transmission frequency have been found to cause the continuous background signal to disappear, leaving only isolated meteor echoes, or bursts.

The practical usefulness of this form of transmission stems from the fact that for point-to-point communication between locations of the order of 800–1000 miles, the possibility of dispensing with the usual procedure of changing frequency two or three times a day in order to follow diurnal changes in the regular layers is offered. If a nominal increase in transmitted power over the value customarily used for layer-propagated transmission over circuits of this sort would be acceptable, it appears that meteor reflections could be relied on to provide usable transmission when other methods had failed. The use of one frequency throughout the 24 hr not only simplifies transmitter design and operation, but also conserves valuable space in the radio spectrum.

The signal obtained in the above-mentioned tests could be accounted for in part as another manifestation of the "ionospheric forward-scattering" suggested as taking place at 50 megacycles (*2*). It is too early to discuss this possibility in detail. However, it is clear that meteors play a very large part in the 15-megacycle experimental observations. On theoretical grounds, it appears that meteors alone could account for the observed signal.

A more detailed account of this work is published elsewhere (*4*).

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Comments and Communications

Rapid Aerial Survey of Gulf Stream with Camera and Radiation Thermometer[1]

During the cold half of the year a sharp discontinuity of surface temperature (often amounting to 20° F in less than 100 yd) occurs along the northern border of the Gulf Stream. The recent discovery (*1*) of meanders in the Gulf Stream has stimulated efforts to devise rapid means for surveying its course, and we (Parson and Stommel) decided to investigate the possibility of tracing the thermal discontinuity on the ocean surface by flying an infrared detector along it.

A Goylay detector (*2*) is exposed alternately to the sea surface and to a reference black body in the instrument by means of a rotating shutter. The temperature of the black body is adjusted by admitting hot or cold water into it until the chopped signal from the Golay cell is nulled. Were there no absorption and emission of thermal radiation by the atmosphere between the cell and the sea, the temperature of the black body would be that of the sea surface. In practice, however, a minimum altitude of 1000 ft is safe over long ocean flights. Enough radiation from the sea penetrates the lowest 1000 ft of the atmosphere to make the sharp thermal discontinuity easily detectible, although the actual temperature of the sea surface is not indicated by that of the black body.

To date three surveys have been made. Positions of the thermal discontinuity on Nov. 26, 1952 are shown in Fig. 1 by dots; the visual evidence of the northern

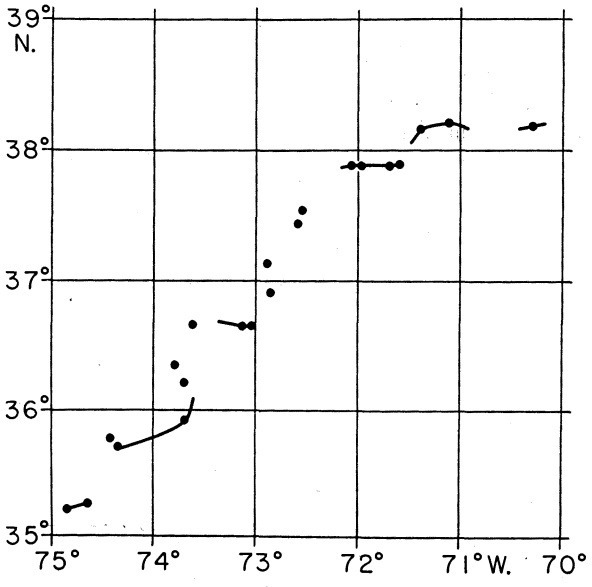

FIG. 1.

edge of the Stream cited by Kielhorn (*3*) (contrast in color and sea-state) was confirmed. A wide angle (80°) time lapse (72 frames/min) motion picture camera directed straight ahead (von Arx) recorded visual evidence of the edge of the Stream at positions marked by segments of curves on the figure. The general appearance of the course of the Stream is similar to that obtained by ship (*4*).

The primary obstacle to extending this type of survey to areas further to the east is the range and endurance of aircraft; but it does seem quite clear that

[1] Contribution No. 597 of the Woods Hole Oceanographic Institution, work supported by the Bureau of Aeronautics and the Office of Naval Research. A Navy PBY airplane carried the apparatus.

an airborne infrared detector is capable of providing an almost synoptic oceanographic chart of surface thermal gradients over a much greater area and in a shorter time than can be obtained using surface vessels.

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Terminology of Pigment Cells

At a conference[1] on the Biology of the Normal and Atypical Pigment Cell we presented our suggestions for the revision of the terminology of pigment cells. The need for this revision has become apparent with the increasing activity in melanin research being carried out by the many investigators in diverse fields.

Investigators in biology and medicine at the present time are using different terms for the same cell. For example, the term melanophore which has long been used by biologists refers to certain dentritic-shaped cells in the skin of fish, amphibians and reptiles which have "contractile" properties. The melanin contained in the melanophores may, in response to certain stimuli, disperse into the dendrites or concentrate in the perikaryon, thus accounting for the color change. In human cytology and pathology the term melanophore is a macrophage. Similarly, the term melanoblast is used by medical investigators for the mature cell elaborating melanin, whereas in biology the term melanoblast refers to an immature pigment cell during its migration from the neural crest. The confusion of terminology is apparent when the terms used by biologists and medical investigators are compared as in Table 1.

TABLE 1

PRESENT TERMINOLOGY OF PIGMENT CELLS

	Biology	Medicine
Mature melanin-forming cell	Melanophore*	Melanoblast†
Immature melanin-forming cell	Melanoblast	No term
Cell with phagocytized melanin	Macrophage	Melanophore
"Contractile" cell	Melanophore	Melanophore

* Melanophore, melanin-bearing cell (*melas* Gr. black; *phore* Gr. to bear).

† Melanoblast, immature melanin cell (*melas* Gr. black; *blast* Gr. germ).

[1] Third Conference on the Biology of the Normal and Atypical Pigment Cell, held in New York, November 1951.

It is noted from the actual translation of the words melanophore and melanoblast that in their present usage these terms do not connote the meaning desired. The term melanoblast for the *mature* pigment-forming cell as originally suggested by Bloch is objectionable because in the modern cytological sense the suffix *blast* is applied to immature cells which differentiate into mature cells (for example, erythroblast, lymphoblast, and leukoblast).

The terms listed in Table 2 represent the consensus of opinion of investigators[2] in melanin research in the United States and Europe.

TABLE 2

RECOMMENDED TERMINOLOGY OF PIGMENT CELLS

Mature melanin-forming cell	Melanocyte
Immature melanin-forming cell	Melanoblast
Cell with phagocytized melanin	Macrophage (or melanophage)
"Contractile" cell	Melanophore

This nomenclature of pigment cells has been adopted by the National Research Council, Committee on Pathology, Subcommittee on Onocology, and is used by contributors to the book *Pigment Cell Growth*, edited by Myron Gordon, Academic Press, New York.

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[2] The following were consulted either personally or by letter: Arthur C. Allen, S. W. Becker, Sr., S. W. Becker, Jr., H. S. Bennett, R. E. Billingham, Helen O. Curth, A. J. Dalton, H. Eastlick, Edward A. Edwards, Peter Flesch, Benson Ginsburg, Myron Gordon, Marie L. Hesselbach, H. Z. Lund, H. S. Mason, P. B. Medawar, Hamilton Montgomery, George Pack, Mary E. Rawles, G. P. DuShane, E. F. Traub, I. P. Trinkaus, Fred Weidman, Helen Wilder, George B. Wislocki.

Miseducation of the Public in Scientific Matters

Today miseducation of the public in scientific matters has become a multi-million dollar industry. As a consequence, all the means of mass communication are being turned upon the public to flood it with "scientific facts" about chlorophyll, about cigarettes, about new drugs, about food, about one's body—indeed, "scientific facts" about almost everything vital to one's very existence.

Unfortunately many of these scientific facts are insidiously concocted by slick advertising copywriters. More are ground out by authors of uncritical, sensationalized magazine articles. Still others are eagerly conveyed by warm, friendly voices on radio and television. Some are invented by novelists and playwrights purely as literary devices. And finally there are the scientific facts poured out by faddists, cultists, pseudoscientists, and skillfully camouflaged quacks—who sometimes become authors of best sellers.

In 1947 W. Wendell Rázim launched a one-man