



AEROMAGNETIC DATA



DATA ANNOUNCEMENT

82-TGB-04

The following digital aeromagnetic survey data sets, including both high- and low-density surveys for the period 1953-79, are now available from the National Geophysical and Solar-Terrestrial Data Center. The low-density data, which are primarily useful for magnetic field modeling and charting, are mostly for ocean areas and Canada; the high-density data, which are useful for magnetic anomaly mapping, mineral and petroleum exploration, and other geological studies, include selected areas of North America, Europe, and Antarctica. Data sampling rates range from 5 min for low-density surveys to 1 s for high-density surveys.

LOW-DENSITY SURVEYS

Item No.

TGO-0140

PROJECT MAGNET: Global Airborne Magnetic Survey
(1953-70)

These Project Magnet data are part of a world-wide aeromagnetic survey conducted by the U.S. Naval Oceanographic Office primarily to obtain data for publication of world magnetic charts. The data set consists of 97,700 records (5-min averages) of all magnetic components at intervals of approximately 30 km; the track-line spacing is generally less than 400 km.

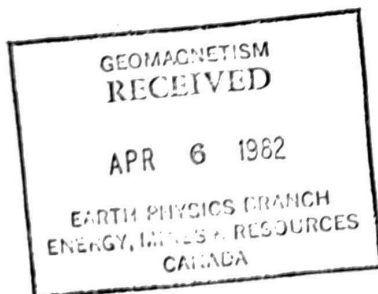
Cost \$ 100

TGO-0100

CANADA (1953-76)

The Canadian aeromagnetic data set consists of 22,000 records of all magnetic components averaged over 5-min intervals (which correspond to 30-km segments of the flight path). The altitude of observation ranges from 2 to 7 km above sea level, and the track-line spacing over Canada is approximately 100 km. The survey was conducted by the Department of Energy, Mines, and Resources of Canada.

Cost \$ 100



National Geophysical and Solar-Terrestrial Data Center, NOAA
Boulder, Colorado 80303

Date: Sun, 26 May 96 13:48:36 -0500
From: Grant Robert Cameron <gcameron@cc.UManitoba.CA>
To: gcameron@cc.UManitoba.CA
Subject: (no subject)

This is a multi-part message in MIME format.

-----194482268625935
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii

<http://www.maui.net:80/~daryl/magnet.html>

-----194482268625935
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=iso-8859-1

(Xian report)

CANADIAN SCIENTISTS CONTACT VENUS

Government secret Project

In January 1972, the Department of Interplanetary Affairs was created, to research into the scientific investigation of UFOs and attempt to contact UFO occupants if possible. Extensive files on reports of UFO landings, sightings, and contacts in Hawaii were soon accumulated, and it was discovered that many UFO researchers desired our reports. We began to trade data, and were amazed when former officials of secret government or military intelligence agencies came to our office, and offered to trade us what THEY KNEW for what we knew. The information was often classified TOP SECRET and beyond, they admitted government and military UFO secrecy, and much of the information alarmed us then! Regardless of whether they came from NASA, were government commissioned civilian scientists, military pilots of intelligence agents, or from the United Nations. THEY ALL TOLD THE SAME SHOCKING DETAILS. There were no contradictions in these reports of alien bases on Earth, other planets, crashed retrieved saucers with bodies, and secret alien government contacts. And most of these informers, who wish to remain anonymous due to threats of assassination, fines, court martials, or mysterious disappearances warned us that we would get in big trouble for publicly releasing what they told us!

In the early 1950s the Canadian Government established PROJECT MAGNET to investigate UFOs. The director of that project, Wilbert B. Smith, publicly wrote that a top US. Pentagon official said that UFOs was the biggest secret they had. Even greater than the H BOMB(the ultimate weapon then). We were able to obtain a copy of Wilbert B. Smith's research on Project Magnet.

This research was so startling he could possibly have been assassinated for releasing it, so it was not available to us until he died. PROJECT MAGNET has been able to work with Canadian scientists who had continued working on inventions of Nikola Tesla, one of the most prominent scientists in history. Tesla, who invented the AC/DC electrical current, helped invent radar and much military technology, was the holder of hundreds of successful patented invention. He had told some associates and friends he had invented an interplanetary communications device with ideas given to him by Venusians he was in contact with then. People who heard these conversations often laughed, yet Project Magnet took Tesla seriously. This report details a formerly secret experimental UFO landing site built by the Canadian government during their attempts to contact UFOs their air Force had monitored in the skies. Former Canadian Defense Minister, Paul Hellyear, later publicly admitted that project existed. However, he did not mention what Smith reported...the project had actually detected a real UFO with their scientific equipment, and later a scientific research group he directed established communications with a landed interplanetary ship from

*Project
MAGNET*

what their pilots said was Venus. Tesla's closest scientific assistant at one time, Arthur Matthews, was involved in this contact. The Project Magnet report added that Matthews had been trying to complete some of Tesla's incomplete inventions, when the Venusians helped him with instructions on finishing that work. The report also details several inventions the Venusians gave to Project Magnet through Dr. Matthews' committee, which were tested and worked perfectly. The Venusians were also seriously concerned about our environmental damage and danger from nuclear testing and fossil fuels, warned the government to try to stop these practices, and offered alternative non-polluting nearly-free energy systems that government leaders, kept in power by multi-billion dollar oil, gas, coal, and war industries all rejected for "Economic reasons."

[Image] [Go back to Department of Interplanetary Affairs Home Page](#)

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it is the policy of the Air Defense Command to establish the identity of any unidentified target, there were no special orders issued for scrambling fighters to try to identify reported UFO's. A UFO was something unknown and automatically called for a scramble. However, there had been some hesitancy on the part of controllers to send airplanes up whenever radar picked up a target that obviously was not an airplane. The directive merely pointed out to the controllers that it was within the scope of existing regulations to scramble on radar targets that were plotted as traveling too fast or too slow to be conventional airplanes. The decision to scramble fighters was still up to the individual controller, however, and scrambling on UFO's would be a second or third priority.

The Air Defense Command UFO directive did not mention shooting at a UFO. This question came up during our planning meeting at Colorado Springs, but, like the authority to scramble, the authority to shoot at anything in the air had been established long ago. Every ADC pilot knows the rules for engagement, the rules that tell him when he can shoot the loaded guns that he always carries. If anything in the air over the United States commits any act that is covered by the rules for engagement, the pilot has the authority to open fire.

The third thing that ADC would do would be to integrate the Ground Observer Corps into the UFO reporting net. As a second priority, the GOC would report UFO's—first priority would still be reporting aircraft.

Ever since the new Project Grudge had been organized, we hadn't had to deal with any large-scale publicity about UFO's. Occasionally someone would bring in a local item from some newspaper about a UFO sighting, but the sightings never rated more than an inch or two of space. But on February 19, 1952, the calm was broken by the story of how a huge ball of fire paced two B-29's in Korea. The story didn't start a rash of reports as the story of the first UFO sighting did in June 1947, but it was significant in that it started a slow build-up of publicity that was far to surpass anything in the past.

Project Magnet

This Korean sighting also added to the growing official interest in Washington. Almost every day I was getting one or two telephone calls from some branch of the government, and I was going to Washington at least once every two weeks. I was beginning to spend as much time telling people what was going on as I was doing anything about it. The answer was to get somebody in the Directorate of Intelligence in the Pentagon to act as a liaison officer. I could keep this person informed and he could handle the "branch office" in Washington. Colonel Dunn bought this idea, and Major Dewey J. Fournet got the additional duty of manager of the Pentagon branch. In the future all Pentagon inquiries went to Major Fournet, and if he couldn't answer them he would call me. The arrangement was excellent because Major Fournet took a very serious interest in UFO's and could always be counted on to do a good job.

Sometime in February 1952 I had a visit from two Royal Canadian Air Force officers. For some time, I learned, Canada had been getting her share of UFO reports. One of the latest ones, and the one that prompted the visit by the RCAF officers, occurred at North Bay, Ontario, about 250 miles north of Buffalo, New York. On two occasions an orange-red disk had been seen from a new jet fighter base in the area.

The Canadians wanted to know how we operated. I gave them the details of how we were currently operating and how we hoped to operate in the future, as soon as the procedures that were now in the planning stages could be put into operation. We agreed to try to set up channels so that we could exchange information and tie in the project they planned to establish with Project Grudge.

Our plans for continuing liaison didn't materialize, but through other RCAF intelligence officers I found out that their plans for an RCAF-sponsored project failed. A quasi-official UFO project was set up soon after this, however, and its objective was to use instruments to detect objects coming into the earth's atmosphere. In 1954 the project was closed down because during the two years of operation

they hadn't officially detected any UFO's. My sources of information stressed the word "officially."

During the time that I was chief of the UFO project, the visitors who passed through my office closely resembled the international brigade. Most of the visits were unofficial in the sense that the officers came to ATIC on other business, but in many instances the other business was just an excuse to come out to Dayton to get filled in on the UFO story. Two RAF intelligence officers who were in the U.S. on a classified mission brought six single-spaced typed pages of questions they and their friends wanted answered. On many occasions Air Force intelligence officers who were stationed in England, France, and Germany, and who returned to the U.S. on business, took back stacks of unclassified flying saucer stories. One civilian intelligence agent who frequently traveled between the U.S. and Europe also acted as the unofficial courier for a German group—transporting hot newspaper and magazine articles about UFO's that I'd collected. In return I received the latest information on European sightings—sightings that never were released and that we never received at ATIC through official channels.

Ever since the fateful day when Lieutenant Jerry Cummings dropped his horn-rimmed glasses down on his nose, tipped his head forward, peered at Major General Cabell over his glasses and, acting not at all like a first lieutenant, said that the UFO investigation was all fouled up, Project Grudge had been gaining prestige. Lieutenant Colonel Rosen-garten's promise that I'd be on the project for only a few months went the way of all military promises. By March 1952, Project Grudge was no longer just a project within a group; we had become a separate organization, with the formal title of the Aerial Phenomena Group. Soon after this step-up in the chain of command the project code name was changed to Blue Book. The word "Grudge" was no longer applicable. For those people who like to try to read a hidden meaning into a name, I'll say that the code name Blue Book was derived from the title given to college tests. Both the tests and the project had an abundance of equally confusing questions.

Project Blue Book had been made a separate group because of the steadily increasing number of reports we were receiving. The average had jumped from about ten a month to twenty a month since December 1951. In March of 1952 the reports slacked off a little, but April was a big month. In April we received ninety-nine reports.

On April 1, Colonel S. H. Kirkland and I went to Los Angeles on business. Before we left ATIC we had made arrangements to attend a meeting of the Civilian Saucer Investigators, a now defunct organization that was very active in 1952.

They turned out to be a well-meaning but Don Quixote-type group of individuals. As soon as they outlined their plans for attempting to solve the UFO riddle, it was obvious that they would fail. Project Blue Book had the entire Air Force, money, and enthusiasm behind it and we weren't getting any answers yet. All this group had was the enthusiasm.

The highlight of the evening wasn't the Civilian Saucer Investigators, however; it was getting a chance to read Ginna's UFO article in an advance copy of *Life* magazine that the organization had obtained—the article written from the material Bob Ginna had been researching for over a year. Colonel Kirkland took one long look at the article, sidled up to me, and said, "We'd better get back to Dayton quick; you're going to be busy." The next morning at dawn I was sound asleep on a United Airlines DC-6, Dayton-bound.

The *Life* article undoubtedly threw a harder punch at the American public than any other UFO article ever written. The title alone, "Have We Visitors from Outer Space?" was enough. Other very reputable magazines, such as *True*, had said it before, but coming from *Life*, it was different. *Life* didn't say that the UFO's were from outer space; it just said maybe. But to back up this "maybe," it had quotes from some famous people. Dr. Walther Riedel, who played an important part in the development of the German V-2 missile and is presently the director of rocket engine research for North American Aviation Corporation, said he believed that the UFO's were from outer space. Dr. Maurice

not random, but ordered, it would be proof that the UFO's were things that were intelligently controlled.

During our discussion Major Fournet brought up two reports in which the UFO seemed to know what it was doing and wasn't just aimlessly darting around. One of these was the recent sighting from Haneda AFB, Japan, and the other was the incident that happened on the night of July 29, when an F-94 attempted to intercept a UFO over eastern Michigan. In both cases radar had established the track of the UFO.

In the Haneda Incident, according to the sketch of the UFO's track, each turn the UFO made was constant and the straight "legs" between the turns were about the same length. The sketch of the UFO's flight path as it moved back and forth over Tokyo Bay reminded me very much of the "criss-cross" search patterns we used to fly during World War II when we were searching for the crew of a ditched airplane. The only time the UFO seriously deviated from this pattern was when the F-94 got on its tail.

The Michigan sighting was even better, however. In this case there was a definite reason for every move that the UFO made. It made a 180-degree turn because the F-94 was closing on it head on. It alternately increased and decreased its speed, but every time it did this it was because the F-94 was closing in and it evidently put on speed to pull out ahead far enough to get out of range of the F-94's radar. To say that this motion was random and that it was just a coincidence that the UFO made the 180-degree turn when the F-94 closed in head on and that it was just a coincidence that the UFO speeded up every time the F-94 began to get within radar range is pushing the chance of coincidence pretty hard.

The idea of the motion analysis study sounded interesting to me, but we were so busy on Project Blue Book we didn't have time to do it. So Major Fournet offered to look into it further and I promised him all the help we could give him.

In the meantime my people in Project Blue Book were contacting various scientists in the U.S., and indirectly in Europe, telling them about our data, and collecting opinions.

Project Fournet

We did this in two ways. In the United States we briefed various scientific meetings and groups. To get the word to the other countries, we enlisted the gratis aid of scientists who were planning to attend conferences or meetings in Europe. We would brief these European-bound scientists on all of the aspects of the UFO problem so they could informally discuss the problem with their European colleagues.

The one thing about these briefings that never failed to amaze me, although it happened time and time again, was the interest in UFO's within scientific circles. As soon as the word spread that Project Blue Book was giving official briefings to groups with the proper security clearances, we had no trouble in getting scientists to swap free advice for a briefing. I might add that we briefed only groups who were engaged in government work and who had the proper security clearances solely because we could discuss any government project that might be of help to us in pinning down the UFO. Our briefings weren't just squeezed in either; in many instances we would arrive at a place to find that a whole day had been set aside to talk about UFO's. And never once did I meet anyone who laughed off the whole subject of flying saucers even though publicly these same people had jovially sloughed off the press with answers of "hallucinations," "absurd," or "a waste of time and money." They weren't wild-eyed fans but they were certainly interested.

Colonel S. H. Kirkland and I once spent a whole day briefing and talking to the Beacon Hill Group, the code name for a collection of some of the world's leading scientists and industrialists. This group, formed to consider and analyze the toughest of military problems, took a very serious interest in our project and gave much good advice. At Los Alamos and again at Sandia Base our briefings were given in auditoriums to standing room only crowds. In addition I gave my briefings at National Advisory Committee for Aeronautics laboratories, at Air Research and Development centers, at Office of Naval Research facilities and at the Air Force University. Then we briefed special groups of scientists.

Normally scientists are a cautious lot and stick close to proven facts, keeping their personal opinions confined to

Though Behind The Flying Saucers was acclaimed by scholars of the sandlot sciences, especially those in the hire of the Hearst and Fawcett dynasties, as "the greatest hoax since the Cardiff Giant," a billing I had hoped to live on for years, I'm afraid my contemporaries in these researches, notably Keyhoe, Adamski, Leslie, Van Tassel, Heard, Bethrum, Gardener, Arnold, Williamson and Palmer, have already reported findings that make much of my earlier material appear dated, if not dead, as I reported the crews were.

Though three years of painstaking efforts have gone into evaluating new materil in this book so as to eliminate hoaxes, I would be disappointed if the earlier heralds did not re-emerge to declare that my latest word on the subject was a bigger hoax than the last one.

Being an old partisan of a school of public relations that believes there is "no such thing as a bad notice except no notice at all," I am not above the value of such motices. Like throwing bricks at squatters, they help lay a solid foundation, even if one might question that anything substantial could come from such pitchmen along the sideshows of literature as are hired by Hearst or Fawcett.

When they get it first and get it right, that will be news.

Despite this handful of hecklers the material in Behind The Flying Saucers and conclusions drawn from it have stood up remarkably well. The book was attacked from all sides, of course, from the lowest to the highest motives, which was to be expected as it was a highly controversial subject. I myself even attacked parts of it, like Don Quixote attacking his own windmill. But nothing has happened to date to refute the story as a whole.

Of course there has been a lot of good-natured spoofing about

those little men, particularly when other observers reported seeing crews from space ships, men of normal stature, speech and appearance. These contradictions caused me to retreat a little and so I have since advanced the theory that the Saucerians probably sent their jockeys at first, it being a long trip and excess weight being therefore important.

But the magnetic theory of the propulsion of these objects, first advanced in Behind The Flying Saucers, has stood up so well that by 1954 it became the official blueprint of a Canadian project saucer in their attempt to build a ship on this earth that could duplicate the amazing aerodynamic feats reported by those who have seen space ships from elsewhere performing in our atmosphere.

If and when the Canadians ~~bring~~ get their saucer off the ground I hope they will toss some posies of conventional magnetic frequencies over the grave of those brave men who far away and long ago first told of three saucers that had landed on this earth.

Since that time others, as I say, have reported contact with live crews. Even the author may talk to one yet. It is his hope of course that he should live so long.

Rancho Pancho
Desert Springs

FRANK SCULLY

1 9 5 4

Arthur Bray
The UFO Connection

As seen previously, I was successful in tracking down dormant files in both DOC and DND, as well as current files.

In a letter from the Department of External Affairs, I was informed that "the Canadian Government does not underestimate the seriousness of the question of UFOs and this matter is being kept under consideration and study in a number of departments and agencies".³⁸

Why the apparent lack of interest in UFOs by the Ministry of Transport? Why the "disappearance" of secret files? Why was I given such a run-around in trying to uncover the contents of government files on UFOs?

I am thoroughly convinced that the Government of Canada was engaged in a cover-up operation. Of course, the lack of information could simply have been incompetence and plain bumbling on the part of all Ministers of the Crown and public servants concerned, but I cannot honestly believe that all the high officials I contacted were really that incompetent. The only explanation, in my view, is a deliberate cover-up. My many years of badgering the government on this leaves me no alternative conclusion. For a number of years I deliberately avoided such a conclusion in the hope that I was wrong. I can no longer avoid it.

Cover-up of UFO facts is not unique to Canada. It exists around the world and a very large number of documents have recently been released by the FBI and CIA in the U.S.A. under the Freedom of Information Act, which is positive proof of secrecy having been maintained over a period of thirty years.

Ufologists are familiar with the case of a 3000 pound mass of metal reported to have fallen from the sky under very strange circumstances near Les Ecureuils on the St. Lawrence River in 1960. Government scientists are the first to admit this was not a meteorite and claim it is foundry slag.³⁹ However, at least eight separate analyses have been undertaken on samples of this metal and all results differ significantly. One university professor said he was "disturbed" by the results. A full report of this interesting case, written by myself, will appear soon in the *Encyclopedia of UFOs* to be published by Doubleday (New York).

Much interesting information has now been brought into the open, however, with the release of the Canadian Government files referred to. More facts from these files will be brought to light in the next chapter.

CHAPTER 7

PROJECTS MAGNET AND SECOND STOREY

"We are faced with a substantial probability of the real existence of extraterrestrial space vehicles" was the conclusion of a leading Canadian radio engineer in his report on a three year study of UFOs.

Established in 1950 by the Department of Transport, **PROJECT MAGNET** was the first Canadian government investigation into UFOs, according to available records. It was under the direction of Mr. Wilbert B. Smith, Senior Radio Engineer, Broadcast and Measurements Section of that Department. Mr. Smith was already internationally recognized in his field of radio communications, held a number of patents and had received a number of awards for his work in radio. He was a graduate of the University of British Columbia, having received both the B.Sc. and M.Sc. degrees in Electrical Engineering. He had represented Canada at the Canada-U.S. FM Broadcasting Agreement in 1947 as well as at other international conferences. He was in charge of establishing a network of ionospheric measurement stations throughout Canada.

Project Magnet was a small program using Department of Transport (DOT) facilities with the assistance of other government organizations including the Defence Research Board (DRB) and National Research Council (NRC).

Much has been written and spoken about Project Magnet over the years but a large proportion of this has been misleading, incomplete or inaccurate. In this chapter I will attempt to set the record straight, using official government documents as sources of my information. The information in some of these documents has never before been made public.

In addition to the government files I have reviewed, I have been privileged to obtain certain other material and information for which specific references cannot be cited due to the need to protect my sources.

The project was an outgrowth of work already being done by Smith and a small group of engineers on the collapse of the Earth's magnetic field as a source of energy. It was believed that



Wilbert B. Smith

"Flying Saucers" were operating on magnetic principles and it seemed that this work might explain the saucers' operation. Smith had been informed by highly-placed sources that flying saucers are indeed real, that they are almost certainly of extraterrestrial origin and that they operate on a magnetic principle. Just how this principle actually operated was unknown.

Early in 1950, a book by Frank Scully (*Behind the Flying Saucers*) claimed that flying saucers had crashed in the USA and that the US Air Force had retrieved them along with the dead bodies of their occupants. Although some people have claimed that Scully's book was a hoax, Smith was informed by a certain top American Scientist who was deeply involved in UFO research for the US Government, that "the facts reported in the book are substantially correct".

On November 21, 1950, Smith submitted a proposal to the Controller of Telecommunications to set up a special project within the Department. He stated in his proposal that his group believed they were on the track of something which may well prove to be the introduction to a new technology. It appeared that their work in geomagnetics might well be the linkage between our technology and the technology by which the saucers are designed and operated.

The study of UFOs, or flying saucers as they were called in those days, was of tremendous interest at top levels of the US Government, and Smith was informed that the matter was the most highly classified subject in that government, rating higher even than the H-bomb. Top officials were aware of their reality, he was also told.

Smith had discussed the work of his group with Dr. O. M. Solandt, Chairman, Defence Research Board, who agreed that work on geomagnetic energy should go forward as rapidly as possible and offered full co-operation of his Board, according to Smith's proposal.

The project was classified, and for several reasons. The exchange of information with other parallel classified projects could thereby be facilitated; scientific personnel working along unorthodox lines prefer to work in camera until their results can be proven; and furthermore, in the event that a new technology should be uncovered, its implications would have to be carefully assessed before pertinent information could be made public.

There has been misunderstanding and confusion over whether Smith's project was an official one. Numerous statements from the government have denied that it was. Let's examine this situation. The files of the former DOT covering the period of the 1950s contain an undated statement for the Minister of Transport to deliver in the House of Commons. The pertinent part of this statement says that

This entire program . . . is being carried on . . . with official approval and authority to make use of existing facilities.¹

The full statement appears as Annex 2.

In 1963 HANSARD tells us that a statement was made in the House of Commons by Mr. Dupuis:

Between December 1950 and August 1954 a small program of investigation in the field of geomagnetics was carried out by the then telecommunications division of the Department of Transport with a view to obtaining, if possible, some physical information or facts which might help to explain the phenomenon which was generally referred to as unidentified flying objects. Mr. W. B. Smith was the engineer in charge of this program.²

In 1964 I was told by the Department of Transport:

. . . at no time has this Department carried out research in the field of unidentified flying objects . . . The Department did not take part in any of his [Smith's] research work nor did Mr. Smith provide the Department with any useful information arising out of his work.³

In 1966, Dr. William D. Howe, MP, wrote to J. R. Baldwin, Deputy Minister of Transport, seeking information on Project Magnet. In reply, a Mr. D. A. McDougal answered that:

. . . these activities [Smith's] were purely a personal hobby of his and we have no Departmental information on the subject.⁴

A 1968 memorandum in the National Research Council files signed by Dr. Peter M. Millman, at that time Head of Upper Atmosphere Research, states:

I have been informed by the Department of Transport that although Project Magnet was officially authorized by the Depart-

ment, work on this project was carried out almost entirely by Mr. W. B. Smith and was in the nature of a spare time activity.⁵

Four months later, Dr. Millman stated:

The project was a personal one carried out by Mr. Smith with the knowledge of his department, but without any official government sponsorship.⁶

These statements are typical examples of what the public and Parliament was being told regarding the status of Project Magnet.

However, Department of Transport internal correspondence (see Annex 3, paragraph 1) makes the whole matter clear as the statement is made that:

Project Magnet was established November 21, 1950 by authority of Commander C. P. Edwards, then Deputy Minister of Transport for Air Services.

The files of the Department of Communications show that Smith's proposal was dated November 21, 1950, and that formal approval was given by Edwards on December 2, 1950.

It is quite clear that despite the fact the public was being told that Project Magnet was not a government project, it in fact was, at least for a period of time. The situation changed later.

Smith's program consisted of two parts. The first part was the collecting of as much high quality data as possible, analyzing it, and where possible drawing conclusions from it. The second part consisted of a systematic questioning of all our basic concepts in the hopes of turning up a discrepancy which might prove to be the key to a new technology.⁷ He also developed ideas for measuring the reliability of observational data and using these measurements to rate the probability that a given report could be accepted as a real observation.

In 1950, an article intended for publication in an American magazine was written by Major Donald E. Keyhoe, U.S. Marine Corps (Retired), later Director of the National Investigations Committee on Aerial Phenomena (NICAP) on the reality of the saucers. This article was in fact partly ghost-written by Wilbert B. Smith and cleared by the Chairman, Defence Research Board of Canada. What Smith wrote correctly reflected the work of Magnet to date so it gave credence to the Canadian part of the

article. There are also definite indications that clearance was given at a very high level in the US. If Canadian approval was sought for an American-originated article it would seem certain that similar US clearance must have been obtained. This matter of security clearances puts an official stamp of approval on the contents of the article which stated that saucers operated on a magnetic principle.

In January 1951, Smith stated in a letter to a senior member of the Canadian Embassy staff in Washington, in which he was reporting on progress, that three engineers and two technicians were working full time on Project Magnet. This demolishes repeated government statements that the project was simply a part-time activity on the part of Smith.

High security was attached to the flying saucer matter and only two staff members of the Embassy in Washington were even allowed to discuss the matter.

Smith submitted an interim report to his department in June, 1952 in which he stated that it appeared evident that flying saucers are emissaries from some other civilization and actually do operate on magnetic principles.⁸ This complete report appears as Annex 3.

On August 10, 1953, Smith filed a further report on the project and he concluded that we are faced with a substantial probability of the real existence of extra-terrestrial vehicles and that such vehicles must of necessity use a technology considerably in advance of what we have.⁹

It will also serve a useful purpose to include the complete report in this book so readers may decide for themselves whether Smith reached a valid conclusion from the evidence presented. This report appears as Annex 4.

The Government has also consistently denied that Smith's report was an official one, claiming that it simply represented his own views and not those of the Government. However, it should be noted that the Government never made an official statement either accepting or rejecting the conclusions of the report. It simply disclaimed any official status for the report. Smith himself has stated that this report represented simply the views of himself and his small group, and that his report had not been endorsed by the Government. Neither was it rejected.

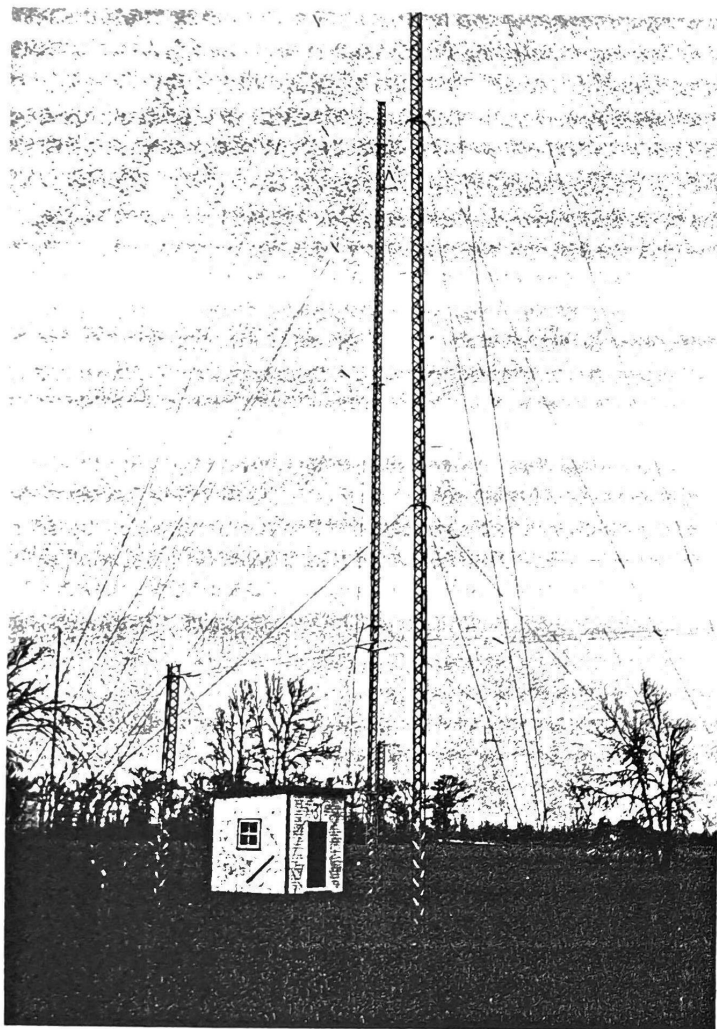
The report stands on the reputation of Smith as a very capable

and careful investigator whose ability was beyond dispute and who for years afterwards continued to represent his department before the House of Commons Broadcasting Committee.

On November 13, 1953, the world's first "flying saucer sighting station" was placed in operation by Smith. Located at Shirleys Bay, ten miles northwest of Ottawa, it consisted of some highly sophisticated instrumentation for the purpose of detecting flying saucers. The instruments were located in a small shack near the DOT Ionosphere Station on Defence Research Board property. There was a gamma ray counter to detect the presence of radioactive or cosmic radiation; a magnetometer which would register variations or disturbances in the earth's magnetic field; a radio receiver to detect the presence of radio noise; and a recording gravimeter to detect any variation in the earth's gravitational pull. The four instruments produced traces on a multiple-pen graphical recorder, the charts from which were scrutinized from time to time for any disturbance which might appear. These instruments were left over from a previous program of radio and skywave recording and were specially adapted for UFO detection.

Government scientists were reluctant to admit publicly that they regarded stories of flying saucers as anything but utter nonsense and were inclined to dismiss the very existence of the saucer station with a snort and a sweep of the hand. On the very day the station went into operation, Dr. O. M. Solandt, Chairman of the Defence Research Board, was quoted as saying reports of the station's establishment were completely untrue. Later he claimed he actually had said such a station was not being operated by his department and he personally had no knowledge of its existence.¹⁰ In fact, the building was loaned to Smith by the Defence Research Board.¹¹

On August 8th, 1954 at 3.01 p.m., the instrumentation in the Shirleys Bay station registered a very definite disturbance, quite different from disturbances registered by passing aircraft. In Smith's words "the gravimeter went wild". All evidence indicated that a UFO had flown within feet of the station. Smith and his colleagues were alerted to this event by alarm systems connected to the instrument panel. Unfortunately, the area was clouded in at the time and they could see nothing which was causing the commotion with the instruments. Whatever was up there was hidden in the cloud. However, the event was recorded



The world's first flying saucer observatory
at Shirleys Bay, near Ottawa, Canada.

on the chart paper as evidence of some sort of major disturbance, quite distinct from that of even the largest aircraft.

Two days later, DOT announced it was dropping Project Magnet. How could this be possible when the evidence waited for had now been obtained, despite lack of visual confirmation?

The records show that on August 10th, 1954, the Controller of Telecommunications issued a form letter (a note added that this could also be used as a press release) which admitted that DOT had been engaged in a study of UFOs for three and one-half years, that considerable data was collected and analyzed but it had not been possible to reach any definite conclusion, and since new data simply confirmed existing data there seemed little point in carrying the investigation any further **on an official level** (emphasis added). This release went on to state that DOT would discontinue any further study of UFOs and that Project Magnet would be dropped. It ended by adding that Wilbert Smith would continue to receive and catalogue future data "on a purely unofficial basis".¹² A memo was sent to Smith the same day directing him to discontinue the DOT activities.

Here we have, in addition to further confirmation that Project Magnet was an official DOT project, a startling turn of events by the announcement itself, and its timing. Two days! Just enough time to call hasty meetings to consider the importance of the event at Shirleys Bay, decide what to do, and prepare a statement for the public.

But it made no sense to shut it all down now that they had some scientific confirmation of what DOT was looking for. In personal correspondence, Smith stated that there were a number of reasons behind this decision but they **did not include lack of results**. (Emphasis added). Did it all move to a higher level and go behind more security? Smith tells us that as the project proceeded it ran into difficulties from the press:

The program was plagued by well-meaning but misguided journalists who were looking for spectacular copy which could be turned to political account to such an extent that both those who were working on the project, and the Department of Transport found themselves in an embarrassed position. Consequently, when the Project Magnet report was made and permission sought to extend the scope of the investigation through federal financial support, the decision was finally made in 1954 that this would not

be advisable in the face of the publicity from which the whole project has suffered.¹³

However, we also find that the **decision** to discontinue the project as an official government-sponsored project was actually made in June 1954, as the DOT files show that Smith was to be told

... that he can continue in his own free time, not on Departmental time. He may continue to use Departmental equipment not otherwise in use. . .¹⁴

This leaves us with a puzzling picture of what was going on behind the scenes. To recap, the press was creating problems for the government and in June 1954 it was decided to terminate the project, officially, but to permit Smith to continue unofficially and on his own time. On August 8th, a UFO was evidently tracked on the sensitive instruments at Shirleys Bay, then on August 10th the government hastened to announce publicly that the project had been discontinued. Surely this evidence should have justified keeping the project going officially. However, it is significant that it **was** kept going, even though unofficially. The situation seems to indicate an official cover-up by leading the public to believe the government was no longer involved or interested.

Smith stated in a private letter:

... when certain government people came face to face with the reality of the space people, and realized that there wasn't anything they could do about it, they promptly closed their eyes and hoped that the whole business would fade out and go away. ✓

During much of the period of Project Magnet's official activity, which dealt with the physics of flying saucers, a parallel project was underway in which Wilbert Smith was also involved.

In April, 1952, the federal government set up a committee representing a number of departments, and code-named it - PROJECT SECOND STOREY. This consisted of a group of scientists and military officers who met periodically to consider the UFO problem and to recommend government action.

This group was set up at a meeting on April 22, 1952 chaired by Dr. O. M. Solandt, Chairman of the Defence Research Board.

The following persons were nominated and agreed to serve on the Committee:

Dr. Peter M. Millman (chairman), Dominion Observatory.
Group Captain D. M. Edwards, Directorate of Air Intelligence.
LCOL. E. H. Webb, DMOP.
Commander J. C. Pratt, Directorate of Naval Intelligence.
Flight Lt. V L. Bradley, Defence Research Board.
Mr. Wilbert B. Smith, Department of Transport.
Mr. H. C. Oatway, (secretary), Defence Research Board.

This committee was "to prepare a brief of instructions for observers, examine interrogation procedures and to get a consolidated and pertinent series of questions."¹⁵ The minutes of the organizing meeting as well as those of Project Second Storey which it set up, were classified "Confidential".¹⁶

According to the minutes made available to me by NRC, it would seem that only five meetings of the Second Storey Committee were held, the first being on April 24, 1952 and the last on March 9, 1953.

At first it was agreed to call the work of this Committee "Project Theta". However, at the second meeting it was agreed to adopt the name "Project Second Storey".

The minutes of the first meeting of Second Storey record that a report by the RCAF relative to the USAF project on flying saucers was tabled. This report was to be duplicated by the RCAF and copies passed to the secretary for distribution to the Committee members.¹⁷

This report was not attached to the minutes made available to me. Government sources always insist that no information is being withheld from the public, so why was this report not made available?

At the third meeting, the Committee approved a form titled "Project Second Storey Sighting Report". This standard form was apparently to be used by all persons when investigating a UFO report. An information or instruction pamphlet was also prepared for distribution with Sighting Report Forms, in two parts:

- Part I — Information for Guidance in reporting on unknown flying objects
- Part II — Description of normal phenomena which might cause reports of unidentified aerial objects.

It is clear from the minutes that Second Storey was not intended for the purpose of actually investigating sighting reports. Its purpose was really to facilitate this work by others, hence the development of the Sighting Report Form and the accompanying pamphlet.

Smith reported on an experiment carried out under DOT auspices in an endeavour to obtain data relative to the accuracy of reports. A large meteorological balloon, approximately twelve feet in diameter, to which was attached a thirty second magnesium flare, was released from the Central Experimental Farm.¹⁸ No advance notice was given to the press. As of the fourth meeting DOT had not received any queries relating to the experiment.¹⁹ Perhaps no one noticed this device in the air. On the other hand, perhaps people *can* tell the difference between a lighted balloon and a flying saucer!

A further document was developed by Smith and approved by the Committee, in the form of "Weighting Factors for Analysis of Sighting Reports". In the analysis of sighting reports it was fairly obvious that different reports would have widely different values from the viewpoint of reliability, confirmation and lucidity. A formula was devised giving approximately the same significance to each of these factors and derived from numerical values assigned to the answers given to the various questions on the Sighting Report Form.²⁰

Also, a Record Card and a Record Instruction Card were designed for the purpose of maintaining adequate records of sightings reported on the Sighting Report Forms.

At the fifth meeting, the chairman outlined his discussions with the Chairman of the Defence Research Board on the future activities of this Committee. It was pointed out that evidence to date did not seem to warrant an all-out investigation by the Canadian Services but it might be well to continue to collect at some central location all forms which may be submitted to the Services. For the present at least, it was considered unnecessary for that Committee or any other section of DND to undertake a detailed analysis of the reports received to date. However, the Committee, the minutes made clear, should retain its existence and hold meetings at the discretion of the chairman. Arrangements were being made to bring Captain Ruppelt, head of the US Air Force's Project Blue Book, to Ottawa to brief the Committee.

It was also agreed that a separate file on sightings would be maintained by DSI (Director of Scientific Intelligence, DRB) who would henceforth act as the central agency, and reports received through the various services would be forwarded to DSI for filing. It was not intended that DSI would complete a Record Card system.

It was considered that the next committee meeting need not be held until DOT had completed an analysis of the sightings to date or whenever other members had data which might warrant the calling of a meeting.²¹

There were no further minutes available to indicate whether any subsequent meetings were held. In view of the statement that the Committee should retain its existence, and the fact that there was unfinished business, caused me to suspect that further meetings were held, the minutes of which have not been made public.

Consider the following facts. Meeting No. 5 was held on March 9, 1953 at which it was agreed to meet again on an undetermined date, after a DOT analysis was completed. Wilbert Smith was conducting this analysis for the Department. In August 1953, Smith submitted his Project Magnet Report to the Controller of Telecommunications, DOT. This was obviously the report the Committee was waiting for. I have been informed by a reliable source that this report went as high as Prime Minister Louis St. Laurent who held it for three months.

Smith concluded that we were probably being visited by inter-planetary spacecraft. This conclusion had tremendous implications, yet we have nothing on it from Project Second Storey. Why? I cannot believe that the Second Storey group did not consider this report important enough to justify a meeting to discuss it. It can only be concluded that further meetings were held, the minutes of which remain classified by the government.

Strangely enough, recent correspondence with Dr. Allen McNamara of NRC prompted the statement by him (without having been asked the question) that the Project Magnet Report was submitted to the Project Second Storey Committee in 1953. So there we have it. Where are the minutes that show this? He went on to state:

Mr. Smith's conclusions were not supported by his own Department or by the Second Storey Committee.²²

The last document in the Second Storey file summarizes this work of the Committee and ends with the following statement:

The Committee as a whole has felt that owing to the impossibility of checking independently the details of the majority of the sightings, most of the observational material does not lend itself to a scientific method of investigation.²³

This is a rather odd statement as science consists to a large extent of a search for patterns. Many patterns have been discovered in UFO behaviour as discussed elsewhere in this book. Why was Second Storey not interested in searching for these? The file ends abruptly with no satisfactory explanation. Could it be that Second Storey went "underground" after receiving Smith's report with his startling conclusion? This could account for the unsatisfactory situation faced in attempting to get UFO information from the government.

Not surprisingly, the minutes of one further meeting of Project Second Storey have recently been made available to me by a private source. These are in the form of a draft and are undated, but a government transmittal slip is attached, dated March 15, 1954. I infer from this and from internal evidence of the minutes, that the meeting was held no earlier than a few weeks prior to that date.

These minutes make clear that no arrangements had yet been made for the Officer-in-Charge, Project Blue Book, US Air Force, to visit Canada. The RCAF appears to have been dragging its feet.

It is also reported that the chairman of the Committee was particularly interested in a recently-published book in which contact was claimed with the occupants of a landed saucer, and that the book's author had actually taken a flight aboard a saucer.²⁴ The chairman indicated he intended to obtain further information concerning the author's source of information. This type of internal evidence illustrates the seriousness with which the flying saucer matter was regarded.

Smith then presented a report on DOT activities to date, with future plans. This report appears as Annex 5. This report makes clear that there were really only two acceptable alternative explanations for flying saucers —natural electromagnetic causes or alien vehicles, and that it was desirable to get some measured data in addition to the qualitative observations. This was the

purpose of establishing the Shirleys Bay station. It was felt that certain of the phenomena would probably be accompanied by physical effects which would be measureable. Thus, the disturbance recorded on August 8, 1954 must have been recognized as a major event and must be registered as such in documents not available to the public.

A further document which has come to my attention is a Canadian government report on Project Blue Book, the US Air Force study of UFOs. This report is also undated but internal evidence makes it clear that it originated in 1952 or 1953. This would therefore appear to be the missing report referred to earlier. It was originally classified SECRET but has now been declassified.

This report notes that there are certain patterns of sightings around major port areas and atomic energy establishments. This pattern has been maintained over succeeding years. Another interesting item is that five percent of the reports came from scientists at the missile launching base at White Sands, New Mexico. This destroys the myth that scientists never see UFOs, as already mentioned in Chapter 3.

This report also refers to a Project Stork at Columbus where scientists assisted Project Blue Book in the breakdown of flying saucer data. In all the UFO literature I have read over these many years, I have never seen reference to this project before so it must have been highly classified.

Most of this report concerns the routine activity of Project Blue Book and it ends with expression of a desire to exchange information between Canada and the USA and that Captain Ruppelt, Officer-in-Charge of the project, be invited to visit Canada.

Many questions remain unanswered. Why was Project Magnet suddenly officially closed down just when a major magnetic disturbance was recorded on the instruments? Were there further meetings of the Project Second Storey Committee? Why was the 1953 Project Magnet report with its startling conclusion not recorded in the Second Storey minutes? These and other questions can only be answered by the federal government and it is not about to do so.

Wilbert Smith continued his work on his own time, as authorized by the government. In 1960 he wrote:

Recent Project Magnet activities have dealt with following up any and all leads. Many of these leads were dead ends, but a few were quite significant and well worth the overall effort. At the present time a definite pattern is emerging, and the ground-work is being laid for a new technology which may literally lead us to the stars.²⁵

There you have the **available** facts of Projects Magnet and Second Storey as recorded in official files made available to me. Much more went on behind the scenes which is still buried in secret government files, which I am unable to document adequately. But here is one example of the sort of thing I refer to. In 1959 Smith was closely involved with the Office of Naval Intelligence, US Navy, and the Central Intelligence Agency (CIA) in the investigation of a situation in the USA in which a certain Mrs. Swan was in mental contact with the occupants of UFOs. This communication manifested through the technique of automatic writing.²⁶ Proof of this contact was shown when Mrs. Swan's communicator predicted that UFOs would be seen at specified times and places. They were in fact seen by US Intelligence Officers who also made contact with the occupants.

This has the appearance of a wild tale, I realize, but part of it is documented in a "Memorandum for the Record" which has now been released by the US Government and is printed in its entirety in a 1974 book by Robert Emenegger.²⁷ Only the names of participants have been deleted to protect their identity. This episode is confirmed by Dr. David M. Jacobs in his doctoral dissertation, subsequently published in 1975.²⁸ Jacobs has researched the US Air Force Project Blue Book files in the Archives at Maxwell Air Force Base, Montgomery, Alabama, but since relocated to the National Archives in Washington, D.C.²⁹ Through my own sources, I know this story to be true. We are left in the position of being denied the most important aspects of Project Magnet due to government secrecy.

Smith was informed of many things by his contact, who identified himself as AFFA, among these being that this planet is afflicted with areas of reduced "binding". Matter is held together by the equilibrium of all the forces acting within it and the alteration of any of the fields reflects in the binding forces within the matter. As Smith said:

Not all fields within matter are due to that particular chunk of matter, or even to matter itself, as the field structure within which matter is immersed may be altered by outside influences.

This all means that the binding forces within matter are **not** the fixed and immutable quantities we have believed them to be.

On this earth, and reasonably close to its surface, the field structure is predominantly constant, except for certain regions, and matter displays reasonably stable characteristics throughout the world.

However, there do exist certain regions which may be termed vortices, in which one or more of the fields are different from the values generally prevailing elsewhere. Within these regions there may be substantial changes in the binding forces of matter, depending upon the nature and extent of the field differences.³⁰

Smith was informed by his contact that we had means of detecting areas of reduced binding within our technology and that we should build suitable instruments and pay attention to what they registered.

The significance of this reduced binding was that when an aircraft would fly through such an area, if it was not stressed sufficiently well, the aircraft would fall apart. Apparently a number of air crashes could be attributed to this. It would certainly be helpful if such areas could be located so that aircraft could avoid them.

Smith was given the principles of a "binding meter" and he then set out to work out the detailed design. He and his colleagues constructed a number of these instruments and had them tested and many areas of reduced binding were located. One of the problems encountered was in the discovery that these areas tend to move about so that they are not always found in the same spot.

After testing, which proved the validity of his source of information, Smith passed this information on to the Aviation Branch of the Department of Transport for further testing. They failed to do anything about it. As Smith said:

Unfortunately, because of the unorthodox source of this information, efforts so far to obtain official recognition have resulted only in more letters being added to the "crank file".³¹

Another interesting aspect of Smith's work is that in 1952 he was provided by the US Air Force with a metallic fragment which had been shot from a flying saucer by a jet fighter near Washington, D.C. in July of that year. The fragment was loaned to him

for study purposes, but was returned to an authority "much higher than the US Air Force."³² I have confirmation of this episode from a highly reliable source.

In 1955, Smith told the House of Commons Special Committee on Broadcasting that the results of his UFO measurements were "nil", which contradicts the facts already reported here.³³ It is evident that he was expressing the official government public policy of the time, bearing in mind that he was addressing a Parliamentary Committee as a Public Servant. He continued to publicly express his personal opinions on the matter, which were in agreement with the facts reported in this book.

Shortly before Wilbert Smith passed away, he wrote a small book in which were published some of the basic scientific concepts as revealed to him by our visitors from space, or "the boys from Topsy" as he preferred to call them. In this book he said:

Many shining nuggets of truth lie buried at our feet and if we are not too proud to dig, we will find them . . . Truth is not hidden; it is available to all and is the same for all. Apparent differences must be due to inadequate understanding.³⁴

While Smith named his work **The New Science**, it is, of course, new only in the sense that it is new to us; like all other natural laws, it has always been in existence and its truth is as old as Eternity itself. It was typical of Smith's modesty and integrity that he should claim no personal credit for this work and he inscribed his original manuscript with a simple by-line:

Assembled by W. B. Smith from data obtained from Beings more advanced than we are.

In his book, Smith shows that our universe consists of twelve "dimensions", or four "fabrics" of three parameters each. These twelve parameters are the necessary and sufficient conditions for the existence of the physical universe as we have it, he said. He admitted this sounded rather weird, but insisted "it is quite self-consistent and from it we can obtain rational explanations of all of which we are aware and **entirely without anomalies**". Under these concepts, the velocity of light is **not** a constant and is **not** a limiting velocity. Time is **not** a continuous flow but under varying conditions will show different quantities within specific intervals. Gravitation is **not** a primary force but a function, and is subject to manipulation, he tells us. (Emphasis added).

As the Foreword to his book states:

A first reading of this book will undoubtedly leave the reader with many questions in mind, and with few answers immediately obtainable. As a work which purports to provide a comprehensive yet simplified understanding of the universe and of reality as we observe it, it will appear most novel in its development, intricate in its ramifications, and will challenge the most vivid imagination. Yet, the implications are far-reaching in their significance and the applications innumerable. The serious reader is advised to read it often, and most important of all—to think.

THE NEW SCIENCE attempts to provide a fundamental understanding of reality in general and of our known universe in particular. It advances a unified concept governing our awareness of reality, explains the generation of this reality, and describes the factors which mold it into the numerous forms in which we find it. To some extent it is not a "first" attempt. For centuries philosophers and scientists have, with varying degrees of success, framed hypotheses with the same considered objective. It may be said that such attempts at a unified understanding of the universe is a natural result of man's inquisitiveness and his searching need of the ultimate order. THE NEW SCIENCE is unique, however, in bringing into play not only those factors which are usually considered as physical or material, but also the more subtle yet no less important influence of the mental and spiritual.

The work was produced after many years of thought and investigation. Existing concepts were considered in all their scope and depth. It is the belief of many that numerous "clues" were obtained from civilizations much more advanced than ours. Some of the more physical aspects were confirmed by actual experiment and the less tangible considerations tested against observable data and evaluated for consistency.

Wilbert Brockhouse Smith passed away, from cancer, on December 27, 1962, at the young age of 52. Canada lost a curious and sincere figure.

TOP SECRET

Mr. Edwards should write to the Dept of National Defence Ottawa requesting that clearance may be obtained for Mr. W. B. Smith to visit the appropriate Service in the United States to discuss the use of terrestrial magnetic forces in relation to aerodynamic problems associated with saucer shaped objects .

In the covering request, the Department of Transport should relate in as much detail as possible the objects of this study and also detail the work which has been carried out in the geophysical field in Canada.

Information unofficial- obtained from Dr. Robert I Sarbacher , dean of the Graduate school, Georgia University.

UAT 26/2

C
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MINUTES OF A CONFERENCE OF UNITED STATES
AND CANADIAN OFFICIALS ON MAGNETIC AND
IONOSPHERIC STATIONS IN THE CANADIAN ARCTIC.

ROOM 123, EAST BLOCK,

MAY 14, 1947

PRESENT:

D.M. JOHNSON.	DEPT. OF EXTERNAL AFFAIRS, OTTAWA
GUY BEAUDRY.	" " " " "
COL. J.C. HODGSON.	MILITARY ATTACHE (AIR) U.S. EMBASSY
DR. NEWBURN SMITH.	CENTRAL RADIO PROPAGATION LABORATORY
	WASHINGTON
LT. CMDR. E. B. ROBERTS	U.S. COAST AND GEODETIC SURVEY
LT. CMDR. S. B. GRENDEL	" " " " "
E.G. BENNETT	DEPARTMENT OF TRANSPORT
	(RADIO DIVISION)
ANDREW THOMSON	DEPARTMENT OF TRANSPORT
	(METEOROLOGICAL DIVISION)
H. D. CAMERON	DEPARTMENT OF TRANSPORT
	(METEOROLOGICAL DIVISION)
R.G. MADILL	DOMINION OBSERVATORY, OTTAWA
W/C K.C. MACLURE	R.C.A.F.
LT. COL. G.W. ROWLEY	DEFENCE RESEARCH
F.T. DAVIES.	DEFENCE RESEARCH (R.C.N. & N.R.C.)
J.H. MEEK	DEFENCE RESEARCH
DR. C. S. BEALS (CHAIRMAN)	DOMINION OBSERVATORY
J.C.W. SCOTT (SECRETARY)	DEFENCE RESEARCH

INTRODUCTION:

The meeting was opened by Mr. D. M. Johnson who welcomed the United States representatives and outlined the purpose of the meeting. Mr. Johnson referred to the previous meeting of Canadian and United States officials which had been held on February 27th in connection with the Arctic weather station programme at which time it had been agreed that the possibility of attaching technical personnel for the purpose of making magnetic and ionospheric observations should be held over for subsequent discussion. The present meeting was taking place as a result of a request transmitted through the United States Embassy for a discussion on the supplementary question of magnetic and ionospheric observations. It was emphasized that unlike the weather station programme, Government approval had not been obtained for any additional programme of this nature. The present meeting, therefore, between technical representatives was essentially of an exploratory character and had the object of determining the work in this field now being conducted and any additional research which might be required.

ITEM I.

PRESENT STATUS OF MAGNETIC SURVEYS IN CANADIAN ARCTIC

Mr. Madill described the extensive programme of magnetic field measurements that was underway in the Arctic North of 60° latitude.

202 field stations had been occupied. At 75 of these the declination, horizontal force and inclination had been measured. At the remainder only the declination was taken.

However, no permanent magnetic observatory was operated by the Dominion Observatory north of 60 degrees latitude. At the Clyde Ionosphere station, now operated by the Department of Transport, field variations had been measured since 1943.

A complete magnetic observatory was planned for Churchill and another at Goose Bay, Labrador. Baker Lake was being established as a temporary observatory until Churchill was operating. After the Churchill observatory was in full operation, Baker Lake would in all probability be continued as an out station.

Mr. Thomson considered that Winter Harbour might eventually become a general research base, but emphasized the problems of housing and transportation. All existing facilities were required for the planned Meteorological programme this year.

Commander Roberts described a new method of magnetic recording which necessitated only a small hut for the instruments. He considered that one magnetic observer, assisted by Meteorological observers could well take care of this equipment.

ITEM II

PRESENT STATUS OF MAGNETIC SURVEYS IN ALASKA & GREENLAND

Commander Roberts stated that the magnetic survey of the southern half of Alaska was fairly complete. A party would be in the field in Northern Alaska this summer. Field surveys were not comprehensive in the North.

A new complete observatory was now being contracted for in Fairbanks.

First class stations were being operated by the Danes at Thule and Godhavn in Greenland. Good coverage of the West Greenland Coast existed and the Danes were organizing an expedition to North Greenland.

ITEM III

DISCUSSION OF NEED FOR ADDITIONAL FIELD STATIONS AND OBSERVATORIES

Commander Roberts considered that the need for field stations was adequately covered by the Canadian programme.

He considered an ideal network of permanent magnetic observatories in the Arctic would be met by the following sites:

1. Eureka Sound
2. Peary Land, Greenland
3. Point Barrow, Alaska
4. Julianehaab, Greenland

5. Goose Bay, Labrador
6. Winter Harbour.
7. Baker Lake, or alternatively, Churchill.

Commander Roberts considered that the Clyde area was adequately covered by Thule and Godhavn.

The meeting recommended the establishment of magnetic observatories at the following points:

- a. Eureka Sound. This would be on a small scale and temporary basis for the first year or two after which the value of the Observations would be assessed and the question of a more permanent observatory reviewed. The first observations should be carried out at as early a date as possible.
- b. Winter Harbour. This should be established as soon as meteorological commitments permit which will probably be in 1948.
- c. Goose Bay. Preliminary steps towards establishing this observatory have already been taken.
- d. Baker Lake. After Churchill has been established this will probably operate as an outpost of Churchill.

ITEM IV.

MEANS OF CARRYING OUT NEEDED EXTENSION OF MAGNETIC SURVEYS

- (a) It was pointed out that limitations of transport restricted the establishment of ground magnetic stations in the Arctic.
- (b) AIRBORNE MAGNETIC SURVEYS. The U.S. Army Air Forces consider making magnetic declination surveys of the Arctic using C 54 planes equipped with various magnetic compasses, directional gyros, gyro stabilizers, continuous strip cameras, navigational equipment including Loran etc.

It was pointed out that the present types of magnetic compass are not reliable in the Arctic where the horizontal force is small but that more accurate equipment and reliable declination charts would provide a valuable aid to navigation as well as important scientific data.

The meeting recommended that the possibility of instituting a Canadian programme to parallel the U.S. Air Survey Programme should be examined.

INSTRUMENTATION

(c) Commander Roberts described the development of air borne magnetometers to measure intensity to 100 gammas and direction and dip to one degree. Some discussion of air borne magnetic instruments ensued. Mr. Madill and Mr. Davies pointed out that the National Research Council, and the RCAF were also engaged in the development and use of air borne magnetic instruments.

It was recommended that further meetings be held on air borne instrumentation and that research on sensitive air borne magnetometers should be given a high priority.

EXCHANGE OF DATA

(d) It was pointed out that American and Canadian magnetic data was freely available but that publication was behind hand. Commander Roberts stated that photographs of unscaled U.S. data were immediately available and that the U.S. authorities were very interested in obtaining results from Canadian stations for scientific purposes.

ITEM V.

PRESENT STATUS OF IONOSPHERIC RESEARCH IN CANADIAN ARCTIC

Mr. Davies outlined the present programme of Ionospheric research in the North.

He explained that of the six fixed Canadian stations one was at Churchill, which is in the Auroral zone and one was at Clyde, Baffin Land, well north of the Auroral zone.

The distribution of stations was arrived at after close liaison with the Central Radio Propagation Laboratories, Washington, so as to fit into the world network of Ionosphere stations. Problems of radio frequency prediction were complicated in the Arctic by the presence of the Auroral zone, and of the Magnetic pole. Because of these factors, interpolation of data between stations was doubtful. It was of great importance to make magnetic and ionospheric measurements at the same points so as to establish the relations between the two phenomena. Measurements through the Auroral zone were being amplified by use of a mobile Observatory. Air borne measurements were also planned though the value of these was so far speculative.

An Ionosphere station at Winter Harbour was proposed to fill the gap in coverage west of the magnetic pole. Additional stations should be located so as to establish a North-South line of combined magnetic and ionospheric Observatories. For this reason a station at Baker Lake has been proposed to complete a North-South line including Winter Harbour, Baker Lake, Churchill, and Portage La Prairie.

ITEM VI

PRESENT STATUS OF IONOSPHERIC RESEARCH IN ALASKA AND GREENLAND

Dr. Newburn Smith advised that only field strength recordings of W.W.V. of 5 and 10 Mc. were being made at Thule in Greenland.

In Alaska at College, vertical absorption measurements were planned. In addition a vertical pulse recorder and field strength recorders were operating.

UAT 26/2.1

Committee on Geophysical Sciences
of the
Research and Development Board

21 October 1947

PANEL ON THE UPPER ATMOSPHERE

COPY

INTELLIGENCE REPORT

For General Use by Any U.S. Intelligence Agency

FROM Military Attache Ottawa, Ontario DATE 7 July 1947
AGENCY OR OFFICER STATION

SOURCE Department of External Affairs EVAL. A-1

AREA REPORTED ON Canada SUBJECT Minutes of Conference of United
States and Canadian Officials on Magnetic and Ionospheric Stations in
Canadian Arctic

Reference

(Directive, Correspondence, Previous Report, etc.
if applicable)

SUMMARY: Enter careful summary of report, containing substance succinctly stated. Answer questions where, when, what, how, how many, and give date of event. In a final one sentence paragraph give significance. Begin text on Page 2.

There are forwarded herewith two copies of "Minutes of a Conference of United States and Canadian Officials on Magnetic and Ionospheric Stations in Canadian Arctic".

The conference was held at Ottawa, Canada, on 14 May 1947 and the minutes contain the following discussions:

Introduction

Present Status of Magnetic Surveys and Canadian Arctic
Discussion of Need for Additional Field Stations and Observations
Means of Carrying Out Needed Extensions of Magnetic Surveys
Present Status of Ionospheric Research in Canadian Arctic
Present Status of Ionospheric Research in Alaska and Greenland
Requirements for Additional Ionospheric Stations and Measurements
Method of Ionospheric Research in the Arctic.

FORWARDED FOR AND IN THE ABSENCE OF THE MILITARY ATTACHE:

JACK C. HODGSON
Colonel, Air Corps
Military Air Attache