



CABLE ADDRESS "RESEARCH"

IN YOUR REPLY PLEASE QUOTE

FILE No. 45-17-130-3

NATIONAL RESEARCH COUNCIL
CANADA

RADIO AND ELECTRICAL
ENGINEERING DIVISION

OTTAWA, 14 December, 1951.

Mr. Grote Reber,
212 West Seminary Avenue,
WHEATON, Illinois.

Dear Reber,

I was certainly pleased to receive your letter and to learn of your high altitude observatory. I hope you will be able to assemble everything soon and start obtaining some data. You didn't mention any operating wavelength, but in view of the large antenna height I have guessed that you will be operating at the longest possible wavelength in order to get some data during the coming sunspot minimum.

We are still maintaining our solar observations with the four-foot reflector and have obtained about three months' records with the long waveguide array. The array is mounted as a meridian telescope so that it can be set at any declination. In the NS direction the beam width is 20° , while in the EW direction the beam is about 0.12° . This is a calculated value which has been checked only once, making use of the drift curves from a large single spot on the Sun. During the three months the Sun has been reasonably free of spots. This occurred only once, around October 4, and we are in the process of trying to find the radial distribution of temperature. Unfortunately our preliminary attempts at finding the point source in Taurus have led to negative results. We will have another try after we have cleaned up a few details which will give us 3 decibels more sensitivity. I have enclosed some photographs of the long array antenna, as well as some of a 10-foot parabolic reflector which does not yet have a receiver. Just now we are experiencing our first cold winter weather -- 0° at night--and the long array has not been able to stand up under the stresses. One of the middle joints has pulled apart so there is a $5/16$ " gap in the middle.

I am certainly sorry that I will miss seeing you at the Cleveland meetings of the A.A.S. We will be very pleased to see you if you have an opportunity to come to Ottawa. During the past year I have enlarged our home, so we now have a spare bedroom and would be only too pleased to have you stay with us.

Yours sincerely,

Arthur E Covington

A. E. Covington.

AEC:HP









NATIONAL RESEARCH COUNCIL
DIVISION OF RADIO AND ELECTRICAL ENGINEERING
RADIO ASTRONOMY OBSERVATORY
THIS EQUIPMENT CONTINUOUSLY RECORDS
NATURAL RADIO WAVES FROM OUTSIDE
THE EARTH'S ATMOSPHERE
PLEASE DO NOT DISTURB









