

APPENDIX F

U. S. Department of Commerce Feather Bureau

Information on Fall Lighting

COPY

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Washington 25

In Reply Please Address
CHIEF OF BUREAU
and Refer to
0-4.3

Dec. 16, 1945

Commanding General
Air Materiel Command
Attention: WCIAXO
Wright-Patterson Air Force Base
Dayton, Ohio

Dear Sir:

Your letter of October 20, 1945, addressed to the National Bureau of Standards and requesting information on the subject of "Ball Lightning" has been referred to this Bureau for reply.

Attached is a tabulation filling in as well as practicable the information called for by the outline presented in your letter. We shall be glad to be of further assistance in connection with this matter.

Very truly yours,

/s/ F. W. Reichelderfer
F. W. Reichelderfer
Chief of Bureau

Attachment

COPY

APPENDIX I

Project Grudge

Summary of AMC Evaluation of Remaining Reports

APPENDIX I

In the following section of this report, each remaining unexplained incident is considered separately. It is not the intent to generally discredit the character of observers, but each case has undesirable elements, and these cannot be disregarded. The numerical designation is merely the categorical order of the incident in the project files.

Incident No. 1 — 8 July 1947, 0930 hours local, Muroc Air Force Base. Four witnesses, all observed two silver disc like or spherical objects against a clear bright sky. All witnesses estimated the altitude at about 8000 feet, and the speed between 300 and 400 MPH. It is possible to estimate distance and speed of an object with a fair degree of accuracy if the size is known. The distance is judged on the known size and speed on an estimate of distance, plus angular change in position (see page 8, app. G). In this incident the size could not be known, owing to the fact that the object was not identified. The time in sight and angular distance traveled were not given. However, the first witness stated he sighted the objects at 0930, and the last witness said he was called to view the objects at 1000. Time in sight is therefore assumed to be at least one-half hour. The objects reportedly traveled in a straight line. Taking the mean reported speed (350 MPH), the objects must then have traveled 175 MPH while in sight. If the objects were of such proportions as to be seen at that distance, it is believed that more details could have been observed at the first sighting. Two additional remarkable aspects of this case are:

1. A few moments previous to the sighting, the first witness was engaged in conversation. Quoting the witness, "My part in this conversation was as follows: 'Someone will have to show me one of those discs before I will believe it.'"

2. The statements of the three other witnesses were made to the first witness. All three agree almost identically with the first. It is probable, therefore, that their evidence was influenced by suggestion.

AMC Opinion: This report is a result of misinterpretation of the nature of real stimuli, probably research balloons.

Incident No. 10 — 4 July 1947, 2004 hours, Boise, Idaho. An airline pilot and crew watched from the air two groups, (5 and 4 in number) of objects described as thin and smooth on the bottom and rough on top, silhouetted against sunset and flying "loose formation." They followed them for forty-five miles; therefore, had them in sight for approximately ten minutes. No further information was submitted.

AEC Opinion: Since the sighting occurred at sunset, when light conditions change rapidly and illusory effects are most likely, the objects could have been ordinary aircraft, balloons, birds, or pure illusion. Insufficient information.

Incident No. 17 — 21 June 1947, afternoon, Mt. Rainier, Washington. One witness viewed nine "saucer-like discs" from the air calculated to be 20 to 25 miles distant, and 45-50 feet in length, (about 20 times as long as wide) which traveled 47 miles in 102 seconds (1700 MPH). Dr. Hynek calculated mathematically (see Appendix B) that assuming the estimate of distance to be accurate, in order to see such detail, the objects would need to have been at least 100 feet thick, therefore, 2000 feet long. If the estimated size is more nearly correct, then to have been seen as described, the objects would have been roughly six miles distant. At this distance they would have traveled only 11 miles in 102 seconds, or approximately 400 MPH. The entire report of this incident is replete with inconsistencies. It is to be noted that the observer has profited from this story by selling it to Fate magazine.

AMC Opinion: The report cannot bear even superficial examination, therefore, must be disregarded. There are strong indications that this report and its attendant publicity is largely responsible for subsequent reports.

Incident No. 21 — 29 June 1947, 1645, Des Moines, Iowa.
The observer, a bus driver, reported observing thirteen objects at 1200 ft altitude, traveling in a straight line in file at 300 MPH. The objects were elliptical in form "inverted saucer", 12 ft thick, 175-250 ft in diameter, dirty white, and made a sound like an electric motor or dynamo. There was no further information supplied except that the observer stated they looked like dots in the sky.

AMU Opinion: These objects were seen just outside Des Moines, and were flying toward Des Moines. If they were not ordinary objects mistaken for something else by the observer, but were really unusual aircraft, it seems almost certain that someone else would have also reported them. There is insufficient information for a proper analysis.

Incident No. 29 — 14 June 1947, 1200 and 1415, Bakersfield, Calif. The observer, an experienced pilot, reported sighting ten and later seven objects at 8500 ft altitude, traveling 350 MPH in a loose "V" formation. Although the objects were apparently at a considerable distance, the reporter described them as being similar to the XP5U-1 "Flying Flapjack." He stated that he attached no particular importance to this sighting until he read of the Cascade Mountain sighting, (Incident No. 17). He then recalled this incident.

AIC Opinion: There is no information contained in this report to refute the assumption that these objects were ordinary aircraft beyond the range of identification. The fact that no one else in Bakersfield reported observing anything unusual, tends to substantiate this conclusion.

Incident No. 35 -- 14 October 1947, 1200 hours, eleven miles north,
N.E. of Cave Creek, Arizona.

Two mine operators observed one object at 8000 to 10,000 ft altitude, traveling 350 MPH, S.E. in a straight line for a period of 45-60 seconds. The object was red against the sky, and black against a cloud. It appeared to be three feet in diameter from point of observation. The OSI report of investigation states that one observer thought it was a buzzard, but decided later that it was not; the other observer said it resembled a flying wing, but was not a flying wing. No reasons are given for these apparently superfluous and conflicting remarks. As in many other instances, these observers cite their flying experience as qualification for their ability to observe and report details.

AIC Opinion: From the limited data furnished in this report, it is difficult to arrive at any conclusion. If the object was actually 10,000 ft distant, and yet appeared three feet wide to the observer, it would of necessity be huge. This sole point of contention tends to discredit the report.

Incident No. 37 -- 14 October 1947, 1200 hours, eleven miles North,
N. E. of Cave Creek, Arizona.

Two mine operators observed one object at 8000 to 10,000 ft altitude, traveling 350 MPH S.E. in a straight line for a period of 45-60 seconds. The object was red against the sky, and black against a cloud. It appeared to be three feet in diameter from point of observation. The OSI report of investigation states that one observer thought it was a buzzard, but decided later that it was not; the other observer said it resembled a flying wing, but was not a flying wing. No reasons are given for these apparently superfluous and conflicting remarks. As in many other instances, these observers cite their flying experience as qualification for their ability to observe and report details.

AMC Opinion: From the limited data furnished in this report, it is difficult to arrive at any conclusion. If the object was actually 10,000 ft distant, and yet appeared three feet wide to the observer, it would of necessity be huge. This sole point of contention tends to discredit the report.

Incident No. 40 - 7 July 1947, 1600 hours, Phoenix, Arizona.
One observer witnessed an elliptical, flat, gray object, measuring 20-30 ft across, flying 400-600 MPH, spiraling downward to 2000 ft from 5000 ft, then ascending at a 45° angle into an overcast. Observer ran into a garage where he obtained a Kodak Brownie 120 box camera, and snapped two pictures; one negative, and a print of the other, are contained in project files. The negative displays a small apparently flat object rounded on one end, and pointed on the other. The object appears to have a hole in the center. The image is in stark contrast with the background of clouds. From the print, the object appears to be jet black with sharp outlines. Four expert photographers concur in the opinion that the image is of true photographic nature. However, they disagree with each other as to the possibility of filming such an occurrence under the conditions described. Considering the object was gray as described, and at a distance of 2000 feet, it seems unlikely that it would appear pure black on the print. In subsequent correspondence to the reporter of this incident, the observer refers to himself as Chief of Staff of Panoramic Research Laboratory, the letterhead of which lists photography among one of its specialities. Yet, the negative was carelessly cut and faultily developed. It is covered with streaks and over a period of six months, has faded very noticeably. An OSI agent discovered that a letter by this observer was published by Amazing Stories magazine early this year. In this letter he stated that he had been interviewed by two Federal agents, had given them pictures of "flying discs" and that the pictures had not been returned. He requested the advice of the magazine as to how to proceed to sue the Government. This individual is aware of the whereabouts of these pictures, but has never requested their return. There are other undesirable aspects to this case. The observer's character and business affiliations are presently under investigation, the results of which are not yet known. Dr. Irving Langmuir studied subject photographs, and after learning of the prior passage of a thunderstorm, discounted the photographed object as being merely paper swept up by the winds.

AME Opinion: In view of the apparent character of the witness, the conclusion by Dr. Langmuir seems entirely probable.

Incident No. 51 -- 3 September 1947, 1215 hours, Oswego, Oregon.
A housewife observed twelve to fifteen round, silver-colored objects at a high altitude. No further information was submitted, therefore, no conclusion can be reached.

Incident No. 58 — 4 August 1947, Sunset, near Bethel, Alaska.

A pilot and his co-pilot observed a black object of the design and approximate dimensions of a C-54 fuselage, flying at 500-1000 ft altitude N.W. The object crossed their path at right angle, and they pulled up to 1200 ft to avoid a collision, then chased it at 170, but lost sight of it in four minutes. They estimated the speed of the object to be three times their own, or 510 MPH. Assuming the estimate of speed to be correct, elementary computations determine the distances object traveled as 3 1/4 miles in four minutes while the observer's airplane moved eleven miles in the same period. Therefore, the object was more than twenty miles distant when last seen. To be capable of being seen at this distance under the conditions given, the object would have to be about 50 feet in its smallest or end-on dimension. If this were true, and the object was proportionate with a C-54 fuselage, its length would be about 500 ft. Assuming the estimate of speed to be incorrect, but time in sight to be correct, the problem is figured in reverse, using as a reasonable width 15 feet. In this event the object would have been less than ten miles away when lost to sight, therefore, it would have traveled about eighteen miles in four minutes, giving a speed of less than 300 MPH.

A/C Opinion: It is believed that the pilots were suddenly startled by a conventional aircraft crossing their path, and that as they gave chase to the aircraft which was "silhouetted against a brilliant evening sky", they were partially blinded, and were therefore unable to discern wings or engines.

Incident No. 62 -- 8 September 1947, 2250-2300 hours, Logan, Utah.
A man and his wife, together with five other unidentified people, observed five groups each of 35-60 small objects, yellowish-white in color, flying several thousand feet in the air at a high rate of speed. The weather was cloudy.

AIC Opinion: From the limited evidence submitted, it is practically impossible to formulate a conclusion. Fast motion could be attributed to closeness rather than to true linear distance. In an atmosphere of darkness, any impression may be erroneous. Ground lights reflected from moving, low-hanging clouds, themselves not visible, could readily account for this report. Light colored birds are another possibility.

Incident No. 64 - 19 August 1947, 2130 hours, Twin Falls, Idaho. Several people were reported as sighting numerous groups of objects in the night sky. These objects were described as a glow in the air with a color similar to regular electric lights. The objects were said to have traveled at "terrific" speed. Some flew in triangular formation. Three objects peeled off of one group of ten, and proceeded on another course. The sky was overcast. Two observers stated that the objects could not have been birds since the lights were not a reflection of city lights.

AEC Opinion: Many familiar objects visible because of the fact that they reflect light, appear to be incandescent; for example, the moon and certain planets. The evidence is, therefore, contradictory since in one instance the objects are described as merely a glow, and later on as not being reflectory. The submitted evidence is readily explained as in incident 62; ground lights reflected from clouds; or birds in flight.

Incident No. 68 -- 24 June 1947, Daytime, Cascade Mountains, Washington. A prospector reported sighting five or six round objects with tails, 1000 ft overhead, heading S.E., and banking in the sun. The objects were in sight 45-60 seconds and alleged to be thirty feet in diameter. They made no noise. While the objects were within sight, the observers compass fluctuated wildly. He states that he read of a former sighting (incident No. 17) also occurring on 24 June 1947, and submitted this report solely to add credence to the person who provided that story. While there appears to be an attempt on the part of the observer to infer that these objects were possibly the same as those reported in (incident No. 17), there are several major differences, notably as Dr. Hynek points out (app.B), that these objects had tails, and that the inferred size, as determined from the estimated distance, is quite different. Dr. Valley (App D) has pointed out and Dr. Hynek concurred that it is difficult to take seriously the peculiar action of the compass for this would imply fantastically large magnetic fields.

AME Opinion: From the limited evidence submitted, it is impossible to reach a definite conclusion. However, two possible psychological factors are readily apparent; one, the observer stated he submitted this report solely because he had read several days following his observation of another sighting. Therefore, he very likely either consciously or inadvertently may have attempted to conform his report to that recounted in the newspaper; and two, he colored his report with inference of huge magnetic fields, as to the implications of which he was obviously uninformed.

Incident No. 71 — 8 or 9 October 1947, daytime, Las Vegas, Nevada. An Air Force Reserve pilot reported observing a trail appearing high in the sky at an estimated speed of 400-1000 MPH. The object producing the trail was not visible. The trail was white as a cloud, and dissipated in fifteen to twenty minutes. The object proceeded in a straight line, then it made an approximately 180° turn of radius five to fifteen miles, and proceeded away toward the direction of first appearance. The weather was described as "almost cloudless."

AMC Opinion: It is difficult to understand why this individual attached any importance to this sighting, and why he did not conclude that the trail was caused by exactly what it appears to have been; that is, an ordinary aircraft flying normally at an altitude too high for itself to be visible, but in the best altitude range to form vapor trails 20,000 - 45,000 feet.

Incident No. 75 -- 13 August 1947, 1300 hours, Snake River Canyon, Idaho. A farmer together with his two sons, ten and eight years of age, witnessed an object move down a canyon. It was in view only momentarily at a distance of 300 feet, and approximately 75 feet above the ground. The object made a swishing sound, and was sky-blue in color. The farmer doubted the possibility of its visibility if viewed against the sky. The children told of smokeless turbine or exhaust flames shooting from the device through which could be seen daylight. The object passed over some trees, which in the words of the farmer, "spun around on top as if they were in a vacuum."

AAC Opinion: It seems logical to concur with Dr. Hynek's deduction, that this object was simply a rapidly moving atmospheric eddy.

Incident No. 76 -- 13 August 1947, Salmon Dam, Idaho.

Two men reported simultaneously hearing a roar, and looking up observed two objects of undetermined size, several miles distant at a great height which they thought might have been 4000-6000 feet. The objects were "circular", "reflected light", and were traveling at "great speed". Although occurring on the same day as Incident No. 75, the descriptions vary widely.

AMC Opinion: There is no information contained in this report to refute the assumption that these men saw two ordinary aircraft at too great a distance to discern details.

Incident No. 77 -- 3 July 1947, 1430 Hours, South Brooksville,
Maine.

This observer, an "astronomer", heard a loud roar and with difficulty observed at 50° elevation approximately ten very light-colored objects traveling N. W. The group is reported to have covered 1 1/2° angular diameter in the sky, bunched together with no regular formation. He calculated that at a distance of 10 miles the objects would have a speed of 1200 MPH; that their width must be 100 feet across and due to their color would be barely visible. He also estimated the object would have a width of fifty feet at five miles with a speed of 600 MPH. He believed they were aircraft of some type, owing to the loud roar. In his letter he asked, "have any meteorites been reported?"

AMC Opinion: It is believed that the observer should have been able to rule out the possibility of meteorites. Reducing the estimate of distance, and correspondingly reducing the required size to that of objects such as birds or insects, then the speeds become very modest. If the objects were actually five to ten miles distant, and responsible for the "unusually loud roar", it is expected that numerous other reports would have been received from this section of Maine, which is thickly populated.

Incident No. 79 -- April 1947, Richmond, Virginia

A weather bureau observer at the Richmond Station observed on three different occasions, during the six-month period prior to April 1947, a disc-like metal chrome object. All sightings were made through a theodolite while making pibal observations. On the last reported sighting, the balloon was at 15,000 feet altitude, the disc followed for fifteen seconds. It was shaped like an ellipse with a flat level bottom and a dome-like top. The altitude and speed were not estimated, but the object, allegedly through the instrument, appeared larger than the balloon. Another observer at the same station saw a similar object under corresponding circumstances, with the exception that her balloon was at an altitude of 27,000 feet and possessed a dull metallic luster. There was good visibility on days of observation. Report of this sighting was not submitted until 22 July 1947.

AMC Opinion: There is no readily apparent explanation. If there were only one such object, it seems amazingly coincidental that it would be seen four times near the pibal of this station only. On the other hand, there would have to have been a great number of these objects to rule out coincidence, and as the number of objects increases so do the chances of sightings by other witnesses.

Incident No. 24 -- 7 July 1947, 1300-1400 Hours, Lakeland, Fla.
One observer reported hearing a swishing noise and then seeing, five shiny objects climbing from 5000 ft to 7500 ft in fifteen to thirty seconds. He estimated the objects were one mile from him. The lead object was of plastic appearance and appeared to be towing the other four. The reporter made a model and submitted it as an exhibit. The model is roughly two feet in diameter, domed top and bottom and with an opening in the rear on either side of a vertical fin. Police records list the man as having been AWOL from the Navy on two occasions. A neighborhood and employment check disclosed he is an excitable person, very talkative, possessing an exaggerated imagination, and inclined to impress people with his continuous verbal chatter.

AMC Opinion: This incident has all the aspects of a psychopathological report.

Incident No. 111 — 1 April 1947, 0955 Hours, Central Philippines.
An F-47 pilot leading three other aircraft at 1500 ft saw an object approximately three miles away at 1000 ft. Object appeared to be a flying wing thirty by twenty feet, silver in color. The pilot turned to intercept the object and the object turned on nearly the same course and disappeared from sight in five seconds. Object appeared to have a dorsal fin but distance was too great to note any other features. The report does not reveal whether any of the other pilots saw the object.

AMC Opinion: No definite explanation. However, every pilot has experienced the sensation of seeing an aircraft obliquely at nearly the limit of vision and then losing sight at the same range when the aircraft presented, in stern view, a smaller surface.

Incident No. 122 -- 5 April 1948, Holloman Air Force Base, New Mexico.

Three balloon observers saw an object very high in the sky, moving faster than any known aircraft and possessing a rounded indistinct form, which disappeared suddenly. It was seen less than thirty seconds and was apparently not manned, judging by its violent maneuvers. For analogous size they stated if the moon were the size of an orange the object would approximate the size of a ^{1/2} disco.

ATC Opinion: No explanation. However, the above comparison of size is to be noted. A dime held at arms length would shield the moon from the eye even if the moon appeared several times larger than it does. To reduce the proportion then, this object must have appeared as an infinitesimal point. From trained observers, this is certainly a major discrepancy.

Incident No. 134 -- 28 May 1948, 1500 Hours, Monroe, Michigan.
One passenger in a C-47 at 8000 ft observed three disc-like objects and later two more (another observer saw only the two). The objects appeared to descend from above, level off at altitude of C-47 and travel in the opposite direction at great speed. They left no trail, were disc shaped and were "silvery-gold" or "shiny brass" in color. One observer said they were 300-400 feet across with well rounded contours, the other said they were four feet in size. The first observer later said all had a hazy or fuzzy outline. There was an overcast at 13,000 feet and a thin, broken stratus layer at 5000 feet, the level of the aircraft.

AMC Opinion: Dr. Lynek suggests these individuals could have seen successive shafts of sunlight through breaks in the high overcast illuminating portions of the lower cloud stratum. Apparent speed could be a combination of projected motion of the break in the overcast and the velocity of the C-47. This explanation partially fits the contradictory evidence.

Incident No. 135 -- Between 15 and 20 August 1947, 2130 Hours,
Weaver, South Dakota.

An Air Force Officer saw twelve "flying discs" four miles away over the Rapid City Air Force Base in a tight diamond formation at 8000 to 10,000 feet descending to 6000 feet at 500 MPH. Objects made a formation turn and climbed at 30° to 40° accelerating. Objects were very maneuverable, remaining equally spaced in all maneuvers. Each object was 100 feet in length, oval-shaped and brilliant yellowish-white. No sound nor exhaust trail were heard or seen.

AWC Opinion: This reporter should be a reliable observer. However, it has been shown that distance cannot be estimated without prior knowledge of the size of an object. If distance is not known, speed cannot be estimated. More notable perhaps is that such minute detail could be remembered in a report made one year after the observation and yet the date was not remembered. Dr. Hynek suggested the possibility of detached auroral streamers.

Incident No. 151 -- 29 July 1948, 0955 Hours, Indianapolis, Indiana.

The observers driving a truck saw an object shaped like a broad short propeller traveling 25-30 MPH in a bank just above the trees at thirty feet altitude. It was eight feet long, two feet wide and one foot thick, with "cups" on the upper sides of the blades. The object glided with no spinning action, and there was no sound or trail. The object was thought to have fallen, but a search revealed nothing.

AUC Opinion: No satisfactory conclusion can be drawn.

Incident No. 152 -- 31 July 1948, 0825 Hours, Indianapolis, Indiana.

A man and his wife saw an object shaped like a cymbal, lusterless white in color, at an altitude of 2000 ft. The object moved across the sky to the east at approximately 1800 MPH, on a level course and shimmering in the sun, giving the appearance of spinning. It was twenty feet in diameter and six to eight feet high in the center. There was no sound or exhaust.

AMC Opinion: This object could conceivably be the same at different angles as that seen in Incident 151, although all the remaining evidence is widely divergent. No satisfactory conclusion can be drawn.

Incident No. 154 -- 2 August 1948, 1945 Hours, Columbus, Ohio
An attorney and his wife observed an object moving south over the center of Columbus at 1500-2000 ft altitude. During the ten to fifteen minutes the object remained in sight, it changed shape from that of a parallelogram to a circle and back again, direction of travel remained constant. Once it seemed to hesitate and a thin trail of smoke appeared from the rear. The smoke disappeared soon. The outline of the object was dark gray or black, but the center seemed to be transparent. Object was judged to be 20 to 30 feet in diameter.

AMC Opinion: There is no reason to believe other than that this object was a research balloon, of which there are many types, and that the "trail of smoke" appeared so from a momentary glimpse of trailing apparatus.

Incident No. 162 -- 11 August 1945, 1200 Hours, Hamel, Minnesota.
Two children, ages ten and eight, described a dull gray object two feet in diameter and one foot thick, shaped like two plates together which settled gently to the ground. It clanked when it touched down. On the ground it emitted a whistling noise and "shot" up to twenty feet where it hesitated, whistled once more, "shot" up to thirty feet, then "shot" off in a northeast direction.

AMC Opinion: This apparent bit of fantasy is hardly worth further consideration.

Incident No. 168 -- 20 July 1948, 1330 Hours, Arnheim, The Hague.

One observer saw an object intermittently through clouds four times. The object had two decks and no wings, was said to be very high, with speed comparable to V-2.

AMC Opinion: Insufficient information. It may be well to point out that the V-2 is not visible in flight, therefore, it follows that this object would not have been visible as described if traveling at that speed.

Incident No. 176 -- 23 Sept. 1948, 1200 Hours, San Pablo, Calif.
On a dull hazy day, two men saw a large translucent object over a mile overhead. It was the size of a four-engine bomber, buff-gray in color, and appeared to be made of canvas. According to the first observer, the center portion was spherical and undulated, having appendages fore and aft, like an amoeba. The second observer said the object looked like a "vegetable crate" covered with translucent material. The investigator states one observer's description was in direct contradiction to the other. One observer was far-sighted but wore no glasses, the other was over seventy, needed glasses to read but wore none at time of sighting.

AWO Opinion: The only fact that might be accepted is that an object was seen. Two observers, side by side, could not agree on its appearance. The evidence is useless. A balloon or cluster of balloons, an aircraft, or a cloud could have been the stimulus.

Incident No. 183 - 15 Oct. 1948, 2305 Hours, Fushoka Area,
Japan.

Airborne radar observer in F-61 attempted six times to intercept an object between 5000 and 6000 ft. The object traveled 200 MPH until approached to within 12,000 ft., then quickly accelerated from scope at estimated 1200 ft. Object appeared to be 20-30 ft long. Pilot saw silhouette on undercast of object with rounded nose, general projectile shape, cut off sharply at rear.

AMC Opinion: There is no apparent explanation. One discrepancy seems to be that the target was never seen by ground radar, which was operating and had the F-61 in sight throughout period of sighting.

Incident No. 186 -- 16 Oct. 1948, 1145 Hours, eight miles east of Sterling, Utah.

One observer on mountain at 9000 ft heard a throbbing noise, then saw one object 9 inches long, three inches thick, and six inches wide traveling horizontally at 300 MPH, 500 ft overhead. It was black with a wide silver stripe on underside center. Investigator states observer's ability to estimate distances is poor. In sight approximately four seconds.

AMC Opinion: Information indicates no explanation.

Incident No. 193 -- 24 Oct. 1948, between 1100 and 1330 GMT,
Neubiberg, Germany.

An Air Force Officer heard a sound like an F-47 at high altitude,
looked up and saw a dark object shaped like a coin at undetermined al-
titude, 60° elevation flying southwest at fast undetermined speed in
level flight.

AMC Opinion: There is nothing to controvert the conclusion that
this object was a conventional aircraft at a range outside the limit
of visual resolution.

Incident No. 207 -- 18 Nov. 1946, 2200 Hours, Andrews Air Force Base, Maryland.

The pilot of a T-6 reported seeing an object over the base at 1700 feet. Object was an oblong ball with one light, no wings, no exhaust, in landing light of T-6. It had a dull gray glow and was thought to be smaller than the T-6. Pilot made passes and object evaded by going above aircraft. T-6 tried to close in very tight climbing turns, but object turned inside the aircraft. Object was lost after ten minutes at 7500 feet. Its speed seemed to vary between 80 MPH and 60 MPH.

AMC Opinion: That the object described was a synoptic balloon. Dr. Fitt's report shows that it is very difficult for the observer to separate target motion and his own motion even in daylight, and practically impossible to do so at night. This fact has been substantiated by the writer, who in controlled experiments attacked ordinary balloons with a T-6. In daylight, and with knowledge of what the object was and what it did, all the above described maneuvers were duplicated in appearance.

Incident No. 215 -- 3 Dec. 1948, 2015 Hours, Fairfield-Luisan
Air Force Base, California.

The base control tower operator saw for 25 seconds a bright white light in the air. It came into view two miles away at 500 to 1000 ft, climbing slowly at 400 MPH; at 1500 ft it slowed for a few seconds to 200 MPH; at this time, it undulated or bounced; rose vertically to 3000 ft and immediately afterwards climbed quickly to 20,000 ft and was lost to sight.

AMC Opinion: There is no logical explanation for this incident that fits the available evidence.

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Incident No. 236 -- 4 Jan. 1949, 11:00 Hours, Hickam Field, Territory of Hawaii.

An Air Force pilot saw an object which appeared to be a large round piece of flat cardboard the size of a T-6. It was white underneath and dark on top. It approached from 25 mile distance at 3000 ft and circled the area at 85. The object seemed to "blink" a "whitish reflection" regularly. It departed climbing at 25° angle.

AWC Opinion: The evidence does not lead to an explanation. It should be noted, however, that if the object were actually the size of a T-6 at 3000 feet a greater amount of detail should have been observed.

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