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YUSIB-D-33, 7/1
13 July 1959
Limited DistributionDEPARTMENT OF THE NAVY
Office of The Chief of Naval Operations
Washington 25, D. C.

MEMORANDUM FOR THE CHAIRMAN, UNITED STATES INTELLIGENCE BOARD:

Subject : Project TIROS; intelligence aspects of (C)

Enclosure : (1) Synopsis of the TIROS Project

1. Project TIROS, recently transferred from the Advanced Research Project Agency (ARPA) to the National Aeronautical and Space Administration (NASA), refers to a planned multi-sensor satellite for meteorological observation. This cloud cover satellite will carry two television cameras and one infra-red camera at an altitude of 400 miles and will have an orbit time of 100 minutes. Launching of the first satellite is planned for October 1959, with one to follow in the spring of 1960, and two per year thereafter for the following two years.

2. The U. S. Navy and the U. S. Air Force are engaged in specialized aspects of Project TIROS in accordance with requests made under joint ARPA-NASA programming. Project TIROS appears, at present, to have an overall security classification of CONFIDENTIAL.

3. It is my understanding that NASA is oriented primarily toward the free exchange of scientific information and that it will, logically, not desire to classify its projects. In this case, however, the implications for U. S. intelligence and security appear considerable enough to warrant consideration by the United States Intelligence Board (USIB) of two courses of action:

a. An approach to NASA to apprise it of the implications of TIROS - secured data to the intelligence community and to national security, and

b. The establishment of special security safeguards under USIB in cooperation with NASA for the protection of certain data secured through the TIROS project.

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4. It is requested that this subject be placed on the agenda of the USIB for 14 July 1959.

S/
L. H. FROST
Director of Naval Intelligence

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Limited DistributionPROJECT TIROS

1. TIROS is the short title for "Television Infra-Red Observation System", a cloud cover satellite planned for meteorological observation. The satellite is multi-sensor and will carry two television cameras and one infra-red camera. One wide-angle television camera is designed to cover an 800-mile wide area with resolution of 2.4 miles on the earth's surface. The other television camera is designed to furnish a 75-mile wide strip with resolution of 500 to 600 feet.
2. The vehicle for launching will be a Thor-Delta rocket. Spin axis is to be oriented in space inertially in a fixed position. The orbit altitude will be 400 miles; orbit time will be 100 minutes.
3. Project TIROS is about 75% completed. The first firing is scheduled for October 1959, with one to follow in the spring of 1960, and two per year thereafter for the following two years.
4. Receiving or interrogating stations are being assembled and details for manning them are now being worked out between the National Aeronautical and Space Administration (NASA), the Advanced Research Project Agency (ARPA) and the U. S. Navy Weather Service.
5. Data will be received in two forms--photographic and tape. Processing of the photographic yield from TIROS will be handled by the U. S. Naval Photographic Interpretation Center (USNPIC) in collaboration with the U. S. Naval Photographic Center (USNPC). USNPIC will extract accurate positioning data plus any measurements required and effect feedback of information to the U. S. Weather Service. In addition, five degree squares of latitude, in the form of a grid, will be superimposed on approximately 5,000 selected frames. It is estimated that 16,000 feet of film will be obtained during the first six days of the life of the satellite. Copies of all processed photographs will be supplied to the Air Force Cambridge Research Center for designated special evaluation and interpretation.
6. Project TIROS was recently transferred from ARPA to NASA, except for continuation of the development of meteorological techniques for the

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military application of information. The U. S. Navy and U. S. Air Force special participation in the program are unaffected by this change.

7. Up to this point, Project TIROS has been looked upon as basically an unclassified project for weather reconnaissance, although it appears, so far, to have a general security classification of CONFIDENTIAL. Its ultimate classification will be controlled by NASA, which is oriented toward the free exchange of scientific information and generally unclassified projects.

8. Since TIROS will probably provide the first pictures of the earth from a satellite, it would be quite reasonable to expect that, in the absence of agreed security restrictions, the resultant photographs would get immediate wide dissemination by NASA. This would provide the Soviets with free information on the effectiveness of the system for reconnaissance and perhaps even show what we are able to detect behind the Iron Curtain. Such release may not be desirable and its implications should be examined carefully before such an event.

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