

WOODS HOLE OCEANOGRAPHIC INSTITUTION
WOODS HOLE, MASSACHUSETTS

May 15, 1947

Dear Walter

Just a note to say hello & that
I have been building an infra-red sleeve

that ~~I am~~ ^{is} to be used for
sea-surface temperature measurement if
it works. I am having electronic

troubles, but hope to get them
straightened. We will send you an official

memo about it pretty soon.

I had a chance to talk with
Dr. Sverdrup while he was here, and
he says you are still thinking about
surface waves and are putting out a
paper about their generation soon. I
would like very much to see it.

I think you might be able to observe
the separation of the boundary layer
from crests if you used a heavy cold

Good
idea

May 19, 1947

Mr. Henry Stommel
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Dear Hank:

Thanks a lot for your note. I have heard from Bill von Arx about your scheme for measuring sea surf temperature by means of infra-red radiation. I think this is a very good scheme. You may have heard that Dale Leipper here at Scripps had about the same idea some time ago and had actually suggested the problem as a possible project for ONR.

I am interested in your suggestion concerning the measurement of the separation of the boundary layer by using dry ice. I won't have a chance to try it in the near future. Please let me know any results you might have.

I am busy now writing up two Bikini papers. When this is complete, we shall prepare a number of instruments along the Scripps Institution pier, especially designed to measure tsunamis and also the mean rise in sea level due to wave action.

With many regards,

Yours,

Walter H. Munk

WHM:JS

July 1

Dear Walter —

Just a note to say hello & let you know my plans

I am going to England, I think, in about two months to work with R. V. Southwell on oceanic tides & this numerical tide theory business that we talked about so long ago ~~with~~ together in Princeton. Southwell offered to collaborate, and I can only hope that I can hold my end up.

I got a letter from Bill Wood to the effect that he's going to the Philippines. Give my best to Anita Schuster & my best regards to you & your wife.

Hank Stommel

July 10, 1947

Mr. Henry Stommel
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Dear Hank:

I was very interested to hear that you are planning to go to England to work on tides. This ought to be a very interesting problem and I wish you the best of luck.

I am planning to go to England and Norway late next year, in time to attend the meeting of the International Geophysical Union. After the meeting I hope to be able to stay in Norway for a number of months and work there.

I wonder whether you have learned what the Office of Naval Research policy is regarding trips of this type. In my case I would continue to do the same type of work I would be doing at Scripps under the Navy project. If you can give me any hints as to whether and how this might be arranged, I should very much appreciate it.

With best regards.

Yours,

Walter H. Munk

WHM:sac

April 7, 1948

Mr. Henry Stommel
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Dear Hank:

Thank you for your kind words. I will certainly send you a rough draft of the manuscript on wind stirring. We are definitely scheduled for the analysis beginning Monday, April 12th, and I hope to be able to send you the manuscript a few weeks later.

It was certainly fun talking to you in New York.

Yours,

WHM:SAC

Walter

WOODS HOLE OCEANOGRAPHIC INSTITUTION
WOODS HOLE, MASSACHUSETTS

July 14, 1947

Dear Walter,

Thanks a lot for your letter
and I hasten to reply that I don't
know anything about ONR policy
regarding type of this type. ^(England etc.) Columbus
Belin very kindly has offered to give
me some Institution funds for this
purpose.

My very best to you & your wife

Yours truly
Hank

September 9, 1947

AIR MAIL

Mr. Henry Stommel
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Dear Hank:

Dr. Sverdrup and I have read with very much interest your paper on the wind driven oceanic circulation. You have made an important contribution to oceanography in being able to explain what is perhaps the most outstanding feature in the general circulation pattern of the sea.

It is strange that you have done a job with which I have been playing around for some time. Indeed, the whole problem of wind stresses and oceanic circulation appears suddenly to have received attention. You probably noticed a paper by Hidaka in the last issue of the Transactions of the American Geophysical Union. Dr. Sverdrup has prepared a very interesting paper which explains the known equatorial current changes on the basis of wind stresses. Dr. Sverdrup's paper is now in press and will appear in the proceedings of the National Academy.

I assume you will be going to England soon and I wish you good luck in your trip.

Kindest regards.

Yours,

Walter

WHM:SAC

WOODS HOLE OCEANOGRAPHIC INSTITUTION
WOODS HOLE, MASSACHUSETTS

September 11, 1947

Dear Walter

Thank you very much for your letter and comments. I hope you will be here at the Woods Hole A. G. U. meeting, but in case you do not come I ~~am~~ probably won't see you until the Spring. I am going to London the 26th of this month for about 4 months to work with Southwell on the numerical tide business. I hope it does not turn out to be a dud.

I look forward to seeing Dr. Sverdrup's National Academy paper.

My very best wishes to you + your wife.

Hank.

February 24, 1948

Mr. Henry Stommel
Imperial College Hostel
S. Kensington, S. W. 7
England

Dear Hank:

I was East for a week and found your letter upon my return here. I am familiar with Richardson's paper and the point of view he takes regarding turbulence. Have you ever looked at Scripps Institution of Oceanography oceanographic reports Nos. 1, 2 and 6? We sent copies of these reports to Columbus.

I am planning to go to Norway in July and to study for about six months. I have applied for a Guggenheim Fellowship to study the problem of wind-driven currents by extending somewhat the analysis Dr. Sverdrup used in his recent article on equatorial counter currents.

Sverdrup, H. U., : 1947. "Wind-Driven Currents in a Baroclinic Ocean, with Application to the Equatorial Currents of the Eastern Pacific",
Proc. Natl. Acad. of Sciences, v. 33, pp. 318-326.

I think you would find this a very interesting paper.

I will attend the New York Academy of Sciences meeting on March 12th and 13th. Would it be possible for you to attend this meeting? I am very anxious to get together with you and talk about problems in which we are mutually interested.

Yours,

WHM:SAC

Walter H. Munk

November 20, 1947

Mr. Henry Stommel
Imperial College Hostel
S. Kensington, S. W. 7
England

Dear Hank:

Thank you for your interesting but rather sad letter. Everybody seems to be very discouraged the way things are going in England.

It is very good news that you have made progress with your study of tides and the success by means of the relaxation methods. We will probably meet after you return and I am looking forward to talking to you some more about it.

Regarding purchase of a wave analyser from the Admiralty, I believe the situation is not very favorable. The possibility was discussed in detail but given up because Klebba felt he could build a better instrument for very much less money. So far, this hasn't happened, I believe.

You will be interested to hear that your paper on "The Fixed Intensification of Wind-Driven Ocean Currents" was sent to me by the AGU editor. I shall return it with high recommendations.

With best regards.

Yours,

WHM:SAC

Walter H. Munk



Collected from 1932

IMPERIAL COLLEGE ^{HOSTEL} UNION,

S. KENSINGTON, S.W. 7.

KENSINGTON 2963.

Nov 1, 1947

Dear Walter,

I have been over here for about a month now & I have now found that I can positively work tide problems by relaxation methods. I have been working on a few geometrically simple problems. First. The initial problem I tried was a zonal ocean bounded by latitudes $25^{\circ}S$ & $65^{\circ}S$. "the Antarctic Ocean". I have just finished trying the effect of putting a barrier across this zonal ocean to see what the effect of the Drake Strait (Cape Horn to Palmer Peninsula)

must be on the tide generated
in the Antarctic Ocean. Next
I will put in the major
oceans (Pacific Indian Atlantic)
by degrees, first using
geometrically simple basins.

I saw Bondmon & Dodson
last week and find that they
have also been trying similar
methods for the Irish Sea.

I also went out to the
Admiralty to see G. E. R. Deacon—
and he has been very
hospitable & kind to me. He
has some very fine wave
analyzers at present. I understand
they would like to sell one, and
that they are quite superior
in resolving power to anything
we have, although they are quite
bulky.

The situation in general is quite dreary here, Walter. We eat mostly potatoes & cabbage. No milk, butter, eggs, meat to speak of. I saw a ^{single} peach for \$1.50 in a store window the other day - & cigarettes are 75¢ for twenty, no gas for cars. The poor food affects everyone, especially the old people who are mostly thin & gaunt looking. When I think what it must be like in Germany & Austria I shudder.

Well my best wishes to

you Walter and to your wife.

Yours truly
Hank (Stommel)

Collectual Policy

1932

April 2, '48

Dear Walter,

I was greatly intrigued by
your account of your work on
the mixing layer using the
California D. Analyzer.

If you have any prepared
manuscripts or first drafts
I should very much like to
see one

My best to you & your wife.

Rank Stommel

Congratulations on the very
interesting paper that appeared in
the Sears Found Jour. of Mar Res.

A.