

HS/HC 475 Flying Objects

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FEDERAL CIVIL DEFENSE ADMINISTRATION
WASHINGTON 25, D. C.

OFFICE OF THE ADMINISTRATOR

APR 18 1953

Mr. Richard D. Drain
Secretary
Intelligence Advisory Committee
2430 E Street, N. W.
Washington 25, D. C.

Dear Mr. Drain:

We have carefully studied the report of the Panel of Scientific Consultants on the subject of "Unidentified Flying Objects," which you sent this Agency on March 13.

The conclusions of the Panel and its recommendations, particularly in terms of public education, are of considerable interest in connection with the civil defense program. We appreciate your indicated willingness to assist in implementing the appropriate aspects of the Panel's report as applicable to Civil Defense, and suggest that a conference be arranged for a full discussion of the subject on a mutually satisfactory date.

Sincerely,

Val Peterson

THE G.I.A. HAS NO OBJECTION
TO THE DECLASSIFICATION OF
THIS DOCUMENT

AUTHORITY: HR 702

REVIEWER 0233768 DATE 7 JUN 91

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13 March 1953

Mr. Edward T. Dickinson
Vice Chairman, National Security
Resources Board
Room 211
Executive Office Building
Washington 25, D. C.

Dear Mr. Dickinson:

The Director of Central Intelligence has asked that you be furnished a copy of the attached report prepared by a panel of scientists on the subject of "Unidentified Flying Objects." This panel was convened at the direction of General Smith, following the recommendation of the Intelligence Advisory Committee

The conclusions and recommendations may be of interest to you, in that they point out certain potential dangers to national security which are related to the subject and suggest ways of their elimination.

Although this Agency does not consider problems arising from sightings of "flying saucers" primarily its concern, we shall be pleased to assist in any appropriate action that you may deem advisable.

Copies of this report are also being sent to the Secretary of Defense and to the Chairman, National Security Resources Board.

This document has been approved for release through the HISTORICAL REVIEW PROGRAM of the Central Intelligence Agency.

Federal Civil Defense Administration.
Sincerely yours,

Date 7 JUN 91

HRP 89-2

RICHARD D. DRAIN
Secretary
Intelligence Advisory Committee

Enclosure

Distribution:

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13 March 1953

The Honorable
The Secretary of Defense
Department of Defense
Washington 25, D. C.

Dear Mr. Secretary:

The Director of Central Intelligence has asked that you be furnished a copy of the attached report prepared by a panel of scientists on the subject of "Unidentified Flying Objects." This panel was convened at the direction of General Smith, following the recommendation of the Intelligence Advisory Committee.

The conclusions and recommendations may be of interest to you, in that they point out certain potential dangers to national security, which are related to the subject and suggest ways of their elimination.

Although this Agency does not consider problems arising from sightings of "flying saucers" primarily its concern, we shall be pleased to assist in any appropriate action that you may deem advisable.

Copies of this report are also being sent to the ~~Secretary of Defense~~ ^{Federal Civil Defense Administration} and to the Chairman, National Security Resources Board.

Sincerely yours,

RICHARD D. DRAIN
Secretary
Intelligence Advisory Committee

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OIC:RDD:KR (13 March 1953)

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13 March 1953

The Honorable Val Peterson
Administrator, Federal Civil
Defense Administration
1930 Columbia Road, N. W.
Washington, D. C.

Dear Mr. Peterson:

The Director of Central Intelligence has asked that you be furnished a copy of the attached report prepared by a panel of scientists on the subject of "Unidentified Flying Objects." This panel was convened at the direction of General Smith, following the recommendation of the Intelligence Advisory Committee.

The conclusions and recommendations may be of interest to you, in that they point out certain potential dangers to national security, which are related to the subject and suggest ways of their elimination.

Although this Agency does not consider problems arising from sightings of "flying saucers" primarily its concern, we shall be pleased to assist in any appropriate action that you may deem advisable.

Copies of this report are also being sent to the Secretary of Defense and to the ~~Chairman, National Security Resources Board~~

~~Secretary of State~~

Sincerely yours,

RICHARD D. DRAIN
Secretary
Intelligence Advisory Committee

Enclosure

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an unauthorized person is prohibited by
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[FORM LETTER]

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12 March 1953

Mr. C. D. Jackson
Special Assistant to the President
The White House
Washington, D. C.

Dear Mr. Jackson:

Mr. Robert Amory, Jr., Assistant Deputy Director/Intelligence, has asked me to forward to you for your information the enclosed report "Report of the Scientific Panel on Unidentified Flying Objects", dated January 17, 1953

This report was prepared by a panel convened in January 1953 at the direction of the former Director of Central Intelligence, General Walter B. Smith, with the concurrence of the Intelligence Advisory Committee

Copies are being transmitted to the Secretary of Defense; the Director, Federal Civil Defense Administration; and the Chairman, National Security Resources Board.

Sincerely yours,

RICHARD D. DRAIN
Secretary
Intelligence Advisory Committee

OIC:RDD:KR (12 March 1953)

cc: DD/I
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One copy of the attached form letter sent to each of
the following:

Mr. Robert Cutler
224 Executive Office Building

Mr. C. D. Jackson
Special Assistant to the President
The White House

Mr. James S. Lay
Executive Secretary
National Security Council
302-A Executive Office Building

Mr. George Morgan
Psychological Strategy Board
708 Jackson Place

Mr. Tracey Barnes
Psychological Strategy Board
708 Jackson Place

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JAN 17 1953

REPORT OF THE SCIENTIFIC PANEL
ON
UNIDENTIFIED FLYING OBJECTS

1. Pursuant to the request of the Assistant Director for Scientific Intelligence, the undersigned Panel of Scientific Consultants has met to evaluate any possible threat to national security posed by Unidentified Flying Objects ("Flying Saucers"), and to make recommendations thereon. The Panel has received the evidence as presented by cognizant intelligence agencies, primarily the Air Technical Intelligence Center, and has reviewed a selection of the best documented incidents.

2. As a result of its considerations, the Panel concludes:

a. That the evidence presented on Unidentified Flying Objects shows no indication that these phenomena constitute a direct physical threat to national security.

We firmly believe that there is no residuum of cases which indicates phenomena which are attributable to foreign artifacts capable of hostile acts, and that there is no evidence that the phenomena indicate a need for the revision of current scientific concepts.

3. The Panel further concludes:

a. That the continued emphasis on the reporting of these phenomena does, in these parlous times, result in a threat to the orderly functioning of the protective organs of the body politic.

We cite as examples the clogging of channels of communication by irrelevant reports, the danger of being led by continued false alarms to ignore real

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the Central Intelligence Agency.

Date 7 JUN 91

HRP 89-2

indications of hostile action, and the cultivation of a morbid national psychology in which skillful hostile propaganda could induce hysterical behavior and harmful distrust of duly constituted authority.

4. In order most effectively to strengthen the national facilities for the timely recognition and the appropriate handling of true indications of hostile action, and to minimize the concomitant dangers alluded to above, the Panel recommends:

a. That the national security agencies take immediate steps to strip the Unidentified Flying Objects of the special status they have been given and the aura of mystery they have unfortunately acquired;

b. That the national security agencies institute policies on intelligence, training, and public education designed to prepare the material defenses and the morale of the country to recognize most promptly and to react most effectively to true indications of hostile intent or action.

We suggest that these aims may be achieved by an integrated program designed to reassure the public of the total lack of evidence of inimical forces behind the phenomena, to train personnel to recognize and reject false indications quickly and effectively, and to strengthen regular channels for the evaluation of and prompt reaction to true indications of hostile measures.

/s/ H. P. Robertson	/s/ Lloyd V. Berkner
Chairman	Associated Universities, Inc.
California Institute of Technology	/s/ S. A. Goudsmit
	Brookhaven National Laboratories
/s/ Luis W. Alvarez	/s/ Thornton Page
University of California	Johns Hopkins University

SCIENTIFIC ADVISORY PANEL ON
UNIDENTIFIED FLYING OBJECTS

14 - 17 January 1953

EVIDENCE PRESENTED

1. Seventy-five case histories of sightings 1951 - 1952 (selected by ATIC as those best documented).
2. ATIC Status and Progress Reports of Project GRDOGE and Project BLUE BOOK (code names for ATIC study of subject).
3. Progress Reports of Project STORK (code name for Battelle Memorial Institute contract work supporting ATIC).
4. Summary Report of Sightings at Holloman Air Force Base, New Mexico.
5. Report of USAF Research Center, Cambridge, Mass., Investigation of "Green Fireball" Phenomena (Project TWINKLE).
6. Outline of Investigation of U.F.O.'s Proposed by Kirtland Air Force Base (Project POUNCE).
7. Motion Picture Films of sightings at Tremonton, Utah, 2 July 1952 and Great Falls, Montana, August 1950.
8. Summary Report of 89 selected cases of sightings of various categories (Formations, Blinking Lights, Hovering, etc.).
9. Draft of manual: "How to Make a FLIOERPT", prepared at ATIC.
10. Chart Showing Plot of Geographic Location of Unexplained Sightings in the United States during 1952.
11. Chart Showing Balloon Launching Sites in the United States.
12. Charts Showing Selected Actual Balloon Flight Paths and Relation to Reported Sightings.
13. Charts Showing Frequency of Reports of Sightings, 1948 - 1952.
14. Charts Showing Categories of Explanations of Sightings.
15. Kodachrome Transparencies of Polyethylene Film Balloons in Bright Sunlight Showing High Reflectivity.

16. Motion picture of seagulls in bright sunlight showing high reflectivity.
17. Intelligence Reports Relating to U.S.S.R. Interest in U. S. Sightings.
18. Samples of Official USAF Reporting Forms and Copies of Pertinent Air Force, Army and Navy Orders Relating to Subject.
19. Sample Polyethylene "Pillow" Balloon (54 inches square).
20. "Variations in Radar Coverage", JANP 101 (Manual illustrating unusual operating characteristics of Service radar).
21. Miscellaneous official letters and foreign intelligence reports dealing with subject.
22. Copies of popular published works dealing with subject (articles in periodicals, newspaper clippings and books).

SCIENTIFIC ADVISORY PANEL ON
UNIDENTIFIED FLYING OBJECTS

14 - 17 January 1953

<u>MEMBERS</u>	<u>ORGANIZATION</u>	<u>FIELD OF COMPETENCY</u>
Dr. H. P. Robertson (Chairman)	California Institute of Technology	Physics, weapons systems
Dr. Luis W. Alvarez	University of California	Physics, radar
Dr. Lloyd V. Berkner	Associated Universities, Inc.	Geophysics
Dr. Samuel Goudsmit	Brookhaven National Laboratories	Atomic structure, statistical problems
Dr. Thornton Page	Office of Research Operations, Johns Hopkins University	Astronomy, Astrophysics
<u>ASSOCIATE MEMBERS</u>		
Dr. J. Allen Hynak	Ohio State University	Astronomy
Mr. Frederick C. Durant	Arthur D. Little, Inc.	Rockets, guided missiles
<u>INTERVIEWEES</u>		
Brig. Gen. William M. Garland	Commanding General, ATIC	Scientific and technical intelligence
Dr. H. Marshall Chadwell	Assistant Director, O/SI, CIA	Scientific and technical intelligence
Mr. Ralph L. Clark	Deputy Assistant Director, O/SI, CIA	Scientific and technical intelligence

<u>INTERVIEWEES (con't)</u>	<u>ORGANIZATION</u>	<u>FIELD OF COMPETENCE</u>
Mr. Philip G. Strong	Chief, Operations Staff, O/SI, CIA	Scientific and technical intelligence
Mr. Stephan T. Possony	Acting Chief, Special Study Group, D/I USAF	Scientific and technical intelligence
Capt. Edward J. Ruppelt, USAF	Chief, Aerial Phenomena Branch, ATIC, USAF	Scientific and technical intelligence
Mr. J. Dewey Fournet, Jr.	The Ethyl Corporation	Aero Eng.
Lt. R. S. Neasham, USN	USN Photo Interpretation Laboratory, Anacostia	Photo interpretation
Mr. Harry Neo	USN Photo Interpretation Laboratory, Anacostia	Photo interpretation

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UNIDENTIFIED FLYING OBJECTS

2. It is proposed to transmit copies of this report to the Secretary of Defense; the Director, Federal Civil Defense Administration; and the Chairman, National Security Resources Board for their information and such action as they may feel necessary.

4. Please inform the undersigned by 25 February 1953 if you do not concur in the action and conclusions contained in paragraphs 2 and 3, above.

Mrs. Powell called 24 Feb and said that Mr. Amory said when approved for release to those mentioned in paragraph 2, copies should be sent to

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normal channels w/o letter from staff to Chris Pine (11)
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18 February 1953

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18 February 1953

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REPORT OF MEETINGS OF SCIENTIFIC ADVISORY PANEL
ON UNIDENTIFIED FLYING OBJECTS
CONVENED BY OFFICE OF SCIENTIFIC INTELLIGENCE, CIA
January 14 - 18, 1953

F. C. DURANT

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PART II: COMMENTS AND SUGGESTIONS OF PANEL

GENERAL

The Panel Members were impressed (as have been others, including O/SI personnel) in the lack of sound data in the great majority of case histories; also, in the lack of speedy follow-up due primarily to the modest size and limited facilities of the ATIC section concerned. Among the case histories of significant sightings discussed in detail were the following:

Bellefontaine, Ohio (1 August 1952); Tremonton, Utah (2 July 1952); Great Falls, Montana (15 August 1950); Yaak, Montana (1 September 1952); Washington, D. C. area (19 July 1952); and Haneda A.F.B., Japan (5 August 1952), Port Huron, Michigan (29 July 1952); and Presque Isle, Maine (10 October 1952).

After review and discussion of these cases (and about 15 others, in less detail), the Panel concluded that reasonable explanations could be suggested for most sightings and "by deduction and scientific method it could be induced (given additional data) that other cases might be explained in a similar manner". The Panel pointed out that because of the brevity of some sightings (e.g. 2-3 seconds) and the inability of the witnesses to express themselves clearly (semantics) that conclusive explanations could not be expected for every case reported. Furthermore, it was considered that, normally, it would be a great waste of effort to try to solve most of the sightings, unless such action would benefit a training and educational program (see below). The writings of Charles Fort were referenced to show

that "strange things in the sky" had been recorded for hundreds of years. It appeared obvious that there was no single explanation for a majority of the things seen. The presence of radar and astronomical specialists on the Panel proved of value at once in their confident recognition of phenomena related to their fields. It was apparent that specialists in such additional fields as psychology, meteorology, aerodynamics, ornithology and military air operations would extend the ability of the Panel to recognize many more categories of little-known phenomena.

ON LACK OF DANGER

The Panel concluded unanimously that there was no evidence of a direct threat to national security in the objects sighted. Instances of "Foo Fighters" were cited. These were unexplained phenomena sighted by aircraft pilots during World War II in both European and Far East theaters of operation wherein "balls of light" would fly near or with the aircraft and maneuver rapidly. They were believed to be electrostatic (similar to St. Elmo's fire) or electromagnetic phenomena or possibly light reflections from ice crystals in the air, but their exact cause or nature was never defined. Both Robertson and Alvarez had been concerned in the investigation of these phenomena, but David T. Griggs (Professor of Geophysics at the University of California at Los Angeles) is believed to have been the most knowledgeable person on this subject. If the term "flying saucers" had been popular in 1943 - 1945, these objects would

have been so labeled. It was interesting that in at least two cases reviewed that the object sighted was categorized by Robertson and Alvarez as probably "Foo Fighters", to date unexplained but not dangerous; they were not happy thus to dismiss the sightings by calling them names. It was their feeling that these phenomena are not beyond the domain of present knowledge of physical science, however.

AIR FORCE REPORTING SYSTEM

It was the Panel's opinion that some of the Air Force concern over U.F.O.'s (notwithstanding Air Defense Command anxiety over fast radar tracks) was probably caused by public pressure. The result today is that the Air Force has instituted a fine channel for receiving reports of nearly anything anyone sees in the sky and fails to understand. This has been particularly encouraged in popular articles on this and other subjects, such as space travel and science fiction. The result is the mass receipt of low-grade reports which tend to overload channels of communication with material quite irrelevant to hostile objects that might some day appear. The Panel agreed generally that this mass of poor-quality reports containing little, if any, scientific data was of no value. Quite the opposite, it was possibly dangerous in having a military service foster public concern in "nocturnal meandering lights". The implication being, since the interested agency was military, that these objects were or might be potential direct threats to national security. Accordingly, the need for deemphasization made itself apparent. Comments on a possible educational program are enumerated below.

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It was the opinion of Dr. Robertson that the "saucer" problem had been found to be different in nature from the detection and investigation of German V-1 and V-2 guided missiles prior to their operational use in World War II. In this 1943-1944 intelligence operation (CROSSBOW), there was excellent intelligence and by June 1944 there was material evidence of the existence of "hardware" obtained from crashed vehicles in Sweden. This evidence gave the investigating team a basis upon which to operate. The absence of any "hardware" resulting from unexplained U.F.O. sightings lends a "will-of-the-wisp" nature to the ATIC problem. The results of their investigation, to date, strongly indicate that no evidence of hostile act or danger exists. Furthermore, the current reporting system would have little value in the case of detection of enemy attack by conventional aircraft or guided missiles; under such conditions "hardware" would be available almost at once.

ARTIFACTS OF EXTRATERRESTIAL ORIGIN

It was interesting to note that none of the members of the Panel were loath to accept that this earth might be visited by extra-terrestrial intelligent beings of some sort, some day. What they did not find was any evidence that related the objects sighted to space travelers. Mr. Fournet, in his presentation, showed how he had eliminated each of the known and probable causes of sightings leaving him "extra-terrestrial" as the only one remaining in many cases. Fournet's background as an aeronautical engineer and technical intelligence

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officer (Project Officer, BLUEBOOK for 15 months) could not be slighted. However, the Panel could not accept any of the cases sighted by him because they were raw, unevaluated reports. Terrestrial explanations of the sightings were suggested in some cases and in others the time of sighting was so short as to cause suspicion of visual impressions. It was noted by Dr. Goudsmit and others that extraterrestrial artifacts, if they did exist, are no cause for alarm; rather, they are in the realm of natural phenomena subject to scientific study, just as cosmic rays were at the time of their discovery 20 to 30 years ago. This was an attitude in which Dr. Robertson did not concur, as he felt that such artifacts would be of immediate and great concern not only to the U. S. but to all countries. (Nothing like a common threat to unite peoples!) Dr. Page noted that present astronomical knowledge of the solar system makes the existence of intelligent beings (as we know the term) elsewhere than on the earth extremely unlikely, and the concentration of their attention by any controllable means confined to any one continent of the earth quite preposterous.

TREMONTON, UTAH, SIGHTING

This case was considered significant because of the excellent documentary evidence in the form of Kodachrome motion picture films (about 1600 frames). The Panel studied these films, the case history, ATIC's interpretation, and received a briefing by representatives of the USN Photo Interpretation Laboratory on their analysis of the film. This team had expended (at Air Force request) approximately

1000 man-hours of professional and sub-professional time in the preparation of graph plots of individual frames of the film, showing apparent and relative motion of objects and variation in their light intensity. It was the opinion of the P.I.L. representatives that the objects sighted were not birds, balloons or aircraft, were "not reflections because there was no blinking while passing through 60° of arc" and were, therefore, "self-luminous". Plots of motion and variation in light intensity of the objects were displayed. While the Panel Members were impressed by the evident enthusiasm, industry and extent of effort of the P.I.L. team, they could not accept the conclusions reached. Some of the reasons for this were as follows:

- a. A semi-spherical object can readily produce a reflection of sunlight without "blinking" through 60° of arc travel.
- b. Although no data was available on the "albedo" of birds or polyethylene balloons in bright sunlight, the apparent motions, sizes and brightnesses of the objects were considered strongly to suggest birds, particularly after the Panel viewed a short film showing high reflectivity of seagulls in bright sunlight.
- c. P.I.L. description of the objects sighted as "circular, bluish-white" in color would be expected in cases of specular reflections of sunlight from convex surfaces where the brilliance of the reflection would obscure other portions of the object.

- d. Objects in the Great Falls case were believed to have probably been aircraft, and the bright lights such reflections.
- e. There was no valid reason for the attempt to relate the objects in the Tremonton sighting to those in the Great Falls sighting. This may have been due to misunderstanding in their directive. The objects in the Great Falls sighting are strongly suspected of being reflections of aircraft known to have been in the area.
- f. The intensity change in the Tremonton lights was too great for acceptance of the P.I.L. hypothesis that the apparent motion and changing intensity of the lights indicated extremely high speed in small orbital paths.
- g. Apparent lack of guidance of investigators by those familiar with U.F.O. reports and explanations.
- h. Analysis of light intensity of objects made from duplicate rather than original film. The original film was noted to have a much lighter background (affecting relative brightness of object) and the objects appeared much less bright.
- i. Method of obtaining data of light intensity appeared faulty because of unsuitability of equipment and questionable assumptions in making averages of readings.
- j. No data had been obtained on the sensitivity of Kodachrome film to light of various intensities using the same camera type at the same lens openings.

- k. Hand "jitter" frequencies (obtainable from early part of Tremonton film) were not removed from the plots of the "single pass plots" at the end of the film.

The Panel believed strongly that the data available on this sighting was sufficient for positive identification if further data is obtained by photographing polyethylene "pillow" balloons released near the site under similar weather conditions, checking bird flight and reflection characteristics with competent ornithologists and calculating apparent "G" forces acting upon objects from their apparent tracks. It was concluded that the results of such tests would probably lead to creditable explanations of value in an educational or training program. However, the Panel noted that the cost in technical manpower effort required to follow up and explain every one of the thousand or more reports received through channels each year (1,900 in 1952) could not be justified. It was felt that there will always be sightings, for which complete data is lacking, that can only be explained with disproportionate effort and with a long time delay, if at all. The long delay in explaining a sighting tends to eliminate any intelligence value. The educational or training program should have as a major purpose the elimination of popular feeling that every sighting, no matter how poor the data, must be explained in detail. Attention should be directed to the requirement among scientists that a new phenomena, to be accepted, must be completely and convincingly documented. In other words, the burden of proof is on the sighter, not the explainer.

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POTENTIAL RELATED DANGERS

The Panel Members were in agreement with O/SI opinion that, although evidence of any direct threat from these sightings was wholly lacking, related dangers might well exist resulting from:

- a. Misidentification of actual enemy artifacts by defense personnel.
- b. Overloading of emergency reporting channels with "false" information ("noise to signal ratio" analogy--Barkner).
- c. Subjectivity of public to mass hysteria and greater vulnerability to possible enemy psychological warfare.

Although not the concern of CIA, the first two of these problems may seriously affect the Air Defense intelligence system, and should be studied by experts, possibly under ADC. If U.F.O.'s become discredited in a reaction to the "flying saucer" scare, or if reporting channels are saturated with false and poorly documented reports, our capability of detecting hostile activity will be reduced.

Dr. Page noted that more competent screening or filtering of reported sightings at or near the source is required, and that this can best be accomplished by an educational program.

GEOGRAPHIC LOCATIONS OF UNEXPLAINED SIGHTINGS

The map prepared by ATIC showing geographic locations of officially reported unexplained sightings (1952 only) was examined by the Panel. This map showed clusters in certain strategic areas such as Los Alamos. This might be explained on the basis of 24-hour watchful guard and

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awareness of security measures near such locations. On the other hand, there had been no sightings in the vicinity of sensitive related AE establishments while there were occasionally multiple cases of unexplained sightings in non-strategic areas. Furthermore, there appeared to be no logical relationship to population centers. The Panel could find no ready explanation for these clusters. It was noted, however, that if terrestrial artifacts were to be observed it would be likely that they would be seen first near foreign areas rather than central U. S.

INSTRUMENTATION TO OBTAIN DATA

The Panel was of the opinion that the present ATIC program to place 100 inexpensive 35 mm. stereo cameras in the hands of various airport control tower operators would probably produce little valuable data related to U.F.O.'s. However, it was recognized that such action would tend to allay public concern in the subject until an educational program had taken effect. It was believed that procurement of these cameras was partly the result of public pressure in July 1952. With the poor results of the year-long Project TWINKLE program of 24-hour instrumentation watch (two frames of film showing nothing distinguishable), a widespread program of sky-watching would not be expected to yield much direct data of value.

There was considerable discussion of a possible "sky patrol" by amateur astronomers (Hynek) and by wide-angle cameras (Page). Dr. Page and Dr. Robertson pointed out that at present a considerable fraction

of the sky is now—and has been for many years—under surveillance every clear night in several meteor and aurora observing programs as well as sky mapping programs at the various locations listed below. Although the attention of these astronomers is largely directed toward identified rather than unidentified objects, no case of any striking unidentified object is known to Dr. Page or Dr. Hynek. Such an object would most certainly be reported if found on patrol plates.

A case was cited where an astronomer refused to interrupt his exposure in order to photograph an alleged sighting in a different part of the sky. This led Dr. Hynek to say that, if a program of watching could be an adjunct of planned astronomical programs, little cost would be involved and that the trained astronomical personnel might photograph a sighting of an unidentified object.

The location of some of these programs and their directors are believed to be:

- a. Harvard University, Cambridge and New Mexico (meteor patrol)—Whipple.
- b. Yerkes Observatory, University of Chicago and Fort Davis, Texas (several programs)—Meinel (aurorae), Kuiper (asteroids), Morgan (wide angle camera).
- c. University of Alaska, Fairbanks (aurorae)—Elvey
- d. Dominion Observatory, Ottawa (meteors)—Millman
- e. Palomar Observatory, California (sky map)—Minkowski
- f. Lick Observatory, California (sky map)—Shane

It was agreed by the Panel that no government-sponsored program of optical nation-wide sky patrol is worthwhile at the present time, and that the encouragement of amateur astronomers to undertake such a program might have the adverse effect of over-emphasizing "flying saucer" stories in the public mind. However, the issue of radar 'scope cameras for recording peculiar radar echoes would serve several purposes, including the better understanding of radar interference as well as identification of U.F.O.'s.

RADAR PROBLEM OF MUTUAL INTERFERENCE

This characteristic problem of radar operation wherein the pulse signal (of approximately the same frequency) from station A may be picked up on the screen of station B and show as a high-speed track or series of dots was recognized to have probably caused a number of U.F.O. reports. This problem was underlined by information received indicating ADC concern in solving this problem of signal identification before service use of very high-speed aircraft or guided missiles (1955-1956). Dr. Berkner believed that one answer to this problem was the use of a "doppler filter" in the receiving circuit. Dr. Alvarez suggested that the problem might be better solved by the use of a "controlled jitter" wherein the operator receiving "very fast tracks" (on the order of 1000- 10,000 m.p.h.) would operate a circuit which would alter slightly his station's pulse frequency rate. If the signal received on the screen had been caused by mutual interference with another station, the track would now show itself at a different distance

from the center of the screen, if it still appeared at all. Dr. Alvarez felt such a technical solution was simpler and would cost much less than a "doppler filter".

UNEXPLAINED COSMIC RAY PHENOMENA

Two reported cases were examined: one at Palomar Mountain, California, in October 1949, when cosmic ray counters went "off scale for a few seconds", apparently while a "V" of flying saucers was observed visually; and two, a series of observations by the "Los Alamos Bird Watchers Association" from August 1950 to January 1951, when cosmic ray coincidence counters behaved queerly. Circuit diagrams and records were available for the latter, and Dr. Alvarez was able quickly to point out that the recorded data were undoubtedly due to instrumental effects that would have been recognized as such by more experienced observers.

The implication that radioactive effects were correlated with unidentified flying objects in these two cases was, therefore, rejected by the Panel.

EDUCATIONAL PROGRAM

The Panel's concept of a broad educational program integrating efforts of all concerned agencies was that it should have two major aims: training and "debunking".

The training aim would result in proper recognition of unusually illuminated objects (e.g., balloons, aircraft reflections) as well as natural phenomena (meteors, fireballs, mirages, noctilucent clouds). Both visual and radar recognition are concerned. There would be many

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levels in such education from enlisted personnel to command and research personnel. Relative emphasis and degree of explanation of different programs would correspond to the categories of duty (e.g., radar operators; pilots; control tower operators; Ground Observer Corps personnel; and officers and enlisted men in other categories.) This training should result in a marked reduction in reports caused by misidentification and resultant confusion.

The "debunking" aim would result in reduction in public interest in "flying saucers" which today evokes a strong psychological reaction. This education could be accomplished by mass media such as television, motion pictures, and popular articles. Basis of such education would be actual case histories which had been puzzling at first but later explained. As in the case of conjuring tricks, there is much less stimulation if the "secret" is known. Such a program should tend to reduce the current gullibility of the public and consequently their susceptibility to clever hostile propaganda. The Panel noted that the general absence of Russian propaganda based on a subject with so many obvious possibilities for exploitation might indicate a possible Russian official policy.

Members of the Panel had various suggestions related to the planning of such an educational program. It was felt strongly that psychologists familiar with mass psychology should advise on the nature and extent of the program. In this connection, Dr. Hadley Cantril (Princeton University) was suggested. Cantril authored "Invasion from

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Mars", (a study in the psychology of panic, written about the famous Orson Welles radio broadcast in 1938) and has since performed advanced laboratory studies in the field of perception. The names of Don Marquis (University of Michigan) and Leo Rosten were mentioned as possibly suitable as consultant psychologists. Also, someone familiar with mass communication techniques, perhaps an advertising expert, would be helpful. Arthur Godfrey was mentioned as possibly a valuable channel of communication reaching a mass audience of certain levels. Dr. Berkner suggested the U. S. Navy (ONR) Special Devices Center, Sands Point, L. I., as a potentially valuable organization to assist in such an educational program. The teaching techniques used by this agency for aircraft identification during the past war was cited as an example of a similar educational task. The Jam Handy Co. which made World War II training films (motion picture and slide strips) was also suggested, as well as Walt Disney, Inc. animated cartoons. Dr. Hynek suggested that the amateur astronomers in the U. S. might be a potential source of enthusiastic talent "to spread the gospel". It was believed that business clubs, high schools, colleges, and television stations would all be pleased to cooperate in the showing of documentary type motion pictures if prepared in an interesting manner. The use of true cases showing first the "mystery" and then the "explanation" would be forceful.

To plan and execute such a program, the Panel believed was no mean task. The current investigatory group at ATIC would, of necessity, have to be closely integrated for support with respect to not only the

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historical cases but the current ones. Recent cases are probably much more susceptible to explanation than older ones; first, because of ATIC's experience and, secondly, their knowledge of most plausible explanations. The Panel believed that some expansion of the ATIC effort would certainly be required to support such a program. It was believed inappropriate to state exactly how large a Table of Organization would be required. Captain Ruppelt of ATIC unofficially proposed, for purposes of analyzing and evaluating reports:

- a. An analysts' panel of four officers
- b. Four officer investigators
- c. A briefing officer
- d. An ADC liaison officer
- e. A weather and balloon data officer
- f. An astronomical consultant
- g. A Group Leader, with administrative assistant, file clerks and stenographers.

This proposal met with generally favorable comment. The Panel believed that, with ATIC's support, the educational program of "training and debunking" outlined above might be required for a minimum of one and one-half to two years. At the end of this time, the dangers related to "flying saucers" should have been greatly reduced if not eliminated. Cooperation from other military services and agencies concerned (e.g., Federal Civil Defense Administration) would be a necessity. In investigating significant cases (such as the Tremonton, Utah, sighting), controlled experiments might be required. An example

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would be the photographing of "pillow balloons" at different distances under similar weather conditions at the site.

The help of one or two psychologists and writers and a subcontractor to produce training films would be necessary in addition. The Panel considered that ATIC's efforts, temporarily expanded as necessary, could be most useful in implementing any action taken as a result of its recommendations. Experience and records in ATIC would be of value in both the public educational and service training program envisaged. Dr. Robertson at least was of the opinion that after public gullibility lessened and the service organizations, such as ADC, had been trained to sift out the more readily explained spurious sightings, there would still be a role for a very modest-sized ATIC section to cope with the residuum of items of possible scientific intelligence value. This section should concentrate on energetically following up (perhaps on the advice of qualified Air Force Scientific Advisory Board members) those cases which seemed to indicate the evidence of unconventional enemy artifacts. Reports of such artifacts would be expected to arise mainly from Western outposts in far closer proximity to the Iron Curtain than Lubbock, Texas!

UNOFFICIAL INVESTIGATING GROUPS

The Panel took cognizance of the existence of such groups as the "Civilian Flying Saucer Investigators" (Los Angeles) and the "Aerial Phenomena Research Organization (Wisconsin)". It was believed that such organizations should be watched because of their potentially

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great influence on mass thinking if widespread sightings should occur.

The apparent irresponsibility and the possible use of such groups for subversive purposes should be kept in mind.

INCREASE IN NUMBER OF SIGHTINGS

The consensus of the Panel was, based upon the history of the subject, that the number of sightings could be reasonably expected to increase again this summer.

F. G. DURANT III

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RESEARCH AND DEVELOPMENT BOARD
WASHINGTON 25, D. C.

ER-3-3971
*Scientific Intell. -
Flying Saucers*

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Dear Mr. Becker:

Confirming our brief conversation in the hall the other day, I enclose a memorandum from General Maxwell on the subject. We will advise you when we receive the report referred to in this memo.

Sincerely,

S/Walter G. Whitman

WALTER G. WHITMAN
Chairman

Enclosure (1)

Mr. Loftus E. Becker
Deputy Director for Intelligence
Central Intelligence Agency
2430 E Street, N.W.
Washington 25, D. C.

(This document may be declassified upon removal of Confidential Attachment.)

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AUTHORITY: HR 70-2

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RESEARCH AND DEVELOPMENT BOARD
WASHINGTON 25, D. C.

4 November 1952

MEMORANDUM FOR CHAIRMAN, RDB

SUBJECT: Radar Phantoms

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1. At our conference here the other day with Mr. Becker, Mr. Clark and General Sanford, it was agreed that we would evaluate the radar phantoms from the viewpoint of the seriousness of the problem to the Air Defense Command.

2. Inquiries made to the appropriate sections of the Air Staff did not disclose any undue concern over the phantoms. I believe that this is because in war and in peace the problem of identifying the vast number of aircraft tracks seen by the Air Defense radars is a confusing factor of much greater magnitude. However, to make sure that we are not overlooking any important considerations, the Air Force has asked the Air Defense Command to study this problem and make recommendations.

3. This, then, is an interim report to you, because it may be several weeks before the answer arrives from the Air Defense Command.

4. Naturally there is general concern about the radar phantoms and the larger problem of the flying saucers because we are unable to explain a sizeable percentage of the reports. However, the consensus seems to be that a great deal of activity and study is going on in this field which will do much to clarify the situation. The subject of anomalous radar propagation has been under study for some time and will continue with appropriate emphasis. The Air Technical Intelligence Center, which analyzes "saucer" reports, will emphasize the radar confusion aspect. It is also my feeling that, whereas formerly this was a subject which scientific men did not wish to become involved in, it is now becoming "respectable" to study the subject and to discuss it publicly. If this trend continues and our astronomers and other scientists do turn their talents to the problem, I am sure that the answers will be expedited.

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NOV 13 1952

ALFRED R. MAXWELL
Brig. General, USAF
Air Force Secretary

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13 October 1952

MEMORANDUM FOR: Deputy Director (Intelligence)

SUBJECT: Flying Saucers

1. Flying unidentified objects (Flying Saucers) have been the subject of Air Force observation and analysis because of the possibility that such objects might conceivably be an attack on the U.S. If they are not, it is conceivable that the enemy might take advantage of the confusion created by the by the Flying Saucers to use at his convenience some air weapon against the United States.

2. Thus far Defense Department conducted research in this area has been confined to the effort by A-2 through ATIC with the result that an explanation has been provided on all but 20 per cent of the total 1500 reported sightings of Flying Saucers.

3. Determination of the scientific capabilities of the USSR to create and control Flying Saucers as a weapon against the United States is a primary concern of the CIA/OSI. Its review of existing information does not lead to the conclusion that the saucers are USSR created or controlled. It is the view of OSI that collection of intelligence information on the capabilities of the USSR to produce, launch, and control Flying Saucers and the analysis of such data as might be collected cannot be very effective until there is adequate fundamental scientific research launched to clarify the nature and causes of Flying Saucers and to devise means whereby they might be instantly identified.

4. The major scientific intelligence problems in respect to Saucers are:

a. What is the present level of Soviet knowledge regarding these phenomena?

b. What are possible Soviet capabilities to utilize these phenomena to the detriment of US security interests?

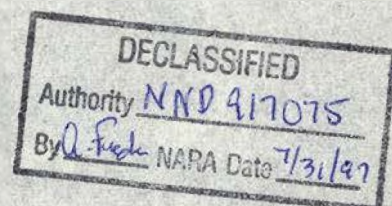
c. What effect do flying saucers have on our warning system.

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5. Conclusions:

a. The instigation of fundamental scientific research is the primary responsibility of the Defense Department.

after IAC

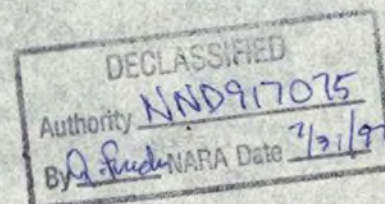
b. The DCI, *alternatively: The NSC* should dispatch to Secretary Lovett along the lines of the attached. The cover sheet explaining to the IAC why the proposed letter is submitted is also attached. *(we should discuss this draft & the idea with A-2 before IAC)*

c. It is far too early in view of the present state of our knowledge regarding Flying Saucers for psychological warfare planners to start planning how the United States might use U.S. Flying Saucers against the enemy.

d. When intelligence has submitted the National Estimate on Flying Saucers there will be the time and basis for a public policy to reduce or restrain mass hysteria.

JAMES Q. REBER
Assistant Director
Intelligence Coordination

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DRAFT COVER SHEET

INTELLIGENCE ADVISORY COMMITTEE

Flying Unidentified Objects (Flying Saucers)

1. Attached is a proposed letter to Secretary Lovett, ^{alternatively: the NSC} from the DCI recommending the initiation of fundamental scientific research with respect to the nature and causes of unidentified flying objects (Flying Saucers).

2. While it is recognized that the implications of Flying Saucers are of primary concern to the Defense Department in carrying out its responsibility to defend the United States, it is also believed that intelligence must request of appropriate authority such assistance as it needs to carry out its responsibility. It is believed that the scientific research required and the intelligence research contingent thereon can be most fruitful if they go hand in hand.

3. Recommendations:

a. That the IAC concur in the proposed letter to the Secretary of Defense.

b. That the IAC request the Watch Committee to give close attention to indications which may reflect Russian actions are being taken with respect to or on the basis of cognizance of Flying Saucers or with respect to the state of United States public opinion in respect of Flying Saucers.

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DRAFT LETTER

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MEMORANDUM FOR: Secretary of Defense *[alternatively: The NSC]*
SUBJ: Unidentified Flying Objects (Flying Saucers)

1. The IAC has reviewed the current situation concerning unidentified flying objects which have caused extensive speculation in the press and have been the subject of concern to Government organizations. The Air Force, within the limitations of manpower which could be devoted to the subject, has thus far carried the full responsibility for investigating and analyzing individual reports of sightings. Since 1947, approximately 1500 official reports of sightings have been received and, of these, about 20% are as yet unexplained.

2. It is my view and that of the IAC that this situation has possible implications for our national security with respect to the vulnerability of the U.S. to air attack. Intelligence, however, cannot discharge its responsibilities with regard to estimating the capabilities of an enemy to create and use such phenomena against the U.S. unless we first determine through scientific research whether or not such phenomena can in fact be generated and controlled by humans.

3. It is therefore recommended, that the Department of Defense (be directed to) undertake an expanded scientific research program to reveal the nature of the various phenomena which are causing these sightings and means by which these phenomena may be identified immediately. It is recommended that in such a project there be close cooperation between conducting the research and scientific and technical intelligence. The IAC agencies are prepared to do their part in such a project.

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