

(Summary of a talk given October 19, 1966, to the District of Columbia Chapter of the American Meteorological Society, Washington, D. C. This is an extension and revision of a short digest, of which a limited number of copies were available at the time of the meeting.)

**ABSTRACT:** Conclusions drawn from a continuing, intensive study of the problem of the UFOs (Unidentified Flying Objects) were summarized. Although atmospheric phenomena (ball lightning, mirages, scintillation, parhelia, anomalous radar propagation, etc.) have been invoked to account for many UFO reports, such explanations have been seriously misapplied. Specific examples were discussed.

Careful scrutiny of hundreds of the better UFO reports from quite credible observers during the past twenty years (and longer) reveals that not only does it seem altogether impossible to explain them away in terms of atmospheric physics, but also the other officially proposed categories of geophysical, astronomical, technological, and psychological hypotheses fail to encompass the UFO phenomena. Reasons were given for regarding as probably the least unsatisfactory hypothesis that of the extraterrestrial nature of the UFOs. Serious shortcomings in the past official investigations of the UFO problem were discussed, and a radical change in the level of scientific study of the problem was urged.

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One might group past and current explanations of the unidentified flying objects (UFOs) into eight broad categories comprising the following spectrum of hypotheses:

1. Hoaxes, fabrications, and frauds;
2. Hallucinations, mass hysteria, rumor phenomena;
3. Lay misinterpretations of well-known physical phenomena (meteorological, astronomical, optical, and so on);
4. Advanced technologies (test vehicles, satellites, re-entry effects);
5. Poorly understood physical phenomena (rare atmospheric-electrical effects, cloud phenomena, plasmas of natural or technological origin, and so on);
6. Poorly understood psychological phenomena;
7. Extraterrestrial probes;
8. Messengers of salvation and occult truth.

There appears to be general agreement among all who have seriously studied the past 20 years of UFO reports, here and abroad, that Categories 1 through 4 do indeed account for a substantial number of reported "unidentified aerial phenomena." However, when such cases are eliminated, there remains a still-sizable residuum of unexplained reports from credible observers. Categories 5 and 6, to the extent that they constitute explanations in terms of the still-unknown, are intrinsically difficult to handle in logical fashion. Nevertheless, one can attempt reasonable extrapolations from present knowledge and thereby put certain rough bounds on the probable range of present ignorance. Admitting that certain UFO cases may come to be understood in terms of improved knowledge in Categories 5 and 6, I find no adequate basis for accounting for the entire problem in such terms.

I would emphasize that I now regard Category 6 as the only important alternative to Category 7, but discussions of typical cases with psychologists has led to no promising clues in this area. Category 8 is accepted by a distressingly large and vocal group outside the scientific community, but I am not aware that supporters of Category 8 have shed any useful light on the basic problem. My own study of this problem has led me to the conclusion that Category 7 now constitutes the least unsatisfactory hypothesis for accounting for the intriguing array of credibly reported UFO phenomena that are on record and that do not appear to fit acceptably into the first six cited categories. Needless to say, the a priori probability of Category 7 appears to be exceedingly low in terms of present scientific knowledge.

My study of past official Air Force investigations (Project Blue Book) leads me to describe them as completely superficial. They have, for at least the past dozen years, been carried out at a very low level of scientific competence as a very low-priority task (one of about 200 within the Foreign Technology Division, Wright-Patterson Air Force Base). Officially released "explanations" of important UFO sightings have often been almost absurdly erroneous. In only a few instances has there been any on-the-spot field investigation by Blue Book personnel, and much of that has been quite superficial. On the other hand, official press releases, statements to Congress, and so on, have conveyed an impression of expertise and investigative thoroughness that has led both the public and the scientific community at large to accept the conclusion that no significant scientific problem exists with respect to UFOs. This impression has, of course, been enhanced by journalistic fun-poking and by the dismaying actions of many cultist groups. It seems to me to be important to secure much more extensive scientific study of the UFO problem, preferably involving not only the Air Force, but other more scientifically oriented agencies. That the official Air Force position has for over fifteen years been one of public assurance of no UFO hostility argues the reasonableness of turning over substantial portions of the UFO investigative problem to science-oriented federal agencies in the near future. The recently-announced "university teams" program is a laudable step forward. Much more effort seems warranted, and agencies such as NASA and NSF should participate actively in the task of rapid clarification of the long-standing confusion over the UFO problem. The work of independent organizations such as the National Investigations Committee on Aerial Phenomena (whose efforts impress me as much more thorough and open-minded than those of Project Blue Book) should be exploited and incorporated into all future studies.

A part of the background to the manner in which Blue Book has handled the UFO problem in the past dozen years is to be found in the complete report of the 1953 Robertson Panel. That scientific panel concluded that there was no strong evidence of any hostile UFO action. The Central Intelligence Agency, represented at the policy-drafting sessions closing the activities of the Robertson Panel, requested that the Air Force adopt a policy of systematic "debunking of flying saucers" to decrease public attention to UFOs. The reasons for this request were associated with the 1952 wave of UFO reports, the largest wave ever recorded in the United States (possibly exceeded in intensity by the French wave of the fall of 1954). So many UFO reports were flooding into air bases throughout the country and other parts of the world in the summer of 1952 that the CIA regarded them as creating a national security problem: In the event of enemy attack on the country, the clogging of military intelligence channels with large numbers of reports of the evidently non-hostile UFOs was regarded as an acceptable hazard. This CIA request, made in January of 1953, was followed by the promulgation, in August, 1953, of Air Force Regulation 200-2, which produced a sharp drop-off in public reporting of Air Force UFO sightings, by forbidding release, at air base level, of any information on sightings of unidentified aerial phenomena. All sighting reports were to be funneled through Project Blue Book, where they have been largely categorized as conventional objects with little attention to scientific considerations. The strictures implicit in AFR 200-2 were made binding with promulgation of JANAP 146, which made any such public release of UFO information at air base or local command level (by any of the military services

and, under certain circumstances, commercial airlines) a crime punishable with fines up to \$10,000 and imprisonment up to 10 years. These regulations have not only cut off almost all useful reports from military pilots, tower operators, and ground crews, but even more serious from a scientific viewpoint has been their drastic effect on non-availability of military radar data on UFOs. Prior to 1953, many significant UFO radar sightings were disclosed. Since then, military radar sightings have been scientifically compromised by confusing denials and allusions to "weather inversions" whenever word of radar observations accidentally leaked out in the midst of a UFO episode. Air Force Regulation 200-2 contained the specific admonishment that "Air Force activities must reduce the percentage of unidentifieds to the minimum." This has been achieved.

Illustrating the serious discrepancies between Blue Book classifications and the publicly accessible facts are a number of cases that were discussed in my October 19 talk. These include:

1. "Mirage" explanations, exemplified in the Arnold sighting near Mt. Ranier June 24, 1947, and many other cases ascribed to refraction effects;
2. "Astronomical" explanations such as those put forth in the Exeter, N. H. case of September 3, 1965, the Damon, Texas case of the same date (both subsequently retracted after outside inquiries), the widespread sightings in the Midwest on August 1, 1965, and most recently the Portage County (Ohio) case of April 17, 1966;
3. Anomalous radar-propagation explanations, perhaps best illustrated in the famous Washington National Airport sightings of July 19 and 26, 1952;
4. "Ball lightning" explanations as represented by the Levelland, Texas case of November 2-3, 1957;
5. "Aircraft" and "meteor" explanations in certain cases. Within the limits of time available in the talk, other widely circulated explanations of non-official character were also critically examined.

It is important to stress that there are baffling aspects of the available, credibly reported, UFO cases. It is not possible to offer any pat explanations of the temporal and spatial distributions of sightings. I reject as ill-considered any demands that one now be able to explain "why" the UFOs, if extraterrestrial, so often appear in relatively remote areas, why nighttime observations are more common than those in daytime, why we have no substantial evidence of any "contact" or of "communication," and so on. Intriguing as those questions may be, they immediately plunge one into completely unsupported speculations. The present urgent need is for much more scientific examination of the available UFO evidence in order to establish, or to reject, as the case may be, the very interesting possibility that these aerial objects may be some type of extraterrestrial probes.

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NOTES: AFR 200-2 was superseded September 19, 1966 by AFR 80-17.

It was recommended that AMS Chapter members seeking an extensive summary of carefully checked and documented UFO cases should see THE UFO EVIDENCE, Richard Hall, editor, published by NICAP.