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[illegible] were impeached (as have been others, [illegible]) [illegible] the lack of sound data in the great majority [illegible] that they also, in the lack of speedy follow-up due primarily [illegible] and limited facilities of the ATIC section concerned [illegible] of significant sightings discussed in detail [illegible] the following:

Willoughby, Ohio (1 August 1952); Evanston, Utah (2 July [illegible]); Fort Dodge, Kansas (16 August 1950); Tonk, Kentucky (1 September 1952); Washington, D. C. area (19 July 1952); and Kenai A[illegible], Japan (5 August 1952), Port Huron, Michigan (29 July 1952); and Bonneville Dale, Idaho (13 October 1952).

After review and discussion of these cases (and about 15 other [illegible] in more detail), the Panel concluded that reasonable explanations could be suggested for most sightings and flip definition and other [illegible] that 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 [illegible] of the witnesses [illegible] express themselves clearly (sometimes) [illegible] 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 [illegible] a training and educational program (see [illegible]). The sightings at Chanlon Fort were referenced to show

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"Strange things in the sky" had been reported 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 agreed 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.

<u>[illegible]</u>

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

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[illegible] as [illegible]. It was interesting that in at least two [illegible] nothing that the object sighted was categorized by Robertson and Hynek as probably "Not Sighters", to date unexplained but not [illegible] dangerous. They were not happy then to dismiss the sightings by calling them names. It was their feeling that these phenomena were not beyond the domain of present knowledge of physical science [illegible].

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It was the Panel's opinion that some of the Air Force actions over U.F.O.'s (notwithstanding Air Defense Command anxiety over their 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 felt 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 wandering 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 demystification made itself apparent. Comments on a possible educational program are enumerated below.

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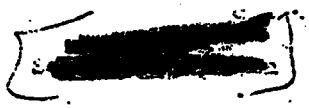
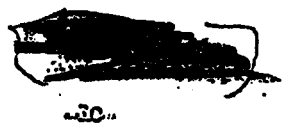


It was the opinion of Mr. Robertson that the "saucer" problem [illegible] to be different in nature from the detection and [illegible] of German V-1 and V-2 guided missiles prior to their operational use in World War II. In this 1943-1944 intelligence operation (CROSSBOW), there was excellent intelligence and by June 1944 there was material evidence of the existence of "hardware" obtained from crashed vehicles in England. This evidence gave the intelligence team a basis upon which to operate. The chances of any "hardware" resulting from unexplained U.F.O. sightings leads a "still-shot" (thing) nature to the AIR problem. The results of their investigation, to date, strongly indicate that no evidence of hostile and or danger exists. Furthermore, the current reporting system would be of 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.

<u>[illegible] OF EXTRATERRESTRIAL ORIGIN</u>

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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[illegible] Project Sailor, [illegible] for 15 months) could not be [illegible]. However, the Panel could not accept any of the cases [illegible] by him because they were raw, unevaluated reports. Conventional explanations of the sightings were suggested in some cases and in others the time of sighting was so short as to cause [illegible] of visual impressions. It was noted by Dr. Goudsmit and others, that extraterrestrial artifacts, if they did exist, are no [illegible] alone; rather, they are in the realm of natural phenomena subject to scientific study, just as comets 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 [illegible] 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 them) 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.

[illegible] SAMPLE

This case was considered significant because of the excellent documentary evidence in the form of Kodachrome motion picture films (about 3000 frames). The Panel studied these films, the case history, [illegible] interpretation, and received a briefing by representatives of the [illegible] Photo Interpretation Laboratory on their analysis of the [illegible]. This team had expended (at Air Force request) approximately

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[illegible] use of professional and amateurs time in the [illegible] of graph plots of individual frames of the film, showing [illegible] 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, [illegible] because there was no blinking while passing through 60° of arc and were, in fact, "reflecting". Flight 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, [illegible]" 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 objects.

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4. Objects in the Great Falls case were believed to have probably been aircraft, and the bright lights such reflections.

5. 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.

6. The intensity change in the Tremonton lights was too great for acceptance of the P.I.R. hypothesis that the apparent rotation and changing intensity of the lights indicated extremely high speed in small orbital paths.

7. Apparent lack of guidance of investigators by those familiar with U.F.O. reports and explanations.

8. 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 objects) and the objects appeared much less bright.

9. Method of obtaining data of light intensity appeared faulty because of unreliability of equipment and questionable assumptions in making averages of readings.

10. 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.

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[illegible] (which is a very small part of the [illegible] site) were not removed from the plates if the [illegible] were placed on the out of the site.

[illegible] Panel believed strongly that the data available on their sighting was sufficient for positive identification of further data [illegible] by photographic polychromatic [illegible] believed relevant [illegible] the site under similar weather conditions, showing that sight [illegible] characteristics with computed [illegible] and [illegible] approach [illegible] objects from their approach [illegible]. It was concluded that the [illegible] of such tests would probably lead to credible explanations of what is an [illegible] or [illegible] program. However, the Panel felt that the cost in technical manpower effort required to follow up and explain away one of the [illegible] or more reports received through channels each year (i.e., [illegible]) would 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 [illegible] all. The long delay in explaining a sighting tends to cut down [illegible] intelligence value. [illegible] reporting program should have as a major purpose [illegible] popular feeling that every [illegible], no matter how poor the data, must be explained in detail. The effort should be directed to the requirement every reasonable [illegible] [illegible], to be explicitly and conclusively [illegible]. In other words, the burden of proof is on the sighting [illegible] [illegible].

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[illegible] Soviet Bloc [illegible] in agreement with O/SI opinion) that, although evidence of any direct threat from these sightings was [illegible], related images might call out something from

a. Misinterpretation of natural enemy artifacts by defense personnel.

b. Overloading of computer by separating channels with "false" information (Pentagon "signal noise" analogy—Bulletin).

c. Susceptibility of public to mass hysteria and greater vulnerability to possible enemy psychological warfare.

Although not the concern of OSI, the first two of these problems may seriously affect the Air Defense Intelligence system, and should be studied by experts, possibly under ARO. If $U_2F_2O_6$'s bosses are confined in a reaction to the "flying saucer" scare, or if separating channels are saturated with false and poorly documented reports, our capability of detecting hostile activity will be reduced. Dr. Page noted that some component screening or filtering of reported sightings at or near the source is required, and that this can best be accomplished by an educational program.

[illegible] SOLUTIONS OF INVESTIGATED SIGHTINGS

The map prepared by ARO showing geographic locations of officially reported unexplained sightings (1952 only) was studied 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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[illegible] sightings were made such locations. On the other hand, there had been no sightings in the vicinity of considerable populated settlements while there were considerably 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 situations. 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 around U. S.

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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 [illegible] 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

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[illegible] for many years under surveillance [illegible] in such meteor and comet observing programs as well as sky mapping programs of the various institutions listed below. Although the [illegible] of these astronomers is largely directed [illegible] rather than unidentified objects, no case of any [illegible] unidentified object is known to Mr. Page or Dr. Hynek. Such a sighting would most certainly be reported if found on patrol plates.

[illegible] was asked where an astronomer refused to interrupt his [illegible] 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 [illegible] could be an adjunct of planned astronomical programs, little [illegible] would be involved and that the trained astronomical personnel [illegible] 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 [illegible] London (meteor patrol)—Whipple.

b. Yerkes Observatory, University of Chicago and Fort Davis, Texas (several programs)—Walnal (comets), Kuiper (asteroids), Morgan (wide angle camera).

c. University of Alaska, Fairbanks (aurora)—Elvey

d. Dominion Observatory, Ottawa (meteors)—William

e. Palomar Observatory, California (sky map)—Whitpple

f. Mt. Observatory, California (sky map)—Shane

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It was agreed by the Panel that no government-sponsored program of optical satellite 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-beacon equipment for receiving possible radar echoes would serve several purposes, including the better understanding of radar interference as well as identification of U.F.O.'s.

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This characteristic problem of radar operation wherein the pulse signal (of approximately the [illegible] 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 following ARS consent in solving this problem of signal identification before service use of very high-speed aircraft or guided missiles (1955-1956). Dr. [illegible] believed that one answer to this problem was the use of a "Doppler filter" in the receiving circuit. Dr. [illegible] another suggested that the problem might be better solved by the use of a "band-pass filter" wherein the operator receiving "very fast tracks" (in the order of 2000- 20,000 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

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[illegible] of the [illegible], [illegible] at all. Dr. Ahrens felt such a technical solution was simpler and would cost much less than [illegible].

[illegible]

Two separate cases were considered: one at Palomar Mountain, California, in October 1949, when certain sky cameras 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 certain sky coincidence counters behaved queerly. Circuit diagrams and records were available for the latter, and Dr. [illegible] 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.

[illegible] 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 [illegible] 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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[illegible] in such situation than enlisted personnel to command and non-[illegible] personnel. Relative emphasis and degree of explanation of different programs would correspond to the categories of duty (e.g., active operations; [illegible]; control tower operations; 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 meteorological conditions.

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. Parts of such education would be similar to campaigns which had been pending at Ripon but later cancelled. 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 civil defense 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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[illegible] study in the psychology of music, written about the [illegible] [illegible] radio broadcast in 1939) and has some personal advanced [illegible] studies in the field of psychology. The names of Dan Kingsley (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. Zuckman 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 training techniques used by this agency for aircraft identification during the past war were highly cited as an example of a similar educational tool. The Jam Handy Co. which made World War II training films (motion pictures and slide strips) was also suggested, as well as Walt Disney, Inc. animated cartoons. Dr. Hyman suggested that the amateur enterprises in the U. S. might be a potential source of entertainment 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 two 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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[illegible] of Spaldings hypothesis as although discussion [illegible] weather conditions at the site.

[illegible] of one of the psychologists and writers and a science writer [illegible] Unidentified Flying Object would be necessary in addition. The Panel [illegible] that ATIC's efforts, temporarily expanded as necessary, [illegible] would be implementing any action taken as a result of the recommendations. Experience and records in ATIC would be of value in both the public educational and service training program envisaged.

[illegible] Nevertheless at least, due of the opinion that after public gullibility lessened and the serious organizations, such as ATIC, had been tested 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 problem of those of possible scientific intelligence value. This section should concentrate on energetically following up (perhaps on the criteria of qualified Air Force Scientific Advisory Board members) those cases which seemed to indicate the evidence of unconventional aerial artifacts. Reports of such artifacts would be expected to arise mainly from Western outposts in far closer proximity to the Soviet Certain than Russia, Canada.

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

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F. K. DURANT III

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[illegible]	[illegible]	[illegible]
[illegible]on	[illegible]	[illegible] systems
[illegible]z	[illegible]	[illegible]
[illegible]er	[illegible]	[illegible]
[illegible]	[illegible]	[illegible] problems
[illegible]	[illegible] Research [illegible], [illegible] Illinois University	[illegible] physics
[illegible]	[illegible] University	Astronomy
[illegible]	Arthur D. Little, Inc.	Rocketry, guided missiles
[illegible]	[illegible] Consulting Scientist, [illegible]	Scientific and technical intelligence
[illegible]	Assistant Director, [illegible] OSI	Scientific and technical intelligence
[illegible]	[illegible] Assistant [illegible], C/SI, OSI	Scientific and technical intelligence

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[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Acco Div.
[illegible]	[illegible]	[illegible]
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TAB B

[illegible] OF

[illegible] CASES

[illegible] - 17 January 1953

[illegible]

1. Preliminary case histories of sightings 1951 - 1952 (selected by [illegible]).

2. [illegible] Progress Reports of Project GRUDGE and Project [illegible] (note [illegible] study of subject).

3. Progress Reports of Project GRUDGE (note [illegible] for Battelle Memorial [illegible] [illegible] with supporting [illegible]).

4. Preliminary Report of Sightings at Williams Air Force Base, Ben Harlow.

5. Report of USAF Research Center, Cambridge, Mass., Investigation of [illegible] Balloons (Project [illegible]).

6. Outline of Investigation of U.F.O.'s Proposed by Kirtland Air Force [illegible] (Project [illegible]).

7. [illegible] Various Cases of Sightings at Evanston, Utah, 2 July 1951 [illegible] Grand Falls, Montana, August 1950.

8. Preliminary Report of [illegible] cases of sightings of various [illegible] (Evanston, Blinking Lights, Hovering, etc.).

9. Draft of manuals "How to Make a [illegible]", prepared at ATIC.

10. Chart Showing Plot of Geographic Location of Unexplained Sightings in the United States during 1952.

11. [illegible] Showing Balloon Launching Areas in the United States.

12. [illegible] Showing Selected Typical Balloon Flight Paths and Relation to Reported Sightings.

13. [illegible] Showing Frequency of Reports of Sightings, 1948 - 1952.

14. [illegible] Showing Categories of Explanations of Sightings.

15. Photographs Representative of Polyethylene Film Balloons in Daylight [illegible] Flying [illegible] [illegible].

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[illegible] photos of [illegible] showing high radioactivity.

[illegible] Reports Issued [illegible] Interest in U. S. Sightings.

[illegible] of Selected WWII Reporting Forms and Copies of Pertinent [illegible] Army and Navy Groups Relating to Subject.

[illegible] Polyethylene "Balloon" Balloon (54 inches square).

"[illegible] on Public Opinion", JANAP 301 (Manual illustrating numerical [illegible] Characteristics of Service [illegible]).

[illegible] official letters and foreign intelligence reports dealing with subject.

[illegible] of popular published books dealing with subject (articles in [illegible], newspaper clippings and books).

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