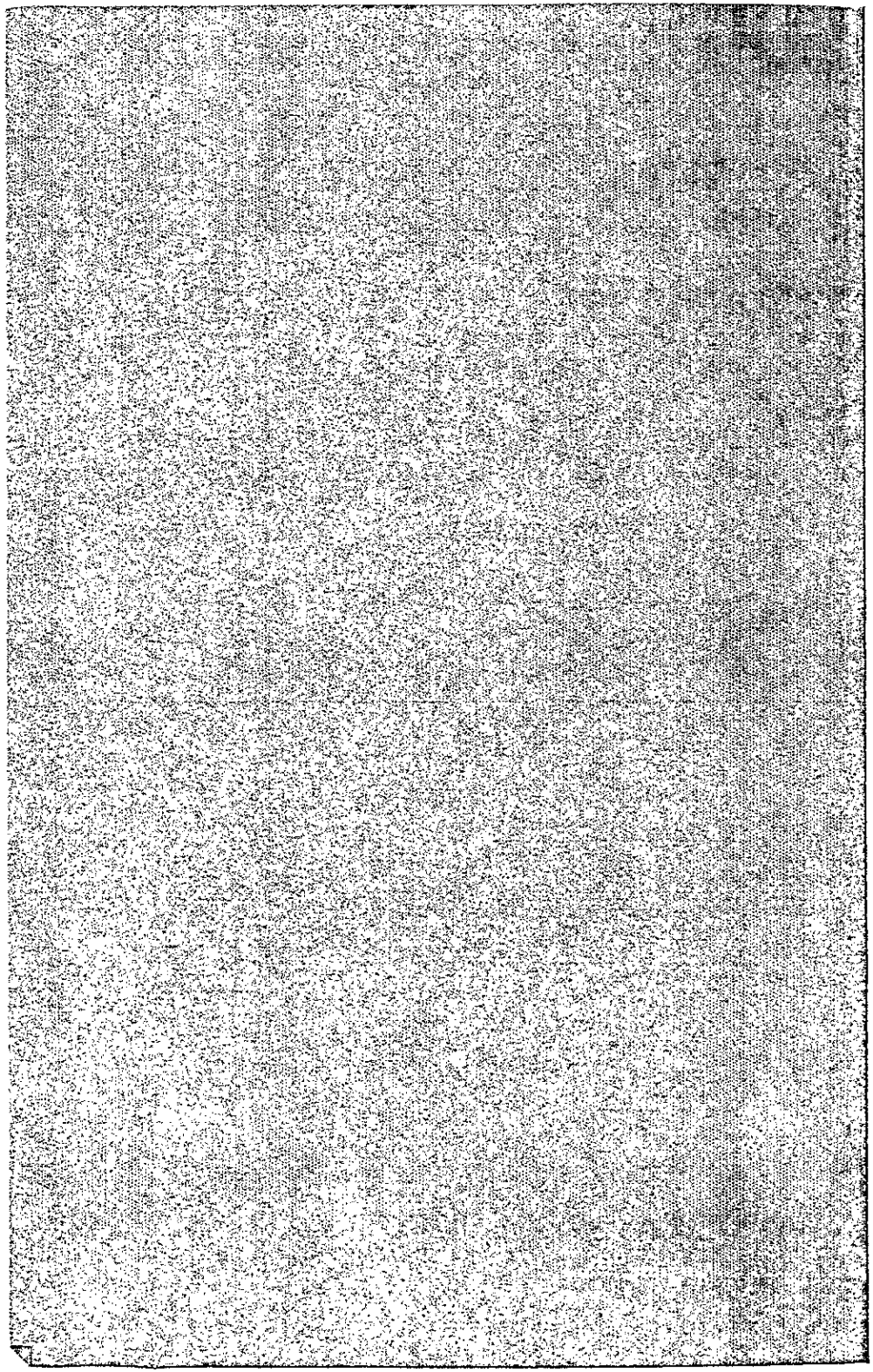
JANUARY/MARCH • 1973

UFO QUARTERLY REVIEW

A NICAP PUBLICATION



UFO QUARTERLY REVIEW

Vol. I, No.1
January-March 1973

A NEW VOICE IN THE MARKETPLACE

The UFO problem does not exist in a vacuum. It competes for economic and scientific attention with many other problems whose importance to society fluctuates with public opinion. In this rude marketplace, many scientists see the need for a new approach to the UFO controversy — an approach based not on publicity and speculation but on serious dialogue. As each year passes that the problem goes unresolved, the need becomes greater for a medium of discussion that has scientific credibility as well as popular appeal.

With publication of *UFO Quarterly Review,* NICAP hopes to contribute toward a more sober exchange of ideas and data on UFOs. Papers will be presented from qualified researchers, along with other material relating to the history and investigation of the problem.

Through a publication of this kind, we hope to offer an alternative voice to the customary din of sensationalism and extravagant claims that have dominated the UFO field. We would like the *Quarterly* to serve both as a scientific journal and a source of information for everyone who is seriously interested in the UFO subject.

With your support, we will make *UFO Quarterly Review* an important addition to the UFO literature.

THIS ISSUE

UFO QUARTERLY REVIEW

 Published quarterly at Kensington, Md. Subscription rate: $5 per year. Address all correspondence to NICAP, Suite 23, 3535 University Blvd. West, Kensington, Md. 20795.

W.B. SMITH:

THE MAN BEHIND PROJECT MAGNET

by Stuart Nixon

If you know someone who thinks he is an authority on UFOs, make him the following bet:

For a one-year membership in NICAP, he cannot identify or otherwise describe an official UFO study called Project Second Storey.

You'll win the bet.

In fact, you'll win twice if you bet him he can't even tell you the *country* that conducted Project Second Storey.

Of all the titles and codenames associated with the UFO subject, one of the least known is this once-classified program, carried out within the somber chambers of highly placed government officials 20 years ago.

Like many government studies, this one had a name that bore no logical connection to the nature of the project. In fact, the study was originally assigned another name —Project Theta— until the secretary of the group, a defense official named Harold C. Oatway, pointed out that Theta was not on the approved list of codewords. Also, since single-word codenames were normally regarded as confidential, it was necessary to find a two-word name that could be used on public documents, even though the actual deliberations of project members were to be kept secret.

Project Second Storey had its genesis in the early months of 1952 in Ottawa, Ontario, capital city of Canada. Members of the Canadian government's Defense Research Board (DRB) had been alerted to the increasing frequency of UFO reports reaching official agencies, and to growing public interest in these sightings. Since the accumulation of evidence appeared to suggest that something other than ordinary "fadism" was occurring, the DRB, in consultation with other government departments, decided to convene a meeting of interested officials to discuss whether some formal action was required to deal with these reports on an active basis.

In the first week of April 1952, while these preparations were being made, *Life* magazine published an article supporting the view that UFOs were extraterrestrial spacecraft. Public reaction to the article was dramatic, bolstered by *Life's* reputation for serious reporting and the article's reference to renewed American interest in UFO sightings. While letters poured into U. S. Air Force headquarters, news media in the United States, Canada, and parts of Europe picked up the story and started asking what was being done by government authorities to probe these observations.

On April 22, two weeks after the *Life* article appeared, the DRB held its meeting. The session was secret, attended by 11 men, under the chairmanship of Dr. O. M. Solandt, DRB head. Solandt briefed the group on rising trends in UFO reports and noted that Canada had no officially organized program to investigate or evaluate these incidents. The group reached agreement that a more active approach was indicated and named a committee to develop standardized procedures for collection and analysis of sighting data.

Within 48 hours, the committee met to begin its work, under the eye of government scientist Dr. Peter M. Millman, an astrophysicist with the Dominion Observatory. When he arrived at the meeting, Millman had with him three books on UFOs, one of which was *The Flying Saucers Are Real* by Major Donald Keyhoe. Another member of the committee, Lieutenant L. P. Bing, brought a copy of a Royal Canadian Air Force report on Project Blue Book, the U. S. UFO program, whose codename had been changed from Grudge just a month earlier. The committee discussed security classification for their study and decided that "Confidential" was sufficient, even though members were cleared to "Secret" for the purpose of dealing with other governments. They also decided to approach U. S. Air Force officials through the DRB representative in Washington to seek an exchange of information.

By May 19, when the committee met for the second time, a number of significant developments had occurred. Committee secretary Oatway had discovered the need to drop Theta in favor of Second Storey as the project codename, and a decision had been made to maintain tight security on release of information to the public concerning project activities. A meeting had also been held, on May 14, at Wright-Patterson Air Force Base in Ohio between two DRB agents and Captain Edward Ruppelt of Project Blue Book. In a secret report that would not be declassified until 1960, Ruppelt described the meeting in dry officialese:

"Two RCAF personnel, members of the Directorate of Scientific Intelligence, Defense Research Board of Canada, visited Project Blue Book at ATIC on 14 May 1952. Canada is setting up a project very similar to the U. S. Air Force project for the investigation of reports of unidentified aerial objects. The RCAF people were briefed on the operations of the project and the difficulties that have been encountered, and the proposed future plans were discussed. Action is being taken to establish channels for communication between the Canadian and U. S. project personnel."

On July 31, Project Second Storey met for the third time in the DRB

Board Room and reviewed the work of the previous two months. Although not recorded in the minutes of the meeting, their conversation touched on events of four days earlier when strange targets made their second appearance in one week on Washington, D. C., radars, setting off an official furor that Ruppelt later described in his book as a "monumental mess." Two days later, a press conference was called at the Pentagon to reassure clamoring news reporters that the"saucer invasion" of the American capital had been caused by "temperature inversions."

With news of these events ringing in their ears, Second Storey members discussed their agenda and got down to serious consideration of investigative problems. Two items of particular importance were on the agenda: a proposal to conduct an experiment in the accuracy of reports, and a proposal to develop a "weighting factor system" for assessing reports. Both suggestions had been made by a 42-year-old electrical engineer who was serving on the committee as a representative of the Canadian government's Department of Transport (DOT). Interested in UFOs since the beginning of 1950, this man had a background in radio communications and a curiosity about technical subjects that was to eventually make him the best known Canadian researcher in the UFO field.

His name was Wilbert B. Smith.

Sparetime Project Makes Smith Famous

Smith is a curious figure in the history of UFOs, a man now remembered chiefly for his theories of space propulsion, particularly those based on gravity and electromagnetic energy. Since his death in 1962, and even beforehand, his name has been linked with various rumors of undisclosed activity concerning the UFO problem. This is partly due to a general misunderstanding about his early involvement with the UFO subject and partly due to his own enigmatic statements. Frank Edwards, in his first book on UFOs, quotes a 1961 interview with Smith in which the congenial engineer alludes to an alleged contact with a U. S. agency "much higher than the Air Force." When asked if he means the CIA, Smith evades the question by saying, "I don't care to go beyond that point."

Probably the one factor that contributed most to the vague air of mystery surrounding his name is the UFO study he organized in 1950 called Project Magnet. Magnet was not an official government project, despite its close association through Smith with various bureaucratic departments. Smith's invitation to sit on the Second Storey committee came from Harold Oatway, who was familiar with Magnet and Smith's personal interest in UFOs. Magnet had begun in late 1950 and was due to continue for four years, a parttime project involving Smith and a number of his colleagues at DOT. During the 12 months Project Second Storey actively met (April 1952 to March 1953), the two projects ran concurrently — one a quasi-official, semirestricted study, the other a high-level, classified program. In a letter to Keyhoe dated April 6, 1953, Smith comments:

"As far as making the [Magnet] report or portions of it public, I haven't much hope. I mentioned it unofficially but the reaction was quite definite to maintain the classification. As you know, there are two saucer projects in Canada, and even though there is considerable overlap of personnel, they function rather separately and towards quite different ends. One of them, being a national defense effort, is automatically tangled in security and drags the other in too."

The idea for Project Magnet grew out of the controversy over UFOs that erupted in early 1950 following release of Keyhoe's classic article in the January issue of *True* magazine. This, plus such books as Frank Scully's *Behind the Flying Saucers* and Keyhoe's *The Flying Saucers Are Real*, both of which appeared in 1950, sent shock waves to almost every populated sector of North America. By July of that year, a poll taken by the Canadian Institute of Public Opinion showed "that half the adult people of Canada believe...these mysterious disks are not just imagination and...not just a natural phenomenon."

Caught up in this climate of growing curiosity, Smith began clipping flying saucer stories from the newspapers and contacting people who shared his interest in the UFO subject. As chance would have it, a business trip took him to Washington, D. C., in the Fall of 1950, where he met Keyhoe and spent most of his spare moments outlining his propulsion theories to just about anybody who would listen, including his boss at DOT, John Baldwin, who had accompanied him on the trip. Baldwin agreed that something unusual seemed to be going on and that perhaps the Canadian government ought to make some effort to find out what. With Baldwin's support and that of other engineers in the DOT office, Smith worked out a plan whereby the far flung facilities of DOT could be utilized on an off-hours basis to collect sighting reports and stay on the alert for any important evidence that might turn up, such as radio signals or atmospheric anomalies. Smith was convinced that if UFOs were spacecraft, they were using a form of electrical energy obtained through generation of "magnetic sinks." With sufficient research, he believed it possible to duplicate such force fields and actually construct a prototype saucer device.

Shortly after his trip to Washington, Smith applied to his supervisors for permission to use government property for his project, and received the necessary clearance in December 1950 from Commander C. P. Edwards, Deputy Minister of Transport for Air Services. In specific terms, he was authorized to solicit assistance from personnel in the Broadcast and Measurements Section of DOT's Telecommunications Division, and from such other agencies as he might interest in the study, including the DRB.

In the course of implementing Project Magnet, Smith developed various ideas for organizing UFO reports and using the data to derive new physical principles. His program, as he put it, was to "systematically question all our basic concepts in the hope of turning up a discrepancy which might prove to be the key to new technology." He also developed ideas for measuring the reliability of observational data and using these measurements to rate the probability a given report could be accepted as a real observation. This was the thinking that led him to his two proposals at the Project Second Storey meeting in July 1952.

The first of these proposals — a controlled experiment to check the

accuracy of reports — was passed by the Second Storey committee with the clear stipulation that it be conducted "independently and without public reference to the Committee or the [military] Services." The reason for this caution was that Smith wanted to launch a mock UFO over the city of Ottawa to see what would happen. It was an idea later to be copied by hundreds of high school and college students whose motives were not always on the same high plane of scientific curiosity as Smith's.

Smith and his associates at DOT carried out this plan on September 8, 1952, at approximately 10 o'clock in the evening. They chose one of the government's "experimental farms" as the launch site and used a large meteorological balloon, 12 feet in diameter, to which they attached a 30-second magnesium flare. With the wind blowing in the direction of a baseball game and two drive-in movies, the balloon was sent aloft while Smith's group stood by to observe its flight for themselves. Thanks to a 25-foot fuse, the flare didn't ignite until the balloon reached an estimated 5000 feet, which should have made it visible to almost anybody who happened to be on the streets of Ottawa. To assure that nobody recognized the balloon as a balloon, Smith had devised an aluminum cone that he fixed to the bottom of the balloon with picture wire, creating the general appearance of a "flying saucer."

As it turned out, the results of all this hard work were not exactly what Smith had expected. Although the sight of the flare reflecting off the aluminum cone was enough to convince Smith and his partners that a Martian scout ship might indeed be patrolling Canadian skies, apparently no one else in Ottawa shared this impression. On November 17, Smith reported to Second Storey that Project Magnet was still waiting its first report of the counterfeit UFO. "It would seem," mused the melancholy researcher, "that people just don't watch the sky."

Smith's second project met with a happier fate, the consequence perhaps of better luck and a lower profile. He had developed a system of "weighting factors for analysis of sighting reports," based on assigning mathematical values to various kinds of information obtained from both a witness and the investigator. The Second Storey committee liked the proposal and asked Smith to put it in a formal draft. The draft was tabled at the November 17 meeting and appended to the minutes of the meeting for detailed review. It described three basic parameters — reliability, confirmation, and lucidity — each of which was expressed as a number derived from "scoring" certain questions on an interrogation form. A perfect score in each category was 100. By integrating the three scores through use of a special formula, a single "weight" or "probability" was obtained, expressed as a percentage. The formula — W = cube root of R x C x L — was based on a standard mathematical method for determining probable error, called Peter's Formula.

Magnet used this technique during much of its lifetime and applied it to many of the sightings for which sufficient data were available. Simply put, it allowed an investigator to state for any particular report that it had a certain probability of being reliable (regardless of how it might best be explained). In 1952, Magnet rated 25 reports according to this method, ten of which proved to be unconventional structured object

reports with a high probability of accuracy. Some of the other 15 were unidentified cases with good scores, but they were weak in observational detail.

In the early months of 1953, events behind the scenes at Second Storey took a critical turn for the future course of UFO research in Canada. Four hundred and fifty miles to the south, in Washington, D. C., the CIA convened a secret conference of U. S. scientists under the chairmanship of Cal Tech's Dr. H. P. Robertson. After meeting for five days (January 14-18), the Robertson Panel concluded that UFOs do not "constitute a direct physical threat to national security" or indicate a "need for the revision of current scientific concepts." It was a judgment destined to virtually reverse the direction of Blue Book and indirectly affect the official policy of other governments in their handling of the UFO problem.

For the DRB, whose interest in UFOs was primarily a question of security, an active program to investigate UFO reports could not be justified unless there was some clear requirement of a defense nature. What the American government did in its own UFO program was particularly relevant to the Canadian effort because the two countries shared a common geographical border and were faced with protecting interrelated areas of air space.

During January and February, as it became evident the U. S. was not mounting an all-out investigation of the thousands of observations reported during the "flap" of 1952, the DRB reassessed its own approach to the problem and the general situation in Canada. Second Storey chairman Millman and DRB chief Solandt conferred on several occasions as to the appropriate action their government should take, and word was passed to the DRB representative in Washington to arrange for Blue Book's Ruppelt to visit Ottawa to brief the Second Storey committee on the status of the U. S. program. On March 9, Millman told the fifth session of Second Storey that evidence collected to date did not appear to warrant a full-scale study by the military, but the committee should continue to operate and data should continue to be gathered at a central location for whatever later use might be made of them. Millman added that other government offices would be free to initiate their own program if they felt such a requirement existed. This included Project Magnet, which was nearing completion of its sighting analysis and working to produce a report on its findings.

At this time, Keyhoe was putting the final touches to a second book on UFOs and corresponding with Smith in hopes of getting the Magnet report to include in the manuscript. Smith was anxious to comply but doubtful that DOT wanted to make the report public, assuming it was ready before the book went to press. In a letter to Keyhoe, Smith said, "I am afraid that there is a great deal hiding behind the cloak of security which would be out in the open if the sponsors had the courage of their conviction...I realize that it must be quite exasperating to you to have a finger on this type of material and not have a clear go-ahead to use it, but you can appreciate my position."

In the end, Keyhoe devoted an entire chapter to the Canadian project and described a meeting with Smith in 1953 in which Smith claimed

the DRB was "analyzing reports very carefully." However, nothing was mentioned in the book about Second Storey or the Magnet report.

Smith Ventures on New Experiment

As the summer of 1953 approached and the report was finally completed, a new idea began to take shape in Smith's mind. If the DRB did not want to pursue an active research program, perhaps Magnet, acting through DOT, could. Specifically, perhaps an instrumented approach could be developed to go beyond the report-analysis stage and search for concrete evidence. In the final paragraph of the Magnet report, Smith concluded, "it appears...that we are faced with a substantial probability of the real existence of extraterrestrial vehicles.... Such vehicles of necessity must use a technology considerably in advance of what we have. It is therefore submitted that the next step in this investigation should be a substantial effort towards the acquisition of as much as possible of this technology...."

This was the recommendation Smith took to his superiors at DOT, where it met with a surprisingly sympathetic reception. As the summer passed, plans were drawn up to deploy a small electronic station in a remote area near Ottawa to maintain a "24-hour watch for flying saucers." The idea was to monitor gamma ray activity, magnetic radiation, gravity fields, and radio noise, on the assumption that radical changes in at least one of these areas would signal the approach of a UFO. Alarm bells would be wired to detection equipment to alert on-site personnel who hoped to observe the UFO directly. Smith admitted the scheme was a "shot in the dark" but expressed confidence that it represented a viable approach to the problem. "All we need," he said in a letter to Keyhoe, "is to have our noses directed onto the scent and I feel sure that we can do the rest.... Our big weakness is getting scientific people interested enough to take the first step into a region where the way is not marked out by textbooks."

While these preparations were underway, Keyhoe's book, *Flying Saucers from Outer Space*, was published, touching off a new round of controversy over the UFO mystery. A few weeks later, on November 11, Canadian news reporters found out about the "saucer observatory" and broke the story to wire services. A number of published accounts — quoting Smith — incorrectly linked the experiment to the DRB, putting Smith in an awkward position since he was still officially a member of the Second Storey committee. "My neck was out," he said later. Solandt denied the claimed link, and the situation simmered, giving Smith the chance to move ahead with the project without further hassle.

The detection equipment was set up on DOT property at Shirley's Bay, Ontario, 10 miles west of Ottawa, in an unused research hut that Smith had dragged through the fence from a neighboring government site. As Smith commented to Keyhoe, "It isn't very spectacular, but it contains some interesting instruments. So far as I know, our recording gravimeter is the only one of its kind in captivity."

On August 9, 1954, Smith had an unexpected chance to find out what the gravimeter could do and its limits in connection with the purpose of

the station. At 3 o'clock in the afternoon, the device went off, indicating a greater deflection in the gravitational field than could be explained by any conventional source of interference such as a passing aircraft. Smith, who happened to be present, ran outside to take a look, but heavy cloud cover blocked his view of the sky. No explanation was ever found for the gravimeter's reading.

While Smith and his assistants were manning their post at Shirley's Bay, other forces were at work that would shortly intersect the affairs of Project Magnet and, most importantly, the personal life of Wilbert Smith. In October 1953, at the same moment the Shirley's Bay station was being readied, a book by contactee George Adamski, *Flying Saucers Have Landed*, was released. Essentially a rewrite of an earlier novel by Adamski that never sold, the book set off a wave of cultist fervor that gained sufficient strength in 1954 to support Adamski while he and his co-author, Desmond Leslie, wrote a sequel. Smith picked up a copy of *Flying Saucers Have Landed* in late 1953 and wrote to Keyhoe the following January to ask his reaction. "If true," said Smith, "it is really most astounding.... Quite a bit of it is scientifically...correct and in line with our work."

Adamski's popularity was the froth on a rising sea of contactee activity that was to eventually embrace everything from telepathic communication to machines allegedly capable of curing rheumatism. If the news media thought the idea of a "flying saucer station" was more amusing than practical, the scenario of Adamski meeting golden-haired women from Venus was too much to bear. As sensational stories began to share space with serious UFO articles and no conclusive evidence was produced to resolve the controversy scientifically, certain government officials began to get nervous about Magnet's close association with DOT and its continuing drain on federal personnel and money. In what may have been an unwitting moment of pragmatic vision, Second Storey's Millman drafted a short report on November 21, 1953, noting that the DRB's role in UFO study was "mainly advisory" and "most of the observational material does not lend itself to a scientific method of investigation." On this note, Second Storey effectively bowed out of the UFO business, leaving the field to Smith and his colleagues and their electronic equipment at Shirley's Bay.

During 1954, Smith had increasing difficulty keeping the interest of DOT personnel at their various field bases throughout Canada, and countering adverse publicity created in part by what he later described as "well meaning but misguided journalists." Except for the incident on August 9, nothing occurred at Shirley's Bay that could be regarded as unusual, and as the year progressed, sighting activity showed no sign of repeating its 1952 excursion to statistical heights. The final blow came on August 31 when John Baldwin, deputy DOT minister, announced the Shirley's Bay experiment was being abandoned to save the government further expense. Within weeks, DOT formally withdrew support for Project Magnet, offering only to permit Smith to continue using government facilities as long as he could do so without costing the public any more money.

It was a grim development for Wilbert Smith. The demise of Magnet meant, as he put it, that he had to "go underground." Personally con-

vinced that his mathematical equations and organizational charts represented a valid approach to the UFO problem, he was determined to follow his intuition and find the one piece of evidence that would prove him right. As he had said two years earlier, "It takes only one black sheep to prove that all sheep are not white."

Strangely enough, the route Smith chose for his post-Magnet work was the one route experience should have told him was to be religiously avoided. During 1955, as events of the previous year wore on in his memory and more books appeared to fuel the arguments of believers against official skepticism, some dark power of imagination slowly started to act on his mind, producing a mutation in his view of the UFO subject that was to remove him from the mainstream of serious research for the remainder of his life. His correspondence with Keyhoe stopped, and he entered a period of uncertain communication with himself, made more difficult perhaps by the frustration of what he once described as the many "blind alleys we have explored."

In December 1955, the same month Keyhoe's third book appeared, Smith emerged from his self-imposed hiatus and revealed the nature of his inner turmoil. In a letter to Keyhoe that he requested be kept confidential, he said:

"As you are no doubt aware, I refrained from writing to you during the time that your latest book was under preparation. This blackout was not at the request of the Canadian Government, who no longer have anything to do with the saucer research, but at the request of the saucer people themselves. Certain officials in my government are aware of my contact with these people and are willing to let me play it my way. I am convinced that this will be in the best interests of the human race. I have learned a great deal, but I am as a small child attempting to assimilate a college course. Believe me, I have been shown glimpses of a philosophy and technology almost beyond comprehension. Nor am I alone, as there are quite a few people who have gained the confidence of these beings and are being instructed. I received a copy of your book from the publisher and, after reading it, sent a short review, a copy of which will no doubt reach you in due course. I am surprised how close to the truth you and others have come without actually hitting it."

Exactly what this truth was was never to be clearly explained in the seven years Smith would continue his personal crusade for acceptance of UFOs as alien craft. He expressed sundry opinions to news reporters, lecture audiences, and others who would listen, but somehow these concepts never found unity in one comprehensible point of view. Many of his later ideas were variations on the familiar contactee theme of a benign extraterrestrial race contemplating man from a sympathetic distance and seeing his multiple failings. Like Adamski and hundreds of others after him, Smith sought a marriage of science, religion, and philosophy — a triangle that has always held peculiar fascination for the contact fringe. In 1956, he started a group called the Ottawa Flying Saucer Club, whose newsletter (now defunct) was named *Topside* after Smith's idiom for his alleged space friends, the "boys from topside." The club later changed its

name to the Ottawa New Sciences and Contact Group.

As the years passed, Smith contributed articles to UFO publications, kept up his correspondence, and eventually put some of his ideas into a short manuscript entitled, "Why I Believe in the Reality of Spacecraft." In 1957, using information he supposedly received from his extraterrestrial contacts, he invented what he called a "binding meter," which he claimed was capable of detecting atmospheric "vortices" dangerous to aircraft. He tried to interest civil aviation officials in testing the device but found no takers. In 1962, when illness forced him to discontinue most of his work, he still maintained his association with the UFO subject and freely expressed his views to the occasional writer or reporter who inquired. Finally, on December 27, 1962, he died at a hospital near Ottawa, the victim of cancer at age 52.

It was a premature and anticlimatic end for a man who had once sat in the high chambers of Canada's best scientific manpower, confident that he was sharing in a major human endeavor.

The Sighting Analysis Charts of Project Magnet

As part of his report on Project Magnet, Wilbert Smith devised nine charts on the analysis of UFO sightings. These charts represent, in simplified form, the total conceptual framework of his approach to UFO study. Each chart relates to the one before it or to the first. Beginning on the next page, the nine charts are reproduced in their original form, just as they appeared in the report. Below are their titles.

Chart I -- General Nature of Sightings
II -- Origin of Vehicles
III -- Technology of Vehicles
IV -- Nature of Vehicles
V -- Optical and Radar Considerations
VI -- Observations and Physical Laws
VII -- Electrical and Thermal Phenomena
VIII -- Life Forms
IX -- Astronomical Bodies

Chart I

SAUCER SIGHTING ANALYSIS

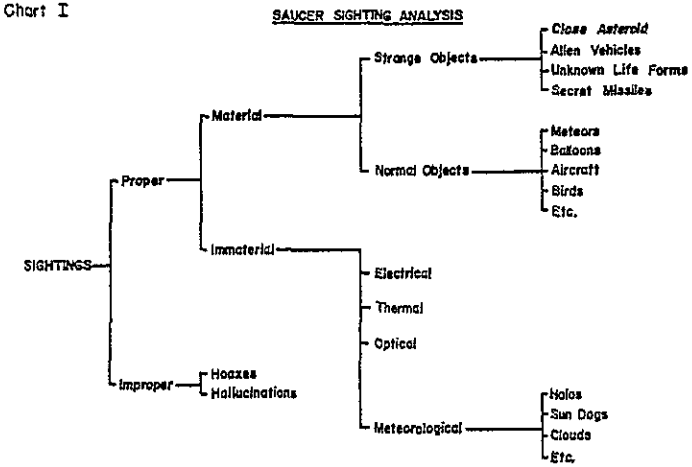


Chart II

SAUCER SIGHTING ANALYSIS

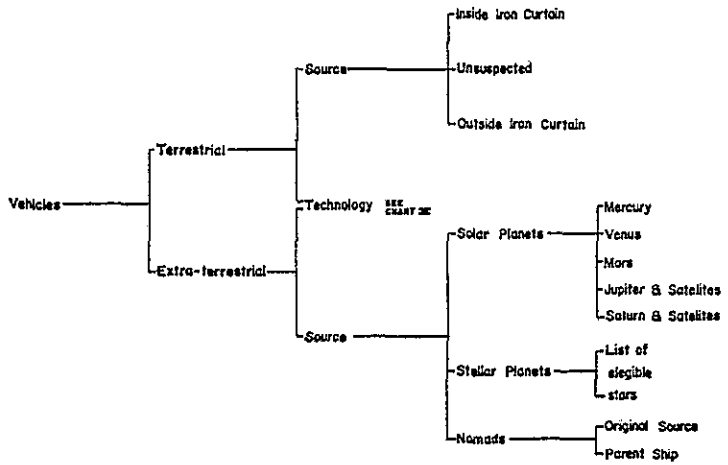
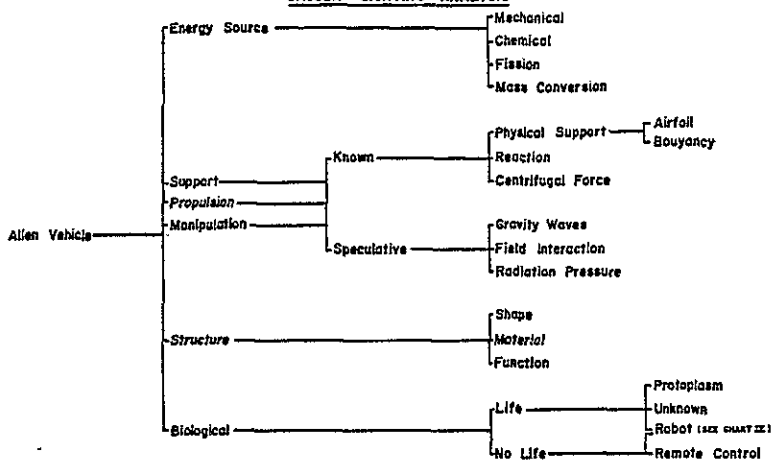


Chart III

SAUCER SIGHTING ANALYSIS



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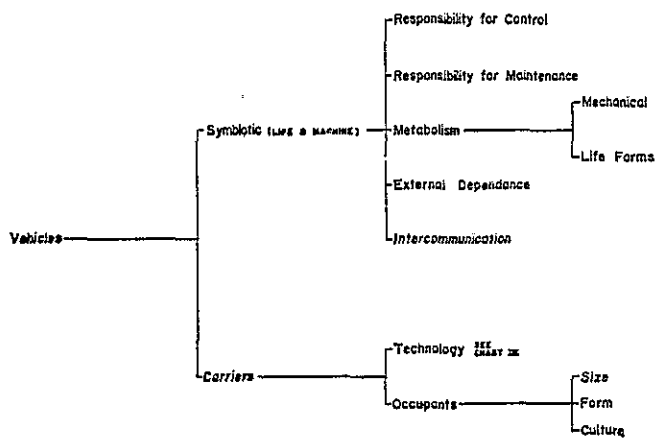
SAUCER SIGHTING ANALYSIS



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SAUCER SIGHTING ANALYSIS

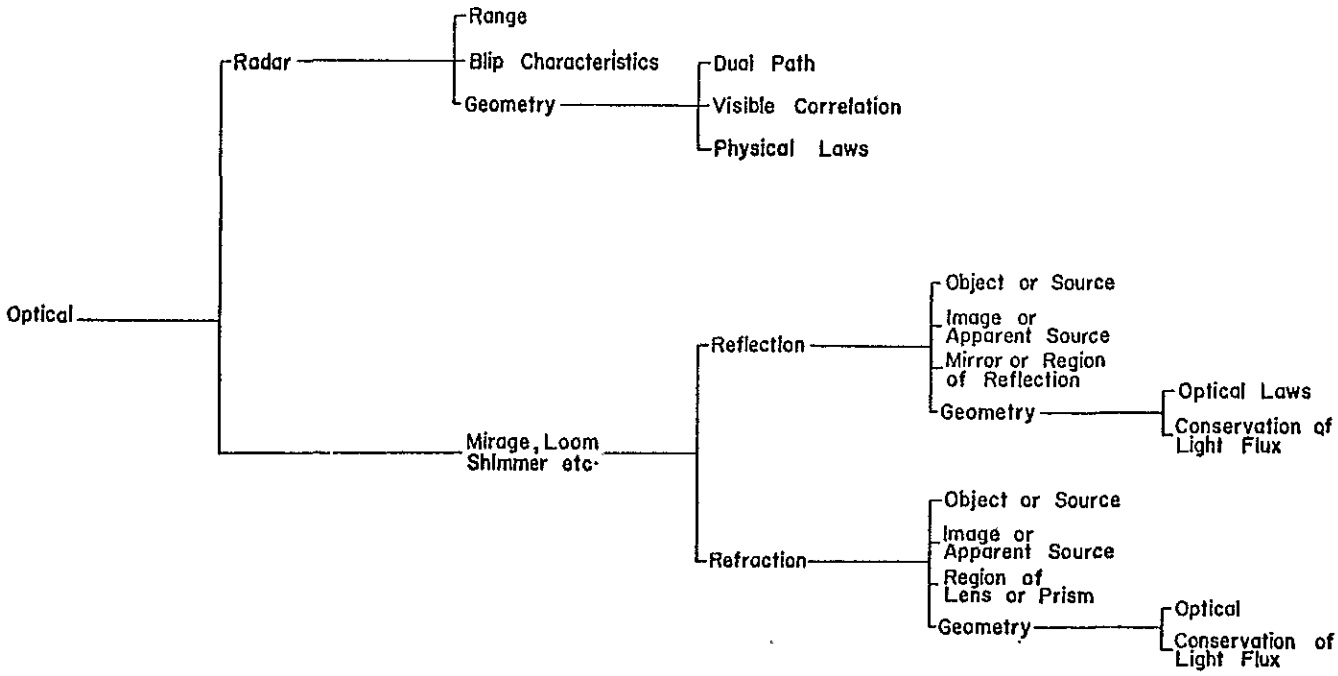
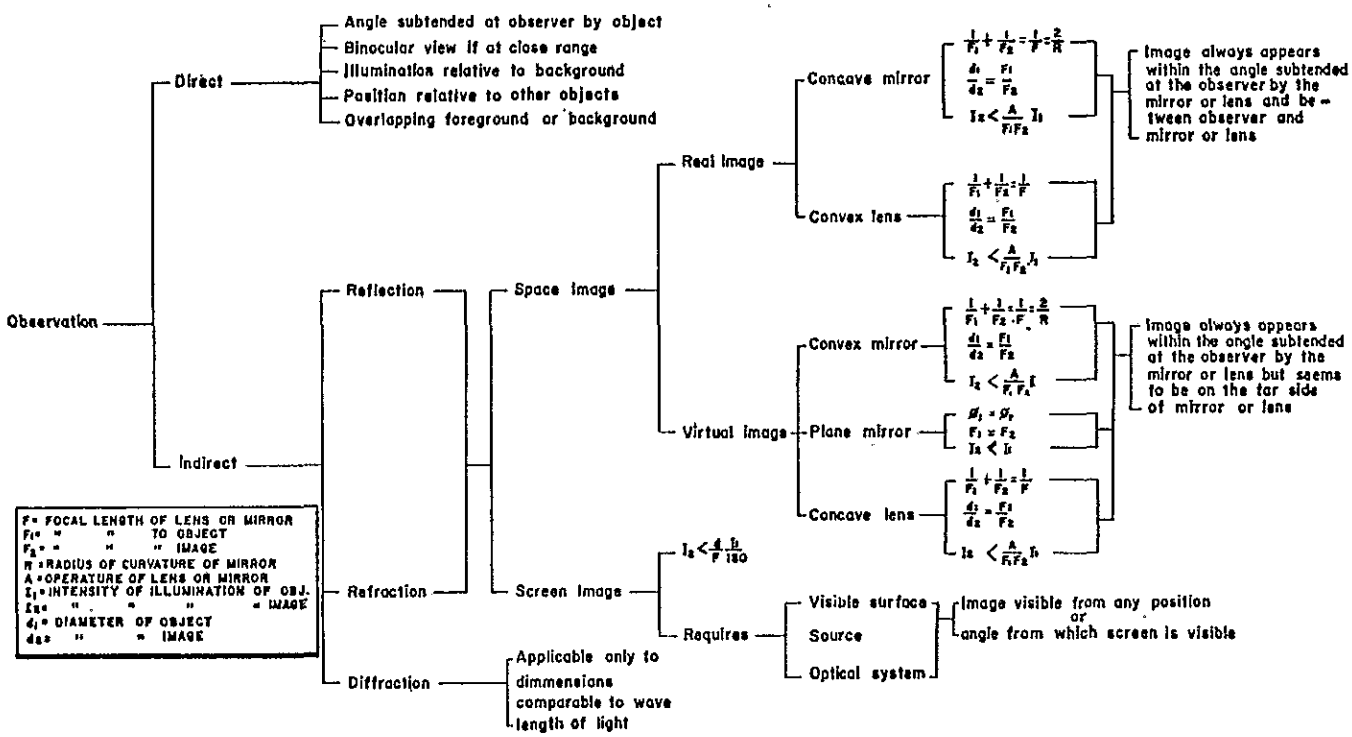


Chart VI

SAUCER SIGHTING ANALYSIS



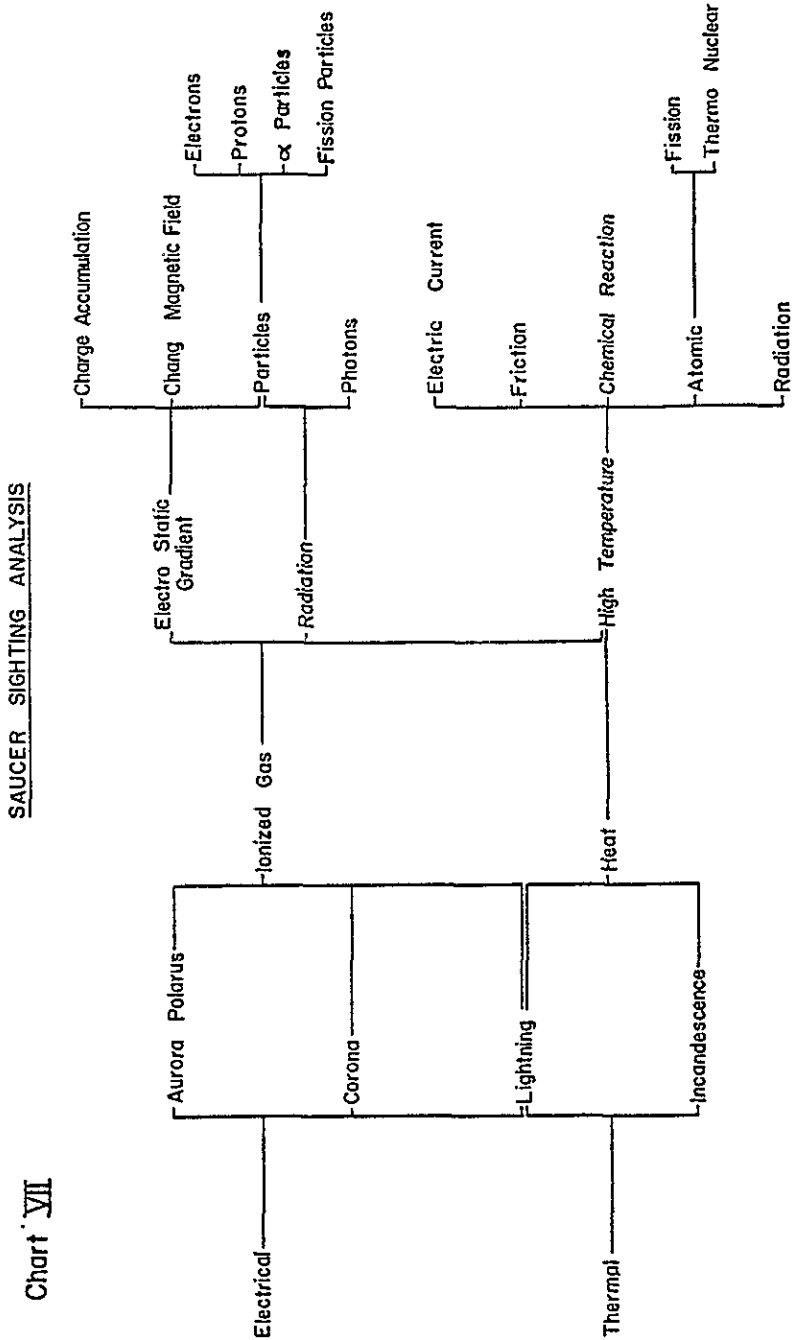


Chart VII

Chart VIII

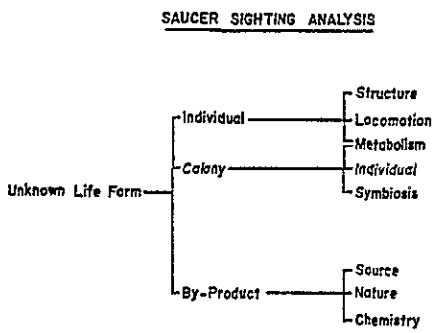
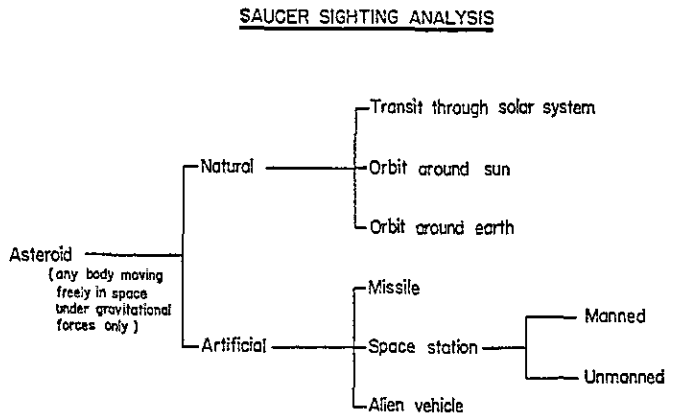
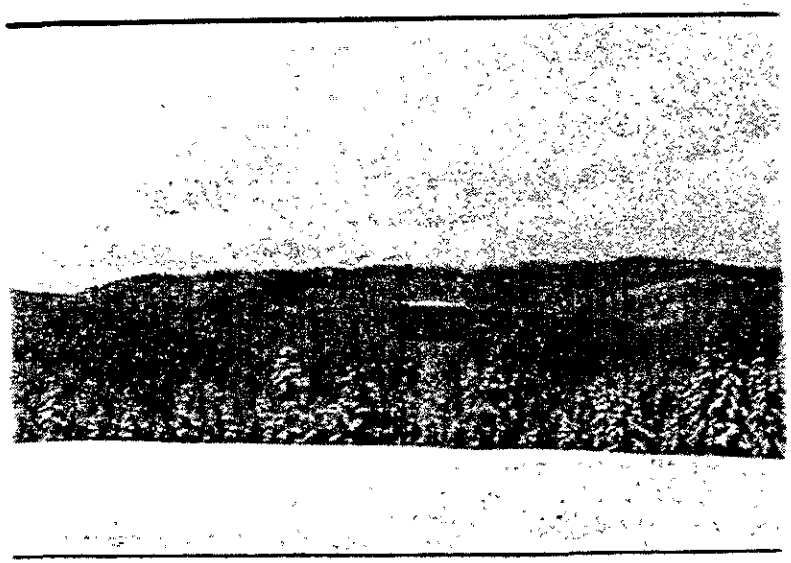


Chart IX



POSTSCRIPT ON THE OREGON PHOTOGRAPH



Full-frame exposure shows object against panoramic sweep of mountains. Note placement of object near center of format.

One of the most unusual and controversial photographs recently presented of an alleged UFO is the picture taken in November 1966 at Willamette Pass, Oregon, by a 45-year-old chemist who had stopped with his wife at a scenic overlook to photograph the mountains. NICAP's analysis of the picture, first discussed in the November 1971 issue of the *UFO Investigator* and again in the August 1972 issue, drew various complaints that certain factors had been overlooked which could lead to a different interpretation than NICAP's.

In evaluating these objections, it is necessary to ask two basic questions: 1) What criteria does NICAP use in judging pictures? 2) What conclusions did NICAP reach concerning the Oregon photograph?

It is often assumed that analysis of UFO photographs is a relatively simple process whereby the investigator asks: Is it real or is it fake? Actually, the problem requires a much different approach, since the concepts of "real" and "fake" can be defined in multiple ways, not all of them equally useful or equally acceptable from a scientific point of view. One reason for this is that the concept of UFO is itself vague, differing from investigator to investigator. Without a theoretical or actual model, we must make certain assumptions about what constitutes an authentic UFO, then develop our approach to photographic analysis on this base line. If the assumptions are in dispute, the method of analysis will likely be also.

One place we can start with the least chance of creating an argument is to stipulate that a UFO should have properties that make it recordable on photographic film. This is not the same as saying it is a physical phenomenon, but only that it produces or reflects light in such a way as to obey certain known physical laws. Because these laws have been tested and are well understood, we can reasonably assume that a true picture of a UFO will possess characteristics consistent to some degree with pictures of other things. If we don't make this assumption, we must forego photographic analysis altogether, since there would be no basis on which to exclude *any* kind of imagery, no matter how inharmonious it was with the world as we perceive it.

A second assumption we might make about UFOs is that if they are photographed, they will most likely be photographed under circumstances not significantly different from those under which they are otherwise observed. This assumption may bother a few followers of the subject who see in UFOs a phenomenon of an especially esoteric nature (which it may be), but most researchers will probably agree that a genuine picture will most likely be obtained by a photographer who fortuitously observes the object and is lucky enough to have a camera on hand, which he uses in a conventional manner. This assumption does not rule out the possibility of an "accidental" picture or a picture taken under abnormal conditions, but it does help us delimit the *probabilities* we are faced with in dealing with pictures of purported UFOs.

Following these two assumptions, NICAP evaluates a photograph in six basic steps:

1. First, we ask whether the picture is consistent with what we know about the behavior of light and the nature of the photographic process.

2. If the answer is yes, we ask whether the picture is consistent with what the photographer said happened at the time and place he took the picture.

3. If the answer is yes, we ask what kinds of objects or phenomena could have produced the imagery in question.

4. If the answer is what the photographer said he observed, we ask whether his report is a good UFO report.

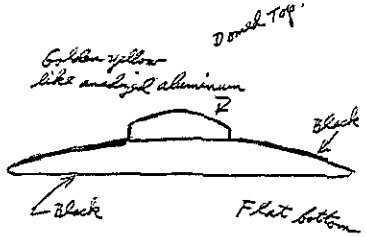
5. If the answer remains yes, we ask whether the picture is useable as scientific evidence (regardless of how sure we may be that it shows a UFO).

6. If again the answer is yes, NICAP is willing to accept the picture as authentic, meaning it shows a clearly defined aerial object with no ordinary explanation.

These may seem like unreasonable requirements to impose on a photograph. Isn't it possible, for example, that a picture could be inconsistent with light behavior but still show a strange object that was observed visually? Suppose the answer to our first question is no but yes to our second? Can a

camera, or a photo-interpreter, be fooled in such a way as to support a wrong conclusion even though most of the "facts" seem to agree with that conclusion?

The answer to this lies in our first assumption, that UFOs will record on film in a manner similar (though not necessarily identical) to other kinds of subjects. With this as our constraint, we are obliged to find an explanation for why a picture would appear to confirm the photographer's report but contradict known physical laws. If we can find such an explanation without stretching our practical sense of order and probability too thinly, we may be able to retain the opinion the picture is authentic, assuming it meets whatever additional criteria we may want to apply.



Photographer reported black disc with yellow dome.

In the case of the Oregon photograph, the central problem arises at the second of our six questions. The photographer reported that he briefly glimpsed, and chanced to photograph, a "saucer- or cymbal-shaped" object with a "domelike structure in the middle, which was the color of gold anodized aluminum." The lower section, or disc, he said, was black. He admitted his observation was extremely short and he took the picture "reflexively as [the object] entered the viewing field."

The three men who examined the picture for NICAP—Williard McIntyre, a professional photographer; Albert Jacobs, a photogrammetrist; and Dr. William Bickel, a physicist—agree that the picture satisfies the first requirement: it is consistent with our knowledge of photography and the physical sciences. However, at the second question, we are faced with a fundamental discrepancy: the picture does *not* show what the photographer reported. Instead, it shows three images of the reported object, each overlapping and aligned in a vertical series, like a stack of dishes.

The photographer's explanation for this curious state of affairs is that the UFO occupied three different positions while the camera lens was open—presumably by accelerating and decelerating in two exceedingly quick jumps or bursts. Another source has suggested that the object disappeared and reappeared twice, rather than moving between locations.

As a practical matter, we might doubt that an aerodynamic device of any kind could change position at least twice within the fraction of a second the chemist triggered his camera. To perform such a maneuver, a rather remarkable power system would be needed. Even if such a capability existed, however, we need to ask what would have happened photographically if in fact this occurred. Is the photograph consistent with a single object photographed three times in one exposure?

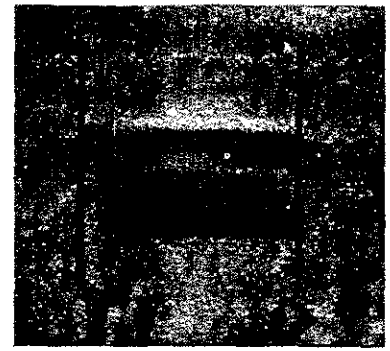
In the judgment of NICAP's analysts, the answer is no. To understand why, it is necessary to remember that a single object could not have occupied more than one

position at any one moment. If the object had been in position A for part of the exposure, background at positions B and C would have been exposed to the film for that interval. Likewise, when the object moved to B and C, background at the other two positions would have been photographed. As a consequence, the background would have "printed through" the three images of the object, producing what is called "residual imagery."

As a demonstration of this well known principle, NICAP devised a small model of the Oregon object, which was mounted on a vertical rod and moved twice during a three-second exposure to obtain a triple image. The results, shown on this page, are a simplified, but accurate, illustration of residual imagery.

From an enlargement of the Oregon picture, it is apparent that almost no residual imagery is present. The black areas of the object are uniformly black, except at the outer edges, and the white "dome" is equally distinct, with none of the background printing through. Such an image is consistent with the assumption that a single object with three sections was photographed in one position. Even allowing for a moderate degree of overexposure, which some sources claim occurred, the solid black areas and homogeneous white area are indicative of a single exposure, not three.

This brings us back to the question of whether an inconsistent report from a photographer can be reconciled with a picture in a way that still permits an affirmative evaluation of the photograph. What assumptions do we need to make to explain why the photographer would report one thing and the

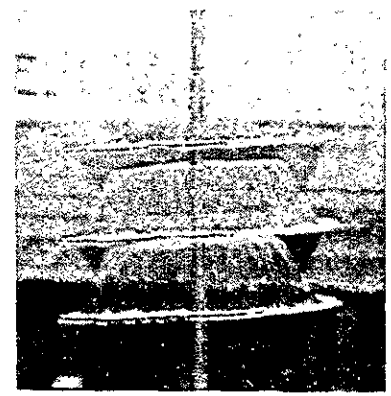


ONE IMAGE OR THREE?

Although the photographer said this picture shows one object exposed in three different positions, it actually shows one object exposed once. Here's why:

1. If one subject changes position during one exposure, it will expose the film for a shorter period at each position than the background. This will produce residual imagery of the background through images of the object. No such residual imagery is evident.
2. If one object changes position in the sequence indicated (A to C), images of the object will overprint, white on black. This is because film reacts to white, not black. No such overprinting is evident.

Both these principles are demonstrated in the picture below, which was made by moving a single object to three positions during one exposure. The object had been painted to match that in the UFO picture.



picture show another? For the Oregon photograph, there are several possible answers to this question:

1. The photographer was mistaken. If we assume the witness actually observed a single object with three sections, the picture meets the first two of our six requirements. However, it is difficult to imagine how this could have happened at the range estimated for the object (300 feet) and with no visual obstructions. Also, the witness denies he made such an error.
2. The object changed configuration during the time of exposure. If we assume the object somehow altered its appearance during the brief moment it was photographed, the failure of the witness to see more than a single disc becomes plausible. However, this again requires a mechanical ability of such extraordinary nature that we are dealing with the same magnitude of improbability represented by the theory of a magical stop-start capability.
3. An optical phenomenon caused the multiple images. If we assume light from the object was somehow "mirrored" so as to expose the film three times instead of once, we have resolved our discrepancy between report and picture. What mechanism, however, could accomplish such a feat? The bending and scattering of light are well understood phenomena, for which mathematical equations exist. No manipulation of these formulas yields trajectories that could account for three overlapping images.

At this point we come to a critical step in our analysis. Without additional evidence, we are forced to acknowledge that no final conclusion is possible, since we cannot satisfactorily answer our second question solely on the basis of one of these three possibilities. Any of the three could contain the solution (or none of them), yet each, as it stands, is unsupported conjecture.

In a situation of this kind, scientists generally apply what is called the principle of Occam's razor. This means choosing the least complicated explanation. In his paper "The Natural Philosophy of Flying Saucers" (reprinted in the Condon Report), R.V. Jones explains why: "Of all the possible explanations for a set of observations, the one with the minimum of supposition should be accepted, until it is proved wrong. Otherwise one lives in a fearsomely imaginative world in which rational conduct becomes impossible."

For the Oregon photograph, we know a single object was photographed in one position. What we don't know—at least with any certainty—is why the photographer failed to report this. Of the three explanations that seem at all possible, *the simplest is the first, that* the photographer made a mistake. However, aside from the improbabilities already mentioned, this hypothesis presents us with another problem: the factor of chance.

We must recall that the photographer had stopped his car at a roadside lookout and gotten out to take a few pictures while his wife waited. According to his report, he took two shots, then prepared to take a third. As he was looking through the rangefinder, something

moved into his field of view. Instinctively, he snapped the shutter, then lowered the camera to see what the object was. The object immediately began to accelerate upward, giving him only a quick look before it disappeared in the distance.

In itself, this account is sufficiently plausible that we cannot, a priori, deny it happened. By definition, a UFO is a phenomenon that can exhibit unusual capabilities, such as rapid movement. We might object, however, to the number of coincidences we must accept if we are to believe the object moved with the precision and speed the photographer claimed. These coincidences may be stated as follows:

1. The object moved into view at the exact moment the photographer had his eye to the camera—not a second too soon or too late.
2. Rather than speed past the photographer, the object slowed or stopped just long enough to be photographed—and no longer.
3. The object's motion was stopped at almost the exact center of the picture, not off to one side or half way out of the picture.
4. The photographer snapped the shutter at precisely the right moment—not a second off and not after first lowering the camera to see what was interfering with his shot.

None of these coincidences, by itself, is inherently impossible. Together, however, they require us to suspend our customary sense of probability. If we apply Occam's razor, we must question the likelihood of such a remarkable series of events. Supporting this is the added piece of information that the photographer did not mention the observation to his wife when he returned to the car. "The sighting was so brief," he later explained, "I discounted actually seeing anything." Without knowing more about the personality of the photographer and his relationship with his wife, we cannot judge this reaction with any confidence; it does seem unlikely from the point of view of what people generally do when they are surprised.

None of this disproves that the chemist observed and photographed a UFO. It only suggests that a simpler explanation should be considered. If we retain our assumption the photographer made an erroneous report but we reject the contention the error was excusable, we are left with the possibility the witness misrepresented what actually occurred. This view has the advantage of satisfying Occam and removing any discrepancy between the picture and the report. Unfortunately, it introduces yet another improbability that is difficult to assess.

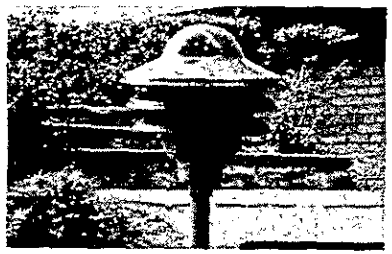
If we suppose the photographer actually observed what the picture seems to show (i.e. a UFO) and photographed it deliberately, not by remarkable coincidence, we are faced with the question of why he didn't tell his wife and why he chose to make up a fictitious report rather than tell the truth, which would certainly have been no less difficult to accept than the story he presented. Perhaps it could be argued that the photographer had never heard of a three-tiered UFO and therefore felt he had to report the usual saucer-type object to be believed. Perhaps, further, he decided he would wait to see how the picture turned out before he admit-

ted the observation, on the assumption his report would only be accepted—even by his wife—if he had the picture as evidence. This is a possible explanation for what happened.

To accept this scenario, however, is to admit our analysis has reached an impasse, since there is no way to satisfy our last four requirements for photographic authenticity. The image could have been produced by an object other than a UFO, especially a small object at close range. The only difficulty with this assertion is the apparent lack of a solid connection between the object and ground. As a UFO report, the case is inherently weak, since we must assume the witness is lying (or in substantial error) before we can accept the possibility he saw a UFO.

Some observers might want to argue that the man photographed a UFO completely by accident and did not realize it until he saw the picture. To support this view, we must assume the man made up his entire report to add credibility to the picture. The only problem is that his report does not describe what the picture shows. To account for this inconsistency, we must resort once again to the assumption he regarded the object in the picture as too unconventional in terms of the typical "flying saucer" to be accepted. That in turn would presumably have forced him to adopt his triple-exposure theory to explain the imagery. The drawback to this is that it puts us back where we started: an authentic picture but a fake report—hardly the kind of evidence likely to win scientific favor.

A final view—and actually one of the simplest—is that the photographer knew what he photographed and chose to misrepresent it. Perhaps he deliberately took the picture hoping it would look like a UFO, or perhaps he only noticed the resemblance of the object to a UFO after he saw the picture. In either case, it would be an attempt to deceive. Against this is the question of what was photographed and why the photographer elected to report something other than what is shown in the picture. Since these are the same problems encountered with earlier explanations, we can only formulate the same hypothetical answers with no way to resolve the question to our satisfaction.



Possible, though improbable, explanation of object in picture is outdoor light fixture similar to this one. Precise separation and alignment of sections support this view.

If it were necessary to choose among all the explanations we have examined, we would probably come closest to the truth if we eliminated all but two hypotheses: Either the photograph is authentic and the witness badly mistaken about what he saw, or the picture is a hoax. Since both these possibilities take us only as far as our second requirement, it is NICAP's judgment that the photograph must remain in doubt and cannot be offered as scientific evidence for UFOs. All we can say with certainty is that the picture shows one object in one position.