

8TH SEPTEMBER 1959
P.O. Box 2
GREEN BANK, WEST VIRGINIA

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DEAR HAP:

THANKS FOR YOUR LETTER OF THE 31ST AUGUST.
MY PRESENT PLANS ARE TO LEAVE HERE THE EVENING OF THE 20TH
AND SPEND ONE DAY IN PRINCETON. I'LL ARRIVE IN N.Y.C.
SOMETIME BEFORE NOON ON THE 22ND. I HAVE A VARIETY OF
SMALL THINGS TO DO INCLUDING HAVE ANOTHER LOOK THRU THE
RADIO JUNK SHOPS AT THE SOUTH END OF THE ISLAND. WE CAN
GET TOGETHER AT YOUR CONVENIENCE AS I INTEND TO STAY THE
REST OF THE WEEK.

THE TRIP TO MACQUARIE ISLAND HAS BEEN PLANNED EVERY
SINCE MY SUCCESSES AT KEMPTON IN 1956 & 7. THE MODE OF
RADIO PROPAGATION USED AT KEMPTON TO GET THE LONG WAVE
COSMIC STATIC THRU THE IONOSPHERE DEPENDED IN PART ON THE
MAGNETIC FIELD OF THE EARTH BEING NEARLY VERTICAL. AT
KEMPTON THE ANGLE IS 18° FROM THE ZENITH. AT MACQUARIE
ISLAND IT IS 9° FROM ZENITH. THIS, IN COMBINATION WITH
DECREASED SOLAR ACTIVITY SHOULD ALLOW THE OBSERVATIONS
TO BE PUSHED DOWN IN FREQUENCY BY ANOTHER FACTOR OF THREE
OR MORE. FROM THE MAP AND THE FOTOS I'VE SEEN, IT APPEARS
THAT SAWYER CREEK VALLEY IS NEARLY THE SAME SIZE AND
DIRECTION AS JOHNSON VALLEY AT KEMPTON. THEREFORE A NEARLY
IDENTICAL INSTALLATION COULD BE MADE. HOWEVER, THERE MAY
BE AN ADDITIONAL ADVANTAGE. SAWYER CREEK IS 800 MILES
BELOW HOBART AND PROBABLY IS ONE OF THE QUIETEST ELECTRICAL
PLACES ON THE FACE OF THE EARTH. THERE IS NOTHING BUT SEA
IN ALL DIRECTIONS. I WOULD LIKE TO GET THIS STATION GOING
A FEW YEARS BEFORE THE NEXT SOLAR ACTIVITY MINIMUM SO THAT
A CONTINUOUS SET OF DATA MAY BE SECUPED DOWN TO AND JUST
THRU THE MINIMUM. I PLAN TO GO HAVE A LOOK TO FIND OUT
JUST WHAT IS NEEDED. IF THE PLACE IS AUSPICIOUS, I PLAN
TO RETURN THE FOLLOWING YEAR WITH ALL THE GEAR AND MAKE
THE SETUP. I WILL STAY THE FIRST YEAR MYSELF TO MAKE SURE
EVERYTHING WORKS AS IT SHOULD. AFTER THAT THE AUSTRALIANS
CAN PROBABLY UNDERTAKE TO GET THE DATA. WHEN THIS EXPERIMENT
HAS BEEN COMPLETED, I BELIEVE THAT WE HAVE GONE TO AS LOW
A FREQUENCY AS POSSIBLE HERE ON THE EARTH. TO GET TO LOWER
FREQUENCIES WILL REQUIRE THE OBSERVER TO MOVE FARTHER OUT
OF THE CORONA OF THE SUN TO SOME PLACE SUCH AS MARS. I WILL
LEAVE THIS TO OTHERS!

BEST REGARDS,

Grote
GROTE REBER

I'll bring a long wave antenna of Tasmania, Hawaii + Green Bank.

*sent 3 copies JRE July 59
also kept in Penhollow Court.*