

OTTAWA, Ontario, November 20, 1950.

Geo-Magnetics

(R.ST.)

MEMORANDUM TO THE CONTROLLER OF TELECOMMUNICATIONS:

For the past several years we have been engaged in the study of various aspects of radio wave propagation. The vagaries of this phenomenon have led us into the fields of aurora, cosmic radiation, atmospheric radio-activity and geo-magnetism. In the case of geo-magnetics our investigations have contributed little to our knowledge of radio wave propagation as yet, but nevertheless have indicated several avenues of investigation which may well be explored with profit. For example, we are on the track of a means whereby the potential energy of the earth's magnetic field may be abstracted and used.

On the basis of theoretical considerations a small and very crude experimental unit was constructed approximately a year ago and tested in our Standards Laboratory. The tests were essentially successful in that sufficient energy was abstracted from the earth's field to operate a voltmeter, approximately 50 milliwatts. Although this unit was far from being self-sustaining, it nevertheless demonstrated the soundness of the basic principles in a qualitative manner and provided useful data for the design of a better unit.

The design has now been completed for a unit which should be self-sustaining and in addition provide a small surplus of power. Such a unit, in addition to functioning as a 'pilot power plant' should be large enough to permit the study of the various reaction forces which are expected to develop.

We believe that we are on the track of something which may well prove to be the introduction to a new technology. The existence of a different technology is borne out by the investigations which are being carried on at the present time in relation to flying saucers.

While in Washington attending the NARB Conference, two books were released, one titled "Behind the Flying Saucer" by Frank Scully, and the other "The Flying Saucers are Real" by Donald Keyhoe. Both books dealt mostly with the sightings of unidentified objects and both books claim that flying objects were of extra-terrestrial origin and might well be space ships

from another planet. Scully claimed that the preliminary studies of one saucer which fall into the hands of the United States Government indicated that they operated on some hitherto unknown magnetic principles. It appeared to me that our own work in geo-magnetics might well be the linkage between our technology and the technology by which the saucers are designed and operated. If it is assumed that our geo-magnetic investigations are in the right direction, the theory of operation of the saucers becomes quite straightforward, with all observed features explained qualitatively and quantitatively.

I made discreet enquiries through the Canadian Embassy staff in Washington who were able to obtain for me the following information:

- a. The matter is the most highly classified subject in the United States Government, rating higher even than the H-bomb.
- b. Flying saucers exist.
- c. Their modus operandi is unknown but concentrated effort is being made by a small group headed by Doctor Vannevar Bush.
- d. The entire matter is considered by the United States authorities to be of tremendous significance.

I was further informed that the United States authorities are investigating along quite a number of lines which might possibly be related to the saucers such as mental phenomena and I gather that they are not doing too well since they indicated that if Canada is doing anything at all in geo-magnetics they would welcome a discussion with suitably accredited Canadians.

While I am not yet in a position to say that we have solved even the first problems in geo-magnetic energy release, I feel that the correlation between our basic theory and the available information on saucers checks too closely to be mere coincidence. It is my honest opinion that we are on the right track and are fairly close to at least some of the answers.

Mr. Wright, Defence Research Board liaison officer at the Canadian Embassy in Washington, was extremely anxious for me to get in touch with Doctor Solandt, Chairman of the Defence Research Board, to discuss with him future investigations along the line of geo-magnetic energy release.

I do not feel that we have as yet sufficient data to place before Defence Research Board which would enable a program to be initiated within that organization, but I do feel that further research is necessary and I would prefer to see it done within the frame work of our own organization with, of course, full co-operation and exchange of information with other interested bodies.

I discussed this matter fully with Doctor Solandt, Chairman of Defence Research Board, on November 20th and placed before him as much information as I have been able to gather to date. Doctor Solandt agreed that work on geo-magnetic energy should go forward as rapidly as possible and offered full co-operation of his Board in providing laboratory facilities, acquisition of necessary items of equipment, and specialized personnel for incidental work in the project. I indicated to Doctor Solandt that we would prefer to keep the project within the Department of Transport for the time being until we have obtained sufficient information to permit a complete assessment of the value of the work.

It is therefore recommended that a PROJECT be set up within the frame work of this Section to study this problem and that the work be carried on a part time basis until such time as sufficient tangible results can be seen to warrant more definitive action. Cost of the program in its initial stages are expected to be less than a few hundred dollars and can be carried by our Radio Standards Lab appropriation.

Attached hereto is a draft of terms of reference for such a project which, if authorized, will enable us to proceed with this research work within our own organization.

(W.B. Smith)
Senior Radio Engineer

PROJECT MAGNETPURPOSE

This project is for the purpose of studying magnetic phenomena, particularly those phenomena resulting from unusual boundary conditions in the basic electromagnetic theory. There is reason to believe that such phenomena exist and that their discovery will open up a new and useful technology.

ORGANIZATION

The initial organization shall be as small as practical and composed of personnel who are used to working together, including so far as possible a variety of research abilities. Laboratory facilities are to be drawn from existing facilities so far as possible. Overall responsibility for the project shall rest with the engineer-in-charge, who shall delegate such responsibility to subordinates as may be required to carry out the project.

PROGRAM

The initial program shall include the following avenues of investigations, to which others may be added from time to time as may appear expedient.

1. Theoretical study of electromagnetic radiation assuming boundary conditions different from those upon which the conventional theory was developed.
2. Laboratory study of the mechanical forces associated with electron drift and electric currents in metallic masses.
3. Theoretical and laboratory study of magnetic domain resonance conditions in magnetic materials.
4. Investigation of the propagation of magnetic wave motion in magnetic materials.
5. Investigate the possibility of producing, in effect, a "sink" in a magnetic field.
6. Investigate the possibility of producing, in effect, single isolated magnetic poles.
7. Investigate the effects of a magnetic field on a rotating curvilinear metallic object.

COORDINATION

Full coordination is to be maintained, within security regulations, with other groups working on parallel or associated problems. Project reports will be available on a classified basis to suitably accredited groups or individuals.

SECURITY

As in the case with most fields of research, it is impossible to assess the results in advance which may be obtained through this project. However, there exist certain suspicions that the lesser known and little explored aspects of magnetism may hold the key to a new and significant technology. Consequently, it is intended to classify this work in its entirety until such time as it can be assessed for its impact on our civilization.