific purposes.

NYT, 15 Nov 57, 1:2. Text in (U) President's Special Committee on Disarmament Problems, Note No. 196, "Draft Resolution on Disarmament Adopted by First Committee," 15 Nov 57, CCS 092 (4-14-45) BP pt 10.

14 Nov 57 — According to the New York Times, the Budget Bureau had released $15 million for Project ROVER, the development of a nuclear-powered rocket. This money had been appropriated by Congress more than a year earlier, but had been withheld from the program until the launching of the Soviet earth satellites. The money released by the Budget Bureau was to be used for test facilities at the AEC's Las Vegas laboratory and at the Nevada Proving Grounds.

NYT, 15 Nov 57, 1:6-7.

14 Nov 57 — Replying to a memorandum of 2 October 1957 from the Assistant Secretary of Defense (ISA), the JCS stated that they considered it to be the over-all US interest to agree in principle to furnish the IRBM to France, or such other NATO nations as were determined by NATO military authorities to be capable of utilizing the weapon. Further, they considered it desirable to make specific commitments of the IRBM to France, or other NATO allies, within the expected availability of the IRBM. They deemed it undesirable to provide France with the IRBM at the expense of the planned program for Britain.

(TS) Memo, CJCS to SecDef, "French Request for Weapons (U)," 14 Nov 57, derived from (TS) Encl to (TS) JCS 1620/165, Rpt by JSPC, same subj, 8 Nov 57. Both in CCS 334 GMC (1-16-45) sec 21.

15 Nov 57 — The Secretary of Defense issued a directive establishing the office of Director of Guided Missiles, in order to "provide for the authoritative direction of all activities in the field of guided missiles." Under the Secretary, the Director of Guided Missiles was to direct all activities in the Department of Defense relating to research, development, engineering, production, and procurement of guided missiles, and was authorized to require such information and reports from Defense Department agencies as might be required for the performance of his duties. He was to make regular reports to the Secretary, and prepare such reports regarding guided missiles as might be required from the Department of Defense by the President and the National Security Council. The directive of 27 March 1956 creating the office of Special Assistant to the Secretary of Defense for Guided Missiles was superseded.

(U) DOD Directive 5105.10, "Director of Guided Missiles," 15 Nov 57, Encl to JCS 1620/166, Note by Secys, same subj, 22 Nov 57, CCS 471.6 (5-13-44) sec 11. (U) Department of Defense Directives System Transmittal No. 57-36, 21 Nov 57, same file.

15 Nov 57 — The JCS recommended that the Secretary of Defense tentatively include, in the Department of Defense budget request for FY 1959, procurement and construction funds for 14 new NIKE-HERCULES battalions and 10 new BOMARC squadrons. The JCS would provide further recommendations after completing a review, on which they were then engaged on a highest-priority basis, of the entire air-defense program, with special emphasis on the air defense of the North American Continent; during the interim neither the Army nor the Air Force would commit funds for the above-recommended purposes.
(TS) Memo, CJCS to SecDef, "NIKE-BOMARCs for Continental Air Defense," 15 Nov 57, reproduced as App to (TS) JCS 1899/365, Note by Secys, same subj, 19 Nov 57. Both in CCS 381 US (5-23-46) sec 89.

15 Nov 57 — Khrushchev, in an interview with a UP correspondent, asserted that the Soviet Union was ahead of the US in the field of missiles and challenged the US to a rocket "shooting match" to prove it.
NYT, 16 Nov 57, 1:6-7.

17 Nov 57 — The JCS informed the Secretary of Defense that, after reviewing the Service submissions of programs in excess of budget ceilings, they were unanimously agreed that the following programs /inter alia/ were of the highest priority and should be supported by augmentation funding in FY 1959. For the Navy: POLARIS, $260 million. For the Air Force: IRBM, $154 million; ICBM (ATLAS), $159 million; Ballistic Missile Detection, $100 million.
(TS) Memo, CJCS to SecDef, "FY 1959 Budget (U)," 17 Nov 57, derived from (TS) Encl to (TS) JCS 1800/262, Note by Secys, same subj, 17 Nov 57. Both in CCS 370 (8-19-45) sec 61.

18 Nov 57 — Secretary of State Dulles requested the Department of Defense to develop a preliminary statement of principles and an outline of an inspection system to ensure that the sending of objects through outer space would be for exclusively peaceful and scientific purposes. On 20 November, the Secretary's request was forwarded for action to the JCS. (For the views of the JCS, see item of 24 January 1958.)
(C) JCS 1731/244, Note by Secys, "Disarmament (U)," 4 Dec 57, CCS 092 (4-14-45) sec 73.

19 Nov 57 — Secretary of Defense McElroy, after a conference with the President, announced that the production of IRBMs was being hastened in order to begin deploying these weapons to the UK and other US allies in Europe in 1959.
NYT, 20 Nov 57, 1:5-6.

19 Nov 57 — According to the New York Times, the Army was urging an all-out effort to produce an operational anti-missile missile by 1961 at a cost of between $6 billion and $7 billion. The Army was convinced, said the Times, that an Army missile, the NIKE-ZEUS, could be developed with nuclear and thermonuclear warheads so that it could track and destroy Soviet ICBMs. To achieve this

end, the Army reportedly argued, the project would have to be given top priority in the budget then being discussed by the JCS.
NYT, 20 Nov 57, 1.8.

20 Nov 57 — According to the New York Times, the Air Force had opposed the Army proposal for Army development of an anti-missile missile (see above item).
NYT, 21 Nov 57, 1:8.

22 Nov 57 — The recommendations of the Secretary of Defense concerning US Military Programs for FY 1959 and FY 1958 augmentations were presented orally to the National Security Council (See item of 7 Nov 57.) After discussion the Council, among other things, (1) agreed that subject to normal budgetary review and final action by the President the above recommendations were generally consistent with national security policy objectives, and (2) noted the President's desire that the Secretary of Defense assure himself that the amounts for the above programs to be recommended for final action by the President represent what is necessary for national security without reflecting "excessive concern." (NSC Action No. 1817 approved by the President on 23 November 57.)
(TS) NSC Action No. 1817, 22 Nov 57.

25 Nov 57 — The Senate Preparedness Subcommittee opened hearings on the US missile program. Dr. Edward H. Teller and Dr. Vannevar Bush, in testimony before the committee, urged the dispersal of US bomber bases as a precaution against Soviet missile attack. Dr. Teller called for accelerating and expanding the missiles program, and Dr. Bush called for an end to inter-Service rivalry.
NYT, 26 Nov 57, 1:8, testimony excerpts, 20.1-8.

25 Nov 57 — The JCS submitted to the Secretary of Defense their proposed revision of a directive to establish a Department of Defense Special Projects Agency (subsequently established on 7 February 1958 as the Advanced Research Projects Agency). They suggested that the new agency be limited specifically to the anti-ICBM and satellite programs, and that in those fields, instead of actually managing and operating projects itself, the agency should give unified direction and coordination to projects managed and operated by the military departments.
(C) Memo, CJCS to SecDef, "Department of Defense Special Projects Agency (U)," 25 Nov 57, derived from (U) SM-823-57 to JCS, same subj, 22 Nov 57, as amended by (U) SM-824-57, same subj, 23 Nov 57, and (C) JCS 1620/167, Note by Secys, same subj, 25 Nov 57. All in CCS 471.6 (5-31-44) sec 11.

26 Nov 57 — Dr. John Hagen, Director of the Navy's VANGUARD project, stated in testimony before the Senate Preparedness Subcommittee that if the decision had been made to complete the satellite project "at the earliest possible date," there would have been a good chance of putting a US satellite into orbit ahead of SPUTNIK I. However, higher priority assigned to the development of ballistic-missile projects, plus a limitation in funds, had

prevented acceleration of the program.

(U) US Congress, Sen, "Inquiry into Satellite and Missiles Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. 1, pp. 148, 149.

27 Nov 57 — In a memorandum to the Secretaries of the Army and the Air Force, the Director of Guided Missiles directed the Air Force to proceed with the operational deployment of both the THOR and the JUPITER missile systems. He authorized production of a maximum of six THOR missiles and five JUPITER missiles per month, the first units to be ready for deployment by December 1958.

(S) Memo, DGM to SecA and SecAF, 'THOR-JUPITER Missile Systems (U),' 27 Nov 57, Encl to (S) JCS 1620/169, Note by Secys, same subj, 3 Dec 57, CCS 471.6 (5-31-44) sec 12.

27 Nov 57 — In a prepared statement before the Senate Preparedness Investigating Subcommittee, Defense Secretary McElroy said that, as the result of an "intensive reassessment" of the THOR and JUPITER programs, both missiles had been authorized for operational production. Although neither of these systems was fully developed, and additional funds would probably be required, the decision to place these missiles into production would permit operational capability in the United Kingdom by the end of 1958, and in other locations soon afterward.

(U) US Congress, Sen, 'Inquiry into Satellite and Missiles Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. 1, p. 194.

9 Nov 57 — Air Force Chief of Staff Gen Thomas D. White announced that the IRBM and ICBM programs had been shifted to SAC from the Air Research and Development Command in a move to lessen the time needed to make these missiles combat-ready.

NYT, 30 Nov 57, 1:4.

9 Nov 57 — Replying to the Secretary of Defense's memorandum of 16 October 1957 concerning deployment of IRBMs, the JCS stated their opinion that the plans for the four squadrons programmed for Britain were still valid and should not be changed. As for additional IRBM deployment, the JCS felt that, after Britain was supplied, the next available squadrons should be allocated to Turkey, Alaska, Okinawa, and France, in that order of priority. After these deployments, the next most suitable areas, without indication of priority, would be Italy, Greece, Taiwan, Spain, and West Germany. In addition, Norway, Denmark, Pakistan, and Japan would be highly suitable if political objections could be overcome. The JCS considered that initial manning and control of foreign-deployed IRBM units by the US would be most logical, but that host countries should be encouraged to plan to assume these responsibilities with indigenous forces for "certain units" as rapidly as possible. For the time

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being, the JCS could not determine the ultimate number of IRBM units that would be required, because of variables inherent in the process of developing such weapons systems and the need to consider other weapons systems with similar or overlapping operational life spans.

(TS) Memo, CJCS to SecDef, 'Future Deployments of the Intermediate Range Ballistic Missiles (C),' 29 Nov 57, CCS 471.6 (5-31-44) sec 12, derived from (TS) JCS 2277/4, 23 Nov 57, same file, sec 11.

30 Nov 57 — According to the New York Times, Secretary McElroy had agreed to reconsider the 200-mile range limitation on Army missiles. Other missile developments reported by the Times were these: 1) The Air Force had been authorized to acquire land for the first BOMARC launching site. 2) A Ballistic Missile Force had been organized under SAC to centralize control over all long-range missile developments, including the Army's JUPITER and the Air Force's THOR. 3) The Army had been authorized to use funds from other projects to continue the development of the JUPITER IRBM.

NYT, 1 Dec 57, 1:4.

Dec 57 — In a report to the President on US overseas military bases, former Assistant Secretary of Defense (ISA) Frank C. Nash stated, among other things, that over-emphasis on the ICBM might give rise to a popular clamor for the reduction of these bases. He pointed out that overseas bases were necessary for the IRBM, that this missile was an additional and necessary deterrent force for US defense, and that not only should existing bases be preserved as IRBM sites but also additional ones should be sought for this purpose.

(S) Rpt, Frank C. Nash to Pres. "United States Overseas Military Bases," Dec 57, encl to (S) JCS 570/155, Note by Secys, same subj, 15 Jan 58, CCS 360 (12-9-42) BP pt 13.

2 Dec 57 — The Chairman of the Military Liaison Committee informed the Chairman of the Atomic Energy Commission that, for planning purposes, the production for the THOR and JUPITER missiles of 30 warheads by 1 November 1958 should be scheduled. Firm requirements for after that date could not yet be provided, but the IRBM program could be expected to expand at an accelerated rate. XW-28Y1 warheads would be acceptable initially, with XW-35-X1 warheads to be phased in as soon as practical.

(S-RD) Memo, Chm MLC to Chm AEC, 2 Dec 57, App to (S-RD) N/H of JCS 1823/355 (Revised Concept of ICBM/IRBM Warhead Program (U), 4 Dec 57, CCS 471.6 (5-31-44) sec 12.

3 Dec 57 — President Eisenhower, in a briefing of Congressional leaders on the subject of meeting the Soviet scientific challenge, informed his listeners that the Administration planned a $2 billion increase in annual expenditures for modern weapons, including missiles.

NYT, 4 Dec 57, 1:8.

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4 Dec 57

In response to a memorandum by the Secretary of Defense of 13 November 57, the Joint Chiefs of Staff forwarded to him their comments and recommendations on certain items in the Gaither Report (NSC 5724). Quoted below and followed by a summary of JCS comments thereon are major items in that report concerned directly with the subject matter of this chronology.

ITEM III-A-1-c - "Provide an active missile defense for SAC bases (NIKE-HERCULES or TALOS) against bombers."

COMENT - The Joint Chiefs of Staff stated they had directed "that the protection of SAC bases be included in the highest priority continental air defense programs." Besides the protection afforded all SAC bases by area defense weapons, NIKE units were currently deployed on four SAC bases. When these units converted to the NIKE-HERCULES weapons system and newly approved NIKE-HERCULES units were installed in FY 1959, incidental protection would be provided to twelve additional SAC bases. The JCS were also considering the deployment of similar units on thirteen other SAC bases in FYs 1959 and 1960 and would consider providing NIKE-HERCULES or TALOS protection for all other SAC bases in North America in their current review of the requirements contained in the Continental Air Defense Objectives Plan 1956-1960

ITEM III-A-2-e: "Provide SAC bases with an active missile defense against ICBMs, using available weapons such as NIKE-HERCULES or TALOS and the improved long-range tracking radars now existing in prototype."

COMMENT: The Joint Chiefs of Staff stated they had agreed "that the development of an anti-ICBM system is an urgent requirement, and one which requires greater emphasis on some aspects of the problem than now accorded the service programs in this field." Since analysis indicated the limited effectiveness of modified NIKE-HERCULES or TALOS weapons in an anti-ICBM role, the Army was planning to continue development of the NIKE-ZEUS The JCS were examining the status of current programs with a view to making specific recommendations as to how the development of an effective defense system, encompassing the necessary growth potential, could best be accelerated.

ITEM III-A-3-d: "Every effort should be made to have a significant number of IRBMs operational overseas by late 1958, and ICBMs operational in the ZI by late 1959."

COMMENTS: The Joint Chiefs pointed out that they had previously recommended acceleration of the IRBM program, and that recent NSC action had given both the IRBM and ICBM programs the highest priority above all others. Four IRBM squadrons were scheduled for deployment to the UK commencing in April 1959. They considered that the current ICBM program was compatible with the recommendations of the Gaither panel and responsive to the priority established by the NSC.

ITEM III-A-3-e: "Hardened bases for the ICBMs should be phased in as rapidly as possible."

COMMENT: The Joint Chiefs of Staff concurred in this recommendation. They suggested that a policy decision be made and that a reasonable level of

protection be agreed upon without delay in order that the ICBM facilities program could proceed in an orderly fashion.

(TS) Memo, JCS to SecDef, "Report to the President by the Security Resources Panel of the ODM Scienence Advisory Committee (U)," 4 Dec 57, CCS 381 US (1-31-50) sec 74, derived from (TS) Dec On JCS 2101/284, same subj, 3 Dec 57, same file, sec 73.

5 Dec 57 ✓

The National Security Council noted the President's request that the Deputy Secretary of Defense and the Special Assistant to the President for Science and Technology, in consultation with the Director, National Science Foundation, and the President, National Academy of Sciences, study whether or not public announcement of any attempted launching of a US scientific satellite could be postponed until a successful launching had been assured. This action (NSC Action 1822) was approved by the President on 9 December.

(TS) NSC Action No. 1822, 5 Dec 57.

5 Dec 57

The Assistant Secretary of Defense (ISA) requested the JCS to comment on the advisability of furnishing the following recommendations to the Secretary of the Air Force as a basis for technical negotiations with the UK in the near future: (1) approved the deployment of the IRBM to UK dispersed but unhardened bases as an interim measure, accepting the vulnerability risk until hardening could be effected; (2) initiate site hardening at the earliest possible date without interfering with the current program for the deployment of the IRBM to the UK.

(TS) Memo, Asst SecDef (ISA) to CJCS, "Deployment of IRBM to the United Kingdom (U)," 5 Dec 57, Encl to (TS) JCS 2277/5, Note by Secys, same subj, 9 Dec 57, CCS 471.6 (5-31-44) sec 12.

6 Dec 57

The first US attempt to launch a satellite was a failure, as the VANGUARD rocket bearing the test satellite burst into flame two seconds after firing. Project VANGUARD director John P. Hagen said that the failure of the rocket was due to a malfunctioning part rather than to any weakness in design.

NYT, 7 Dec 57, 1:8, 10:6.

7 Dec 57

In a memorandum to the Secretaries of the Army and the Air Force, the Director of Guided Missiles stated that, for planning purposes, 1 trained military THOR squadron and 1 trained military JUPITER squadron (group) should be ready at each of the following times for deployment on site: December 1958, and 2d and 4th quarters of CY 1959, and the 1st quarter of CY 1960; making a total of 4 THOR squadrons and 4 JUPITER squadrons (groups).

(S) Memo, DGM to SecA and SecAF, "THOR-JUPITER Missile Systems." 7 Dec 57, Encl B to (TS) JCS 2277/26, Memo by DJS, "Future Deployments of the Intermediate Range Ballistic Missiles (C)," CCS 471.6 (5-13-44) sec 16.

8 Dec 57

Defense Secretary McElroy, in testimony before the House Subcommittee on Appropriations, stated that the FY 1958 supplemental fund request would provide for an accelerated research and development program on the POLARIS missile system and the prompt production of three POLARIS submarines.

(U) *US Cong, HR Supplemental Defense Appropriations* for 1958, Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), p. 12.

9 Dec 57

The Director of Guided Missiles authorized the Department of the Navy to accelerate the POLARIS program to (1) provide by October 1960 a POLARIS/submarine weapons system that would meet the performance specifications previously set for 1963, and (2) complete by June 1961 three such submarine systems.

(UNK) Memo, DGM to SecNav, "Acceleration of the Fleet Ballistic Missile (POLARIS) Program," 9 Dec 57, cited in (S) Ltr, SecNav to SecDef, "Augmentation and Acceleration of the Fleet Ballistic Missile (POLARIS) Program (U)," 30 Jan 58, App to (S) JCS 1620/175, Note by Secys, same subj, 6 Feb 58, CCS 471.6 (5-31-44) sec 14.

9 Dec 57

In a letter to President Eisenhower, the Chairman and Vice Chairman of the Joint Congressional Committee on Atomic Energy urged a speed-up in the US missiles and satellite programs. They called for the use of funds appropriated for these programs but frozen by the Budget Bureau. They also asked for stepped-up production of plutonium and urged greater efforts to develop nuclear-propelled rockets, airplanes, and submarines.

NYT, 10 Dec 57, 1:1.

10 Dec 57

A National Intelligence Estimate on the Soviet ICBM program reaffirmed the conclusion, offered tentatively a month earlier (NIE 11-4-57; see item of 12 November 1957), that the USSR was concentrating on the development of an ICBM that, when operational, would probably be capable of carrying a high-yield nuclear warhead to a range of about 5,500 nautical miles, with a CEP of five nautical miles or less at maximum range, and a system reliability of about 50 per cent. The date of operational capability with up to ten prototypes was estimated as some time during the period mid-1958 to mid-1959 (a N/H of 20 May 1958 corrected this date to "the year 1959"). ICBMs could probably be produced, launching facilities completed, and operational units trained to provide operational capability with 100 ICBMs about one year after the capability with ten prototypes was achieved, and with 500 ICBMs about two or at most three years after the initial operational capability date.

(TS) *SNIE 11-10-57, "The Soviet ICBM Program,"* 10 Dec 57, J-2 files.

10 Dec 57

US Secretary of Defense Neil McElroy and British Defense Minister Duncan Sandys, in London, discussed among other things the US IRBM program. Secretary

McElroy stated that the first IRBM squadron for Britain would be in place and fully operational in December 1958, and said he felt sure that Britain would have THOR deliveries as fast as she could accept them; however, JUPITER deliveries elsewhere could not be held up until Britain had four THOR squadrons, and there could be no mixing of the two types. Mr. Sandys expressed concern that Britain not only be first in receiving the IRBM, but also receive the better of the two missiles. It was agreed that Britain would receive the first four squadrons of one or the other of the two missiles, and then could decide what to do next. Mr. McElroy saw no problems posed by Mr. Sandys' request that the first IRBM squadron be under British rather than US command. He noted Mr. Sandys' hope that Britain would be able to take the lead in the further development of the IRBM, as a British responsibility, and that US knowledge gained from the ICBM program would be made available to Britain.

(TS) Msg, London to SecState, 3602, 10 Dec 57, CCS 471.6 (5-31-44) sec 12.

13 Dec 57 — The Air Force announced that it would build a SNARK guided-missile base at Presque Isle Air Force Base, Maine, at a cost of $12 million. This would be the first SNARK base to be constructed.

NYT, 14 Dec 57, 4:7.

13 Dec 57 — The Director of Guided Missiles, OSD, testified before the Senate Armed Services Committee that, at the present time, he believed emphasis in both money and effort should be placed on the development of IRBMs and ICBMs rather than on a space program. Later, discussing the Gaither Report, he endorsed the recommendations in the report as "sound and good," but he was not sure that he could to "as fast as some of them recommended we go . . . ." Further, implementation of these recommendations would, he felt, involve a substantial increase in appropriations.

(U) US Cong, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. 1, pp. 362, 372, 417.

13 Dec 57 — Gen Maxwell D. Taylor, in testimony before the Senate Preparedness Subcommittee, noted the absence from the US missile arsenal of a medium-range (300 to 500 miles) weapon that could counter a similar weapon the Soviets had paraded in Moscow on 7 November. Gen Taylor said the Army had two plans for such a missile. One, he said, "derives from a scientific break-through on the part of our people at Redstone who now see the possibility of taking the REDSTONE missile itself and giving it greater range"; the other, a "longer-range step," would be a "solid propellant missile of a very light weight which would have great mobility and also have extended range."

(U) US Congress, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt 1, pp. 477, 481.

14 Dec 57 — Testifying before the Senate Preparedness Investigating Subcommittee regarding the development of greater thrust power for a ballistic missile, Major General John B. Medaris, Commander of the Army Ballistic Missile Agency, said that it was his personal opinion that "unless this country can command 1 million pounds of thrust by 1961, we will not be in the /space/ race."

(U) US Congress, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. I, p. 562.

16 Dec 57 — Replying to a memorandum of 13 September 1957 from the Secretary of Defense, the JCS reiterated the views expressed in their interim reply, on 19 September, concerning the urgency of developing an anti-ICBM system, but stated that they were unable to agree "at this time' on the need for assigning a "National Priority' to this project equal to the priority previously accorded the US ICBM development.

(TS) Memo, CSA to SecDef, "Anti-Intercontinental Ballistic Missile Developments (U)," 16 Dec 57, CCS 381 US (5-23-46) sec 91, derived from (TS) Encl to (TS) JCS 1899/372, same subj, 3 Dec 57, same file, sec 90.

17 Dec 57 — Air Force Secretary Douglas, in testimony before the Senate Preparedness Subcommittee, outlined some of the important actions that he had taken since 4 October to speed up the US missile program. These actions included (1) recommending that the 1958 supplemental request contain provisions for additional ICBM base facilities; (2) recommending additional FY 1959 funds to speed up the THOR, ATLAS, and TITAN programs, (3) providing more trained personnel for missile operations; and (4) accelerating the operational date of the THOR. In further testimony, Secretary Douglas stated the US would have an operational unit of IRBMs by December 1958, and operational ATLAS squadrons by 1961.

(U) US Cong, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittees of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. 1, p. 855, 869, 870, 871.

19 Dec 57 — A communique issued at the conclusion of a NATO heads-of-government meeting in Paris stated, among other things, that NATO had decided to establish stocks of nuclear warheads, readily available for use in case of need. IRBMs would be placed at the disposal of SACEUR. Deployment of the warheads and missiles and arrangements for their use would be decided in conformity with NATO defense plans and in agreement with the states directly concerned.

NYT, 20 Ded 57, 1.8, text, 8:1-8.

20 Dec 57 — The Chairman, JCS, in a memorandum to the Secretary of Defense, discussed the additional requirement for warheads arising from the expected expansion of the IRBM program after 1 November 1958 (see item of 2 December 1957). He stated that it had been learned from the AEC that it would be impossible to meet fully the stockpile requirements requested by the JCS for 1 July 1959, and it might therefore be necessary to make cuts in other programs using atomic weapons. He requested that if, in the future, weapons production programs recommended by the JCS could not be fully met, the JCS be given an opportunity to comment and make recommendations concerning the best way to absorb the shortages.

(TS-RD) CM-49-57 to SecDef, 'ICBM/IRBM Warhead Program (U)," 20 Dec 57, CJCS 471.94 (1957), OCJCS files.

21 Dec 57 — The Department of Defense forwarded to the NSC Planning Board its preliminary comments and recommendations on certain conclusions in the Gaither Report, called for by NSC Action 1814 (see item of 7 Nov 57). These comments and recommendations, expanded and slightly modified by revisions on 31 December 57, constituted the Defense position in NSC 5724/1 on which the following summary is based.

With respect to Items III-A-1-c, A-2-e, A-3-d, and A-3-e, the comments of the Secretary of Defense reflected substantially the position taken by the Joint Chiefs of Staff in their 4 December 57 memorandum to him. With respect to other conclusions in the report not commented on by the JCS but related directly to guided missiles and quoted below, the Secretary of Defense had the following principal comments to offer:

Item III-A-2-a - 'Develop, to an Operational Status, a radar early warning system for an ICBM attack."

COMMENT: Concurring in this recommendation, the Department of Defense pointed out that such a system, scheduled to be operational in December 1960, had been designed and funds programmed. An interim "crash proposal" was considered not desirable because of its very low capability.

Item III-A-3-a - "Increase the IOC of our IRBMs (THOR and JUPITER) from 60 to 240."

COMMENT: The Department of Defense stated that the recently approved accelerated IRBM program provided a total of 120 missiles by early CY 1960. The production capability would exist for additional units which could be planned as deployment arrangements were consummated under agreements to be negotiated as the result of the NATO Council meeting in December 1957.

Item III-A-3-b - Increase the IOC of our IRBMs (ATLAS and TITAN) from 80 to 600."

COMMENT: The Department of Defense believed that in view of likely improvements in "second-generation" ICBMs, the objective of establishing 600 of the "first-generation" type appeared questionable at that time. Currently funded programs provided for the production of a total of 130 ICBMs by the end of FY 1963. Of the 13 launching sites required nine were fully - and four partially - funded. Although production could be expanded to achieve 600 missiles by the end of FY 1963,

provision of the required additional bases by that date appeared doubtful.

Item III-A-3-c - 'Accelerate the IOC of the POLARIS submarine IRBM system, which offers the advantage of mobility and greatly reduced vulnerability.'

COMMENT: Recognizing the "attractive features" of this program, the Department of Defense stated that plans for further augmentation of the above system were then under study, and indicated that the current accelerated program would provide a total of three POLARIS submarines no later than June 1961.

Item III-B-4 - "A program to develop and install an area defense against ICBMs at the earliest possible date.'

COMMENT: The Department of Defense agreed that such a program was an urgent requirement necessitating a vigorous R&D program. The Secretary planned to assign responsibility for ANM systems to a "new organizational element."

Item III-B-5 - Increased emphasis on the R&D Program to improve the Navy's anti-submarine effort, including defense against submarine-launched missiles. . . .'

COMMENT: Defense stated that increased emphasis was being placed on the R&D Program and that additional forces had been funded to improve the Navy's ASW effort. The requirement to meet the submarine-launched missile threat, for which "the warning time inherently available is much greater" than for attacks launched wholly by air, was being examined as part of the study of anti-missile missiles for the protection of SAC bases.

(TS) Memo, DepSecDef to Gen Cutler, "Comments and Recommendations by the Department of Defense on the Report to the President by the Security Resources Panel," 21 Dec 57; (TS) NSC 5724/1, 16 Dec 57. (TS) N/H of NSC 5724/1, 31 Dec 57. All in CCS 381 US (1-31-50) BP pt 14.

24 Dec 57 — The Deputy Secretary of Defense designated the Department of the Air Force to represent the US in negotiations with the British Air Ministry to reach agreement on technical details of the IRBM project for the UK. The Air Force was to establish an agenda, designate the negotiating group, and schedule and conduct the talks. Because they required further resolution and agreement, particular attention was to be paid to (1) base sites, (2) provision by the UK of certain common support items, (3) custody and storage of warheads, and (4) the operational use of missiles. Also, special care was to be exercised concerning certain funding arrangements.

(S) Memo, DepSecDef to SecAF, 'Implementation of IRBM Project for the United Kingdom (U)," 24 Dec 57, Encl to (S) JCS 2277/10, Note by Secys, same subj, 3 Jan 58. Both in CCS 471.6 (5-31-44) sec 12.

31 Dec 57 — The Joint Chiefs of Staff, in a memorandum to the Secretary of Defense discussing US disarmament policy warned that because of the apparent advances in Soviet missile technology, and for other reasons, it would be

dangerous to make any change in basic US disarmament policy.

(S) Memo, JCS to SecDef, 'U.S. Policy on Control of Armaments (U)," 31 Dec 57, derived from (S) JCS 1731/247, Memo by Dir JS, same subj, 30 Dec 57, CCS 092 (4-14-45) sec 73.

3 Jan 58 — The Air Force announced the formation of two IRBM squadrons, the first two operational units to be armed with IRBMs. The units would be stationed overseas before the end of 1958. The first squadron, activated on 1 January, would be equipped with the THOR, the other squadron, to be activated on 15 January, would be armed with the JUPITER.

NYT, 4 Jan 58, 1:2.

3 Jan 58 — Referring to the memorandum of the Assistant Secretary of Defense (ISA) of 5 December 1957 concerning deployment of the IRBM to the UK, the JCS stated that they considered the recommendations listed in that memorandum advisable for use by the Secretary of the Air Force as a basis for technical negotiations with the UK.

(S) Memo, CJCS to SecDef, "Deployment of IRBM to the United Kingdom (U)," 3 Jan 58, derived from (S) Encl A to (TS) JCS 2277/7, 23 Dec 57. Both in CCS 471.6 (5-31-44) sec 12.

5 Jan 58 — "International Security--The Military Aspect," a report by the Special Studies Project of the Rockefeller Brothers Fund, called for drastic changes in the US defense program in order to maintain the military security of the nation. A panel of distinguished laymen, industrialists, and former military leaders criticized the existing assignment of roles and missions to the individual military services as "out of accord with both weapons technology and the principal military threats to our national safety," and recommended broad organizational changes within the Defense Department. Among other things, the Rockefeller Report recommended that the Secretary of Defense be given direct authority over all research, development, and procurement, with the right of cancellation and transfer of Service programs together with their appropriations, and that he be provided with a direct appropriation for the conduct of research and development at the DOD level. The Report also called for an immediate increase in the defense budget by $3 billion a year for the next several years, and for accelerated research-and-development support for such key programs as the missile program.

NYT, 6 Jan 58, 1:5; text summary, 18:1-8.

6 Jan 58 — In testimony before the Senate Preparedness Subcommittee, Lt Gen Gavin criticized what he described as the lack of adequate research-and-development funds in the Army's budget, and said he was retiring because, among other things, he could not defend the Army budget before Congress.

NYT, 7 Jan 58, 1:8.

6 Jan 58 — The Deputy Secretary of Defense requested the JCS to comment on the military aspects of the US-UK IRBM Agreement as drawn to include various changes discussed by US and UK government officials prior to and during the recent NATO Heads of Government meeting. The principal proposed changes provided that: (1) All four IRBM squadrons would be transferred to UK operational control as soon as they were available and as soon as the UK was prepared to operate the missiles, instead of two of the squadrons remaining under US operational control until some future mutually agreed time. (2) References to permission for the US to substitute improved-performance missiles for missiles already deployed in the UK and to US maintenance of operational control over a number of missiles not exceeding the number transferred to UK operational control were to be stricken. (3) The joint determination of the two governments concerning the operational use to be made of missiles deployed in the UK was to be made in the light of Article 5 of the North Atlantic Treaty, which required them to consider an armed attack against one or more of the NATO countries as an attack against them all.

The Deputy Secretary of Defense also requested the views of the JCS on how control of the IRBM force in the UK should be coordinated with that of other squadrons to be established on the Continent. [See item for 10 January 1958.]

(TS) Memo, DepSecDef to CJCS, "US-UK IRBM Agreement (U)," 6 Jan 58, Encl to (TS) 2277/12, Note by Secys, "United States-United Kingdom IRBM Agreement (U)," 6 Jan 58; (TS) App to JCS 2277/12, "Revised Draft Agreement on Deployment of the United States Intermediate Range Ballistic Missile in the United Kingdom," 23 Dec 57. All in CCS 471.6 (5-31-44) sec 12.

6 Jan 58 — In a discussion of disarmament problems, the National Security Council, among other things, noted the President's approval of the recommendation of the President's Science Advisory Committee Panel on Disarmament that a study be made of the technical factors involved in monitoring a long-range rocket test agreement to ensure that tests carried out under such an agreement would be for peaceful purposes. This study was to be made by representatives of the Science Advisory Committee, the Department of Defense, AEC, and CIA. (This action, NSC Action 1840, was approved by the President on 9 January.) On 21 January, Secretary McElroy assigned responsibility within the Defense Department for this study to the Director of Guided Missiles in collaboration as appropriate with the JCS, the Assistant Secretary of Defense (ISA), and the Assistant Secretary of Defense (Atomic Energy).

(S) Memo, Exec Secy NSC to NSC, "U.S. Policy on Control of Armaments," 9 Jan 58, CCS 092 (4-14-45) sec 73; (S) Memo, SecDef to SecA et al., same subj, 21 Jan 58, encl to (S) JCS 1731/249, Note by Secys, same subj, 27 Jan 58, same file, sec 74.

6 Jan 58 — The National Security Council, (1) noted and discussed the comments and recommendations concerning the conclusions of the Gaither Report, submitted by the respective departments and agencies in response to NSC Action 1814, 7 Nov 57; (2) noted the President's directive that the Department of Defense report to the Council on the feasibility and desirability of particular military measures, additional or supplemental to those covered by DOD in NSC 5724/1 (see item of 21 Dec 57), which would further improve US capability to deal with the Soviet threat, especially the estimated Soviet ICBM capability; (3) noted that the scope and timing of such reports to be presented to the Council would be in accordance with a schedule developed by DOD in consultation with the Special Assistants to the President for NSC Affairs and for Science and Technology. (NSC Action 1841, approved by President on 9 January 1958).

(TS) NSC Action 1841, 6 Jan 58.

7 Jan 58 — The JCS recommended to the Secretary of Defense that the Department of the Army be authorized to develop a solid-propellant missile to replace the existing REDSTONE. They stated that the new missile should have a launch weight of no more than 10,000 pounds and a guidance system developed to give optimum performance in the range of 200-300 miles, with a minimum range capability of 100 miles or less. On the same date, the Secretary of Defense approved the foregoing recommendations and directed the Department of the Army to implement them.

(S) Memo, CJCS to SecDef, "REDSTONE Solid Propellant Ballistic Missile (C)," 7 Jan 58, derived from (TS) Encl to (S) JCS 1620/171, 7 Jan 58, (S) N/H of JCS 1620/171, dtd 8 Jan 58. All in CCS 471.6 (5-31-44) sec 13.

7 Jan 58 — President Eisenhower requested an emergency supplemental appropriation of $1,260,000,000 from Congress for missile production and defense against air and missile attack. Of the total amount, $683 million was to go for acceleration of ballistic missile production. The President also requested transfer authority for $110,000,000, $10,000,000 of which was slated for the New Advanced Research Projects Agency, which would be responsible, under the Secretary of Defense, for the research-and-development phases of advanced science programs, including satellites and other outer space projects.

(U) US Congress, HR, "Supplemental Defense Appropriations for 1958," Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), pp. 2, 3.

7 Jan 58 — In a report to Senate Democrats, Senate Majority Leader Lyndon Johnson called for a national policy aimed at winning control of outer space.

NYT, 8 Jan 58, 1:7; text, 10:1-8.

8 Jan 58 — General White, in testimony before the Preparedness Investigating Subcommittee, expressed disapproval over the split jurisdiction in the anti-missile missile program. Responsibility for "point defense" had been assigned to the Army, whereas the Air Force had "area defense," and now, he said, there was some doubt as to "which is which." Later, discussing the USSR's prospective ICBM capability, General White stated that the ATLAS program should be accelerated. However, in his opinion, there were not sufficient funds in the 1958 supplemental request nor in the FY 1959 regular budget to provide for this acceleration.

(U) US Congress, Sen, 'Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. 2, pp. 1542, 1555.

9 Jan 58 — President Eisenhower, in his state of the Union Message, called for Congress to provide more long-range missiles and missile-armed submarines. He also asked for a halt in inter-Service rivalries.

NYT, 10 Jan 58, 1:8, text, 8:1-8.

9 Jan 58 — Appearing as a witness before the Senate Preparedness Subcommittee, General Schriever was aksed what date he thought the US would have an advanced reconnaissance system. He replied: "I think that we could have a reconnaissance capability, using the THOR booster, by the spring of next year, with a recoverable capsule." In further discussion on the astronautics-development program, General Schriever recommended against a separate astronautics management agency, and said that the establishment of such an agency "would result in duplication of capabilities already existing in the Air Force ballistic missile programs at a cost in funds and time similar to that already expended on these programs." He believed that an agency was needed that would "formulate policy' and "give direction," but not an agency that might set up its own laboratories and procurement organization.

(U) US Congress, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt 2, pp. 1635, 1678-1680.

10 Jan 58 — Replying to the Deputy Secretary of Defense's memorandum of 6 January concerning the US-UK IRBM Agreement, the JCS stated that they agree with all the proposed changes except the ones relating to manning and operational control. Pointing out that the first two squadrons were "in effect experimental," they insisted that it was "mandatory" that these first two squadrons be US-manned; and while they were so manned they should also be under US command. As for coordinating control of the UK IRBM force with control of squadrons to be established on the Continent, the JCS stated that this should be a function of SACEUR and that the agreement with the British should provide for assignment to SACEUR of all

UK-based IRBM squadrons. However, they believed that deployment of the initial squadrons should not be held up by negotiations on this point.

(TS) Memo, CJCS to SecDef, "U.S.-U.K. IRBM Agreement (U)," 10 Jan 58, derived from JCS 2277/13, 8 Jan 58. Both in CCS 471.6 (5-31-44) sec 13.

12 Jan 58 — President Eisenhower, in a letter replying to one from Premier Bulganin, repeated, among other things, the Western proposal for an agreement that outer space be used only for peaceful purposes (see item of 14 November 1957).

NYT, 13 Jan 58, 1:8; text, 6:1-6.

13 Jan 58 — President Eisenhower, in submitting his budget for FY 1959 to Congress, requested advance authority to shift up to $2 billion in military appropriations from one Service or activity to another. His request for defense funds called for an increase in expenditures for missiles and outer-space weapons. He also asked for a contingency fund of $500 million, not designated for any project as yet specifically planned.

NYT, 14 Jan 58, 1:5, 8; text of budget message, pp. 17-20.

13 Jan 58 — Gen Twining, in hearings before the House Committee on Armed Services, agreed with a statement by Defense Secretary McElroy that "we have available and are prepared to use weapons of retaliation so devastating that the cost to an aggressor of an attack on us would be unbearable."

(U) US Congress, HR, "Investigation of National Defense Missiles," Hearings before the Committee on Armed Services, 85th Cong, 2d sess (Washington, 1958), pp. 3975, 4009.

14 Jan 58 — Gen Twining testified at the Senate Subcommittee on Armed Services hearings on defense satellite and missile programs that he, among other in the military establishment, was concerned about public misunderstandings and misapprehensions regarding recent demonstrations of Soviet technological achievements. Mistaken conclusions that the Soviets possessed military supremacy could, he said, "actually increase the probability of total war because they might result in bolder courses of Soviet action and greater opportunity for fatal miscalculation.' Gen Twining stated that "we are not--today--in my judgment, in a position of inferior military strength vis-a-vis the Soviet Union." However, he continued, the Soviets were rapidly closing the gap in scientific breakthrough and technological progress in new weapons, but, "our military forces are strong enough now to win, if war is thrust upon us, and can take care of the future if we will put our energies to the task.' He thought that probably we were behind the Russians in intercontinental missiles and "we have really got to get on the move."

(U) US Congress, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness

Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt 2, pp. 1824, 1825, 1838.

16 Jan 58 In separate memoranda to the Secretaries of the Army and the Air Force, the Secretary of Defense stated that he had decided to assign to ARPA the direction of the effort to develop a missile system for defense against the ICBM, and that, pending such time as ARPA would begin functioning, there should be no unwarranted duplication of effort between the Army and the Air Force in this area. Therefore, he desired the Army to continue its development effort on the NIKE-ZEUS program as a matter of urgency, but limiting the program "at this time" to work on the missile and launch system and those acquisition, tracking, and computer components required for an integrated missile system. The Air Force was to continue as a matter of urgency, "at this time," that part of its development effort in the WIZARD program pertaining to early-warning radars, communication links between early-warning radars and the active defense system and SAGE, and the data processing components required to form an integrated system. These WIZARD elements were to be compatible with a missile system having the design and performance characteristics of the NIKE-ZEUS weapons system, and the development work carried forward by the Army should be compatible with Air Force planning and development under the WIZARD program. Arrangements were to be made for full technical information interchange between the Army and the Air Force development contractors involved. No significant chahges were to be made in the above-assigned areas of concentration of effort without the specific approval of the Director of ARPA, and until he began functioning the Director of Guided Missiles would act for him.

(U) Memo, SecDef to SecAF, "Program for Defense Against the Intercontinental Ballistic Missile," 16 Jan 58, Encl A to (U) JCS 1899/386, Note by Secys, same subj, 28 Jan 58, CCS 381 US (5-23-46) sec 92; (U) Memo, SecDef to SecA, same subj, 16 Jan 58, Encl B to JCS 1899/386, same file.

16 Jan 58 The National Security Council continued discussion, initiated at its 6 January meeting, of the comments and recommendations (as contained in NSC 5724/1) by the respective departments and agencies on the Gaither Report. The Council, inter alia, (1) noted the tentative schedule developed by the Department of Defense in consultation with others for the submission to the NSC of additional reports concerning military measures to strengthen as a deterrent US effective nuclear retaliatory power and to improve US active defenses; (2) noted the views of the Secretary of Defense that further consideration of the military measures referred to above might involve recommendations for further military expenditures in that and subsequent fiscal years; (3) agreed that for a number of reasons "predominant emphasis should continue to be placed upon measures to strengthen effective US nuclear retaliatory

power as a deterrent and to improve US active defenses, as compared with - but not to the exclusion of - passive defense measures . . . ." (NSC Action No. 1842, approved by the President 21 January 1958.)
(TS) NSC Action 1842, 16 Jan 58.

16 Jan 58 — In a speech before the National Press Club, Secretary Dulles proposed the formation of an international commission to ensure the use of outer space exclusively for peaceful purposes.
NYT, 17 Jan 58, 1:8; text, 4:1-8.

16 Jan 58 — In Congressional speeches, Democratic members of the Joint Committee on Atomic Energy called for a large-scale program to develop space vehicles propelled by atomic energy. They also proposed increased efforts to build a fleet of missile-launching submarines.
NYT, 17 Jan 58, 1:6-7.

16 Jan 58 — In testimony before the Senate Preparedness Subcommittee officials of the Convair Division of General Dynamics--where the ATLAS was being built--stated that the amount of increase in the acceleration of the initial operational capability of the ATLAS over the rate that had existed prior to SPUTNIK was "far less than it might be or should be." Further, they were doubtful that the ATLAS would be "a reliable weapon" as soon as predicted.
(U) US Cong, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt. 1, pp. 1210, 1211.

21 Jan 58 — In a statement issued by the Soviet Foreign Ministry, the USSR called for a ban on nuclear and missile weapons in the Middle East.
NYT, 22 Jan 58, 1:1; text, 4:2-8.

22 Jan 58 — The National Security Council noted that the President, on the recommendation of the Secretary of Defense in consultation with the Special Assistant to the President for Science and Technology, had established certain programs as having priority over all others for research and development and for the achievement of operational capability (the scope of this capability to be determined by the President). These programs were (order of listing did not indicate the priority of one over another); 1) ATLAS (ICBM) weapons system; 2) TITAN (ICBM) weapons system; 3) THOR-JUPITER (IRBM) weapons system; 4) POLARIS (FBM) weapons system; 5) antimissile-missile defense weapons system, including active defense and related early warning for defense of the US proper; 6) IGY scientific satellite (VANGUARD-JUPITER C) programs and 7) satellite programs (other than VANGUARD and JUPITER C) determined by the Secretary of Defense to have objectives with key political, scientific, psychological or military import.

This action (NSC Action 1846), approved by the President on 24 January, superseded conflicting portions of earlier NSC actions and NSC 5520.
(TS) NSC Action No. 1846, 22 Jan 58.

22 Jan 58 — In a speech at Minsk, Khrushchev in effect replied to US proposals for control of outer-space weapons by stating that this problem had to be considered as part of the general disarmament question, including the prohibition of nuclear and thermonuclear weapons.
NYT, 26 Jan 58, 1:8.

22 Jan 58 — The Office of the Secretary of Defense forwarded to members of the Armed Forces Policy Council copies of the "Posture Briefing by the Chairman, Joint Chiefs of Staff, before the Preparedness Investigating Subcommittee of the Senate Armed Services Committee (U). The covering memorandum stated that since discussion by the AFPC at its 16 January 1958 meeting had indicated no disagreement with the general over-all position reflected in the briefing and since revisions suggested by Council members had been incorporated, the document was considered to be the over-all official position of the DOD.
(C) Memo, Spec Asst to SecDef, to AFPC, "Posture Briefing by the CJCS, before the Preparedness Investigating Subcommittee of the Senate Armed Services Committee (U)," 22 Jan 58, reproduced as: (C) Encl to JCS 2101/291, Note by Secys, same subj, 28 Jan 58, CCS 381 US (1-31-50) sec 74.

23 Jan 58 — The Deputy Secretary of Defense agreed to a proposal by the Special Assistant to the President for Science and Technology that the joint study directed by NSC Action No. 1840 (a study to be made by the Science Advisory Committee, DOD, AEC, and CIA of the technical factors involved in monitoring an agreement on long-range rocket tests; see item of 6 January 1958) be undertaken independently by the Missiles Panel, Science Advisory Committee.
(S) JCS 1731/252, Memo by CNO, "Disarmament Planning (U)," 6 Mar 58, CCS 092 (4-14-45) sec 75.
/The correspondence between Dr. Killian and Secretary Quarles is not on file in the Joint Secretariat./

23 Jan 58 — According to a censored version of their testimony, Army witnesses told the House Armed Services Committee that the Soviet Union might have an operational ICBM by July, 1958.
NYT, 31 Jan 58, 3:1.

23 Jan 58 — The Senate Preparedness Subcommittee, having concluded its investigation into the missile and satellite programs, called for reorganization of the Defense Department, accelerated development and production of ballistic missiles, and greater efforts to devise antimissile missiles.
NYT, 24 Jan 58, 1:8, text, 6:3-6.

24 Jan 58

In response to a request from the Secretary of State (see item of 18 November 1957), the JCS informed the Secretary of Defense that it would be "impractical to develop, in isolation, an outline inspection plan to insure that the sending of all objects through outer space would be exclusively for peaceful and scientific purposes, without subjecting US security to unwarranted risks." There was a danger, the JCS pointed out, that a separate agreement on outer space objects might be developed apart from the "overriding principles' of a comprehensive inspection system, and, moreover, might be misrepresented as a satisfactory substitute for a sound comprehensive inspection system. The JCS also stated that, while missile activities at known launching sites could probably be monitored, the detection of unreported launching sites and clandestine missile activities presented a far more complex and almost insoluble problem.

(S) Memo, JCS to SecDef, "Disarmament Planning (U)," 24 Jan 58, derived from (S) JCS 1731/248, same subj, 18 Jan 58, CCS 092 (4-14-45) sec 74.

27 Jan 58

In a speech read for him at the annual meeting of the Institute of the Aeronautical Sciences, the director of the National Advisory Committee for Aeronautics urged that space research be made a cooperative effort by the NACA, the Defense Department, the National Science Foundation, and the National Academy of Sciences. He warned that the nonmilitary aspects of space technology might be "submerged or perhaps even lost" if space research was "included as a mere adjunct to a military program."

NYT, 28 Jan 58, 14:3.

27 Jan 58

Testifying before the House Subcommittee on Appropriations, Gen Twining stated that although "this is no time for complacency," in his considered opinion, "our military forces are strong enough today to make any would-be aggressor realize that to attack us would be reckless folly--folly which would bring down upon such aggressors the very kind of devastation which would defeat any plans to conquer this country." In comparing the modernization of Soviet ground forces with the increased effectiveness of the US Army, Gen Twining stated that one of the important developments in the past year had been the creation of the US Medium Missile Command in SETAF. This Command, now operational, was built around the HONEST JOHN rocket and CORPORAL guided missile battalions. In further testimony on comparision of US over-all air strength with that of the USSR he stated that while he recognized that the introduction of the missile into the nation's arsenal of defense was 'changing the role of the airplane," he felt that "this transition will take a matter of many years." Thus, Gen Twining continued, "if we keep our present offensive and defensive air forces modern and strong, which we must, and missiles are introduced into the inventory as fast as possible, we will always have the capability to devastate the U.S.S.R. even in face of a surprise attack."

(U) US Congress, HR, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), pp. 25, 27, 32.

28 Jan 58 — The Army announced that four combat-ready networks of NIKE-HERCULES guided missiles would be set up in June in the New York, Washington-Baltimore, Philadelphia, and Chicago areas. The Army announcement stated that this would be the beginning of a nation-wide program of converting the Army's surface-to-air missile sites to the dual capability of firing both NIKE-AJAX and NIKE-HERCULES missiles.

NYT, 29 Jan 58, 1:5.

28 Jan 58 — The Secretary of Defense expressed his concern, at an Armed Forces Policy Council meeting, regarding the growing number of expensive offensive and defensive weapons systems, the fact that there was no adequate over-all evaluation to compare the merits of various systems, and the immediate possibility that there was overlap and duplication of strategic delivery systems, such a bombers, THOR, JUPITER, ATLAS, POLARIS, aircraft carriers, SNARK, etc. As an initial action, he desired that the JCS be prepared to discuss at the next AFPC meeting the best way of getting at these problems and suggest terms of reference for the study.

At this meeting the AFPC agreed that the Joint Chiefs of Staff would also be requested to comment on certain Gaither items scheduled for discussion before the NSC on 6 February 1958. Defense presentation was to be delayed to permit thorough study.

(S) AFPC Advice of Action, "Evaluation of Offensive and Defensive Weapons Systems (U)," 30 Jan 58, Encl to (S) JCS 1620/173, Note by Secys, same subj, 31 Jan 58, CCS 471.6 (5-31-48) sec 14; (TS) AFPC Advice of Action, "DOD Comment on Certain Gaither Items (U)," 29 Jan 58, CCS 381 US (1-30-50) sec 74.

28 Jan 58 — Secretary of Defense McElroy testified before the Senate Appropriations Committee that he did not believe "events in the world permit us to wait any longer," and he was requesting over $683 million in FY 1958 supplemental funds in order to accelerate the ATLAS, THOR, JUPITER, and POLARIS ballistic missile programs.

(U) US Congress, Sen, Supplemental Defense Appropriations Bill, 1958: Hearings before the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), pp. 5, 13.

30 Jan 58 — The National Security Council noted and discussed the third annual briefing by the Department of Defense, as presented by the Director of Guided Missiles, on the ICBM and IRBM programs. The Council also noted that the number of missiles reported as scheduled for production beyond the number assigned to operational units to achieve operational capabilities approved by the President were required for testing and training purposes. This action (NSC Action 1850) was approved by the President on 31 January.

(TS) NSC Action No. 1850, 30 Jan 58.

30 Jan 58 — Testifying before the Senate Committee on the 1958 supplemental defense appropriation, Air Force Vice Chief of Staff Gen Curtis E. LeMay expressed his belief that if the Soviets attacked the US at this time, their offensive would be launched with airplanes, and not missiles. "Later on they will phase in some missiles," he said, "but for at least two more years they will be probably few in number and not too effective." After that, both effectiveness and numbers would be rapidly increased. In his opinion, at the present time the missile threat was a "little bit oversold." He felt that a US manned bomber would continue to be a more effective weapons system than the missile for some time.

(U) US Congress, Sen, Supplemental Appropriation Bill, 1958: Hearings before the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), pp. 109, 110, 113, 115.

31 Jan 58 — The first US earth satellite was successfully launched into orbit. The small instrumented satellite, dubbed the "EXPLORER" and weighing 18.13 pounds (30.8 pounds, including the burnt-out final state of its rocket), was shot aloft by means of a modified JUPITER-C rocket, and circled the earth at a maximum height of about 2,000 miles and a speed of about 18,000 miles an hour.

NYT, 1 Feb 58, 1:5, 7, 8; fact sheet, 7A:6-8.

31 Jan 58 — As of the end of January, the ATLAS missile had been test-fired a total of four times; two firings had been successful and two partially successful. The JUPITER had been fired seven times, with three successes and four partial successes. A single firing of the JUPITER-C had been successful. Of eleven firings of the THOR, four had been successful, four partially successful, and three failures.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles.

31 Jan 58 — Referring to their memorandum of 29 November 1957, the JCS recommended to the Secretary of Defense that Libya be included as a deployment area for initial IRBM squadrons, in view of the advisability of having alternate deployment plans ready in case bilateral agreements with NATO countries were not completed in time to permit deployment of IRBM units in such countries as rapidly as the units became available. This recommendation was based on evaluation of military factors, and also on the expectation that the necessary agreements with the Libyan Government could be completed without undue delay.

(TS) Memo, CJCS to SecDef, "Future Deployments of the Intermediate Range Ballistic Missiles (C)," 31 Jan 58, CCS 471.6 (5-31-44) sec 14, derived from (TS) Encl to (TS) JCS 2277/16, 24 Jan 58, same file, sec 13.

31 Jan 58 — The Deputy Under Secretary of State for Political Affairs gave the Assistant Secretary of Defense (ISA) the views of the State Department on future deployments of IRBMs to France and other countries, as proposed by the Defense Department. Agreeing with the Defense Department that the IRBM deployment plans for the UK should not be changed, the State Department nevertheless hoped that at least one squadron of IRBMs could be deployed to France about the time of deployment of the third and fourth squadrons in the UK (assuming completion of negotiations with France and readiness of bases). Because of political considerations, France should have precedence over Turkey, Alaska, or Okinawa.

(TS) Ltr, Dep Under SecState for Pol Aff to Asst SecDef (ISA), 31 Jan 58, App to (TS) JCS 2277/22, Note by Secys, "Future Deployments of the Intermediate Range Ballistic Missiles (C)," 20 Feb 58, CCS 471.6 (5-31-44) sec 15.

31 Jan 58 — The JCS requested the Director, Weapons Systems Evaluation Group, to make a study of the problems associated with geographical distribution of IRBM bases throughout the world, like that made regarding ICBM bases in WSEG Study No. 26 (see item dated 23 September 1957 in basic chronology). The study was to embrace both land-based and sea-based IRBM deployment, and, in addition, the relationship between the IRBM, the FBM, and other weapons systems, such as the ICBM, manned aircraft, and short-range surface-to-surface missiles.

(TS) SM-95-58 to Dir WSEG, "Future Deployment of the Intermediate Range Ballistic Missiles (C)," derived from JCS 2277/18, 31 Jan 58, CCS 471.6 (5-31-44) sec 14.

3 Feb 58 — A three-stage advanced hypersonic NIKE-ZEUS test vehicle was fired to determine the heating effects under hypersonic conditions on various skin materials.

(S) "Report of Significant Missile Firings, 30 Jan-5 Feb 58," 10 Feb 58, Army Missile Flights, 1958, in Office, Director of Guided Missiles, OSD.

3 Feb 58 — Soviet Premier Nikolai A. Bulganin in a letter to President Eisenhower stated that the Soviet Union "is ready to examine also the question of the intercontinental rockets if the Western powers are willing to reach agreement to ban atomic and hydrogen weapons, to end tests thereof, and to liquidate foreign military bases in other nations' territories. In that case, an agreement on the use of outer space for peaceful purposes only would unquestionably meet no difficulties."

NYT, 4 Feb 58, p. 8, cited in (U) US Cong, HR, "The National Space Program," Report No. 1758, 85th Cong, 2d sess (Washington, 1958), pp. 223, 224.

3 Feb 58 — According to the New York Times, the Defense Department had decided to release funds for advance planning on more ambitious satellite projects and had agreed on a

space exploration program. Heavier and more elaborately instrumented satellites were envisioned, according to the Times. The Army was reportedly asking permission to launch two television-equipped reconnaissance satellites in 1958.
NYT, 4 Feb 58, 1:7.

4 Feb 58 — In testimony before the House Subcommittee on Appropriations, Air Force Secretary Douglas stated that failure of the US to put up the first satellite did not have "anything to do with organization, or with service rivalry." The decision was made, he said, "to emphasize the military missiles," and "to do the satellite as a scientific civilian enterprise."
(U) Congress, HR, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), p. 169.

4 Feb 58 — President Eisenhower told Republican Congressional leaders that he had directed Dr. Killian, the Special Assistant to the President for Science and Technology, to undertake a study of whether to keep the space exploration program in the Defense Department or to place it under a new civilian authority.
NYT, 5 Feb 58, 1:5.

5 Feb 58 — A second attempt to launch an earth satellite by means of a VANGUARD rocket ended in failure when the rocket was destroyed in flight because, according to an official announcement, "it failed to maintain its programmed flight path."
NYT, 5 Feb 58, 1:8.

5 Feb 58 — S/FRD — DOE (b)(3)

The Secretary of Defense requested the views of the JCS concerning a recommendation of the Secretary of the Navy that the POLARIS program be accelerated beyond what was authorized by the Director of Guided Missiles on 9 December 1957, and that the initial operational capability of the missile be augmented. The recommended acceleration would result in completion of the first POLARIS/submarine weapon system as early as December 1959, and its operational availability, with nuclear warhead, by March 1960. The minimum initial performance characteristics of the system would include (1) an 1100-mile missile capable of delivering a 300-500-kiloton warhead with an accuracy of 3-4 miles CEP, and (2) a nuclear-powered submarine with a capacity of 16 missiles and capable of operating at 21 knots when submerged to 700 feet. It was planned that by 1963 the range of the missile would be increased to 1500 miles and its accuracy to about 2 miles CEP, and the submarine would be capable of 21 knots at a depth of 1300 feet. Funds required would be $421.5 million in excess of those already approved for FY 1959, and $782.1 million in excess of those already approved for FY 1959.
(On 10 February the JCS referred the foregoing matter to the Director, Weapons Systems Evaluation Group, for inclusion in the studies directed by SM-106-58, 10 February 1958, concerned with evaluating offensive and defensive weapons systems.)

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(S) Memo, SecDef to CJCS, "Augmentation and Acceleration of the Fleet Ballistic Missile (POLARIS) Program (U)," 5 Feb 58, Encl to (S) JCS 1620/175, Note by Secys, same subj, 6 Feb 58; (S) Ltr, SecNav to SecDef, same subj, 30 Jan 58, App to JCS 1620/175, (S) N/H of JCS 1620/175, 12 Feb 58. All in CCS 471.6 (5-31-44) sec 14.

5 Feb 58 — In response to a request from the Director of Guided Missiles the JCS provided Mr. McElroy with their current thinking regarding the feasibility and desirability of installing an interim defense against ballistic missiles, utilizing, as recommended by the Gaither Report, modified available anti-aircraft missiles. (See item for NSC Action 1841, 6 January 1958.)

Reaffirming their earlier view (see item of 4 December 1957) that "there is an urgent requirement for the development of a defense against the ICBM, the JCS stated that an interim capability might be achieved by modifying and adding components to the land-based TALOS system. In order to provide this capability one year earlier than the earliest availability date of the NIKE-ZEUS, a current obligation of approximately $1 billion would be necessary. Of this amount, only $90 million was to be considered "risk capital" inasmuch as the additional weapons would augment defensive capabilities against bombers.

Although the feasibility of installing the interim system had been "reasonably well established," the Joint Chiefs believed that its desirability remained to be determined. The procedure for this determination involved consideration of the effectiveness of each weapons system as a part of the entire continental air defense structure, and in relation to enemy capabilities, fiscal and manpower implications, time phasing requirements, and research and development factors.

Having received recently from WSEG a study of the weapons systems treated in CADOP 56-66, the JCS would proceed on "an urgent basis" to resolve continental air defense problems. The JCS stated that they would advise the Secretary of Defense at an early date (see item of 15 April 1958), concerning their recommendations as to the "desirability" of the interim system as determined in the light of over-all defense requirements and capabilities.

(C) Memo, Dir GM to CJCS, "Report to the President by Security Resources Panel of the OSM Science Advisory Committee (C)," 15 Jan 58, CCS 381 US (3-31-50) sec 74. (TS) Memo, DepSecDef to JCS et al., same subj, 14 Jan 58, same file and sec; (TS) Memo, JCS to SecDef, same subj, 5 Feb 58, same file and sec, derived from JCS 2101/289, 22 Jan 58, same file, sec 75.

5 Feb 58 — President Eisenhower, at his press conference, said that the Secretary of Defense would continue to control military outer space projects, but indicated

the possibility that nonmilitary projects might be put under civilian control.
NYT, 6 Feb 58, 18:1 (text).

5 Feb 58 — Secretary of the Army Brucker testified before the House Subcommittee on Appropriations that, in order to fulfill an urgent requirement for a long range mobile missile system, top priority had been assigned to the development of the PERSHING, a surface-to-surface solid propellant missile. This system, he said, would "fill a serious gap in our current missile family by providing additional depth to the Army's support weapons."
(U) US Congress, HR, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d Sess (Washington, 1958), p. 243.

6 Feb 58 — The National Security Council noted that, at the President's request, the report by the Deputy Secretary of Defense and the comments by the Special Assistant to the President for Science and Technology on the orbiting of the US satellite EXPLORER would be presented at the next Cabinet meeting instead of to the NSC. The NSC also noted that the President had directed his Special Assistant for Science and Technology to submit to it early in March his recommendations concerning legitimate US objectives in space exploration and science. This action (NSC Action 1859) was approved by the President on 7 February.
(TS) NSC Action No. 1859, 6 Feb 58.

6 Feb 58 — The Air Force announced a successful firing of the MACE long-range tactical missile, a late version of the MATADOR.
NYT, 7 Feb 58, 7:5.

6 Feb 58 — Congress passed and sent to the White House an act authorizing the Secretary of Defense to administer for one year any non-military space projects assigned to him by the President. Congress also completed action on a $1,260,000,000 emergency appropriation bill to speed development of ballistic missiles and other wise strengthen the nation's retaliatory power.
NYT, 7 Feb 58, 1:5.

7 Feb 58 — The Department of Defense Advanced Research Projects Agency, OSD, was established with responsibility for the direction and performance of such advanced projects in the field of research and development as might be designated by the Secretary of Defense. The Agency was authorized to (1) direct research and development projects within the Defense Department, as designated by the Secretary of Defense; (2) arrange for the performance of research and development work by other agencies of the Government as might be necessary in relation to assigned projects; (3) make contracts or agreements with individuals or private organizations; and (4) acquire or construct facilities, subject to the approval of the Secretary

of Defense. Roy W. Johnson, a vice president of General Electric Company of New York, was appointed Director of ARPA.

(U) DOD Directive No. 5105.15, "Department of Defense Advanced Research Projects Agency," 7 Feb 58, CCS 334 ARPA (2-7-58) sec 1. NYT, 8 Feb 58, 1:1.

8 Feb 58 — The Secretary of the Air Force proposed to the Secretary of Defense that a firm program be established to develop the MINUTEMAN, a three-stage solid-propellant ICBM. If the MINUTEMAN project developed as expected, he said, it might make the objectives for 1962 in liquid-propellant ICBMs and IRBMs "buy-outs" for some or all of those programs, with the relatively inexpensive and undemanding MINUTEMAN superseding them. However, pending the maturing of the MINUTEMAN project, he would not jeopardize capability to expand the liquid-propellant ICBM force. He believed the objectives for end FY 1962, in terms of operational squadrons in place, ought to be: ATLAS, 9 to 13, depending on military requirements and the state of development of MINUTEMAN; TITAN, 8, IRBMs, 16, part of which would be THOR ICBMs if the situation demanded; MINUTEMAN, beginning to phase in during FY 1963.

In an undated memorandum [between 8 and 19 Feb 1958] the Secretary of Defense approved the foregoing ballistic missile objectives. In addition, he approved the institution of the MINUTEMAN project on and ICBM priority basis, but with the understanding that FY 1958 funds were to be provided from within available Air Force resources. He directed the Secretary of the Air Force to submit, as soon as practicable, a revised ballistic missile program, including MINUTEMAN, to the OSD Ballistic Missile Committee.

(S) JCS 1620/180, "Air Force Ballistic Missile Objectives (U)," 19 Feb 58, CCS 471.6 (5-31-44) sec 15.

10 Feb 58 — As a result of the expression of concern by the Secretary of Defense at the Armed Forces Policy Council meeting of 28 January 1958, the JCS agreed to (1) submit to the Chairman, JCS, a talking paper as a basis for discussion at the meeting of the Armed Forces Policy Council on 11 February 1958, and (2) direct the Director, Weapons System Evaluation Group to (a) submit to the JCS by 21 February (later changed to 19 February), as an interim report, a scientific evaluation of pertinent facts, including time factors, concerning weapons systems such as manned bombers, THOR, JUPITER, ATLAS, POLARIS, aircraft carriers, SNARK, etc.; (b) submit before the beginning of the next budget cycle an over-all study containing scientific analyses designed to provide the bases for the strategic evaluation of offensive and defensive weapons systems and for the determination of an appropriate strategic weapons posture by the JCS. (Later, a second interim report on this latter study was called for, and was submitted on 10 March 1958.)

The talking paper referred to above was furnished the Chairman on 10 February 1958. It stated that the thoughts of the JCS on the subject of the Secretary's concern were reflected, in general, in the Joint Strategic Objectives Plan for 1961, previously forwarded to the Secretary; and further, that the JCS proposed to re-evaluate the various studies and comparisons heretofore produced for them concerning weapons systems and would give the Secretary their interim advice, including views on the POLARIS program, prior to the NSC meeting of 28 February, and would provide definite advice prior to initiation of the next budget cycle.

(S) Dec On JCS 1620/174, "Evaluation of Offensive and Defensive Weapons Systems (U)," 10 Feb 58, CCS 471.6 (5-31-44) sec 14; (S) SM-106-58 to Dir WSEG, same subj and date, derived from foregoing, same file; (S) JCS 1620/177, Memo by DJS, same subj and date, same file; (C) SM-130-58, same subj, 24 Feb 58, derived from (TS) Dec On JCS 2101/295, 24 Feb 58. Both in CCS 381 US (1-31-50) sec 75. (U) SM-134-58, "Correction to SM-130-58 (U)," 25 Feb 58, same file. (U) SM-165-58, "Evaluation of Offensive and Defensive Weapons Systems (U)," 7 Mar 58, CCS 370 (8-19-45) sec 62.

10 Feb 58 ✓

Admiral Arleigh Burke, Chief of Naval Operations, testified before the House Subcommittee on Appropriations that "the rapid development of Soviet missiles--particularly long-range missiles--has made it clear that the overall technological lead which the United States has held over Russia is diminishing." Therefore, he said, the requirement to accelerate the US missile program had been closely re-examined. Although supplemental funds for FY 1958 would speed up the availability of the POLARIS weapons system, maintaining accelerated ballistic programs would have a serious impact on future defense budgets, particularly that of the Navy, because the POLARIS system did not replace the need for other current or planned naval forces. The FY 1959 Navy budget had been reviewed repeatedly in order to ensure that it contained only the most essential items and, Admiral Burke believed it was "a solid budget", but it was at the same time "a minimum budget" which could not be reduced without a "serious effect upon well-considered programs. . . ." The Soviets, he continued, possessed a "substantial military threat to our control and use of the seas. . . ." Not only did they now have the second largest navy in the world, but they were continuing to modernize their military forces. The most formidable offensive power of the Soviet Navy was in their submarine force and Admiral Burke believed, "they will almost certainly have guided missiles and nuclear-powered submarines in the year ahead." In addition, Soviet public statements indicated that guided missile cruisers and destroyers would soon be operational. There had been no change in the Soviet basic objective of world domination, the Chief of Naval Operations stated,

but because "the USSR knows the United States has today the kinds of power that could devastate her," he did not believe the Soviets would start a general war.

(U) US Congress, HR, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), pp 442, 443.

10 Feb 58 ✓ The Navy announced that it had developed a new weapon, the RAT (rocket-assisted-torpedo), which could be shot into the air from a warship and then parachuted into the water to 'hunt' for enemy submarines. The weapon was already in operational use.

NYT, 11 Feb 58, 1:7.

11 Feb 58 ✓ In response to a memorandum of 28 January 1958 from the Assistant Secretary of Defense (R&E), which forwarded a request from the Director of Guided Missiles, the Director, Weapons Systems Evaluation Group, forwarded WSEG Staff Study No 61, An Evaluation of the Military Utility of a Possible Nuclear-Powered Advanced ICBM. The Report recommended that the Department of Defense (1) indicate to the Atomic Energy Commission its desire that efforts to demonstrate the technical feasibility of a nuclear reactor suitable for rocket propulsion be intensified beyond the 'moderate level' suggested by earlier Defense guidance to the AEC, so as to provide a nuclear rocket engine at the earliest possible date, (2) have preparations made for prompt utilization of a flyable engine, if produced, in a missile airframe, (3) reaffirm the interest, expressed in its earlier guidance to the AEC, in the development of a nuclear rocket engine for ICBM application that could use storable working fluids; (4) insure that Service-sponsored studies investigated the performance characteristics of possible ballistic missiles using the engine referred to in (3), and also the costs of operating weapons systems built around such ballistic missiles. (5) support studies already in progress investigating the possible use of hydrogen as the working fluid for a nuclear rocket engine, in view of the desirability of developing a nuclear rocket engine for space-flight purposes even though detailed studies might indicate its unsuitability as the propulsive element of an ICBM.

(S) Memo, Dir WSEG to Asst SecDef (R&E), 'WSEG Staff Study No. 61, 11 Feb 58, App to (S) JCS 1620/182, Note by Secys, 'An Evaluation of the Military Utility of a Possible Nuclear Powered Advanced ICBM - WSEG Staff Study No. 61 (U),' 25 Feb 58, CCS 471.6 (5-31-44) sec 16, (S-RD) WSEG Staff Study No. 61, 24 Jan 58, same file, BP pt 4.

12 Feb 58 The President approved Public Law 325, which gave the Department of Defense authority to participate in advanced research projects, including space projects. Section 7 read in part:

"The Secretary of Defense or his designee is authorized to engage in such advanced projects essential to the Defense Department's responsibilities in the field of basic and applied research and development which pertain to weapons systems and military requirements as the Secretary of Defense may determine after consultation with the Joint Chiefs of Staff; and for a period of one year from the effective date of this Act, the Secretary of Defense or his designee is further authorized to engage in such advanced space projects as may be designated by the President."

(U) PL 325, 72 Stat 13, 14, 85th Cong, 2d sess, 12 Feb 58.

12 Feb 58 — At a meeting in the office of the Deputy Secretary of Defense, representatives of the State Department were informed that the Air Force IRBM deployment plans provided for the delivery of 4 squadrons to the UK, 3 to France, and 1 to Italy, with contingency plans for deployments to Turkey or Greece, Alaska, Libya, and Okinawa in case implementation of the basic plan were delayed or became infeasible.

(TS) Memo, "Views of the Department of State on IRBM Deployments to Various Foreign Countries," Encl to (TS) Ltr, State Dept Couns to Asst SecDef (ISA), 4 Apr 58, CCS 471.6 (5-31-44) sec 17.

12 Feb 58 — The Secretary of Defense informed the Secretary of State that Mr. Dulles' request for an outline of an inspection system for outer-space objects (see item of 18 November 1957) had been referred to the JCS (see item of 24 January 1958). In the interim, however, Secretary McElroy pointed out, as a result of NSC Action No. 1840 (see item of 6 January 1958), the Missiles Panel, Science Advisory Committee, had been designated to proceed with a study of the problem (see item of 23 January 1958). This study, he wrote, after review of interested departments and agencies, would presumably constitute the basis for the US position on the subject, and it would therefore appear that any views submitted by the Defense Department before the completion of the Panel's study would be premature. The Department of Defense was therefore reserving its comments and recommendations until the Panel had completed its study and the JCS had had an opportunity to assess its implications from the military point of view.

(S) N/H of JCS 1731/248, 13 Feb 58, CCS 092 (4-14-45) sec 74.

15 Feb 58 — The JCS informed the Secretary of Defense that there was an operational requirement for a nuclear warhead for the NIKE-ZEUS antimissile missile, and requested that the Secretary notify the Chairman of the Atomic Energy Commission of this requirement and request his cooperation with the Department of the Army in developing the required warhead.

(S-RD) Memo, CSA to SecDef, "Operational Requirement for a Nuclear Warhead for the NIKE-ZEUS Anti-Missile Missile (C)," 15 Feb 58, CCS 471.6 (5-31-44) sec 15, derived from JCS 2012/112, 31 Jan 58, same file, sec 14.

17 Feb 58 — In a letter to Soviet Premier Nikolai A. Bulganin, President Eisenhower repeated his plea for the dedication of outer space to peaceful uses. Denying that this proposal was intended "to gain strategic advantages for the United States," he stressed the urgency of dealing with outer space before its use for military purposes had, like nuclear weapons, advanced to the point where complete international control was almost impossible.
NYT, 18 Feb 58, p. 8, cited in (U) US Cong, HR, "The National Space Program," Report No. 1758, 85th Cong, 2d sess (Washington, 1958), p. 225.

18 Feb 58 — In testimony before the House Armed Services Committee, Lt Gen Donald L. Putt, Air Force Deputy Chief of Staff for Research and Development, estimated that until mid-1962 an enemy attack might be made by long-range manned jet bombers augmented by air-to-surface missiles. Between mid-1958 and mid-1959, he forecast, the Soviets would probably have their "first operational capability with prototype ICBM's," and he anticipated that, as Soviet ICBM capability increased, by 1962 missiles would further supplement Soviet manned bombers in a primary attack. Gen Putt expressed "grave concern" as to the capability of the US antimissile missile program, in view of the cost involved. Although some system of air defense should be developed, the Air Force was not convinced that the present program was the best approach. "If the Air Force had the operational responsibility and the development responsibility, it would not develop the NIKE-ZEUS system, for immediate operational employment," he stated. Instead, one of the designs being developed in the WIZARD program would have been selected. He believed the decision to proceed with the development of the ZEUS over the WIZARD was premature. In testimony the following day, Gen Putt stated that the Air Force had terminated all work on the WIZARD program. The Air Force did not believe that any single system had "sufficient capability at this point to warrant fixing on that system and going ahead with operational quantities and to place into operation," he said.
(U) US Cong, HR, "Investigation of National Defense Missiles," Hearings before the Committee on Armed Services, 85th Cong, 2d sess (Washington, 1958), pp. 4770, 4771, 4778-80, 4788.

21 Feb 58 — The Assistant Secretary of the Air Force (R&D) provided the Director of Guided Missiles with technical and operational CEP estimates for the ATLAS, the TITAN, and the THOR. The technical, or theoretical, estimates were as follows: ATLAS, [1.3 nautical miles]; TITAN, [2.1 n.m.]; THOR, 1.3 n.m. Accuracy estimates derived for Air Force planning purposes in connection with the IOC period for these missiles, with various error-causing factors likely to exist in operational conditions taken into consideration, were ATLAS, [2-3 n.m.]; TITAN, [3 n.m.]; THOR, 2 n.m. It was stressed that these estimates were interim in nature and might be changed as a result of more extensive test data and operational experience.
(S) Memo, Asst SecAF (R&D) to DGM "Technical Accuracy Estimates for ATLAS, TITAN, and THOR," 21 Feb 58, App to (S) JCS 1620/183, same subj (U)," 5 Mar 58, CCS 471.6 (5-31-44) sec 16.

DOE (6)(3)

22 Feb 58 By an exchange of unclassified notes, the Under Secretary of State and the British Ambassador to the US placed in effect the US-UK IRBM Agreement developed from the tentative agreement reached in the Eisenhower-Macmillan talks of 21-24 March 1957. On the same day an exchange of secret notes implemented secret provisions of the Agreement. The unclassified Agreement called for the US to furnish "an agreed number" of IRBMs to the UK, which would provide the sites and supporting facilities for the missiles. The missiles were to be manned and operated by UK personnel, trained by the US for this purpose at the earliest feasible date, and ownership was to pass to the UK under established US MAP procedures as soon as the UK was in a position to man and operate the missiles. However, all nuclear warheads provided for the missiles by the US would remain in full US ownership, custody, and control. The decision to launch the missiles would be made jointly by the two Governments, in the light of existing circumstances and Article 5 of the North Atlantic Treaty. This Agreement was subject to revision by agreement between the two Governments, was to remain in force not less than five years, and thereafter could be terminated by either Government on six months' notice.

The secret correspondence confirmed that the US would furnish four squadrons of 15 missiles each for deployment in the UK as rapidly as practicable, and set forth agreed technical details concerning the respective responsibilities of the two countries. It also confirmed that the US had no existing intention of proposing the deployment of additional IRBMs in the UK, but that if such a proposal were to be made, either for US-manned or UK-manned units, the UK would give it prompt and sympathetic consideration.

(U) Note, Under SecState to UK Amb, 22 Feb 58, with enclosed (U) 'Memorandum'; (U) Note, UK Amb to Under SecState, 22 Feb 58; (S) Note, Under SecState to UK Amb, 22 Feb 58; (S) Note, UK Amb to Under SecState, 22 Feb 58. All in CCS 471.6 (5-31-44) sec 15.

24 Feb 58 In response to a request by the Secretary of Defense of 29 January 1958, the JCS forwarded their views on two Gaither items on which the Department of Defense was scheduled to report to the NSC in the near future.

The items under consideration involved whether or not decisions should be made at that time (1) "to produce additional first generation ICBMs beyond the 130 currently programmed, to be operational prior to the end of FY 1963," and (2) "to order now production of more than 3 POLARIS/submarine weapon systems, and on possible further acceleration of production."

The Chiefs stated that they were currently undertaking, as a matter of urgency, a re-evaluation of offensive and defensive weapons systems that would

include conclusions as to the role of the ICBM and POLARIS in a balanced combination of over-all weapons systems. They considered that it would be undesirable for the Secretary of Defense to take a final position on the two items in question prior to the completion of JCS re-evaluation.

(TS) Memo, JCS to SecDef, "Report to the President by the Security Resources Panel of the ODM Science Advisory Committee (C)," 24 Feb 58; derived from (TS) JCS 2101/295, 21 Feb 58. Both in CCS 381 US (1-31-50) sec 75.

25 Feb 58 — The JCS noted WSEG Interim Report No. 30, "Medium- and Long-Range Delivery Systems," dated 19 February 1958. The conclusions of the report were as follows: (1) The duplication existing in US-programmed counter-force weapons systems was considered to be, not in their variety, but in the sum of the force levels proposed, sufficient to perform the task many times over. (2) Both the JUPITER and the THOR having proved feasible, duplication between them was apparent. (3) Duplication between the TITAN and the ATLAS was justifiable until the feasibility of the TITAN should be proven. (4) The phasing out of the manned bomber in favor of liquid-propellant ballistic missile systems could not take place for a number of years because of the high costs and limited effectiveness of such missile systems. (5) Aircraft carriers and tactical aircraft were supplementary to major strategic air power and not competitive with it, were vital to the waging of limited war, and contributed to the missions of deterrence and counterforce. (6) A preliminary cost-effectiveness analysis with respect to the particular role of destroying a 3-psi target in the Soviet Union indicated that the TITAN, hardened to only 25 psi, cost about one-half as much as the ATLAS. (7) Though developed for different types of employment, the POLARIS and the TITAN appeared comparable on the cost-effectiveness basis mentioned in (6).

(TS) Dec On JCS 1620/181, "Evaluation of Offensive and Defensive Weapons Systems (U)," 25 Feb 58; (TS) WSEG Interim Report No. 30, "Medium- and Long-Range Delivery Systems," 19 Feb 58, App to (TS) JCS 1620/181, same subj, 19 Feb 58. Both in CCS 471.6 (5-31-44) BP pt 4.

25 Feb 58 — The Assistant Secretary of Defense (ISA), in anticipation of a requirement for the development of a national policy regarding outer space (see item of 6 February 1958), circulated to appropriate offices within the Defense Department an outline of some of the elements requiring consideration in formulating such a policy. This outline, which had been prepared in consultation with interested agencies within the Department and with the Office of the Special Assistant to the President for Science and Technology, included these general headings: (1) present or potential uses of space; (2) US requirements; (3) estimates of Free World and Soviet capabilities; (4) international controls and agreements for peaceful uses of space; (5) domestic organization;

(6) strategic and tactical goals; (7) policy guidance; and (8) special problems.

(C) Memo, Asst SecDef (ISA) to SecArmy, et al., "Proposal for a National Policy on Outer Space," 25 Feb 58, CCS 000.97 (2-25-58) sec 1.

25 Feb 58 — Lt Gen Putt testified before the House Committee on Armed Services that the conquest of space, in his opinion, was vital to the security of the US. In view of the Soviet "comprehensive space flight effort," he emphasized the need for a manned space flight "at the earliest possible date," and for acceleration of other Air Force space programs

(U) US Cong, HR, "Investigation of National Defense Missiles," Hearings before the Committee on Armed Services, 85th Cong, 2d sess (Washington, 1958), pp. 4916, 4921-4923.

26 Feb 58 — As part of its assessment of current trends in world power relationships, the NIE issued this date characterized Soviet demonstration of scientific achievement in the field of rocketry and the extraordinary impact that this demonstration made on the world as one of USSR's "most formidable gains." The estimate went on to state, "It is now generally believed that the USSR will, during the next year or two rather than at some time in the distant future, be able to inflict instant and crippling damage on North America, with a consequent deterrent power as effective as that which the US has exercised."

(S) NIE 100-58, "Estimate of the World Situation," 26 Feb 58, CCS 381 US (1-31-50) BP pt 15.

27 Feb 58 — The Director of Guided Missiles authorized the Secretary of the Air Force to proceed with the research and development of the MINUTEMAN missile system, but specified that the effort should be concentrated in those areas where critical technical problems might exist, so that a firm development plan could be established at an early date. He also specified that effort on the MINUTEMAN system be limited to the research and development concerned with the ICBM until such time as the Air Force was prepared to present a complete evaluation of the MINUTEMAN versus the POLARIS as the follow-on land-based IRBM system. In addition, he desired that the Secretary of the Air Force arrange for early presentation of the MINUTEMAN program to the Scientific Advisory Committee. According to the New York Times, this action had aroused resentment in the Navy, which favored POLARIS, and the fight might be carried to the White House.

The DOD announcement of Project MINUTEMAN also stated that the Air Force had been further directed to accelerate research and development work on liquid propellants that could be handled and stored more easily than the liquid oxygen already in use. This work would be pursued initially in connection with the TITAN missile, with a view to later inclusion in other IRBM-ICBM systems.

(S-RD) Memo, DGM to SecAF, 'Air Force Ballistic Missile Objective,' 27 Feb 58, Encl B to (S) JCS 2012/127, Memo by CSUSAF, 'Requirement for Warheads for SM-80 (U)," 12 Aug 58, CCS 471.6 (5-31-44) sec 20. NYT, 28 Feb 58: 1:2-3. (U) DOD Press Release No. 179-58, 28 Feb 58.

27 Feb 58 ✓ The National Security Council, among other things, (1) noted and discussed an oral report by the Department of Defense on the status of several studies scheduled for NSC consideration, (2) noted that the Secretary of Defense would report to the NSC prior to 15 April his recommendations regarding certain aspects of the ICBM and POLARIS programs of interim defense measures against ballistic missile attack at SAC bases; (3) noted the comment by the Secretary of State that the development of US ballistic missile programs should take account of foreign political conditions which could involve a risk to US security through undue dependence upon deployment of such missiles in areas not under secure US controls. (NSC Action No. 1866, approved by the President 3 March 1958.)

(TS) NSC Action No. 1866, 27 February 58.

28 Feb 58 A THOR missile, bearing, for the first time, an "operationally configured" nose cone, was test-fired The test was not conclusive, but the firing was rated as partially successful.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas), in Office of Director of Guided Missiles, OSD.

4 Mar 58 In response to a memorandum from the Assistant Secretary of Defense (ISA) that enclosed an outline of elements to be considered in formulating a policy regarding outer space (see item of 25 February 1958), the Chairman, JCS, forwarded his views on this subject to the Secretary of Defense. The Chairman's memorandum stated that, subject to a few specific recommendations, the policy guidance met the necessary requirements, as a point of departure, for the establishment of a national policy on outer space. The Chairman's specific recommendations were aimed at preventing any US agreement to an international accord on outer space that was either unsound or not part of an over-all comprehensive inspection and disarmament agreement. He warned, also, that the US, in an effort to reach national or international agreement on outer space, should not establish measures" that would unduly restrict any US space program.

(C) CM-92-58 to SecDef, "Proposal for a National Policy on Outer Space (U)," 4 Mar 58, CCS 000.97 (2-25-58) sec 1.

5 Mar 58 The Army launched a second EXPLORER satellite by means of a JUPITER-C rocket, but the satellite, a duplicate of the first EXPLORER, failed to go into orbit, plunging back toward the earth and burning up as it re-entered the atmosphere. The failure was ascribed to the fact that the final stage of the rocket did not ignite.

NYT, 6 Mar 58, 1:6, 7. 7 Mar 58, 1:1.

6 Mar 58 — The National Security Council noted and discussed a report by the Special Assistant to the President for Science and Technology, assisted by Drs. Edward Purcell and Herbert York of the President's Science Advisory Committee, prepared pursuant to NSC Action 1859 (see item of 6 February 1958). The report dealt with US objectives in space exploration and science, and included examples of possible programs designed to achieve these objectives. The NSC also noted that the Special Assistant for Science and Technology would make a subsequent report to it on the organizational aspects of achieving these objectives. (NSC Action No. 1871, approved by the President on 8 March.)
(TS) NSC Action No. 1871, 6 Mar 58.

6 Mar 58 — Following up their memorandum of 15 November 1957, the JCS recommended to the Secretary of Defense the deployment of 56 NIKE-HERCULES batteries in various parts of the US and Canada (4 batteries), actual installation to be in FY 1959 and FY 1960; 10 BOMARC squadrons at US sites, actual installation to be in FY 1961; and 96 HAWK batteries at US, Canadian, and Greenland sites (18 batteries in Canada and 3 in Greenland), actual installation to be in FY 1960 and FY 1961. These recommendations, listing the sites in order of priority, were to serve for budgetary guidance beginning with the FY 1959 military construction program, and were in addition to previous JSC-approved deployments of 7 NIKE-HERCULES battalions (plus 1 battery), 5 BOMARC squadrons, and 2 HAWK battalions in the US (including Alaska). (On 22 August 1958, the JCS approved the deletion of the HAWK deployments in Greenland and all HAWK deployments recommended for Canada except 6 in Labrador and Newfoundland.)
(TS) Memo, CJCS to SecDef, "Deployment of Continental Defense Surface-to-Air Missile Unites (U)," 6 Mar 58, CCS 471.6 (5-31-44) sec 16, derived from (TS) JCS 2277/20, 13 Feb 58, same file, sec 15; (TS) N/H of JCS 2277/20, 25 Aug 58, same file, sec 15.

6 Mar 58 — The Assistant Secretary of Defense (ISA) raised with the JCS the question of the operational responsibilities of SACEUR/USCINCEUR concerning IRBMs deployed in NATO countries. He pointed out that the IRBMs being deployed in Britain were not under SACEUR's operational control because the British had contended that the IRBM was a stragetic weapon and therefore inconsistent with SACEUR's existing mission, but that the North Atlantic Council had decided at its December 1957 meeting to place at SACEUR's disposal the IRBMs offered by the US and accepted by the Council at that meeting for deployment in NATO countries other than Britain. Under these conditions France was to be offered three IRBM squadrons, and other countries would

receive later offers, with SACEUR's operational control of the missiles being spelled out in a bi-lateral treaty between the US and the recipient country in each case. In view of the above and the dual roles of SACEUR/USCINCEUR, the comments of the JCS were requested on (1) whether the NATO allocation of IRBMs employed as strategic weapons required a redefinition of the missions of USCINCEUR and CINCSAC, and (2) whether it was necessary or desirable to propose, through NATO channels, an extension of the mission of SACEUR to encompass a strategic role consistent with (1) above. (For JCS reply see item of 9 April 1958.)

(S) Memo, Asst SecDef (ISA) to CJCS, "Operational Responsibilities of SACEUR/USCINCEUR (U)," 6 Mar 58, Encl to (S) JCS 2277/25, Note by Secys, same subj, 12 Mar 58, CCS 471.6 (5-31-44) sec 15.

10 Mar 58 — The Director, Weapons Systems Evaluation Group, submitted WSEG Second Interim Report No. 30, "On the Need for Additional Emphasis on Certain Weapons Systems," to the JCS. The Report recommended, inter alia, that (1) funds be provided to deploy about 25 TALOS units by 1961 and to develop their AICBM potential so as to permit retrofitting of the deployed units if proving-ground tests were successful; (2) funds be provided for the development and deployment of 30 batteries of NIKE-ZEUS on an accelerated basis; (3) funds be provided for the acceleration of the GAM-77 (HOUND DOG) B-52 ASM weapons system program; (4) there be no augmentation or acceleration of the program for procurement of the soft-based ATLAS system; (5) hardening of the last 2-4 ATLAS bases be seriously considered and initial planning be undertaken immediately; (6) decision to augment the TITAN program be postponed, (7) funds be provided to augment the POLARIS program from 3 submarines to 9; (8) the POLARIS program be accelerated and any additional funds required provided in order to obtain the first delivery as early as December 1959 instead of October 1960, (9) funds be provided to place the research and development of the MINUTEMAN concept on an accelerated basis; (10) decision to fund for the deployment of significant numbers of MINUTEMAN be deferred pending results from the research and development program.

(TS-RD) JCS 1620/185, WSEG Second Interim Report No. 30, "On the Need for Additional Emphasis on Certain Weapons Systems" (U)," 17 Mar 58, CCS 471.6 (5-31-44) BP pt 5.

11 Mar 58 — The Armed Forces Policy Council agreed that the three major guided missile test ranges would be renamed the Atlantic Missile Range, the White Sands Missile Range, and the Pacific Missile Range, and that the military department having jurisdiction in each case would make satisfactory arrangements for extending the facilities of that range to the other military departments.

(C) AFPC Advice of Action, "Guided Missile Ranges," 17 Mar 58, CCS 471.6 (5-31-44) sec 16.

12 Mar 58 — The JCS replied to the memorandum from the Secretary of Defense, dated 27 February 1958, in which the Secretary had requested the JCS to review a list of priority projects suggested by the Services for additional funding in FY 1958 and FY 1959 over and above the amounts provided in the FY 1958 supplemental appropriation and in the FY 1959 budget, and to recommend projects and funding amounts on the basis of two alternative assumptions: (1) that an additional $1.5 billion was provided, and (2) that an additional $2.5 billion was provided. Included in the list, inter alia, were the following development areas and specific projects: AICBM (TALOS, ZEUS); Satellites (Army, Air Force, ARPA); Ballistic Missiles (TITAN, THOR, JUPITER, POLARIS, MINUTEMAN, IRBM Follow-On); and SNARK (4 squadrons). Reporting that they had been unable to agree in many cases concerning projects and funding amounts on the basis of the two assumptions, the JCS listed the projects by Service, in the order of priority within each Service, showing the funding recommended for each project by each Chief of Service (1) without regard to budgetary limitation, (2) under the $1.5 billion limitation, and (3) under the $2.5 billion limitation. The reasoning that led to each Chief's recommendations was also set forth.

(TS-RD) Memo, CNO to SecDef, "Additional Funding for Priority Projects in FY 58 and FY 59 (U)," 12 Mar 58, reproduced in (TS-RD) Encl to (TS-RD) JCS 1800/266, Note by Secys, same subj, 13 Mar 58, CCS 370 (8-19-45) BP pt 10.

13 Mar 58 — The Joint Chiefs of Staff, in response to a request from the Deputy Secretary of Defense for their views concerning the effect of a suspension of nuclear tests, warned that, among other things, a cessation of testing after Operation HARDTACK might have serious adverse effects on the development of warheads for US missiles and anti-missile missiles. For this and other reasons the JCS again reiterated their view that the cessation of tests should be considered only as part of a larger, over-all disarmament agreement.

(TS-RD) Memo, JCS to SecDef, "Nuclear Testing (U)," 13 Mar 58, derived fr (TS-RD) JCS 1731/254, 11 Mar 58, CCS 092 (4-14-45) sec 75.

13 Mar 58 — The White House announced that Lt Gen Putt, Deputy CSAF, Development, was retiring. No reason was given for the retirement, but the New York Times stated that

Gen Putt had been rebuked by Secretary McElroy for the General's criticism of the Secretary's policy on outer-space development (see items of 18 and 25 February 1958). It was announced that Gen Putt would be succeeded by Maj Gen Roscoe C. Wilson, who had been nominated for the rank of lieutenant general.
NYT, 14 Mar 58, 9:1.

13 Mar 58 — The JCS forwarded to the Secretary of Defense their comments on a Gaither panel item concerning additional missile defenses for SAC bases. This was one of the items included in the report that the Department of Defense was required to prepare for further NSC consideration (see item for 6 January 58).
On the basis of the currently approved schedule of deployment of NIKE, BOMARC and HAWK units, protection would be provided for 70 North American SAC bases by the end of FY 1961. SAC bases would also be afforded protection by area defense missile systems. The JCS considered that the presently approved schedule of deployment was appropriate and should be followed, however, they would consider the provision of additional missile units for the protection of North American SAC bases in their current review of over-all air defense requirements.
(TS) Memo, JCS to SecDef, 'Defense of SAC Bases (U),' 13 Mar 58, derived from (TS) Dec on JCS 2101/296, 12 Mar 58. Both in CCS 381 US (1-31-50) secs 76 & 75 respectively.

14 Mar 58 — In view of their establishment of a military requirement for a high-yield warhead for the BOMARC, the JCS requested the Director, Weapons Systems Evaluation Group, to prepare and submit to them a study of the implications of the employment of high-yield weapons in air defense. The study was to include, inter alia, consideration of (1) minimum altitudes for the employment of such weapons, and (2) the employment of such weapons over friendly territory.
(C) SM-191-58 to Dir WSEG, 'Employment of High-yield Weapons in Air Defense (U),' 14 Mar 58, derived from (C) Encl to (S-RD) Dec On JCS 2012/116, 14 Mar 58. Both in CCS 471.6 (5-31-44) sec 16.

14 Mar 58 — The JCS informed the Secretary of Defense that they had established a military requirement for a high-yield warhead in the BOMARC interceptor missile system. This warhead should attain the maximum yield possible in the 1000-pound pay-load capacity of the BOMARC and should be available to operational units in January 1962. In case the Atomic Energy Commission should find that work on developing this warhead would interfere with the schedule of other AEC programs in support of guided missile systems, the JCS desired an opportunity to state whether the degree of interference would be acceptable.
(S-RD) Memo, CSA to SecDef, 'High-Yield Warhead for BOMARC (U),' 14 Mar 58, derived from (S-RD) JCS 2012/116, 28 Feb 58. Both in CCS 471.6 (5-31-44) sec 16.

15 Mar 58 — Maj Gen Bernard A. Schriever, Commander of the Air Force Ballistic Missile Division, announced that the Air Force had completed ground tests of the guidance system and all other major components of the TITAN and that the missile would be ready for flight tests during 1958.
NYT, 16 Mar 58, 33:1.

15 Mar 58 — In a statement issued by the Soviet Foreign Office, the USSR proposed a four-point international agreement on control of outer space. This agreement would: (1) prohibit the use of outer space for military purposes and oblige nations to launch space rockets only under an agreed international program; (2) eliminate foreign military bases in other countries, particularly in Europe, the Middle East, and North Africa; (3) establish a UN control body to oversee fulfillment of these points; and (4) create a UN agency for international cooperation in space research.
NYT, 16 Mar 58, 1:8; text, 34:4-7.

17 Mar 58 — In a *memorandum to the Secretary of Defense, the Joint Chiefs of Staff* stated their belief that it would be inadvisable for the Missiles Panel, Science Advisory Committee, to proceed with an independent study of an *inspection system for outer-space objects (see items* of 23, 24 January and 12 February, 1958) without the benefit of military counsel and advice. They considered that participation of all interested agencies, including the Defense Department, was essential to ensure that the study did not neglect major national security problems. The JCS therefore recommended that the decision assigning an independent study to the Missiles Panel be reconsidered; that the views of the JCS (see item of 24 January 1958) be made available to the Missiles Panel; and that the JCS be authorized to collaborate with the Missiles Panel, through the Director of Guided Missiles, in the preparation of the study.
(S) Memo, JCS to SecDef, "Disarmament Planning (U)," 17 Mar 58, derived from (S) JCS 1731/252, 6 Mar 58, CCS 092 (4-14-45) sec 75.

17 Mar 58 — A Navy VANGUARD rocket successfully fired a tiny satellite into orbit. The satellite was a 6.4-inch, 3.25-pound sphere, circling the earth at a maximum altitude of 2,500 miles, and carried a minimum of instrumentation.
NYT, 18 Mar 58, 1:8.

17 Mar 58 — The CSAF, in a speech to an aviation conference of the American Rocket Society and the American Society of Mechanical Engineers, said that, while there should be over-all civilian control of space operations, the military should be given a voice because "only through our military capability to control space will we be able to use it for peaceful purposes." He said the Air Force was the logical agency to take the lead in developing the ability to control space.
NYT, 18 Mar 58, 14:5.

17 Mar 58 — The Secretary of Defense requested the comments of the JCS on the following items, inter alia, in a "preliminary package" of priority projects for additional funding in FY 1958 and FY 1959, which he and the Deputy Secretary of Defense had developed from the widely varying amounts recommended for various programs by the individual Chiefs of Service in the JCS memorandum of 12 March 1958: NIKE-ZEUS, $225 million; POLARIS, $400 million; Solid-Propellant Land-Based IRBM/ICBM, $125 million; GAM-77, $91 million; ARPA, $100 million; TITAN, $100 million; THOR/JUPITER, nothing, with a caution that the Air Force should check to see if production-continuity support would still be provided.

(S) Memo, SecDef to CJCS, "Additional Funding for Priority Projects in FY 1958 and FY 1959," 17 Mar 58, Encl to (S) JCS 1800/267, Note by Secys, same subj and date, CCS 370 (8-19-45) sec 62.

17 Mar 58 — The Secretary of Defense stated at the Armed Forces Policy Council meeting that any announcements on the nature and timing of ARPA projects and other new developments and actions in the missile and satellite area should come from the Office of the Secretary of Defense. He said that many of these projects were related to the US "cold war" effort, that premature or unauthorized release of the plans could prevent full exploitation of the projects, and that particular care should be taken in regard to projects involving reconnaissance satellite and moon shots.

(C) AFPC Advice of Action, "Publicity on ARPA Projects and New Missile and Satellite Developments," 19 Mar 58, CCS 471.6 (5-31-44) sec 17.

19 Mar 58 — Replying to the memorandum of 17 March 1958 from the Secretary of Defense concerning a "preliminary package" of high-priority projects for additional funding in FY 1958 and FY 1959, the individual Chiefs of Service recommended the following funding, in millions of dollars. NIKE-ZEUS: CSA, 682; CNO, 108; CSAF and CMC, 225. POLARIS: CSA and CSAF, 83; CNO and CMC, 400. Solid-Propellant Land-Based IRBM/ICBM: CSA and CNO, 24; CSAF and CMC, 125. GAM-77: CSA, CNO, and CMC, 91; CSAF, 141. ARPA: CSA, CSAF, and CMC, 100; CNO, 150. TITAN: CSA and CNO, nothing; CSAF and CMC, 100. THOR/JUPITER: All four, nothing. The following were recommended, inter alia, as additional items by the Chiefs of Service indicated: Pacific Missile Range, CSA and CNO ($99 million); SNARK, CNO ($93 million); Astronautics, CSAF ($177 million); BMEW, CSAF ($22 million).

(S) Memo, CJCS to SecDef, "Additional Funding for Priority Projects in FY 1958 and FY 1959 (U)," 19 Mar 58. Reproduced in (S) JCS 1800/268, CCS 370 (8-19-45) BP pt 11.

19 Mar 58 — Scientists of the Earth Satellite Program of the US National Committee for the International Geophysical Year, in a lengthy report just made public, recommended to the President a long-range program of space research, including eventual manned space flight, for exploring the moon and planets. The program called for the

launching of progressively bigger and more complex earth satellites that would probe farther and farther into space and eventually lead to the launching of manned space vehicles. The report, entitled 'Basic Objectives of a Continuing Program of Scientific Research in Outer Space," was submitted in mid-February.
NYT, 20 Mar 58, 1:2; text excerpts, 12:3-8.

20 Mar 58 ✓ A new Army Ordnance Missile Command, under Gen Medaris, was established, effective 31 March, at Huntsville, Alabama. Through it, Gen Medaris would control the Army Ballistic Missile Agency at Huntsville, the Jet Propulsion Laboratory at Pasadena, California, the Redstone Arsenal (now renamed the Army Rocket and Guided Missile Agency), at Huntsville, and the all-Service White Sands, New Mexico, proving grounds, for which the Army had executive administrative responsibility. Gen Medaris was also given authority for direct access to the Chief of Staff and the Secretary of the Army. In announcing this reorganization, Secretary Brucker stated that it was intended to provide more effective procedures for "future priority Army programs, specifically, among other, the PERSHING and JUPITER missiles.
NYT, 21 Mar 58, 1:2.

21 Mar 58 The Deputy Secretary of Defense, in a memorandum for the Chairman of an Ad Hoc Panel on Nuclear Test Cessation established by the Science Advisory Committee, forwarded the views of the JCS on this subject (see item of 13 March 1958) and stated his general agreement with these views. Discussing the effect of a test cessation on the US missile and anti-missile missile programs, he pointed out that the USSR possessed a recognized long-range-missile capability and that even after the conclusion of the HARDTACK test program the US would still not be fully assured of an effective anti-ICBM system. Warhead development necessary for such a system was also essential for the maintenance of an effective US retaliatory threat against the USSR.
These DOD views were not considered by the Ad Hoc Panel on Nuclear Test Cessation since they were considered to relate, in part, to matters outside the scope of the technical studies made by the Panel. On 2 April, accordingly, at the request of the Deputy Secretary of Defense, his memorandum was circulated within the NSC.
(TS-RD) Memo, Dep SecDef to Chmn, Ad Hoc Panel on Nuclear Test Cessation, "The Effects of a Total Suspension or Cessation of Nuclear Testing (S)," 21 Mar 58, encl to (TS-RD) N/H of JCS 1731/254, 28 Mar 52; (TS) Memo, Exec Secy NSC to NSC, "Technical Feasibility of Cessation of Nuclear Testing," 2 Apr 58. All in CCS 092 (4-14-45) sec 75.

21 Mar 58 Air Secretary Douglas forwarded to Mr. McElroy Air Force comments on certain Gaither items, scheduled for further consideration by the NSC, including two pertaining to the Ballistic Missile Early Warning System and the initial operational capability of IRBMs

The Secretary of the Air Force stated that the BMEWS should be accelerated. Recent re-evaluation of the program indicated that its cost would be upwards of $1 billion, of which $600 million would be required during FY 1959. In view of OSD's decision to restrict funding for this program in FY's 58 and 59 to $427 million, the Air Force was re-examining the matter.

With respect to the IOC of first generation IRBMs, Secretary Douglas confirmed an earlier statement that the AF objective as to provide a 16 squadron force (including not more that 4 JUPITER squadrons) by the end of FY 1962. This objective would require $65.8 million in additional funds in FY 1959.

(TS) Memo, SecAF to SecDef, "Report to the President by the Security Resources Panel of the ODM Science Advisory Committee," 21 Mar 58, CCS 381 US (1-31-50) sec 76.

23 Mar 58 — The first underwater launch of a dummy POLARIS missile was successfully conducted.

(S) Navy Dept, "Status of Polaris Program for Month Ending 31 March 1958," Polaris (Monthly Status Report) file, Office, Dir Guided Missiles, OSD.

24 Mar 58 — Replying to a memorandum dated 24 March 1958 from the Deputy Secretary of Defense, the JCS stated that they considered the Canadian MARK I and MARK II air-to-air missile to be of sufficient military importance to warrant its inclusion with the other three elements of the Canadian continental air defense system as Item .04 in Urgency Category "S" of the current Department of Defense Master Urgency List. In addition, they recommended acceptance of the request of the Canadian Department of Defense Production that the four elements of the air defense weapon system be identified by the name "ARROW-ASTRA Weapon System."

(S) Memo, CJCS to SecDef, "Military Urgencies (ARROW-ASTRA Weapon System) (U)," 24 Mar 58, derived from (S) Encl A to (S) JCS 1725/314, Rpt by JLPC, same subj, 13 Mar 58. Both in CCS 004.04 (11-4-46) sec 81.

25 Mar 58 — The Army announced that it was assigning to a private contractor, the Martin Company of Baltimore, the task of developing, testing, and producing a new major weapon, the PERSHING missile. The move was a departure from the Army policy of developing new weapons at Army arsenals, and followed the Air Force technique of contracting most of its weapons development to private concerns. The development program assigned to the Martin Company, it was emphasized by Army officials, would be "under control" of the Army Ballistic Missile Agency.

NYT, 26 Mar 58, 14:1.

25 Mar 58 — A Soviet note to the US on the questions of disarmament and a summit meeting again linked the US proposal to limit the use of outer space to peaceful purposes to the Soviet demand for the elimination of military bases on foreign soil (see item of 15 March 1958).

NYT, 26 Mar 58, 1:1; text, 8:1-7.

26 Mar 58 — President Eisenhower released a report by his Science Advisory Committee, entitled "Introduction to Outer Space," that was designed to acquaint the laymen with some of the problems and hopes of space research. Among other things, the report stated it might cost a total of about $2 billion to send a man on a round trip to the moon.
NYT, 27 Mar 58, 1:7; text of report and Presidential statement, 14:1-8.

26 Mar 58 — The Army launched EXPLORER III, the nation's third artificial satellite. The satellite's orbit, however, was not as planned, bringing the vehicle too close to the earth, and EXPLORER III was expected to have a short life. The deviation from the planned orbit occurred because the last three stages of the JUPITER-C rocket did not fire at the planned angle to the earth.
NYT, 27 Mar 58, 1:8.

27 Mar 58 — The Director of Guided Missiles forwarded for the information of the Chairman of the Joint Chiefs of Staff Department of Defense comments, scheduled for further consideration by the NSC, on a Gaither item pertaining to area defense against ICBMs. The position of the Department of Defense was that it had taken four separate actions which were considered to provide an accelerated program for area defense against ICBMs at the earliest possible date. These actions involved the BMEWS, the WIZARD and NIKE-ZEUS programs, and additional tests during operation HARDTACK. The Department of Defense believed "that a ballistic missile area defense capability will come as a result of experimental and developmental programs now in progress for the NIKE-ZEUS system." Augmented programs of investigation were planned for support in FY 1959.
(S) Memo, W.M. Holaday, Dir GM, to CJCS, "Item for Inclusion in 1 April 1958 Report to NSC in re Comments from ODM Science Advisory Committee," 27 March 58, CCS 381 US (1-31-50) sec 76.

27 Mar 58 — The White House and Defense Department, in separate announcements, stated that the US would make four or more lunar "probes," sending specially equipped, unmanned vehicles into space to circle the moon. These projects would be carried out by ARPA in coordination with the National Advisory Committee for Aeronautics, the National Academy of Sciences, and the National Science Foundation, and work on them had been progressing for some time. Under the program, the Army would launch one or two lunar probes and the Air Force three, and the Navy would develop a mechanical ground scanning system for use in lunar probes. An initial allocation of $8 million had already been made by ARPA to the agencies concerned.
NYT, 28 Mar 58, 1:2; texts, 8:6-8.

28 Mar 58 — According to the New York Times, the Air Force was dissatisfied with the fact that only $8 million--of which the Air Force would get $3 million--had been allocated by ARPA for lunar probes (see item of 27 March 1958). Army officials were reportedly disturbed

over being "left in the dark' about details of the moon probe attempts, since ARPA had made the assignment directly to General Medaris, Ordnance Missile Command head, without going through the Secretary of the Army and Chief of Staff.
NYT, 29 Mar 58, 1:6.

28 Mar 58 — Replying to the request of the Deputy Secretary of Defense, dated 14 February 1958, for recommendations regarding contingency IRBM deployment plans in case IRBM deployments in Britain and France should be canceled or delayed, the JCS recommended reprogramming of IRBM squadrons made available in that way to the following countries, with priority in the order of listing: Any other NATO nation, especially Turkey (these squadrons to be manned initially by US personnel), and Alaska, Spain, Libya, and Okinawa. The JCS pointed out that if deployment was to be made in any of these alternate sites by December 1958, the necessary construction work would have to start at once. They recommended the immediate starting of construction for planned deployment in Alaska, to take advantage of the 1958 construction season there and to provide an additional austere contingency location by December 1958.
(TS) Memo, CJCS to SecDef, 'Future Deployments of the Intermediate Range Ballistic Missiles (C)," 28 Mar 58, CCS 471.6 (5-31-44) sec 17, derived from (TS) Encl A to (TS) JCS 2277/26, Memo by DJCS, same subj, 17 Mar 58, same file, sec 16.

28 Mar 58 — In accordance with NSC Action No. 1840 (see item of 6 January 1958), the Special Assistant to the President for Science and Technology submitted, for NSC consideration, a study of the technical factors involved in monitoring a long-range rocket test agreement to ensure that tests carried out under this agreement would be for peaceful purposes. This report had been prepared by an Ad Hoc Working Group of the President's Science Advisory Committee and CIA, and included no representatives nominated by the Defense Department (see items of 23 January and 17 March 1958). The Working Group, under the chairmanship of Dr. George B. Kistiakowsky, limited itself to technical problems and did not consider the enforcibility, desirability, or military implications of a missile test suspension.
The report of the Working Group, dated 26 March, concluded that:
(1) The remote detection of long-range rockets that were fired from any point in the Soviet bloc and that left the atmosphere would be made almost certain by a monitoring system employing an expansion of existing intelligence detection systems and by new techniques under development. The detection of these rockets could be further improved by a monitoring system that included stations inside the Soviet bloc, but such stations might not actually be required to provide certainty of detection.
(2) It might not be possible to discriminate always between long-range rockets and other large rockets that left the atmosphere.

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(3) It would not be possible to distinguish with any degree of confidence between a large rocket fired as part of a military program and one fired for peaceful purposes.

(4) It would be impossible to prevent nations from obtaining from rockets designed for peaceful uses important information and training experience that could be used for a military development program. An agreement prohibiting all national large-rocket testing and establishing an international or joint US-USSR agency to plan and execute all rocket firings for peaceful purposes could probably be designed in a manner that would limit the amount of information of military value that might be accumulated. In such an arrangement, moreover, the US might learn more about the Soviet missile capability than the USSR could learn in return.

(5) A complete prohibition of the launching of all large rockets that left the atmosphere, including those intended for peaceful uses, could be fully monitored, and would freeze the development of ballistic missiles and space vehicles and prevent their use for peaceful purposes.

(6) An agreement to prohibit all nationally conducted large-rocket tests would not prevent the USSR from building up an operational military missile force if the Soviets had already developed an ICBM capability. The maintenance and expansion of this capability could only be prevented by the prohibition of the retention or manufacture of ballistic missiles or nuclear warheads.

(S) Memo, Spec Asst to Pres for Science and Technology to Spec Asst to Pres for NSA, "Transmittal of Report," 28 Mar 58, encl to (S) Memo, Exec Secy NSC to NSC, "Monitoring a Long-Range Rocket Test Agreement," 28 Mar 58, CCS 092 (4-14-45) sec 75.

28 Mar 58 The Joint Chiefs of Staff forwarded to Secretary McElroy their comments on two Gaither items, scheduled for further consideration by the NSC, relating to the Ballistic Missile Early Warning System and to the IOC of the IRBM. The Chiefs recognized the importance of attaining as soon as possible an adequate BMEWS, especially in view of intelligence estimates which gave the Soviets a significant ICBM capability as early as 1960. Outlining the general requirements of a BMEWS for ICBM, they agreed that its operational availability should be actively pursued.

With respect to the IOC of the IRBM, the Joint Chiefs of Staff pointed out that in a memorandum to Mr. McElroy, subject, "FY 1959 Budget," dated 17 November 57, they had recommended funds for an accelerated IRBM program designed to provide a 16 squadron force by 1963. Noting that the Secretary of the Air Force had recommended the same force objectives to be available one year earlier (see item 21 Mar 58), the JCS reaffirmed their recommendation that the force objectives, already included in Air Force funding programs, be provided by FY 1963.

The JCS observed that on 20 March 1958 the Secretary of Defense had made a tentative decision

that no additional funding should be provided for these two projects in the FY 1959 supplemental then under consideration.

(TS) Memo, CJCS to SecDef, "Ballistic Missiles Early Warning System (BMEWS) (U)," 28 Mar 58, CCS 381 US (1-31-50) sec 76, derived from (TS) JCS 2101/300, same file, (TS) Memo, CJCS to SecDef, 'IRBM Operational Status (U)," 28 March 58, CCS 381 US (1-31-50) sec 76, derived from (TS) JCS 2101/301, same file.

31 Mar 58 — In a memorandum for the Secretary of Defense General Twining forwarded the views of the Joint Chiefs of Staff on area defense against ICBMs, one of the Gaither items on which Defense was preparing a report for the NSC (see item of 27 March 1958).

In view of intelligence estimates giving the USSR a significant ICBM capability as early as 1960, the JCS recommended that defense weapons to counter this capability be developed as soon as possible. However, since the technical feasibility of an area defense against the BM threat had not yet been established, the JCS agreed that vigorous research leading to a determination of the feasibility of the concept should be pursued.

(TS) Memo, CJCS to SecDef, "Area Defense Against ICBM's (U)," 31 Mar 58, CCS 381 US (1-31-50) sec 76; derived from (TS) JCS 2101/303, 28 Mar 58, same file.

1 Apr 58 — The JCS noted an estimate prepared by the Joint Intelligence Committee on the Soviet reaction to US deployment of IRBMs in Western Europe. The estimate concluded that the USSR (1) would exploit to maximum advantage the propaganda potential that it could recognize in the situation; (2) would attempt to increase the difficulties of the deployment, such as by inciting local civil distrubances or strikes, or even by sabotage; (3) might harden its attitude toward cultural, scientific-technical, and economic exchanges, and might strengthen Communist control in the satellite nations and the USSR itself; (4) would refrain from any action that, in its judgment, would run a serious risk of general war.

(S) JCS 1924/102, Rpt by JIC, "Soviet Reaction to U.S. Deployment of Intermediate Range Ballistic Missiles (IRBMs) (U)," 24 Mar 58; (S) Dec On JCS 1924/102, same subj, 1 Apr 58. Both in CCS 471.6 (5-31-55) sec 17.

2 Apr 58 — President Eisenhower submitted to the Congress a budget amendment covering $1,455,747,000 in augmentation of the FY 1959 appropriation request for the Defense Department. Among the high-priority projects to be accelerated, expanded, or initiated with these funds were the POLARIS; a solid-propellant ICBM/IRBM; the GAM-77 missile; the TITAN; the Pacific Missile Range; and a variety of projects under the direction of ARPA, including development of weapons systems, reconnaissance satellites, and space explorations. An additional request for $136,553,000, for military construction, was to be submitted to the Congress later.

(U) US Congress, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt 3, pp. 2359-2361.

2 Apr 58 President Eisenhower, in a memorandum to the Secretary of Defense and the Chairman of the National Advisory Committee for Aeronautics (NACA), informed them of his request to Congress for the establishment of a National Aeronautics and Space Agency (see earlier item of this date). The President directed that: (1) NACA should prepare and present to the appropriate Congressional committees a full explantation of the proposed legislation. (2) NACA should make such detailed plans as might be necessary to reorient its programs and organization. (3) The Department of Defense and NACA should review pertinent programs under way or planned, including those authorized by him on 27 March, and should recommend which of these programs should be placed under the new Agency. The Department of Defense and NACA should also prepare an operating plan for supporting the new Agency. (4) NACA should discuss with the National Science Foundation and the National Academy of Sciences, and others, the matter of participation of the scientific community in planning and coordinating the use of space vehicles in civilian space science. (5) The Department of Defense should identify and report to him what programs appeared to be needed in support of well-defined military requirements. ARPA would continue to serve as the focal point for such programs within the Department.

(U) Memo, Eisenhower to SecDef and Chm, NACA, no subj, 2 Apr 58, CCS 000.97 (2-25-58) sec 1.

2 Apr 58 In a special message to Congress, President Eisenhower proposed the creation of a civilian National Aeronautics and Space Agency with the broadest authority to direct aeronautical and space sciences activities sponsored by the United States, except for those projects primarily associated with military requirements. The Agency would absorb the National Advisory Committee for Aeronautics, and would be assisted by a National Aeronautics and Space Board. The Agency would have authority to spend whatever money was necessary to recruit scientists and technicians, subject only to regulations prescribed by the President.

NYT, 3 Apr 58, 1:5; text, 14:4-7, and CCS 000.97 (2-25-58) sec 1.

3 Apr 58 In testimony before the Senate Preparedness Investigating Subcommittee, Secretary of Defense McElroy stated that there was no "positive evidence" that the Russians were ahead of the US in the development of long-range (1,500 to 5,000 miles) missiles.

(U) US Congress, Sen, "Inquiry into Satellite and Missile Programs," Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services, 85th Cong, 1st and 2d sess (Washington, 1958), pt 3, p. 2414.

3 Apr 58 President Eisenhower proposed to Congress a far-reaching reorganization of the Defense Department that, among other things, would give the Secretary of Defense authority to transfer appropriated funds from one Service to another. This authority, said the President, was especially necessary "in respect to the development of new weapons."

NYT, 4 Apr 58, 1:6; text, 6:8-1, 7:1-4.

3 Apr 58 The National Security Council noted the study by the Ad Hoc Working Group, made up of the President's Science Advisory Committee and the CIA, on the subject of monitoring a long-range rocket test agreement (see item of 28 March 1958). This action (NSC Action No. 1888) was approved by the President on 7 April.

(TS) NSC Action No. 1888, 3 Apr 58.

4 Apr 58 Supplementing its views of 31 January 1958 on IRBM deployments planned by the Defense Department, the State Department summarized its position with respect to those nations included in the basic and contingency plans as follows. Britain: Negotiations completed. France: SACEUR had advanced discussions to the point where bilateral negotiations might begin shortly; but this schedule could be upset by a serious deterioration of the internal French political situation, or of US-French relations as a result of efforts to settle French problems in North Africa. Italy: US action should await completion of the elections scheduled for 25 May and further progress in the discussions initiated by SACEUR. Turkey: Apparently the logical country to approach after Italy. There should be no public knowledge of discussions with Turkish authorities until after public knowledge of Italian and/or French negotiations. Alaska: No significant political problems bearing on deployment of IRBMs. Okinawa: Military considerations favoring IRBM deployment were considered to override the anticipated Japanese criticism and some antipathetic local reaction. Greece: An immediate approach should not be made, but the Department would like to review the situation after three months, or sooner if discussions with Turkey were begun before that time. Libya: The political atmosphere in North Africa was adverse to IRBM deployment in Libya or an approach to the Libyan Government on that subject, which should await a definite improvement in the area. Spain: State recommended against any immediate approach concerning IRBM deployment to that country.

(TS) Ltr, State Dept Couns to Asst SecDef (ISA), 4 Apr 58, CCS 471.6 (5-31-44) sec 17.

4 Apr 58 The Deputy Secretary of Defense directed that the Department of the Air Force would be responsible for (1) the Service-level negotiation of technical agreements concerning operational aspects of IRBM deployments in NATO nations, (2) the programming of IRBMs for MAP in accordance with established MAP procedures, and (3) the provision of required IRBM training for appropriate foreign nationals in the US and in overseas

areas. He further directed that all US military contacts with host nations would be by arrangement through the appropriate MAAG Chief.

(S) Memo, Dep SecDef to Sec4F, "IRBM Deployments to NATO Nations," 4 Apr 58, App to (S) JCS 2277/29, Note by Secys, same subj (U)," 11 Apr 58, CCS 471.6 (5-31-44) sec 18.

7 Apr 58 — The Assistant Secretary of Defense (R&E), the Director of Guided Missiles, OSD, and the Director, ARPA, issued a memorandum (approved by the Secretary of Defense) delineating their relationships and areas of responsibility, pending reorganization of the Department of Defense. Briefly summarized, the memorandum stated:

The Assistant Secretary of Defense (R&E) was the staff adviser to the Secretary of Defense on all military research, development, and engineering matters, and was responsible for recommending basic policies for the DOD on these matters and for suggesting an integrated program aimed at avoiding gaps and eliminating undesirable duplication. To carry out these responsibilities, he should be fully informed on all related efforts within the DOD, including those projects assigned to the Director of Guided Missiles and the Director, ARPA. The Director of Guided Missiles was a staff assistant to the Secretary of Defense with certain delegated line authority for the direction of all DOD activities related to guided missiles. He looked to the Assistant Secretary of Defense (R&E) for advice and assistance in broad research and development fields. The Director, ARPA, was primarily a line official responsible for planning and directing advance research projects involving space science and technology, ballistic missile defense, and other advanced research and development, as assigned by the Secretary of Defense Normally, these projects would be outside the assigned missions of the military departments or would be of interest to or involve two or more military departments. The relationship between all three of these officials was one of close interdependence.

(U) Memo, Asst SecDef (R&E) et al., to Secys of the Mil Depts, et al., no subj, 7 Apr 58, CCS 334 ARPA (2-7-58) sec 1.

8 Apr 58 — The JCS recommended, in a memorandum to the Secretary of Defense, that the US furnish MB-1 (GENIE) air-to-air atomic rockets to the British Royal Air Force for use with the F-23 supersonic interceptor, which the British had under development and which could be made compatible with the GENIE. The rockets would be furnished on essentially the same basis as that on which atomic weapons were to be furnished British bombers. Prompt action by the US, the JCS said, would enable the British GENIE force to be operational in January 1961. With their memorandum, the JCS forwarded terms of reference that they had approved as a satisfactory basis for proceeding with detailed plans to carry out the recommended action regarding the GENIE.

(TS-RD) Memo, JCS to SecDef, 'A Proposal to Furnish U.S. Atomic Air Defense Weapons to the United Kingdom (S),' 8 Apr 58, derived from (TS) JCS 2220/136, 28 Mar 58. (TS) N/H of 2220/136, 8 Sep 58. All in CCS 350.05 (3-16-48) sec 11.

9 Apr 58 ✓ In a memorandum for the Secretary of Defense the Joint Chiefs of Staff stated their current thinking on the ICBM and POLARIS/submarine items in the Gaither Report. Recalling that on 24 February 1958 they had expressed the view that it would be undesirable for Secretary McElroy to take a final position on the augmentation of the present ICBM and POLARIS/submarine weapons systems prior to their re-evaluation of offensive and defensive weapons systems, the JCS stated this re-evaluation had been used in preparing their memorandum to him, dated 19 March 1958, concerning additional funding for priority projects in FY 58 and FY 59.

The JCS considered that Mr. McElroy's 3 April 1958 statement before the Senate Preparedness Subcommittee on FY 1959 Budget Augmentation established the Department of Defense position on supplemental funding of these two programs.

(TS) Memo, CJCS to SecDef, "Augmentation of the Present ICBM and POLARIS/Submarine Weapons Systems (C)," 9 Apr 58, CCS 381 US (1-31-50) sec 77, derived from (TS) JCS 2101/302, 9 Apr 58 same file, sec 76.

9 Apr 56 Replying to a memorandum by the Assistant Secretary of Defense (ISA), dated 6 March 1958, the JCS informed the Secretary of Defense that they considered the allocation of IRBMs to NATO did not require any alteration of the missions of USCINCEUR, SACEUR, or CINCSAC.

(TS) Memo, CJCS to SecDef, 'Operational Responsibilities of SACEUR/USCINCEUR (U)," 9 Apr 58, derived from (TS) JCS 2277/28, 4 Apr 58. Both in CCS 471.6 (5-31-44) sec 17.

11 Apr 58 The JCS recommended to the Secretary of Defense a revised schedule of ICBM and IRBM warhead requirements through March 1960, to supersede previous guidance furnished the Atomic Energy Commission for production planning, as follows. ICBM warheads: in CY 1959, 2 by 1 March, 6 by 1 June, 10 by 1 September, and 18 by 1 December; and by 1 March 1960, 25. IRBM warheads: in CY 1958, 8 by 1 September and 18 by 1 December; in CY 1959, 45 by 1 March, 73 by 1 June, 84 by 1 September and 107 by 1 December; and by 1 March 1960, 136. The JCS requested that the IRBM XW-49 warhead be produced in an improved 1.75-MT configuration, instead of the original 1.1-MT configuration, to the extent possible without interfering with other stockpile requirements, and that enough preproduction, hand-built ICBM XW-35 warheads be made prior to December 1959, the starting production date for that warhead, to obviate the interim substitution for it of the XW-49 warhead. (On 6 May 1958, the Deputy Secretary of Defense forwarded the foregoing schedule and requests to the Chairman of the Atomic Energy Commission.)

DOE (b)(3)

(TS-RD) Memo, CJCS to SecDef, "Requirements for ICBM and IRBM Warheads (U), 11 Apr 58, CCS 471.6 (5-31-44) sec 18, derived from (TS-RD) JCS 1823/372, 2 Apr 58, same file, sec 17, (TS-RD) Ltr, DepSecDef to Chm AEC, 6 May 58, App to (TS-RD) N/H of JCS 1823/372, 9 May 58, same file.

13 Apr 58 — The second Soviet satellite apparently disintegrated, with the fragments falling into the Caribbean, according to scientists at the Smithsonian Astrophysical Laboratory in Cambridge, Massachusetts.
NYT, 14 Apr 58, 1;8.

15 Apr 58 — The JCS informed the Secretary of Defense that they had completed their review of Continental Air Defense Objectives Plan 1956-1966 (CADOP 56-66) and had approved for planning purposes and programming guidance of the Services the numbers of US air-defense weapons systems that should be operationally installed in defense of the US, Alaska, and Canada, and of US bases in Greenland, by the end of FY 1962. Since it was necessary to leave to the Services sufficient freedom to provide proper balance between offensive and defensive forces, the JCS planned to provide CINCONAD each year, for the next four years, with each Service's current estimate of its continental air-defense programs for CINCONAD's use in future planning. The JCS stated that they had considered the desirability of installing an interim defense against ballistic missiles at SAC bases, utilizing modified available antiaircraft missiles. It was estimated that a program of 25 land-based TALOS units, to be effective soon enough, would require immediate approval and obligation of nearly $1 billion, mostly to be spent over a period of 3 years, with additional funds required to develop and incorporate the antiballistic-missile capability. A program of about 12 land-based TALOS units would require about $600 million over a period of 3 years. Such a program could result in the earliest possible interim defense against ballistic missiles at a limited number of SAC bases, but the expenditure of additional funds in the above amounts did not appear to be justified in view of budgetary limitations. However, the JCS believed that research and development of the antiballistic-missile capabilities of the system should be continued, as directed by ARPA, within such existing funds as could be made available.
(TS) Memo, CSA to SecDef, "Continental Air Defense Objectives Plan 1956 - 1966 (CADOP 56-66) (U)," 15 Apr 58, CCS 381 US (5-23-46) sec 96, derived from (TS) JCS 2245/45, 26 Mar 58, same file, BP pt 15.

15 Apr 58 — Dr. Wernher von Braun, director of the Development Operations Division, Army Ballistic Missile Agency, said in testimony before the House Select Committee on Astronautics and Space Exploration that three months earlier the Army had proposed that it be given authority to shoot a man 150 miles into space in the nose of a rocket and return him to earth. This could be accomplished, he stated, within a year after approval by the Defense Department.
NYT, 16 Apr 58, 7:1.

15 Apr 58 The Deputy Secretary of Defense informed the Armed Forces Policy Council that it was expected that a land-based solid-propellant-IRBM development and production project would be set up under NATO sponsorship in Europe. He said this project was expected to utilize state-of-the-art advancements resulting from the POLARIS and other solid-propellant programs. The Assistant Secretary of Defense (ISA) and the Assistant Secretary of Defense (R&E) were to work out a Mutual Weapons Development project with the NATO-sponsored country, and the Air Force would act as executive agent in carrying out this MWD project.

(S) AFPC Advice of Action, "Development and Production of IRBMs in Europe," 24 Apr 58, CCS 471.6 (5-31-44) sec 18.

16 Apr 58 The President sent to Congress his draft bill for reorganization of the Defense Department, but said he was postponing for a year his proposal to give the Secretary of Defense authority to transfer appropriated funds from one Service to another (see item of 3 April 1958).

NYT, 17 Apr 58, 1:4; text, 10:4-5.

22 Apr 58 The Director of the National Advisory Committee for Aeronautics, testifying before the House Select Committee on Astronautics and Space Exploration, described plans to launch huge aluminum-foil balloons into orbit around the earth or the moon. Another witness, the director of the Avco Research Laboratory, Everett, Massachusetts, told the committee that in two or three years an ICBM could be used to put a manned satellite into space. He said a proposal to use an ATLAS for this purpose had been before the Department of Defense since 20 November 1957.

NYT, 23 Apr 58, 1:4.

23 Apr 58 The Deputy Secretary of Defense, the Director of Guided Missiles, the Secretary of the Air Force, and the Deputy Assistant Secretary of Defense (ISA) agreed that, for planning purposes, production of the first generation of IRBMs should be held to 12 squadrons, deployed as follows: Britain, 4; France, 3; Italy, 2; Turkey, 1, Alaska, 1; and Okinawa or the Near East, 1. They also agreed that (1) the THOR deployment schedule to Britain should remain unchanged (December 1958, June and October 1959, and March 1960); (2) France should receive JUPITERs; (3) the Air Force would work for an initial JUPITER capability (5 missiles) in December 1958 and full squadron capability by February 1959; (4) the second and third JUPITER squadrons would be deployed in France between August 1959 and February 1960; (5) the total JUPITER production should be 3 squadrons; (6) the Air Force should program the first Italian squadron to begin deployment about July 1959 and become fully operational in December 1959, and the second squadron [to become operational] about July 1960;

(8) the Air Force should proceed with base preparations in Alaska for 1 squadron, but deployment of the squadron should be programmed for the summer of 1960 unless an earlier squadron, originally scheduled for some other site, became available.

(TS) Memo for Rec, 'Meeting held in Office of the Deputy Secretary of Defense on 22 Apr 1958 on IRBM Production and Deployment Programs (U)," 23 Apr 58, Encl to (TS) JCS 2277/33, Note by Secys, same subj, 12 May 58, CCS 471.6 (5-31-44) sec 18.

23 Apr 58 — Mr. Roy W. Johnson, Director, Advanced Research Projects Agency, testified before the House Subcommittee on Appropriations that, in his opinion, it would be a "grave mistake" to take the task of exploring space away from the military agencies.

(U) US Cong, HR, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), pp. 325, 339.

24 Apr 58 — The Commander of the Air Force Ballistic Missile Division, testifying before the House Select Committee on Astronautics and Space Exploration, said that the development of a military reconnaissance satellite, known as Project PIED PIPER, had been given equal priority with the development of ICBMs. The Chief Scientist of ARPA, Dr. Herbert F. York, told the committee that the Agency planned to launch satellites at the rate of one a month in 1959 and was working on plans for more powerful rocket engines and other sources of power for satellites, as well as on a program to "get a man in space."

NYT, 25 Apr 58, 14:1.

24 Apr 58 — The National Security Council (a) noted and discussed certain reports by the Department of Defense responsive to NSC actions on 16 January and 27 February 1958; (b) noted the President's approval of the Secretary of Defense's recommendations that the IOC of the IRBM by early CY 1961 be increased from eight to twelve squadrons, with the understanding that additional new obligational authority would not be required for this purpose during FY 1958 or FY 1959; (c) noted the President's request that the Department of Defense review the need and desirability of the proposed locations for TITAN squadrons.

(TS) NSC Action No. 1898, 24 Apr 58.

28 Apr 58 — A Navy attempt to place in orbit an instrumented twenty-inch earth satellite failed when the third stage of the VANGUARD rocket bearing it aloft did not fire.

NYT, 29 Apr 58, 1:8.

30 Apr 58 — In a memorandum to the Secretary of Defense, the JCS again restated their view that the US missile and anti-missile-missile programs would be adversely affected by any halt in nuclear testing. They reiterated their belief that for this and other reasons no such cessation was acceptable unless it

were part of a larger, over-all disarmament agreement. On 9 May, at the request of the JCS, the Secretary of Defense forwarded their views to the President, and stated his general agreement with these views.

(TS) Memo, JCS to SecDef, "Nuclear Testing (U)," 30 Apr 58, derived from (TS) JCS 1731/255, 28 Apr 58; (TS) N/H of JCS 1731/255, 15 May 58. All in CCS 092 (4-14-45) sec 76.

1 May 58 — The Department of Defense reassigned, from the Director of Guided Missiles, OSD, to the Director, ARPA, responsibility for all satellite and other outer-space vehicle programs to be conducted by the Department, including the VANGUARD series of satellites. The Director of Guided Missiles would continue to be responsible for support of these programs with the necessary rocketry, launching and other range facilities, and the like.

(U) Memo, Dep SecDef to Dir ARPA, "Satellite Programs, including the VANGUARD Series," 1 May 58, encl to (U) DOD Joint Secretaries Advice of Action, "Responsibility for Satellite Programs, Including VANGUARD Series," 7 May 58, CCS 334 ARPA (2-7-58) sec 1.

4 May 58 — According to the New York Times, the Department of Defense had increased the planned production figure for the THOR missile and lowered that for the JUPITER. Additional THORs were reportedly to go to Europe, with a proportionate decrease in the number of JUPITERs scheduled for European deployment. JUPITER production was reported to be nine months to a year behind that of the THOR.

NYT, 5 May 58, 1:3.

5 May 58 — The President approved NSC 5810/1, "Basic National Security Policy," superseding 5707/8 of the same subject. NSC 5810/1 included the following statement:

"The United States must tap the basic and most advanced research of the nation, both private and governmental, so that it can rapidly take advantage of new discoveries, including those related to outer space, which may profoundly influence military technology. Moreover, the United States must speed by all practicable steps the translation of research and development into an appropriate flow of new weapons and equipment to the Armed forces."

(TS) NSC 5810/1, "Basic National Security Policy," approved 5 May 58, CCS 381 US (1-31-50) sec 78.

7 May 58 — Mr. Roy W. Johnson, Director of the ARPA, and Dr. Herbert York, Chief Scientist of the Agency, expressed deep concern, in testimony before the Senate Special Committee on Space and Astronautics, regarding "unnecessary restrictions" that the President's proposed civilian space agency might place on military space projects. Both Mr. Johnson and Dr. York believed it was necessary, in view of national security, that DOD be permitted to proceed independently with space programs for which there was a military requirement, or a "reasonable chance of fulfilling military needs."

(U) US Cong, Sen, "National Aeronautics and Space Act," Hearings before the Special Committee on Space and Astronautics, 85th Cong, 2d sess (Washington, 1958), pp. 147, 148, 173, 178, 179.

8 May 58 — Mr. Garrison Norton, Assistant Secretary of the Navy for Air, testified before the Senate Special Committee on Space and Astronautics that although the Navy endorsed the 'intent" of the recommended new space agency, it had "grave misgivings" regarding certain portions of the proposed bill. The Navy's main concern he said, was that the act establishing the agency should make it quite clear that areas of military concern would be under the control of the Secretary of Defense, and that the Secretary would determine which weapons systems were to be taken over by the new agency.

(U) US Cong, Sen, "National Aeronautics and Space Act," Hearings before the Special Committee on Space and Astronautics, 85th Cong, 2d sess (Washington, 1958), pp. 237-239.

8 May 58 — The National Security Council noted and discussed an oral report concerning US-USSR ballistic missile developments presented by the Special Assistant to the President for Science and Technology, assisted by Dr. George B. Kistiakowsky. (NSC Action No. 1909, approved by the President on 9 May.)

(TS) NSC Action No. 1909, 8 May 58.

8 May 58 — Secretary McElroy, at a news conference, said that the cost of keeping the JUPITER and THOR programs going simultaneously had been more than $100 million above what it would have cost to conduct only one of the programs. He stated that the Defense Department was not yet ready to choose between the two systems, but that the choice probably had to be made before the end of 1958.

NYT, 9 May 58, 7:1.

15 May 58 — The Soviet Union launched a new satellite weighing nearly one and one-half tons. The cone-shaped, instrumented missile was the third known Soviet satellite. It was orbiting farther away from the earth than its predecessors, but not as far away as the three US satellites.

NYT, 16 May 58, 1:1.

15 May 58 — Dr. Wernher von Braun, at a news conference, estimated that it would take the US a year to eighteen months to send up a satellite as large as the newly launched Sputnik III. According to the New York Times, other US officials thought the time lage would be at least two years.

NYT, 16 May 58, 8:3.

18 May 58 — A JUPITER missile was successfully test-fired and its nose cone recovered in excellent condition four and one-half hours later. It was the first time a full-scale nose cone had been retrieved intact by the US after a successful flight. The nose cone impacted

within 32 nautical miles of the planned impact point more than 1,300 nautical miles downrange
(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD. NYT, 19 May 58, 1:1.

22 May 58 — An explosion of eight NIKE-ZEUS missiles on the ground, at any Army missile-launching base at Middletown, N.J., killed at least eight persons. On the next day the Army announced that the explosion had apparently occurred while modifications of the missiles were being carried out, and that all such modifications had been suspended until the cause of the explosion was determined.
NYT, 23 May 58, 1:8, 24 May 58, 1:1; text, 12: 2-3.

24 May 58 — A New York Times correspondent, after interviewing officials "responsible for drafting plans for space research," reported that the US still had no firm program, organization, or funds to challenge the Soviet space program. Indeed, reported the Times, no official decision had even been made on whether or not to make this challenge. The US space program had become bogged down in organizational disputes, technical evaluations and re-evaluations, extensive committee work, and budgetary limitations--all compounded by public and official apathy.
NYT, 25 May 58, 1:2-3.

27 May 58 — The Navy launched a VANGUARD satellite 2,000 miles into space, but the vehicle failed to orbit. The satellite was apparently launched at an angle too sharp for orbiting, and probably fell back into the earth's atmosphere and destroyed itself. This was the fourth failure in five attempts to launch a satellite with a VANGUARD rocket.
NYT, 28 May 58, 1:2; 29 May 58, 9:5.

28 May 58 — On recommendation of the Director of Guided Missiles the Deputy Secretary of Defense requested the Chairman of the Atomic Energy Commission to accelerate the POLARIS warhead program so as to provide 16 warheads in April 1960, an additional 16 warheads in July 1960, and an established warhead delivery capability of 7 per month in October 1960. This acceleration was necessary because POLARIS submarines were now expected to be ready for sea sooner than previously anticipated.
(S-RD) Ltr, Dep SecDef to Chm AEC, 28 May 58; (S-RD) Ltr, DGM to Dep SecDef, 'Acceleration of POLARIS Warhead Program,' 26 May 58. Both in CCS 471.6 (5-31-48) sec 18.

DOE (b)(3)

29 May 58 — The JCS informed the Secretary of Defense that they had approved a requirement for atomic weapon tests of the QUAIL, a fractional kiloton device, and that they considered it essential for these tests to take place prior to 1 September 1958, as a part of Operation HARDTACK, because of the possibility of a moratorium on nuclear testing after that date. They

DOE (b)(3)

therefore requested the Secretary to advise the Chairman of the Atomic Energy Commission concerning this matter and request his cooperation in making devices available for testing, in as nearly a weaponized configuration as feasible, prior to 1 September 1958. (See item of 9 July 1958.)

(S) Memo, CJCS to SecDef, "Atomic Weapon Tests of QUAIL Device (C)," 29 May 58, derived from (S) JCS 2012/121, 21 May 58. Both in CCS 471.6 (5-31-44) sec 18.

DOE (6)(3)

2 Jun 58

The JCS informed the Secretary of Defense that they had established an operational requirement for an atomic warhead to be used in the FALCON missile, a guided air-to-air rocket, and in the Battle Group Atomic Deliver System (DAVY CROCKETT), a direct-support weapon to be employed by battle groups and other appropriate combat units. The JCS considered the development of this warhead, which would have a yield of .010 to .030 KT, was important enough to warrant a priority insuring its operational availability early in 1961, and they asked the Secretary to request the cooperation of the Chairman of the Atomic Energy Commission in developing the warhead, on the priority basis mentioned. The JCS also stated that an improved warhead with the same general operational characteristics, but using significantly less plutonium, was required as soon as practicable.

DOE (6)(3)

(S-RD) Memo, CJCS to SecDef, "Atomic Warhead for the FALCON Missile and the Battle Group Atomic Delivery System (DAVY CROCKETT) (U)," 2 Jun 58, (S-RD) JCS 2012/123, 2 Jun 58. Both in CCS 471.6 (5-31-44) sec 18.

3 Jun 58

According to the New York Times, the National Security Council was making a broad review of US foreign and defense policies, including the question of what priority was to be given to the production of various missiles, aircraft, and other strategic delivery systems, such as missile-launching submarines.

NYT, 4 Jun 58, 1:5.

3 Jun 58

An estimate of Soviet progress on outer-space projects (satellites, lunar and planetary probes, etc.) by the Guided Missiles Intelligence Committee, IAC, when compared with a statement of US progress by the Department of Defense, dated 4 June, indicated that the USSR would achieve capability in almost all of these projects before the US. This comparison was reproduced in NSC 5814/1 (see item of 14 August 1958) with the note that the US was estimated to be considerably ahead of the USSR in miniaturization of missile and satellite components, and that, therefore, the effectiveness of US satellites on a 'per pound in orbit' basis was estimated to be greater than that of the Soviet Union

(S) "Earliest Possible Time Periods of Various Soviet and U.S. Accomplishments in Outer Space," in (S) NSC 5814/1, "Preliminary U.S. Policy on Outer Space," 18 Aug 58, Encl to (S) JCS 2283/15, Preliminary U.S. Policy on Outer Space (NSC 5814/1) (C)," 21 Aug 58, CCS 000.97 (2-25-58) sec 2.

3 Jun 58 — According to the New York Times, the Army would begin arming its forces in West Germany with REDSTONE missiles at the end of June.
NYT, 4 Jun 58, 13:1.

6 Jun 58 — General Twining, in hearings before the Senate Subcommittee on Appropriations, for the FY 1959 budget, stated that although "every service did not get everything it would like to have, nevertheless I believe that this is a sound budget and one which will give us the kind of defense essential to the security of this country." He had carefully reviewed Department of Defense Secretary McElroy's statement prepared for the Subcommittee and believed that "it covers the ground so well that no additional formal prepared statement by me is necessary."
(U) US Cong, Sen, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), p. 20.

7 Jun 58 — ARPA was assigned the project of advanced research in the field of high-performance solid propellants, including the supporting research necessary for effective use of these new high-energy materials when they become available.
(U) Memo, Dep SecDef to Dir ARPA, "Advanced Research in High-Performance Solid Propellants," Encl 3 to (U) DOD Directive No. 3200.5, Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

9-10 Jun 58 — At the request of the Secretary of State, a symposium was held at CIA to discuss problems involved in an inspection program that would disclose any significant Soviet violation of a ban on the production and deployment of long-range ballistic missiles. As a result of this symposium and subsequent discussions during the remainder of the month, a preliminary report was completed on 27 June. This report concluded that an inspection system with a reliability of 75-90 per cent could be designed to disclose significant Soviet violations, and that the earlier it was established the simpler and more reliable it would be. The report discussed at length the components of such a system and the means and methods of implementing it.
(S) Memo, Edward L. Allen to Participants in CIA Guided Missile Symposium, et al., "Review of Revised Prelimary Report," 27 Jun 58, filed as encl to (S) Memo, Exec Secy to NSC, "Monitoring a Long-Range Rocket Test Agreement," 28 Mar 58, CCS 092 (4-14-45) sec 75.

10 Jun 58 — Lt General Samuel E. Anderson, Director of the Air Force Research and Development Command, told reporters that three attempts to fire missile "probes" at the moon would be made in 1958, one each in August, September, and October. The Director, ARPA, however, said that "no final decision" had been made on whether

or not the first US moon 'probe" would come in August. On 11 June, Air Secretary Douglas publicly rebuked General Anderson, and stated that ARPA had made no final decision on the dates of the moon "probe."
NYT, 11 Jun 58, 1:5, 7; 12 Jun 58, 1:4.

11 Jun 58 — General Taylor, Chief of Staff, USA, in testimony before the Senate Subcommittee on Appropriations, stated that more than 4 per cent of total Soviet military funds were now being allocated to the Soviet Army research and development program as compared with slightly over 1 per cent that the US Army research and development program had been allocated in the total FY 1959 DOD budget.
(U) US Cong, Sen, Department of Defense Appropriations for 1959: Hearings before the Subcommittee of the Committee on Appropriations, 85th Cong, 2d sess (Washington, 1958), p. 106.

12 Jun 58 — President Eisenhower designated as a project to be assigned to ARPA the establishment of a minitrack doppler fence with an early capability to detect and locate satellite orbits passing over the US.
(U) Ltr, Dep SecDef to Pres, 9 Jun 58, Encl 4 to (U) DOD Directive No. 3200.5, "Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

12 Jun 58 — The Defense Department directed that, pending DOD reorganization, the ballistic missile defense program would be handled as follows within the Department: 1) Certain portions of this program, designated by the President to be expedited with highest national priority, had been assigned to the Air Force and Army (see item of 16 Jan 58). Continuing direction on an expedited basis would be through the OSD Ballistic Missile Committee; agencies responsible for portions of the program would refer matters requiring the Secretary's attention to the Chairman of this Committee and would receive OSD direction through him. The Director, ARPA, would join the deliberations of the OSD/BMC when these projects were under discussion. 2) Longer-range phases of the ballistic missile defense program were assigned to ARPA, which might direct that certain projects within its responsibility be carried out by the Military Departments. 3) An OSD Steering Committee was established to monitor and coordinate the program.
(U) Ltr, Dep SecDef to Asst SecDef (R&E) et al., "OSD Program Responsibilities in Ballistic Missile Defense," 12 Jun 58, Encl 5 to (U) DOD Directive 3200.5, "Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

12 Jun 58 — The Director, ARPA, in a memorandum to the Service Secretaries and the Chairman, JCS stated that the decision of the Secretary of Defense concerning publicity on ARPA projects and new missile and satellite developments (see item of 17 March 1958)

was apparently not being carried out. In this connection he submitted a statement of the bases on which ARPA would approve or issue public statements. Briefly summarized, these included: 1) Disclosure of news of US space activities should be designed to inform the public and to achieve favorable psychological effects; 2) US statements concerning ARPA programs should be national in character and should not promote the merits of a particular program at the expense of others; 3) the initial release about an ARPA program should be made only by ARPA; and 4) statements announcing intentions rather than capabilities would normally be disapproved.

(S) Memo, Dir ARPA to SecArmy et al., 'Publicity on ARPA Projects and New Missile and Satellite Developments," 12 Jun 58, encl to (C) JCS Info Memo 1104, same subj, 13 Jun 58, CCS 334 ARPA (2-7-58) sec 1.

13 Jun 58 — A THOR missile was successfully test-fired. Among the objectives accomplished was the demonstration of (1) nose-cone separation and re-entry, and (2) the performance of the inertial guidance system in "open loop" configurations.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD.

18 Jun 58 — ARPA was assigned the project of investigating the feasibility of a nuclear bomb-propelled space vehicle.

(U) Memo, Dep SecDef to Dir ARPA, "Nuclear Bomb-Propelled Space Vehicle," 18 Jun 58, Encl 7 to (U) DOD Directive No. 3200.5, "Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

18 Jun 58 — The Department of Defense authorized ARPA to engage in studies and advanced investigations of the effects of space weapons employment on military electronic systems. This authorization was not an exclusive assignment of responsibility, since the military departments might be concurrently engaged in similar investigations.

(S) Memo, Dep SecDef to Dir ARPA, "Studies and Advanced Investigations on the Effects of Space Weapons Employment on Military Electronic Systems," 18 Jun 58, Encl 6 to (U) DOD Directive No. 3200.5, "Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

20 Jun 58 — The AP quoted a spokesman for ARPA as saying that the Army had submitted a plan to shoot a man into space in a REDSTONE missile and bring him safely back to earth. This was one of several space-man projects submitted by the three Services, he said.

NYT, 21 Jun 58, 3:4.

23 Jun 58 — ARPA was assigned responsibility for advanced research and development on new super-thrust rocket

engines, including the "million pound thrust" engine.
(U) Memo, Dep SecDef to Dir ARPA, "Super-Thrust Rocket Engines," 23 Jun 58, Encl 8 to (U) DOD Directive No. 3200.5, "Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

28 Jun 58 — President Eisenhower approved a proposal by the Deputy Secretary of Defense to collect data by means of air-launched three- to four-pound instrumented satellites.
(S) Ltr, Dep SecDef to Pres, 14 Jun 58, Encl 1a to (U) DOD Directive No. 3200.5, "Assignment of Advanced Research Projects to the Advanced Research Projects Agency," 19 May 58, CCS 334 ARPA (2-7-58) sec 1.

25 Jun 58 — Referring to a memorandum of 30 April 1958 from the Secretary of Defense, the JCS informed the Secretary that they considered a military requirement existed for the production of nonatomic munitions for the HONEST JOHN and the LITTLE JOHN rockets.
(TS) Memo, CJCS to SecDef, "Non-Atomic Munitions for Rockets (U)," 25 Jun 58, derived from (TS) Encl A to (TS) JCS 2287/1, Rpt by DDSP, same subj, 14 Jun 58. Both in CCS 471.6 (5-31-44) sec 19.

26 Jun 58 — Another attempt to orbit a VANGUARD satellite was unsuccessful when the second stage of the launching vehicle failed to ignite.
NYT, 26 Jun 58, 1:1.

27 Jun 58 — EXPLORER III, the second Army satellite to go into orbit, apparently fell to its destruction, according to a spokesman at the Smithsonian Astrophysical Observatory in Cambridge, Mass.
NYT, 29 Jun 58, 15:3.

28 Jun 58 — The Joint Chiefs of Staff, in a memorandum to the Secretary of Defense, gave their general approval to a draft statement of national policy on outer space (NSC 5814) prepared by the NSC Planning Board. The JCS also expressed their views on certain sections of the draft statement in which there were interagency differences of opinion. (For a description of NSC 5814 as finally approved, see item of 14 August 1958.)
(S) Memo, JCS to SecDef, "U.S. Policy on Outer Space (NSC 5814) (C)," 28 Jun 58, derived from (S) JCS 2283/9, 21 Jun 58, CCS 000.97 (2-25-58) sec 1; (S) NSC 5814, "US Policy on Outer Space," 20 Jun 58, is filed as an enclosure to (S) JCS 2283/8, Note by Secys, "U.S. Policy on Outer Space (NSC 5814) (C)," 21 Jun 58, same file.

1 Jul 58 — The Deputy Secretary of Defense, in a memorandum to the Executive Secretary, NSC, forwarding the views of the JCS on NSC 5814 (see item of 28 June 58), stated that he was in general agreement with these views. He recommended, however, that references to ballistic

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missiles be eliminated from NSC 5814, since he felt that their inclusion might raise the objectives and prescribed level of activity of the paper to a higher degree than would otherwise be warranted. He felt that NSC 5814 should focus exclusively on true outer-space activities and uses, and that these should be evaluated on their own merits.
(S) N/H of JCS 2283/9, 3 Jul 58, CCS 000.97 (2-25-58) sec 1.

3 Jul 58 The National Security Council discussed the draft statement of US Policy on Outer Space (NSC 5814) in the light of the views of the Deputy Secretary of Defense and the Joint Chiefs of Staff. The Council tentatively adopted the following as the first paragraph under "Objectives" (paragraph 43): "Development and exploitation of U.S. outer space capabilities as needed to achieve U.S. scientific, military and political purposes, and to establish the United States as a recognized leader in this field." It was also agreed that NSC 5814 should be referred back to the NSC Planning Board for elimination from the paper of statements of US policy on ballistic missiles and anti-missile missile defense weapons systems (see item of 1 July 58). The Department of Defense and the Special Assistant to the President for Science and Technology were also requested to transmit, for Planning Board consideration on 15 July, proposed specific amendments to NSC 5814 to implement the foregoing. The Council, further, noted a statement by Secretary Dulles that the State Department's Legal Adviser should be chairman of a group to make a study (called for in paragraph 59 of NSC 5814) of the legal issues involved in outer space activities. The Council also noted the President's request that Annex B to NSC 5814, a tentative schedule of US space-vehicle launchings, be revised to show the responsible agency for each project. (NSC Action No. 1940, approved by the President on 7 July.)
(TS) NSC Action No. 1940, 3 Jul 58.

3 Jul 58 The National Security Council, discussing the advanced reconnaissance satellite program described in paragraph 5 of Annex B of NSC 5814 (see above item), noted a statement concerning this program by the Department of Defense. The Defense Department pointed out that, although a satellite with reconnaissance equipment was not expected to be placed in orbit over the USSR until March 1960, it was still necessary to plan for the launching of eight test satellites of this general type. The Department recommended, therefore, that the reconnaissance satellite program, including the eight test vehicles that would orbit over the USSR, be approved for planning purposes--with the understanding that early in 1960 the Department would seek Presidential authorization concerning the scope of the operational capability of the program. The NSC deferred action on this recommendation pending a study by the Special Assistant to the President for Science and Technology that would be considered by the

Council on 31 July. (NSC Action No. 1941, approved by the President on 7 July.)
(TS) NSC Action 1941, 3 Jul 58.

9 Jul 58 — A THOR missile with a modified VANGUARD second stage was successfully test-fired. The primary objective of the firing was to demonstrate the successful re-entry of an ablating nose cone. The missile flew a distance of about 5,200 nautical miles (300 less than projected), but the nose cone, which carried a mouse, was not recovered.
(S) 'Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas),' in Office of Director of Guided Missiles, OSD.

9 Jul 58 — Referring to their memorandum of 29 May 1958 about tests of the QUAIL device, the Deputy Secretary of Defense informed the JCS that the President had approved on 13 June the inclusion in Operation HARDTACK of a surface-burst test of QUAIL B, with a design yield of 10-50 tons, to be conducted at Bikini Atoll about 31 July. At the same time, the President had also approved the inclusion of the underground firing of a more sophisticated version of the QUAIL at a later date. DOE(b)(3)
(S) N/H of JCS 2012/121 (Atomic Weapons Tests of QUAIL Device)(C), 14 Jul 58, CCS 471.6 (5-31-44) sec 18.

13 Jul 58 — According to the New York Times, a committee consisting of nine members of the Air Force's Scientific Advisory Board had submitted a report recommending a sweeping program to expand and streamline research and development. Among other things, the group called for an immediate increase in funds, an improvement in the technical training of research-and-development personnel, and a relaxation of controls over research projects. The committee was headed by Dr. H Guyford Stever, Associate Dean of Engineering at MIT and a former chief scientist of the Air Force.
NYT, 13 Jul 58, 1.7.

15 Jul 58 — The Director, Weapons Systems Evaluation Group, submitted WSEG Final Report No. 30, 'Offensive and Defensive Weapons Systems,' to the JCS, in accordance with their directive of 10 February 1958. The Report contained, inter alia, the following specific conclusions: (1) The military Air Defense System, regardless of improvements possible within the current budget, was highly unlikely to be able to prevent unacceptable losses to the population in case of general war if the enemy used his forces intelligently. (2) Prevention of very serious losses in case of general war was probably not achievable with a future Air Defense System using available or currently programed weapons. An all-out effort to develop and deploy new and greatly improved weapons would eventually require 2 or 3 times the existing air-defense budget figure and even then the probability of successfully countering a rapidly advancing threat did not appear high. (3) The DEW Line, with its programed improvements, would provide a highly reliable source of

warning of a massed bomber attack, but in the interior of the US, deficiencies in low-altitude (below 2,000 feet) tracking capability would degrade the effectiveness of weapons control by the ground environment against low-altitude tactics. (4) The vulnerability of the air defense weapons control network was greatly increased by the programed location of about one-third of the direction and combat centers at SAC bases and by the lack of hardening of any of these centers; further, the network would be severely degraded by enemy ECM unless it was provided with adequate counter-countermeasure fixes and better-trained personnel. (5) Although NIKE-ZEUS was designed to provide a significant point-defense capability against the ICBM, more information on technical problems, including high-altitude nuclear effects, decoy discrimination, etc., was required before the system could achieve its potential effectiveness, or the feasibility of area-type active ICBM defense systems be determined. (6) The B-52G, in combination with the GAM-77 (HOUND DOG), appeared a better and less expensive weapons system than the B-58 when both were employed from ZI bases. (7) If a decision appeared necessary to augment the deterrent posture in the 1960-1962 period, considered as the ability of our manned bombers and ICBMs to survive a severe ICBM surprise attack and still inflict at least 25 per cent casualties with 90 per cent probability on a large fraction of Soviet population centers, the TITAN and POLARIS FBM systems appeared to be the most desirable systems. (8) Hardening to 25 psi and squadron dispersal to three aiming points would significantly increase the expected survivability of the three ATLAS base configurations under consideration. (9) The concentration of GOOSE at a few SAC bases, as planned, would make it extremely vulnerable. It could be of great value if the US struck first, but would be of little value if our airborne bombers were directed to proceed to targets after these bombers were very far past the GOOSE launching sites. Once launched, GOOSE could not be recalled. (10) Research on and development of the MINUTEMAN concept should be accelerated. (11) In future IRBM programs, the extreme vulnerability of already programed missile sites could be reduced by hardening, dispersal, or mobility.

(TS-RD) Memo, Dir WSEG to CJCS, Evaluation of Offensive and Defensive Weapons Systems (U)," 15 Jul 58, Encl to (TS-RD) JCS 1620/189, Note by Secys, same subj and date, CCS 471 6 (5-31-44) BP pt 6A; (TS-RD) WSEG Final Report No. 30, "Offensive and Defensive Weapons Systems," 15 Jul 58, App to JCS 1620/189, same file.

16 Jul 58 — Replying to a memorandum dated 3 July 1958 from the Assistant Secretary of Defense (Supply and Logistics), the JCS stated that they considered the GAM-77 (HOUND DOG) air-to-ground missile (for use with the B-52) to be of sufficient military importance to warrant its inclusion in Urgency Category 'S' other than Item .01 of the current Department of Defense Master Urgency List.

(S) Memo, CJCS to SecDef, "Military Urgencies (GAM-77 (HOUND DOG)) Guided Missile Weapon System (U)," 16 Jul 58, derived from (S) JCS 1725/320, 11 Jul 58. Both in CCS 004.04 (11-4-46) sec 82.

16 Jul 58 — After compromising conflicting House and Senate versions, Congress approved and sent to the White House legislation establishing a National Aeronautics and Space Administration and a nine-member advisory council headed by the President. The new agency would be built around the National Advisory Committee for Aeronautics. Under the new law, the Defense Department would retain control over "activities peculiar to or primarily associated with development of weapons systems, military operations, or defense of the United States," but the President would have the authority to resolve any conflicts between ARPA and NASA. The nine-member advisory council would include, in addition to the President, the Secretaries of State and Defense, the Chairman of the AEC, the Director of NASA, one additional member from the government, and up to three others from outside the government.
NYT, 16 Jul 58, 18.3; 17 Jul 58, 30:6.

17 Jul 58 — A JUPITER missile was successfully fired over a range of about 1,250 nautical miles and its nose cone recovered intact. In announcing this event, the Army stated that the problem of "warhead protection" had been solved.
(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD. NYT, 18 Jul 58, 1:3.

19 Jul 58 — An unsuccessful attempt to fire an ATLAS 3B (two booster engines and one sustainer engine) was made. This was the first launching of a three-engine ATLAS.
(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD. NYT, 20 Jul 58, 1:2.

23 Jul 58 — A THOR-ABLE missile was successfully test-fired over a range of nearly 5,500 nautical miles. The nose cone, which carried a mouse, was not recovered.
(S) "Comilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD. NYT, 26 Jul 58, 5:4.

24 Jul 58 — After reconciling conflicting House and Senate versions, Congress approved and sent to the White House Legislation to reorganizetne Defense Department. The reorganization act, among other things, gave clear authority to the Secretary of Defense to decide which Service should be assigned a particular weapons system. (President Eisenhower signed the act on 6 August 1958.)
NYT, 24 Jul 58, 1:1; 25 Jul 58, 7:5; 7 Aug 58, 3:6.

26 Jul 58 — A JUPITER-C missile carried the United States' heaviest satellite, EXPLORER IV, into orbit. The satellite,

an 80-inch-long projectile weighing 38.43 pounds, was orbiting at a maximum distance from the earth of 1,368 miles. The launching was aimed at gathering data concerning the zone of radiation around the earth. The satellite was the first US vehicle to be launched on an orbit that would pass over the USSR.
NYT, 27 Jul 58, 1.8.

28 Jul 58 — The Senate Appropriations Committee, in a report on a defense appropriations bill, criticized the Air Force for financing private rocket test facilities while permitting Government-owned facilities "to remain idle."
NYT, 29 Jul 58, 13:5.

28 Jul 58 — In a communique issued at Geneva, where Western and Soviet-bloc scientists were meeting to discuss technical aspects of ending nuclear tests, the conferees proposed that space satellites be used as part of a system to monitor an agreement to suspend tests. The satellites, properly instrumented, would be able to detect high-altitude explosions.
NYT, 29 Jul 58, 1:4.

28 Jul 58 — In a memorandum to the Special Assistant to the President for National Security Affairs, in response to NSC Action 1941 (see item of 3 July 1958), the Special Assistant to the President for Science and Technology concurred, with some modifications, in the Defense Department's recommendation of approval for planning purposes of the reconnaissance satellite program.
(TS) Memo, Killian to Spec Asst to Pres for NSA, "Advanced Reconnaissance Satellite Development Program," 28 Jul 58, encl to (TS) Memo, Exec Secy to NSC, "Operational Capability of Reconnaissance Satellites," 29 Jul 58, encl to (TS) JCS 2283/11, Note by Secys, same subj and date, CCS 000.97 (2-25-58) sec 2.

29 Jul 58 — President Eisenhower signed legislation establishing the National Aeronautics and Space Administration (see item of 16 July 1958). In a special statement issued by the White House, he described the establishment of the Administration as a "historic step" that would help the US to lead the world in space exploration.
NYT, 30 Jul 58, 10:4; text, 10:5-7.

30 Jul 58 — In a memorandum to the Secretary of Defense, the Joint Chiefs of Staff gave their approval to the recommendation of the Special Assistant to the President for Science and Technology for modifications in the Defense Department's recommendation concerning the reconnaissance satellite program (see item of 28 July 1958).
(C) Memo, JCS to SecDef, "Operational Capability of Reconnaissance Satellites (C)," 30 Jul 58, derived from (TS) JCS 2283/12, 30 Jul 58. Both in CCS 000.97 (2-25-58) sec 2.

30 Jul 58 As of this date, the ATLAS missile had been fired a total of nine times, of which three firings were successful, five partially successful, and the other a failure. Of nine firings of the JUPITER, five had been successful and four partially successful. The THOR had been fired twenty times: eight firings were successful, eight partially successful, and four failures.

(S) Memo, Lt Col W. W. Hill, Jr., to Director of Guided Missiles, OSD, "Missile Firings," 30 Jul 58, Army Missile Flights, 1958, in Office, Director of Guided Missiles, OSD.

31 Jul 58 ✓ The National Security Council discussed and approved amendments to the Department of Defense recommendation concerning the advanced reconnaissance satellite program that were proposed by the Special Assistant to the President for Science and Technology (see items of 3 and 28 July 1958). The views of the JCS (see item of 30 July 1958) were also heard, and the Deputy Secretary of Defense summarized the advanced reconnaissance satellite program. The Council noted that the President approved for planning purposes the advanced reconnaissance satellite program presented by the Department of Defense, including the eight test vehicles to orbit over the USSR--with the understanding that, in early 1960 or prior to the launching of the first of these satellites, whichever was sooner, the Department would seek Presidential authorization for the launchings and with regard to the subsequent scope of the operational capability of the program. The NSC further noted that the total number of test vehicles and the amount of funds required for the advanced reconnaissance satellite program were subject to further review. (NSC Action No. 1956, approved by the President on 4 August.)

(TS) NSC Action No. 1956, 31 Jul 58.

31 Jul 58 ✓ For his use in preparing a report for further NSC consideration of certain Gaither items, the Joint Chiefs of Staff referenced and confirmed in a memorandum for Secretary McElroy their previously expressed views concerning measures for improvements of the active defenses of CONUS.

In amplification of their previous comments relating to defense against submarine-launched missiles, the JCS agreed that "currently the most practical solution lies in establishing control over the launching submarine prior to the launching of its missile," and outlined peacetime and wartime control measures. They also noted that the problem of active defense against the submarine-launched missile itself was under study; but until the basic anti-missile missile system was in place and operational, probably not prior to FY 1963, no capability against the submarine-launched BM itself would exist.

Since the JCS also agreed that the continental air defense program must receive continuing analysis and possible reprogramming to counter the changing Soviet threat, they had directed WSEG to submit, before the beginning of the next budget cycle, an over-all study containing scientific analyses designed to provide the

bases for the strategic evaluation of offensive and defensive weapons systems and for the determination of an appropriate strategic weapons posture by the Joint Chiefs of Staff.

(TS) Memo, CJCS to SecDef, "Report to the President by the Security Resources Panel of the ODM Science Advisory Committee (Improvement in the Active Defenses of CONUS) (U)," 31 Jul 58, CCS 381 US (1-31-50) sec 79, derived from (TS) JCS 2101/319, same subj, 29 Jul 58, same file, sec 78.

1 Aug 58 — The US detonated a missile-borne atomic device high in the air over the mid-Pacific. The missile was believed to be a REDSTONE.

NYT, 2 Aug 58, 1:5.

1 Aug 58 — The Commander, Ballistic Missile Division, USAF, announced that the Air Force had developed an all-inertial guidance system for ICBMs months, possibly years, sooner than expected. The achievement, a major breakthrough, would permit far greater efficiency in missiles and space ships.

NYT, 2 Aug 58, 7:1.

1 Aug 58 — The Army announced that the PERSHING IRBM would be a two-stage weapon with an inertial guidance system, and would be transportable by aircraft or helicopter.

NYT, 2 Aug 58, 7:1.

2 Aug 58 — An ATLAS-B missile (two booster engines and one sustainer) was fired in the most successful ATLAS flight to date. This was the first ATLAS firing using the full power of its three engines, and the missile flew nearly 2400 nautical miles. The nose-cone capsule was not recovered.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD. NYT, 3 Aug 58, 1:6.

3 Aug 58 — The magazine Aviation Week reported that the USSR had tried unsuccessfully to send a rocket to the moon on 1 May 1958.

NYT, 4 Aug 58, 2.4.

6 Aug 58 — A successful test-firing of the THOR missile demonstrated the satisfactory performance of the missile and its control system when large attitude changes were commanded to the auto pilot.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD.

7 Aug 58 — A BOMARC missile was successfully launched by remote control from 1,500 miles away but failed to hit its target in a test aimed at checking the coordination of BOMARC missiles with the SAGE system.

NYT, 8 Aug 58, 7:2.

7 Aug 58 — The Director of Guided Missiles requested the advice of the JCS on the need, from the standpoint of military planning, for the MINUTEMAN ICBM to meet its proposed

schedule calling for operational availability in mid-1962, in view of the desirable technical improvements that could be expected if more time were allowed for its development. [As of 31 October 1958, the JCS had not replied.]

(S) Memo, DGM to CJCS, "MINUTEMAN Program (U)," 7 Aug 58, Encl to (S) JCS 1620/193, same subj, 19 Aug 58, CCS 471.6 (5-31-44) sec 20.

7 Aug 58 — The National Security Council noted and discussed an oral report by the Director of Guided Missiles, OSD, on the subject of the US Long-Range Ballistic Missile Programs, with specific reference to the JUPITER, THOR, ATLAS, TITAN, and POLARIS programs. (NSC Action No. 1959, approved by the President on 11 August.)

(TS) NSC Action No. 1959, 7 Aug 58.

8 Aug 58 — President Eisenhower named T. Keith Glennan, a Cleveland educator and former AEC member, to head NASA. Dr. Hugh L. Dryden, Director of the National Advisory Committee for Aeronautics, was the President's choice for Deputy Administrator. Both appointments were confirmed by the Senate on 15 August.

NYT, 9 Aug 58, 1:3; 16 Aug 58, 3:6.

11 Aug 58 — The Joint Chiefs of Staff, in a memorandum to the Secretary of Defense, objected to certain aspects of a revised version of NSC 5814, "U.S. Policy on Outer Space" (NSC Action No. 1940; see item of 3 July 1958). The JCS stated that the draft statement of policy did not reflect a proper balance between military and non-military interests in outer space. Referring to paragraph 43, as approved by NSC Action No. 1940, they pointed out that leadership in the non-military aspect of outer space meant world-wide prestige, but that the military aspect of the question was a factor in the survival of the United States. Since US resources that could be devoted to outer space activities were limited, it would be appropriate to indicate the relative priority between military and non-military activities. In another comment, the Joint Chiefs of Staff also emphasized the preliminary nature of the draft statement of policy and the need for flexibility in the execution of its provisions. They also underlined the need, in the absence of a safeguarded international agreement for the control of armaments and armed forces, for policy guidance placing primary emphasis on those activities related to outer space that were necessary to maintain the over-all deterrent capability of the US and the Free World. Subject to the foregoing, the JCS accepted the revision of NSC 5814 from a military point of view and recommended that the Secretary of Defense concur in its adoption.

(S) Memo, JCS to SecDef, "U.S. Policy on Outer Space (NSC 5814) (C)," 11 Aug 58, derived from (S) JCS 2283/14, 6 Aug 58, CCS 000.97 (2-25-58) sec 2. The revised version of (S) NSC 5814 is filed as an enclosure to (S) JCS 2283/13, Note by Secys, "U.S. Policy on Outer Space (U)," 4 Aug 58, same file.

12 Aug 58 — The AEC fired a guided missile with a nuclear warhead in the mid-Pacific atomic testing area.
NYT, 13 Aug 58, 11:4.

12 Aug 58 — At the White Sands Missile Range, a TALOS antiaircraft missile successfully intercepted a KINGFISHER target missile.
NYT, 13 Aug 58, 11:3.

13 Aug 58 — At a meeting attended by the Deputy Secretary of Defense, the Deputy Assistant Secretary of Defense (R&E), the Deputy Assistant Secretary of Defense (ISA), the Director of the Office of Foreign Programs (R&E), and the Executive Assistant to the Director of Guided Missiles, the following points were accepted as an agreed basis on which the Department of Defense activities should proceed during the formulation period of the NATO solid-propellant IRBM project: (1) The Department of Defense intended, during the project formulation period, to make available to the appropriate NATO Assistant Secretary General all available and pertinent information not withheld by law on research, development, and production of solid-propellant IRBMs, to the end that NATO, with US advice, could formulate a course of action leading to the early development and production, in NATO, of a solid-propellant IRBM. (2) During the period of project formulation, management of the project would be an OSD responsibility. Later, bilateral agreements between countries concerned, firm-to-firm arrangements, etc., would be negotiated. (3) The primary effort of each of the Services in support of this project during the formulation period should be in providing the necessary information to permit determination by NATO of an agreed program. (4) The action of the Armed Forces Policy Council at its meeting of 15 April 1958 (see item for that date) in approving (a) the working out of the above-mentioned program by the Assistant Secretaries of Defense (ISA and R&E) with the NATO-sponsored country as a Mutual Weapons Development project, and (b) the designation of the Air Force as executive agent in carrying out this MWD project, was suspended. (5) Existing plans did not include providing the NATO nations with solid-propellant IRBMs manufactured in the US.
(S) Memo for Rec, "Meeting held on 13 August 1958 in the Office of the Deputy Secretary of Defense on the subject of the NATO Solid Propellant IRBM Program," 28 Aug 58, CCS 471.6 (5-31-44) sec 21.

14 Aug 58 — The Air Force fired what it called a "National Advisory Committee for Aeronautics composite test rocket." The NACA vehicle, announced the Air Force, was used as part of a program of atmospheric sampling that was expected to provide basic research information applicable to any space project, including manned space travel, and to further define radiation levels in outer space.
NYT, 15 Aug 58, 3:5.

14 Aug 58 The National Security Council discussed the draft revisions of NSC 5814 (see item of 11 August 1958) in the light of comments and recommendations by the Defense Department, the JCS, the Special Assistant to the President for Science and Technology, and the Director, Bureau of the Budget. The Council adopted NSC 5814, as amended, and the paper, approved by the President on 18 August (NSC Action No. 1956), was circulated as NSC 5814/1, entitled "Preliminary U.S. Policy on Outer Space."

NSC 5814/1 was the first full statement of national policy on outer space to be adopted by the US. A lengthy document, some of its highlights were as follows:

1) While the importance of outer-space activities required risks in the allocation of resources, the effort expended here should be balanced against the needs of other national security programs.

2) The primary aim of the outer-space program was the development and exploitation of US outer space capabilities as needed to achieve US scientific, military, and political purposes, and to establish the US as a recognized leader in this field.

3) US outer-space activities should be developed and expanded with sufficient priority and scope to enable the US to achieve the above objectives at the earliest practicable time. Long-range plans should also be developed.

4) As soon as possible, reconnaissance satellites should be used to enhance to the maximum extent the US intelligence effort.

5) Consistent with the objectives outlined in this paper, the US should be prepared to propose an international agreement for cooperative efforts relating to outer space.

NSC 5814/1 also contained an Annex concerning the Soviet Space Program and another giving a tentative schedule of US space-vehicle launchings.

(S) NSC Action No. 1955, 14 Aug 58. (S) NSC 5814/1, "Preliminary U.S. Policy on Outer Space," 18 Aug 58, Encl to (S) JCS 2282/15, "Preliminary U.S. Policy on Outer Space (NSC 5814/1) (C)," 21 Aug 58, CCS 000.97 (2-25-58) sec 2.

15 Aug 58 A lengthy report by the Inter-Agency Working Group on Surprise Attack, prepared to provide background material for negotiations with the Soviets on this question, discussed, among other things, safeguards against surprise attack by ballistic missiles. The Group concluded that the monitoring problems involved in this question were extremely complex. The best safeguards would probably consist of agreements to limit the size of or completely eliminate missile forces, but it would be very difficult to monitor effectively such agreements.

(TS) "Report of the Interagency Working Group on Surprise Attack," 15 Aug 58, CCS 092 ("-14-45) BP pt 11.

15 Aug 58 In a memorandum to the Secretary of Defense on the subject of nuclear testing, the JCS again reiterated their belief that the US missile and anti-missile programs

would suffer adversely in case of any halt in tests. They again stated their opinion that for this and other reasons no such ban on tests was acceptable unless it were part of a larger, over-all disarmament agreement. On 22 August, at the request of the JCS, the Secretary of Defense forwarded the views of the JCS, and his general agreement with their views, to the President.

(S-RD) Memo, JCS to SecDef, "Nuclear Testing (U)," 15 Aug 58, CCS 092 (4-14-45) sec 78, derived from (S-RD) JCS 1731/261, 12 Aug 58, same file, sec 77; (S-RD) N/H of JCS 1731/261, 12 Aug 58, same file.

17 Aug 58 — A four-stage THOR, fired in the first attempt by the United States to hurl a rocket into orbit around the moon, failed when the first stage exploded. The firing was, nevertheless, rated as a partial success, since the smooth countdown and launch within the predetermined 15-minute time period was considered a major achievement in itself.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD. NYT, 18 Aug 58, 1:3-4.

19 Aug 58 — A National Intelligence Estimate, superseding previous estimates of Soviet missile and space-vehicle capabilities, concluded that:

1) The USSR had continued to press ahead with extensive guided missile research and development and had available for operational use a variety of missile systems. Soviet achievements in ballistic missiles had been especially impressive and had contributed to early successes in the USSR's space program.

2) The Soviet ballistic missile development program had emphasized reliability and simplicity, rather than miniaturization or extreme refinement of design. The USSR probably had operational ballistic missiles with maximum ranges of 100, 200, 350, and 700 nautical miles, as well as a very short-range anti-tank missile. A 1,100-nautical-mile ballistic missile would probably be operational in 1958, and nuclear warheads would almost certainly be used on this and the 700-mile missile.

3) The Soviet ICBM described in earlier estimates (see item of 10 December 1957) would probably be available with ten prototypes sometime during 1959, and with considerably improved reliability and CEP in the early 1960's. It was probably designed to carry a payload of about 2,000 pounds, or possibly about 5,000 pounds. Other aspects of the earlier estimate remained unchanged.

4) The Soviet surface-to-air missile capability was steadily improving and the USSR would probably achieve a limited operational capability against ICBMs in 1963-1966. A capability to counter reconnaissance satellites could possibly be developed for use in 1960-1964.

5) The estimate of Soviet air-to-air and air-to-surface missiles remained substantially the same as it had been (see item of 12 March 1957).

6) The USSR probably had a capability to deliver naval-launched surface missiles with nuclear warheads against land targets within about 200 nautical miles of the launching submarine. By 1961-1963, the Soviets could probably deliver a nuclear warhead from a submerged submarine to a range of about 1,000 nautical miles.

7) Soviet capabilities for early accomplishments in space included, (a) surveillance satellites, recoverable aeromedical satellites, lunar probes and impacts, lunar satellites and planetary probes to Mars and Venus (1958-1959); (b) "soft landings" by lunar rockets and recoverable manned earth satellites (1959-1960), (c) a manned glide-type high-altitude research vehicle (1960-1961), (d) heavy earth satellites and manned circumlunar flights (1961-1962), and (e) manned lunar flights (after 1965). While the USSR was technically capable of each of these accomplishments, it was doubtful if the Soviets could achieve all of them within the time periods specified.

(TS) NIE 11-5-58, "Soviet Capabilities in Guided Missiles and Space Vehicles," 19 Aug 58, J-2 files.

21 Aug 58 — The Assistant Secretary of Defense (ISA) requested the views of the JCS on an informal British proposal that the US sell Britain an unspecified number of THOR missiles, over and above the total already programed under the US-UK-IRBM Agreement, and that Britain as a result discontinue its BLUE STREAK program. Under the proposal, the US would sell the THOR missiles with no strings attached, and Britain would develop, with US technical assistance, its own nuclear warheads compatible with THOR missiles.

(TS) Memo, Asst SecDef (ISA) to CJCS, "United Kingdom Proposal for Unrestricted Sale of THOR in Lieu of Continuation of BLUE STREAK (S)," 21 Aug 58, Encl to (TS) JCS 2220/147, same subj, 25 Aug 58, CCS 471.6 (5-31-44) sec 21

22 Aug 58 — Replying to the memorandum from the Assistant Secretary of Defense (Supply and Logistics), dated 22 August 1958, requesting the views of the JCS on recommending top national priority for the DAVY CROCKETT program, the JCS reported the following. The Chief of Staff of the Army and the Commandant of the Marine Corps favored top national priority for the program, with the Chairman, the Chief of Naval Operations, and the Chief of Staff of the Air Force opposed. The Chairman and the four Chiefs of Service were agreed on the following evaluation of the importance of the Battle Group Atomic Delivery System (DAVY CROCKETT). "The DAVY CROCKETT provides a new and essential capability which is not represented by an existing or planned weapons system. Possession of this capability will greatly enhance the military posture of US ground forces, Army and Marine, and will tend to equate the numerical superiority which confronts them. The early attainment of the concepts of future land warfare is dependent on insuring that the operational capability of this system is not delayed."

(S-RD) Memo, CJCS to SecDef, "Top National Priority Request (DAVY CROCKETT) (U)," 22 Aug 58, CCS 471.6 (4-31-44) sec 21, derived from (S-RD) JCS 1725/324, 9 Aug 58, same file, BP pt 7; CM-163-58 to SecDef, same subj and date, same file.

24 Aug 58 — A JUPITER-C rocket carried a 37.52-pound satellite aloft, but EXPLORER V failed to orbit.
NYT, 25 Aug 58, 1:3.

26 Aug 58 — The West German press association reported that, according to East Berlin "diplomatic sources," the USSR had made three unsuccessful attempts to send a rocket to the moon since the beginning of the month.
NYT, 27 Aug 58, 15:3.

26 Aug 58 — Bell Aircraft Corporation announced the successful use of liquid fluorine as a fuel to increase the potential power of rocket engines by as much as 40 per cent. Use of this fuel according to the Bell announcement, might make it possible for the US to launch satellites considerably heavier than SPUTNIK III, which weighed about 1 1/2 tons.
NYT, 27 Aug 58, 14:3.

27 Aug 58 — A JUPITER missile was successfully test-fired. Several new components were tested for the first or second time.
(S) "Compilation of Ballistic Missile Flight tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD.

27 Aug 58 — President Eisenhower, at his press conference denied the charge made by General Gavin (in his book published after his retirement) that the US faced a perilous gap in the 1960's, when the Soviet Union would allegedly be far ahead in missile development. The President insisted that the US was going ahead in this field faster than anyone could have expected.
NYT, 28 Aug 58, 1:5, text, 10:8 (question 25).

28 Aug 58 — A test-firing of the ATLAS missile was rated as highly successful. The missile impacted within three miles of the intended impact point, about 2,051 nautical miles downrange.
(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD.

29 Aug 58 — The USSR announced that on 27 August it had sent two dogs in a rocket to an altitude of 281 miles and returned them safely to earth.
NYT, 30 Aug 58, 1:6-7.

1 Sep 58 — The New York Times reported that a four-man committee--formed under the auspices of the Space Science Board of the National Academy of Sciences-Research Council--had been organized to develop a US program for international control of space exploration. The committee's recommendations were expected to form the basis of US proposals to be made at the meeting of the International Council of

Scientific Unions scheduled for 2 October, in Washington, Dr. W. Albert Noyes, Jr., was leaving his post as Dean of the College of Arts and Sciences, University of Rochester, to head the group. Dr. Noyes told a Times reporter that his committee would be concerned only with control of satellites and space vehicles designed for research, and would not consider control over military space projects.
NYT, 1 Sep 58, 1:7.

2 Sep 58 Secretary McElroy, speaking before the American Legion in Chicago, declared that the US was ahead of the USSR in over-all military power "in being--in the here and now," but conceded that the Soviet Union was probably ahead of the US in ICBM development. Both nations, he said, were still in the "testing and proving" state with this weapon.
NYT, 3 Sep 58, 1:6.

3 Sep 58 The Deputy Secretary of Defense approved the terms of reference, as amended, proposed by the JCS on 8 April 1958 in connection with their recommendation that the MB-1 (GENIE) air-to-air atomic rocket be furnished the British Royal Air Force. He authorized the JCS to proceed, but requested that detailed guidance based on the terms of reference, which he described as broad, be coordinated with his office prior to the initiation of negotiations; that the texts of agreements and procedures be referred to his office for final approval; and that the Office of the Assistant Secretary of Defense (ISA) be kept appropriately informed. On 8 September, the JCS directed the Chief of Staff, U.S. Air Force, to take the action authorized and requested above.
(TS) N/H of JCS 2220/136, 8 Sep 58, CCS 350.05 (3-16-48) sec 11.

4 Sep 58 President Eisenhower named as members of NASA Lt Gen James H. Doolittle; William A. M. Burden, former Assistant Secretary of Commerce for Air and in 1950-1952 a special research and development assistant to the Secretary of the Air Force; Dr. Alan T. Waterman, Director, National Science Foundation; and Dr. Detlev W. Bronk, President, National Academy of Sciences. These nominations were recess appointments and would be subject to Senate confirmation after Congress reconvened in January 1959.
NYT, 5 Sep 58, 6:5.

4 Sep 58 A New York Times correspondent reported that the Army was preparing a complaint, to be sent to Secretary McElroy, that Air Force "propaganda efforts" were belittling the NIKE-HERCULES air defense weapon while extolling the Air Force's BOMARC. The Times stated that, according to Army sources, Lt General Charles E. Hart, CG, Air Defense Command, apparently "infuriated" by an article about the NIKE-HERCULES in a Chicago newspaper, had clipped the article and sent it to "Army leaders at the Pentagon" with a complaint that it made "odious" comparisons of the NIKE-HERCULES and the BOMARC. The

Times reported later that General Hart's complaint was never officially forwarded to the Defense Department, although it was distributed to newspapermen. (See item of 10 September 1958.)
NYT, 5 Sep 58, 5:5; 10 Sep 58, 7:1.

6 Sep 58 — Replying to the memorandum of the Assistant Secretary of Defense (ISA), dated 21 August 1958, concerning a British proposal to purchase THOR missiles, the JCS stated that they saw no objection, from the military viewpoint, to selling THOR missiles to Britain in addition to those programed under the US-UK IRBM Agreement, provided that delivery of these additional missiles would in no way prejudice US high-priority programs. This opinion was based on the reasoning that it was unnecessary to impose any greater degree of control over the missiles the British proposed to buy than over those programed under the IRBM Agreement.
(TS) Memo, CJCS to SecDef, "United Kingdom Proposal for Unrestricted Sale of THOR in Lieu of Continuation of Blue Streak (S)," 6 Sep 58, CCS 471.6 (5-31-44) sec 21, derived from (TS) JCS 2220/148, 30 Aug 58, CCS 350.05 (3-16-48) sec 13.

8 Sep 58 — "Informed sources," according to the New York Times, stated that the US had begun delivering THOR missiles to the British earlier in the month.
NYT, 9 Sep 58, 3.4.

10 Sep 58 — Secretary McElroy told reporters that he had "passed the word" to the Army and Air Force that their feud over NIKE-HERCULES and BOMARC missiles "should be stopped." At the same time, he stated that both missiles would remain in the US defense system. He added that he had called for a copy of the complaint by the CG, Air Defense Command (see item of 4 September), which had never been officially forwarded to the Defense Department.
NYT, 11 Sep 58, 7:1

14 Sep 58 — An ATLAS was successfully test-fired. The missile, using a closed loop guidance system for the second time, impacted within half a mile of the planned impact point at a range of about 3,150 nautical miles. The objectives of the test were "achieved essentially 100%."
(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD.

16 Sep 58 — A REGULUS II missile was launched from a submarine for the first time. The submarine Grayback fired the missile 200 miles overland from Point Mogu, California, to Edwards Air Force Base. The missile's recovery gear failed, however, and it caught fire and burned on landing.
NYT, 17 Sep 58, 15:2.

17 Sep 58 — In order that development work on the MINUTEMAN could proceed expeditiously pending receipt of the JCS reply to his memorandum of 7 August 1958, the Director of

Guided Missiles authorized the Air Force to go ahead with an FY 1959 program of the order of $100 million. This sum was to include the $50 million included in the President's budget and about $50 million to be reprogramed within the Air Force, provided the Director could be assured that such reprograming would have no adverse effect on the national-priority programs. The $90 million added by Congress would not be made available to the Air Force at this time, but the program was to be planned to permit effective utilization of part or all of those extra funds if progress in the development program should make this possible.

(S) Memo, DGM to SecAF, "MINUTEMAN Program (U)," 17 Sep 58, Encl to (S) JCS 1620/195, Note by Secys, same subj, 19 Sep 58, CCS 471.6 (5-31-44) sec 22.

18 Sep 58 — A test-firing of an ATLAS missile ended in failure. The test had been intended to demonstrate the missile's capability of achieving full intercontinental range, and the ATLAS had been programed to impact more than 5,500 nautical miles from the launching point.

(S) "Compilation of Ballistic Missile Flight Tests (Thor, Jupiter, Atlas)," in Office of Director of Guided Missiles, OSD.

19 Sep 58 — General Twining, addressing a meeting of the Defense Orientation Conference Association, said that the US was militarily superior to the USSR and could remain so in the 1960's. He saw no "gap," when the Soviet Union might possess an overwhelming nuclear superiority, but he agreed that the USSR was probably ahead of the US in the development, and he stressed the word "development," of long-range missiles.

NYT, 20 Sep 58, 1:4.

24 Sep 58 — The first flight test of a POLARIS-configured missile (AX-1) was undertaken. The missile was satisfactorily launched, but had to be destroyed in flight. The test demonstrated the ability of the control system to stabilize the flight of a full-scale POLARIS missile.

(S-RD) Navy Dept, "Status of Polaris Program for Month Ending 30 September 1958," Polaris (Monthly Status Report) file, Office, Dir Guided Missiles, OSD.

24 Sep 58 — The New York Times reported that the Defense Department was considering cancelling or curtailing development of the TITAN missile in FY 1960 as an economy move. Cuts in other research and development were also being weighed, said the Times. The success of the ATLAS in test firings would reportedly allow the TITAN to be dropped.

NYT, 24 Sep 58, 1:5.

25 Sep 58 — After a briefing by the Assistant Director of Research, Weapons Systems Evaluation Group, on the First Annual Review of WSEG Report #23 (see items of 24 May and 4, 18 and 20 June, 1957, in basic chronology), the Armed Forces Policy Council agreed that there had not been a significant-enough change in the situation during the

past year to warrant consideration of the First Annual Review of WSEG Report #23 by the National Security Council. The Assistant Secretary of Defense (ISA) was to notify the National Security Council of this action.
(C) AFPC Advice of Action, "Review of WSEG Report #23," 29 Sep 58, CCS 471 6 (5-31-44) sec 22.

26 Sep 58 — A VANGUARD satellite was fired into space but the vehicle failed to orbit. The satellite made one or possibly several low-altitude trips around the earth and then burned up in the atmosphere.
NYT, 27 Sep 58, 1:1; 28 Sep 58, 58:4.

28 Sep 58 — A New York Times correspondent reported that, according to "authoritative sources," the THOR had been chosen over the JUPITER as the basic mass-produced IRBM for the US. The US, he wrote, would have at most three squadrons of JUPITER, with all other IRBM squadrons being armed with THOR. The decision was reportedly based on the conclusion that the THOR could be more easily produced than the JUPITER, despite the fact that the latter appeared to be slightly the more reliable weapon.
NYT, 29 Sep 58, 1:7.

2 Oct 58 — The Joint Chiefs of Staff, in a memorandum to the Secretary of Defense, recommended that an officer from the Joint Staff be assigned as a permanent member of the newly organized OCB Working Group on Outer Space in order to provide the Group with a member having a military background. The Working Group had been formed to carry out the coordinating responsibilities connected with implementation of NSC 5814/1 (see item of 14 August 1958).
(S) Memo, JCS to SecDef, "Joint Staff Representation on the Operations Coordinating Board Working Group on Outer Space (U)," 2 Oct 58, derived from (S) JCS 2283/16, 22 Sep 58, CCS 000.97 (2-25-58) sec 3.

3 Oct 58 — The General Assembly of the International Council of Scientific Unions, meeting in Washington, approved the establishment of a Committee on Space Research to plan for long-term international coordination of space exploration and exchange of data. Scientists representing all major countries supported the move.
NYT, 4 Oct 58, 1:6.

7 Oct 58 — The Director, ARPA, in a speech at Stamford, Connecticut, stated that the US planned "to have a man in space" in two or three years. The decision to undertake a project aimed at this objective, he said, had "just been reached."
NYT, 9 Oct 58, 9:2.

8 Oct 58 — The Department of Defense announced that an ICBM base would be built at Forbes Air Force Base near Topeka, Kansas. This would be the sixth ICBM base to be built, and would be designed to launch ATLAS missiles.
NYT, 9 Oct 58, 10:1

11 Oct 58 — The Air Force successfully fired the PIONEER rocket into space, with the objective of reaching and circling the moon. The space vehicle's angle of ascent was too steep, however, and, after travelling nearly 80,000 miles, it fell back towards the earth and burned up after re-entering the earth's atmosphere. PIONEER nevertheless was the first vehicle to reach such an altitude, the first to permit a measurement of radiation above a height of 2,500 miles, and the fastest ever launched into outer space (with a speed of more than 23,450 miles per hour). It also provided the first direct measurements of the earth's magnetic field at that altitude.
NYT, 12 Oct 58, 1:8; 13 Oct 58, 1:8.

13 Oct 58 — The National Security Council noted and discussed an oral presentation by the Director, WSEG, of a WSEG evaluation of offensive and defensive weapons systems (see item of 15 July 1958). The President emphasized the need for additional investigation to identify "obsolescent, antithetical, or overlapping" weapons systems. He stated that, unless tough decisions were taken to prevent the unnecessary expense of such systems, the US, in the long run, would encounter increasing difficulty in preserving its free way of life. He requested the JCS to conduct the needed additional investigations. The NSC also agreed that, in view of the presentation and discussion of the WSEG report, there was no need for the Council to study this year's review of the report on "Relative Military Advantage of IRBM-ICBM vs. Manned Aircraft and Non-Ballistic Missiles." (TS) (NSC Action No. 1994, approved by the President on 16 October.)

13 Oct 58 — A New York Times correspondent reported that the Air Force had been authorized to launch two more "space probes," one possibly to Venus, in addition to the three "lunar probes" originally scheduled.
NYT, 14 Oct 58, 1:4.

14 Oct 58 — As a result of reports that the Director, NASA, had requested that the Army turn over to NASA about 2,100 scientists and engineers at the Army Ballistic Missile Agency, Redstone Arsenal, and the entire facilities and personnel of the Army's Jet Propulsion Laboratory at Los Angeles, the Department of Defense issued a statement that the Director, NASA, had "expressed interest in certain capabilities of the ABMA and JPL," and that he had been discussing the matter with the Secretary of the Army and the Acting Secretary of Defense.
NYT, 15 Oct 58, 1:6; 16 Oct 58 [early edition], 14:6.

15 Oct 58 — President Eisenhower, at his press conference, stated that no decision had been made about transferring Army space programs to NASA (see item of 14 October 1958). Various proposals concerning the scope of NASA's activities, including "what should be taken over" by it, were being studied, but no conclusions had been

reached. The President, said that he himself would make the final decisions. In Huntsville, Alabama meanwhile, Army scientists, questioned by reporters, protested against any possible transfer. Dr. von Braun warned that breaking up the Army missile team at a time when a unified effort for rocket supremacy was needed would be "less than prudent."
NYT, 16 Oct 58 (early edition), 14:4; text, 18:6-8 (questions 14, 21).

15 Oct 58 — The second launching of a POLARIS missile (AX-2) was unsuccessful.
(S) Navy Dept, "Status of Polaris Program for Month Ending 31 October 1958," Polaris (Monthly Status Report) file, Office, Dir Guided Missiles, OSD.

15 Oct 58 — The X-15 rocket ship was shown publicly at the North American Aviation plant in Los Angeles. It was announced that the ship would make its first flight in February, and speeds up to 4,500 miles an hour at altitudes between 100 and 150 miles were expected to be achieved by the end of 1959 or early 1960. Vice President Nixon, who unveiled the X-15, said that completion of the rocket ship and the sending of the PIONEER rocket nearly 80,000 miles into space (see item of 11 October 1958) meant that the US had "recaptured the lead . . . in the race to outer space."
NYT, 16 Oct 58 (early edition), 1:2.

18 Oct 58 — Secretary of the Army Brucker, at a news conference, said that the Army had prepared a position paper in response to the request of the Director, NASA, that Army scientists doing space research be placed under NASA (see items of 14 and 15 October 1958). "The Army hopes this thing can be settled without too much conflict," he said.
NYT, 19 Oct 58, 16:1.

20 Oct 58 — Acting Secretary of Defense Donald A. Quarles determined that, because of the potential importance of the MINUTEMAN program as a follow-on ICBM system and its close relationship to other ballistic missile programs, the development programs for the MINUTEMAN should be submitted to the OSD Ballistic Missiles Committee for decision and administration in the same manner as other programs already within the jurisdiction of that organization. This determination did not, however, involve any finding that the MINUTEMAN program was "at this time" of the highest national priority.
(U) Memo, Actg SecDef to SecAF, "Inclusion of the MINUTEMAN Program within the OSD-BMC Administrative Procedures," 20 Oct 58, Encl to (U) JCS 1620/197, Note by Secys, same subj, 23 Oct 58, CCS 471.6 (5-31-44) sec 23.

20 Oct 58 — In response to the recommendation of the Joint Chiefs of Staff concerning Joint Staff representation on the OCB Working Group on Outer Space (see item of 2 October 1958), the Assistant Secretary of Defense suggested that a member of the Joint Staff be designated as an Alternate Defense Member of the Group with the clear

understanding that he would participate fully in all deliberations of the Working Group. (On 20 November, the JCS informed the Secretary of Defense that they concurred in this suggestion and that they had nominated an officer to serve on the Working Group.)

(S) Memo, Asst SecDef (ISA) to CJCS, "Joint Staff Representation on the Operations Coordinating Board Working Group on Outer Space (U)," 20 Oct 58, Encl "B" to (S) JCA 2283/19, Memo by Dir JS, same subj, 6 Nov 58; (S) Dec On JCS 2283/19, 20 Nov 58. All in CCS 000.97 (2-25-58) sec 3.

21 Oct 58 — General Twining, in a speech at the annual meeting of the Association of the US Army, called for the elimination of "duplication, waste, and misdirected effort," and the development of "thorough interservice teamwork." He called on the Army to "look closely at some of the non-combat activities of the Army," and asked if these were "directed properly to providing" a "compact, hard-hitting Army."

NYT, 22 Oct 58 /early edition/, 1:5.

22 Oct 58 — The JCS, in a memorandum to the Secretary of Defense, strongly recommended expediting the establishment of an effective Civilian-Military Liaison Committee that would assure direct military representation and positive coordination between the National Aeronautics and Space Administration and the Department of Defense. The legislation establishing NASA (see item of 2 April 1958) had directed the establishment of the Civilian-Military Liaison Committee.

(U) Memo, JCS to SecDef, "Civilian-Military Liaison Committee to the National Aeronautics and Space Administration and the Department of Defense (U)," 22 Oct 58, derived from (U) JCS 1823/17, 22 Oct 58. Both in CCS 000.97 (2-25-58) sec 3.

22 Oct 58 — The Armed Forces Policy Council discussed the Civilian-Military Liaison Committee to the National Aeronautics and Space Administration and the Department of Defense. The Council approved changes in the Committee's terms of reference in order to strengthen its links with the Military Departments. The terms of reference in their final form, dated 22 October, established a Civilian-Military Liaison Committee to enable NASA and the Defense Department to consult with each other and keep each other informed on matters relating to aeronautical and space activities. It would consist of a chairman appointed by the President, four Defense representatives (one each from the Services and one from the Department), and four NASA representatives.

(U) Armed Forces Policy Council, Advice of Action, 23 Oct 58, encl to (U) JCS 2283/18, Note by Secys, "Civilian-Military Liaison Committee to the National Aeronautics and Space Administration and the Department of Defense," 28 Oct 58, CCS 000.97 (2-25-58) sec 3.

22 Oct 58 — Lt General A. G. Trudeau, the Army's Chief of Research and Development, and Maj Gen Medaris, in remarks made at the meeting of the Association of the US Army and at a news conference afterwards, referred to the possibility that some members of the Army's team of

missile and space scientists might be shifted to NASA. Both officers warned against breaking up this team and interrupting the "momentum" that had been built up. They suggested that the Army's team be kept intact, but that it might work as a unit for NASA. General Trudeau said that the President would make a decision on the question of 28 October, when he was scheduled to meet with members of NASA.
NYT, 23 Oct 58 [early edition] 1:6.

23 Oct 58 — A New York Times correspondent reported that, according to an "authoritative source," the Director, NASA, was planning a gradual absorption into NASA of Army space scientists, engineers, and facilities. The Director's plan, reported the Times writer, called for NASA to take over the "capabilities" of the Army Ballistic Missile Center and Jet Propulsion Laboratory over a period of at least a year and possibly two.
NYT, 24 Oct 58 [early edition], 13:5.

23 Oct 58 — An attempt to launch a balloon satellite to measure the density of space failed when the JUPITER-C rocket carrying it did not perform as expected. It had been hoped to orbit the satellite, a 12-foot aluminum-plastic balloon, at an altitude of about 400 miles.
NYT, 24 Oct 58 [early edition], 10:3.

23 Oct 58 — The JCS replied to the memorandum from the Secretary of Defense, dated 13 August 1958, in which he requested their recommendations concerning a Congressional reduction of 20 per cent in the FY 1959 funds authorized for construction of NIKE-HERCULES and BOMARC sites, and his subsequent memorandum, dated 17 September, in which he prohibited application of any portion of the reduction to NIKE-HERCULES overseas deployment or conversions of NIKE-AJAX to NIKE-HERCULES units, and requested that the recommendations asked for on 13 August be extended to include HAWK and Missile Master installations authorized for construction in the US. Stating that they were unable to agree, the JCS submitted their divergent views. The Chief of Staff of the Army and the Chief of Naval Operations recommended that (1) the FY 1959 construction program for the NIKE-HERCULES provide for 50 batteries at 25 SAC bases listed in an appendix; (2) the FY 1959 construction program for Missile Master installations be implemented; (3) decision on implementing a BOMARC "B" production and operational site construction program be deferred pending the results of an evaluation of WSEG, which they recommended be made, of the BOMARC-SAGE weapons system, and that BOMARC "A" deployments be confined to the four sites funded in the FY 1958 construction program. The Chief of Staff of the Air Force recommended that (1) FY 1959 construction programs be implemented for 44 NIKE-HERCULES batteries at the 22 SAC bases listed by him in an appendix, and for the BOMARC "B" at 10 sites listed in the appendix: (2) the Service-submitted program for Missile Master installations be implemented. In a separate memorandum, the Chairman of the Joint Chiefs of Staff stated that recommendations of the Chief of Staff of the Air Force

represented the views of CINCONAD, and that he agreed with those recommendations.

(S) Memo, CJCS to SecDef, "NIKE-HERCULES-BOMARC Deployment (U)," 23 Oct 58, reproduced in (S) Encl B to (S) JCS 2277/49, Note by Secys, same subj and date; (S) CM-218-58 to SecDef, same subj and date, reproduced in (S) Encl A to JCS 2277/49. All in CCS 471.6 (5-31-44) sec 23.

30 Oct 58 — William M. Holaday, OSD Director of Guided Missiles, was appointed chairman of the civilian-military liaision committee established by the legislation that set up NASA.

NYT, 31 Oct 58, 5:4.

30 Oct 58 — The National Security Council noted and discussed a Defense Department report on the status of the US military program on 30 June 1958 as presented orally by the Chairman, Joint Chiefs of Staff. The President observed that, as a central aim, the US must have a known capability to deter Soviet attack on the US. Beyond that, reason and discrimination should guide the choice and development of, and the establishment of priorities for, weapons systems for other military tasks. The effort, he said, should not be to balance exactly each Soviet capability, but to provide a military posture in which the US could have confidence and which it could finance indefinitely without seriously weakening the essential strength of the national economy. The President re-emphasized the importance of the additional investigation into US weapons systems that had been assigned to the JCS by NSC Action No. 1994 (see item of 13 October 1958). (NSC Action No. 2000, approved by the President on 4 November.)

(TS) NSC Action No. 2000, 30 Oct 58.

31 Oct 58 — In reply to a memorandum dated 20 October 1958 from the Acting Secretary of Defense, the JCS stated that they had reassessed the requirements for IRBMs in the light of recent budgetary considerations, such as the Italian proposals for funding, and of the reluctance of some foreign nations to accept IRBMs. As a result, the JCS recommended that IRBM production be limited to 8 squadrons, and that these 8 squadrons be deployed as follows: UK, 4; Turkey, Okinawa, Alaska, and the NATO area (assuming conclusion of successful negotiations), 1 each.

(S) Memo, CNO to SecDef, "IRBM Deployments (U)," 31 Oct 58, derived from (S) JCS 2277/48, 27 Oct 58. Both in CCS 471.6 (5-31-44) sec 24.