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ESSA Technical Report ERL 134-ITS 93-2

UHF Radio Propagation Data for Low Antenna Heights Volume II

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J. M. HARMAN

BOULDER, COLORADO
November 1969





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UHF RADIO PROPAGATION DATA FOR LOW ANTENNA HEIGHTS
VOLUME II

L. G. Hause, F. G. Kimmett, and J. M. Harman

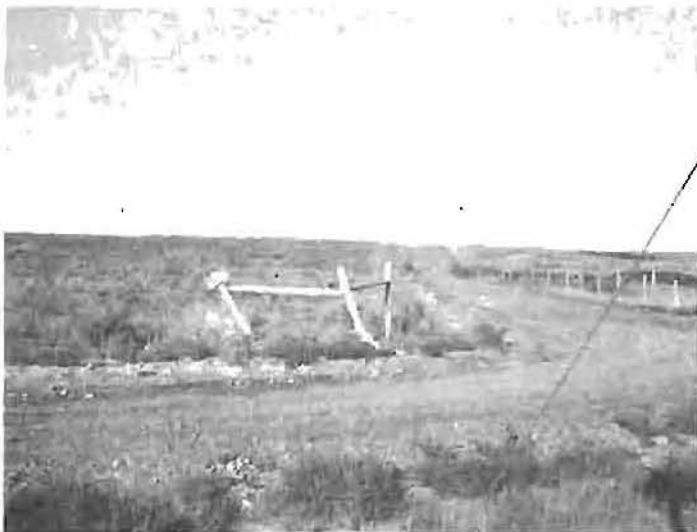
This report is a presentation in two volumes of measurement techniques, data, comparisons, and conclusions obtained from a UHF propagation measurement program at 230 and 415.9 MHz. Antenna heights were 3 m or less above ground. Vertical polarization was used, and the antennas were omnidirectional in the horizontal plane. The terrain was generally rocky, hilly, and relatively free of trees. Path lengths varied from 2 to 45 km. Volume I describes the equipment, techniques, and results and presents data from the Wyoming area, including some buried antenna tests. Volume II presents data obtained in Idaho and Washington.

This volume continues presenting path pictures, data, and supporting information begun in Volume I. Down path pictures were obtained at each site. Path profiles were plotted from U.S. Geological Survey maps. Basic transmission loss was derived for each frequency and for each of the transmitting antenna heights, 0.75 m and 3 m above ground.

Idaho PATH 1 - 3

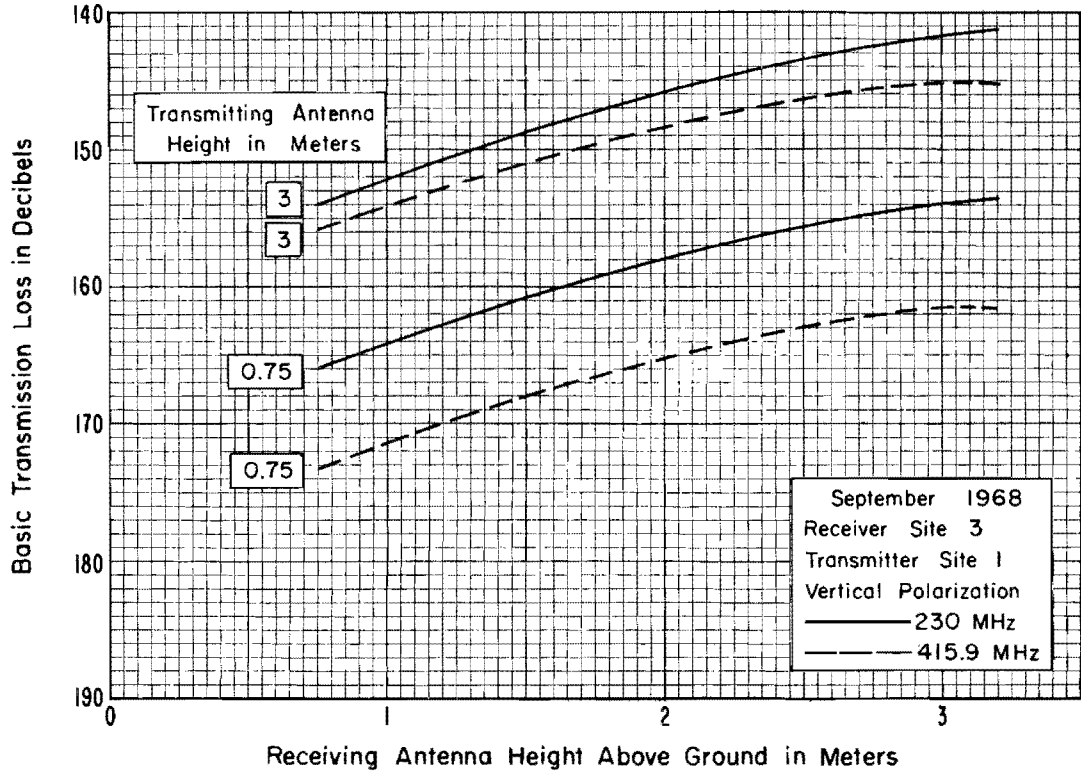


From site 3 toward site 1

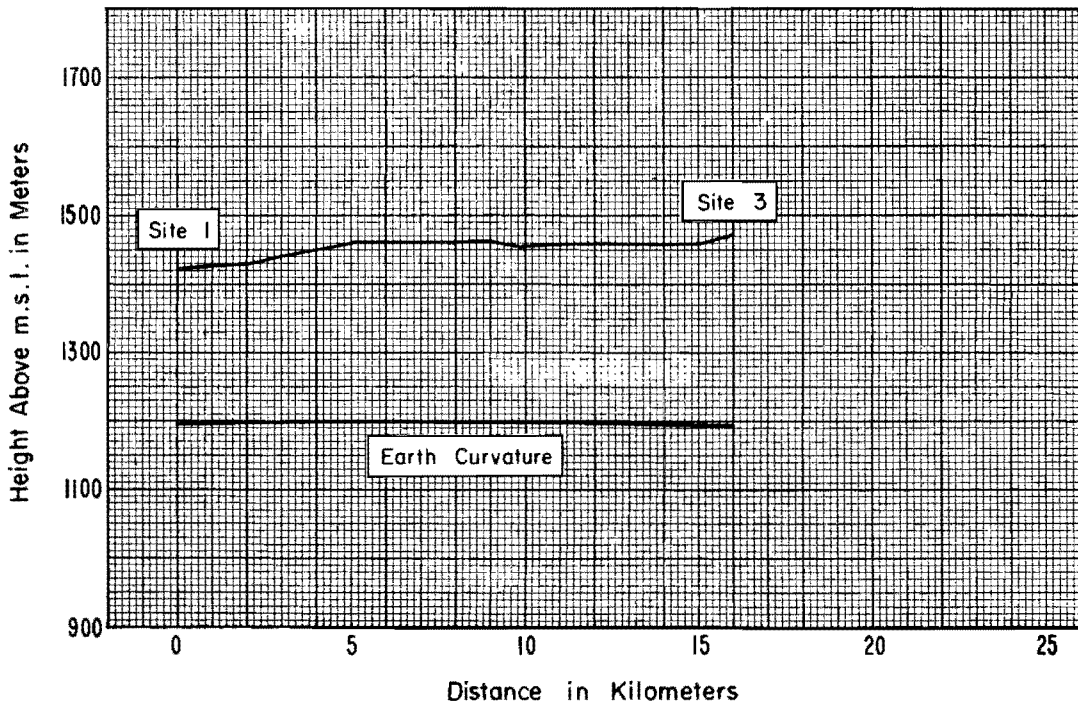


From site 1 toward site 3

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



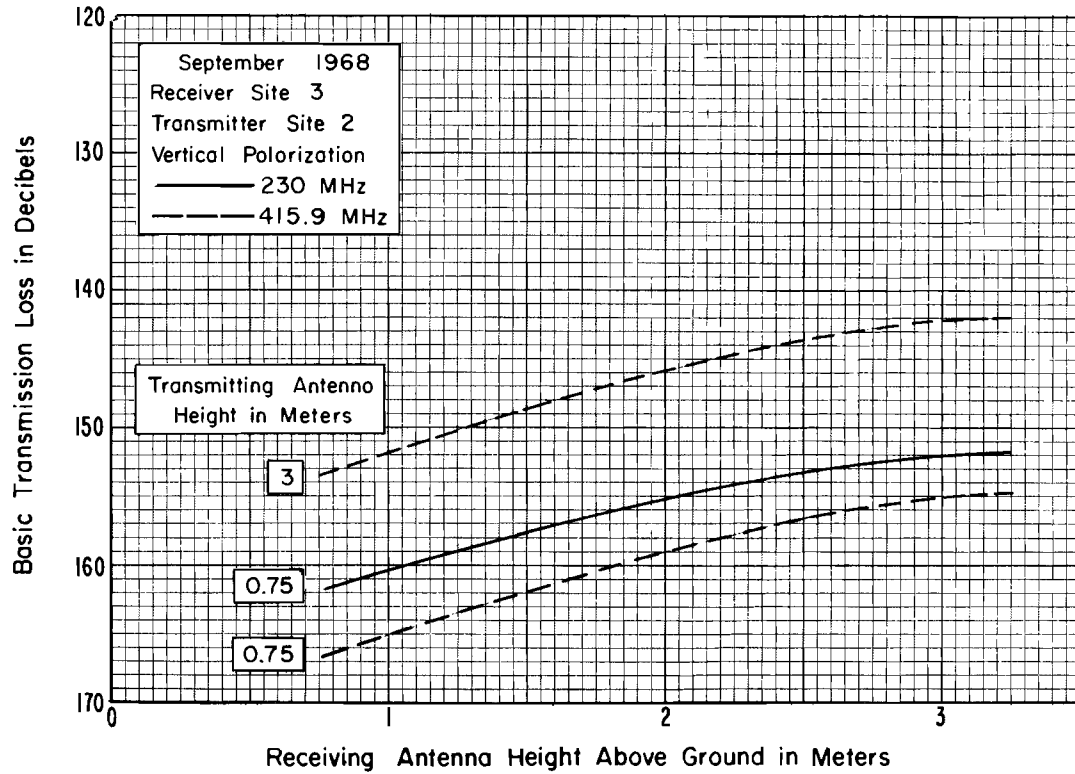
Idaho PATH 2 - 3



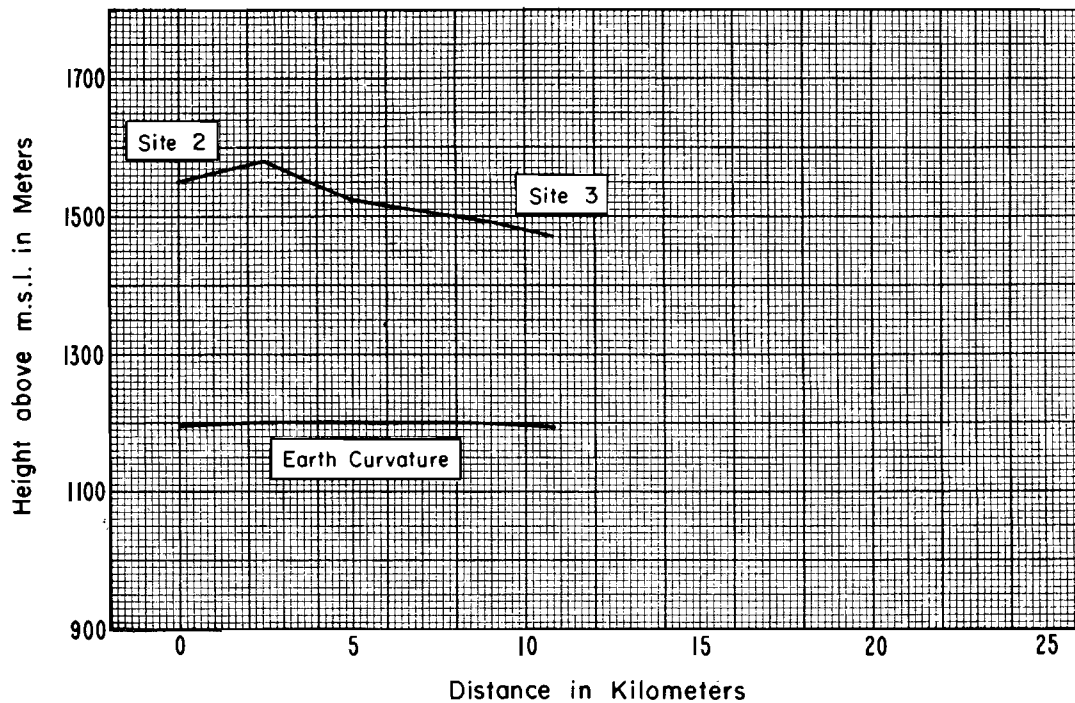
From site 2 toward site 3

IDAHO PATH 2-3

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 3 - 17

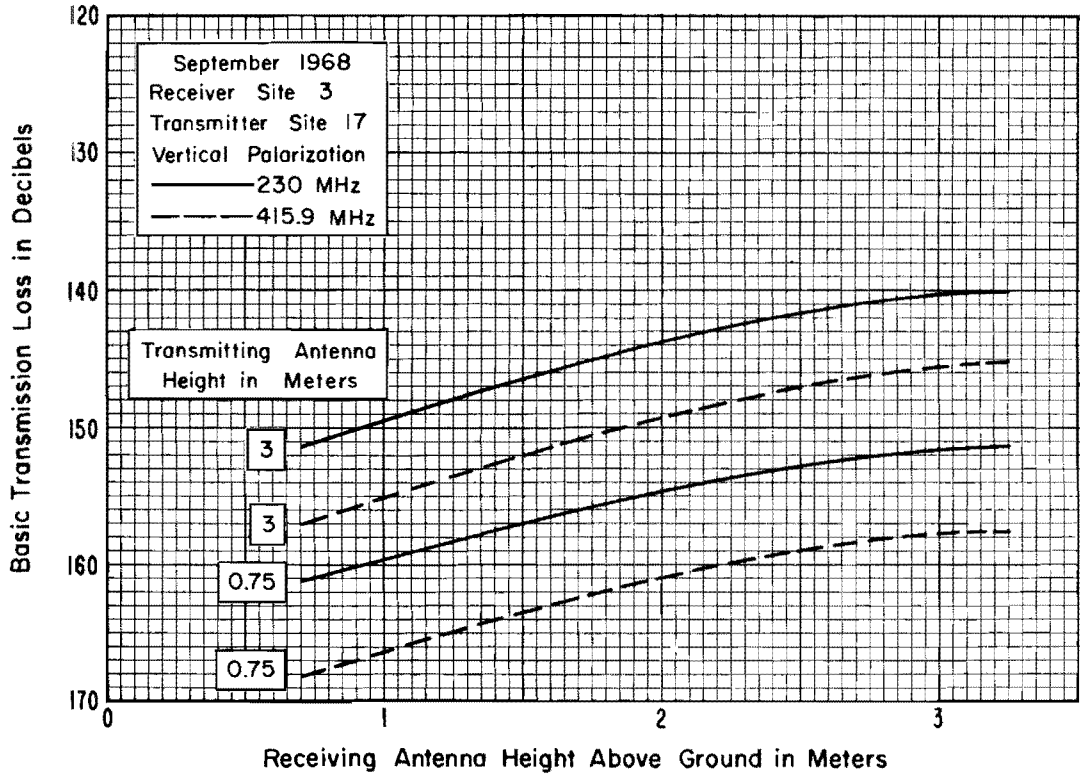


From site 3 toward 17

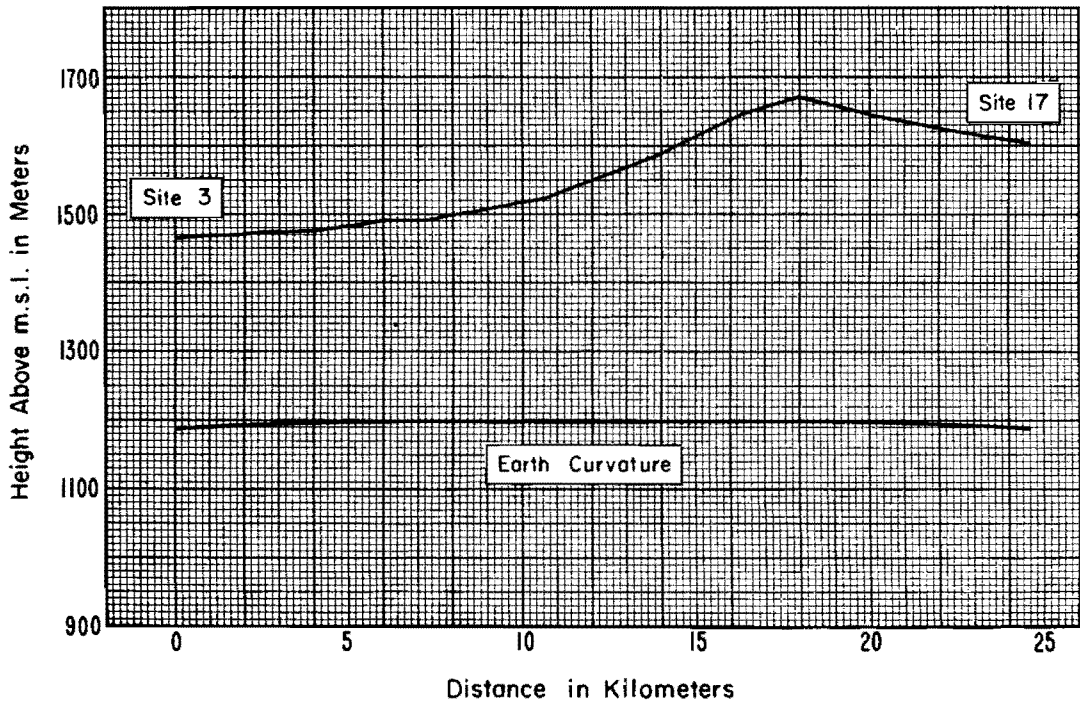


From site 17 toward site 3

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 12 - 23

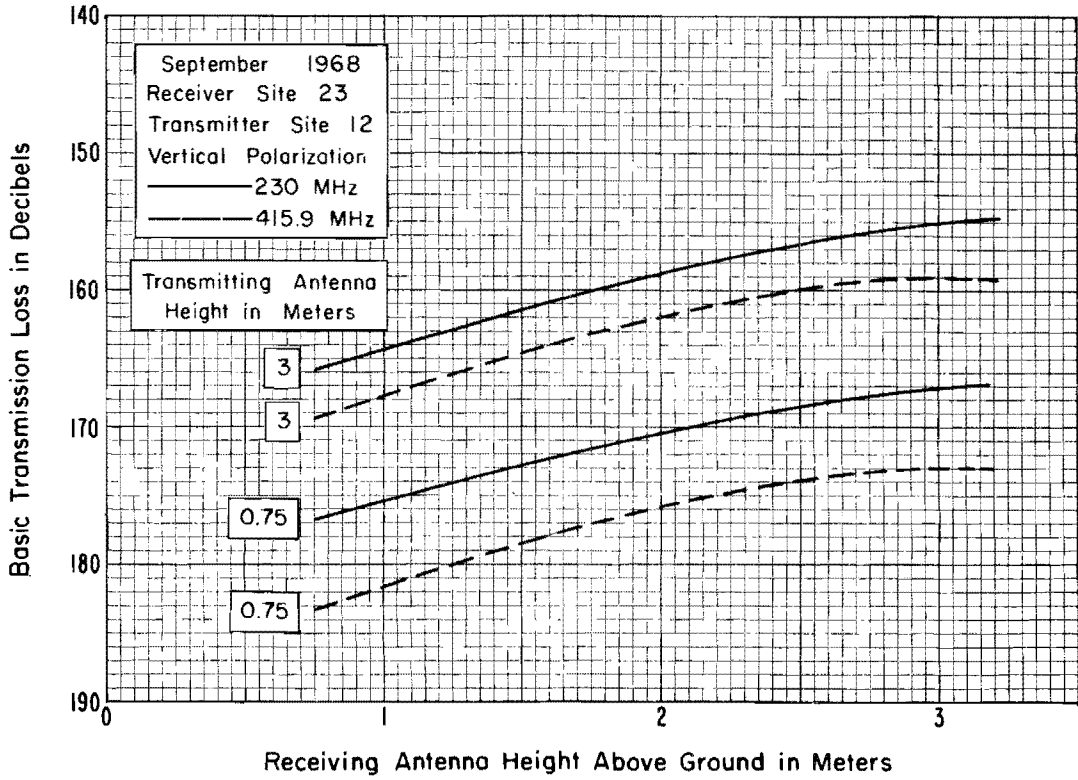


From site 23 toward site 12

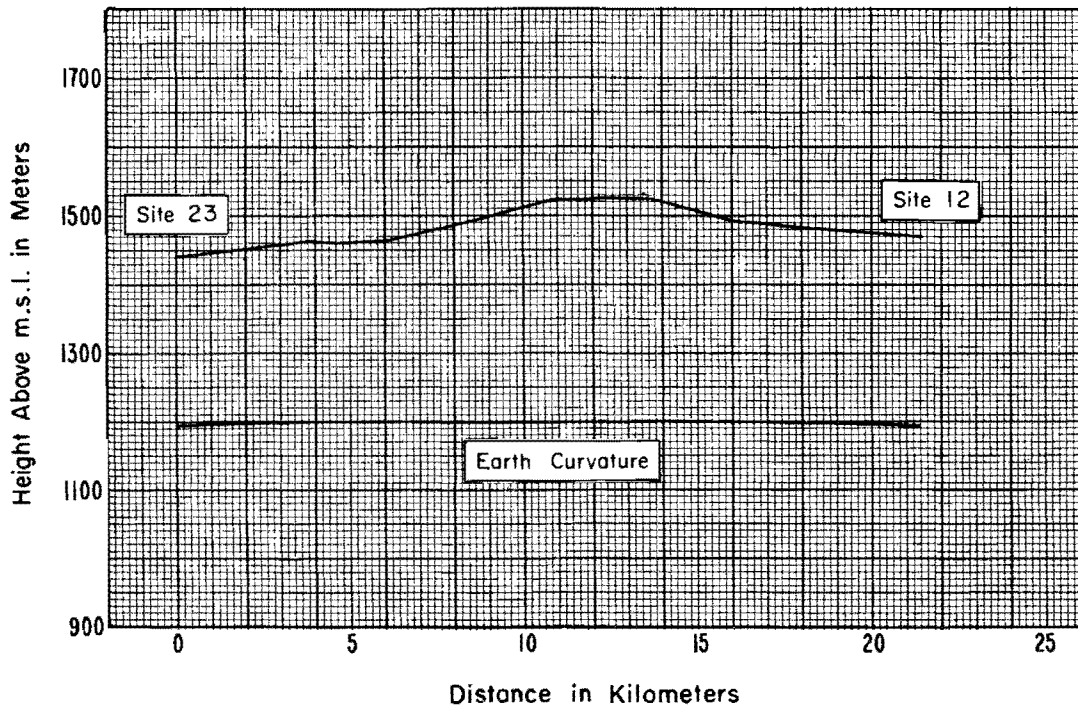


From site 12 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 13 - 18

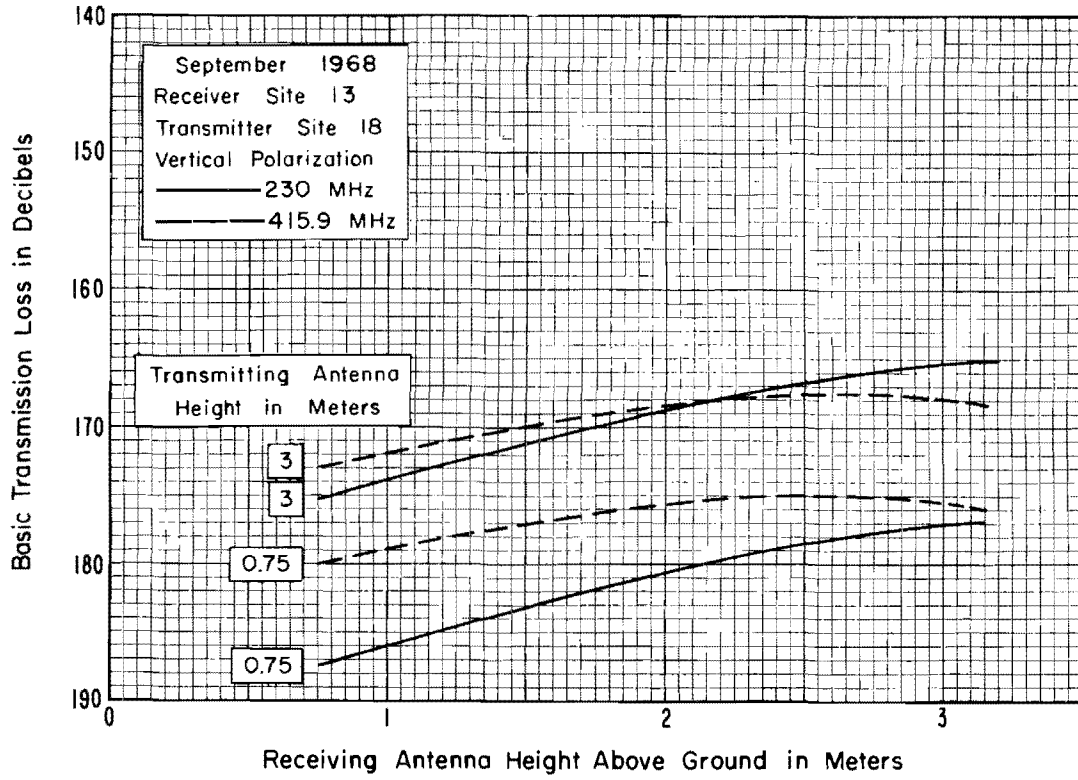


From site 13 toward site 18

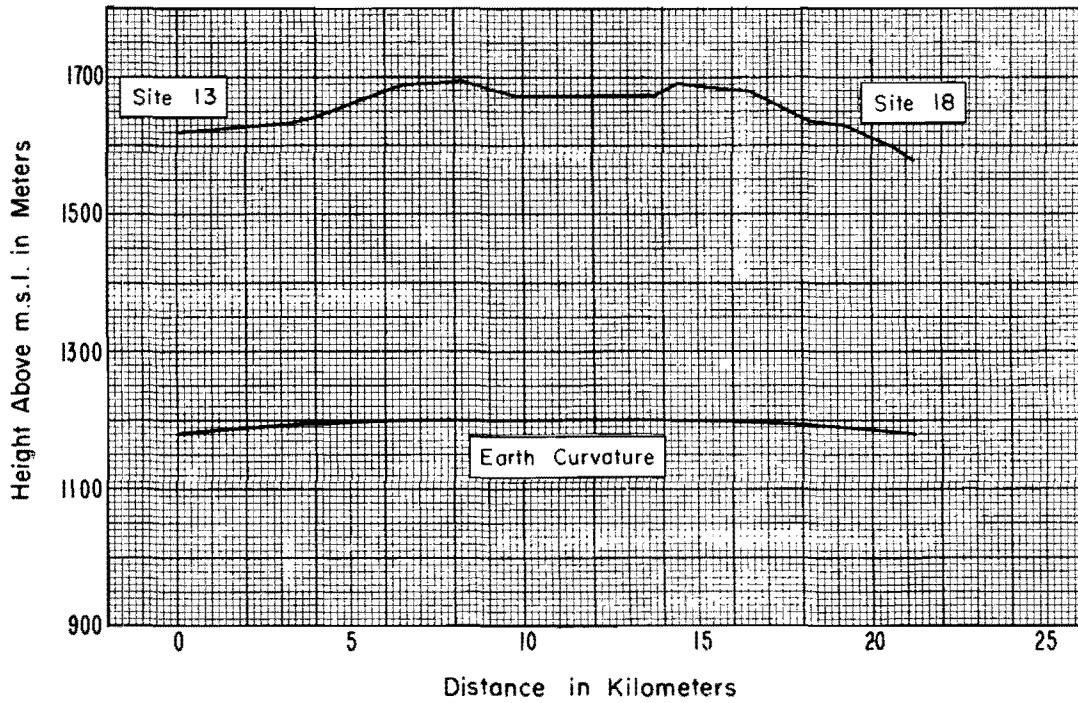


From site 18 toward site 13

PATH LOSS MEASUREMENTS



TERRAIN PROFILE

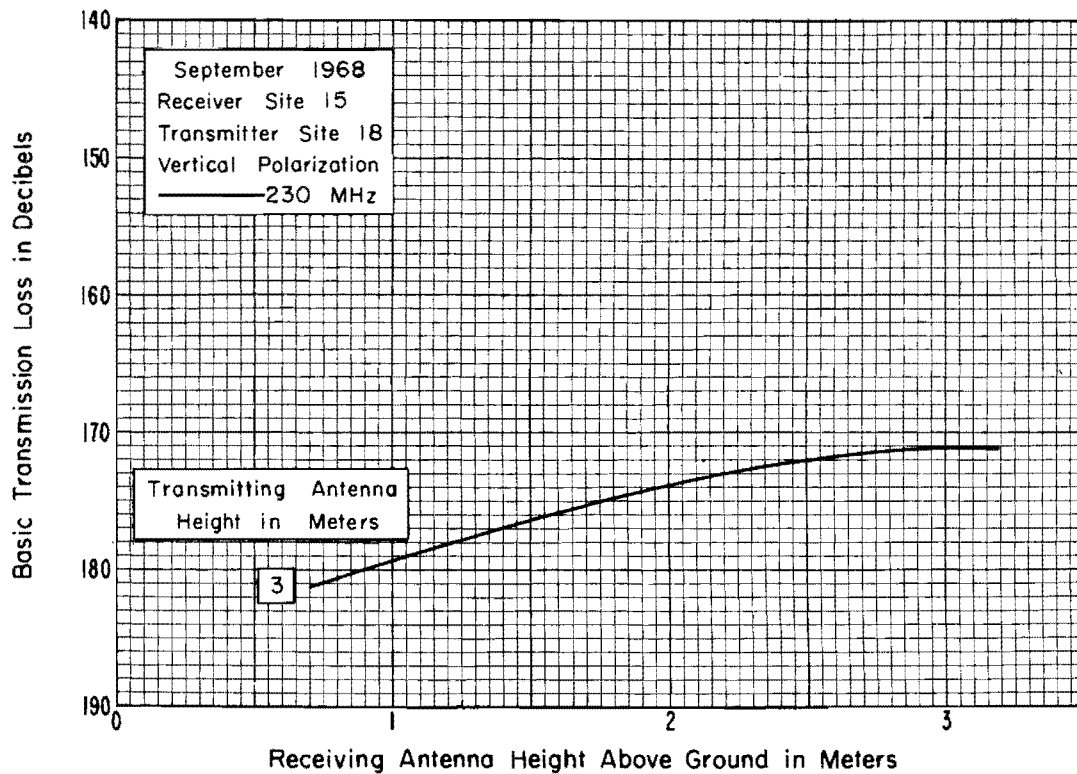


Idaho PATH 15 - 18

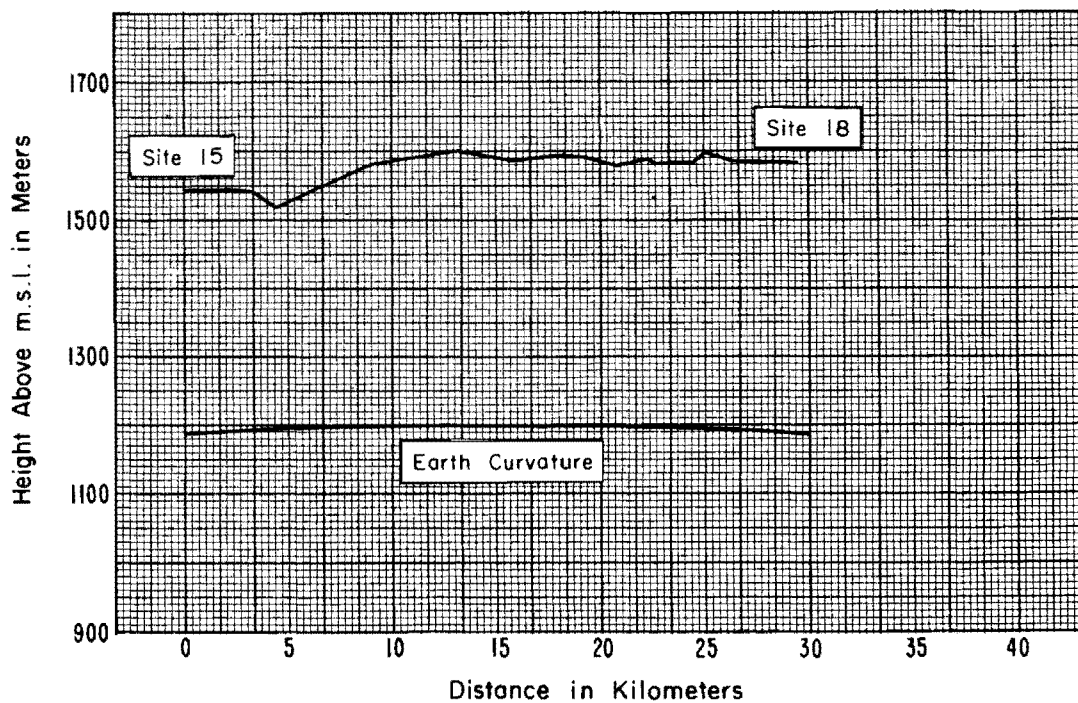


From site 15 toward site 18

PATH LOSS MEASUREMENTS



TERRAIN PROFILE

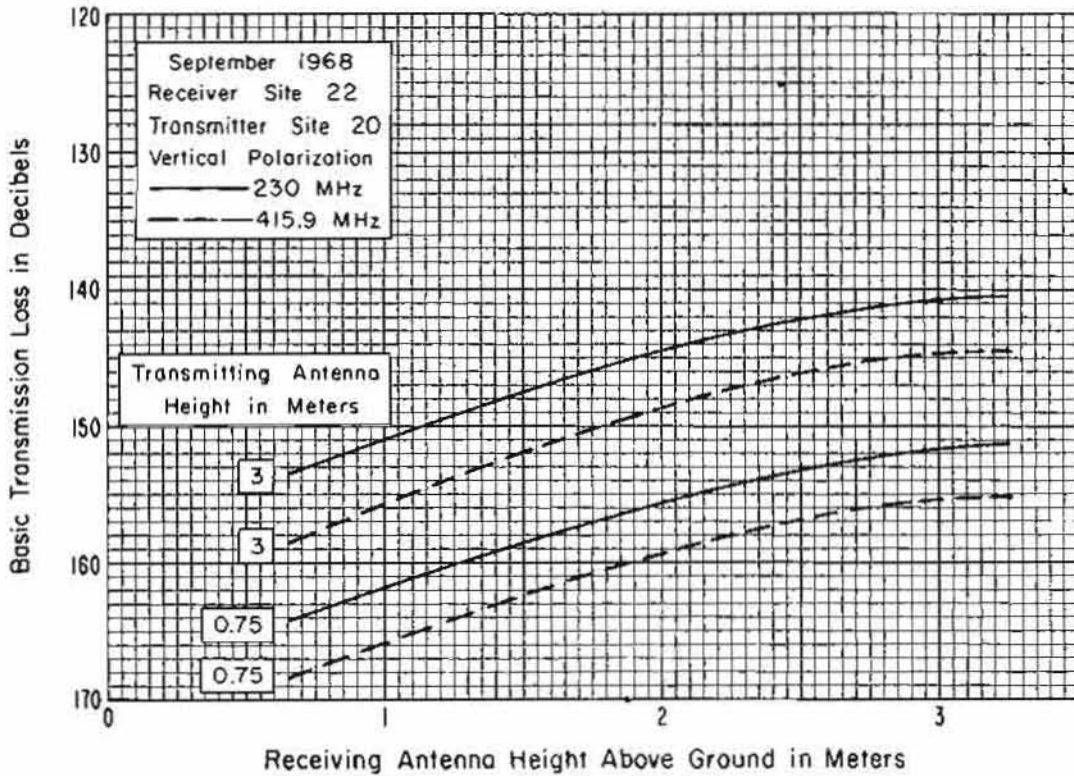


Idaho PATH 20 - 22

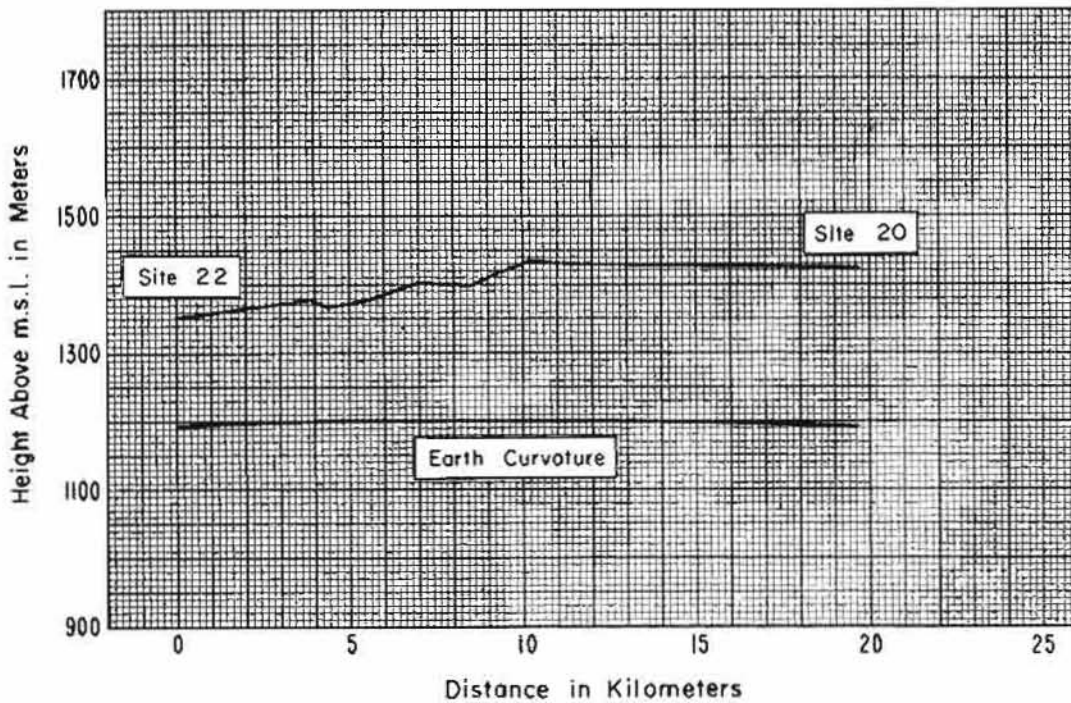


From site 22 toward site 20

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 21 - 26

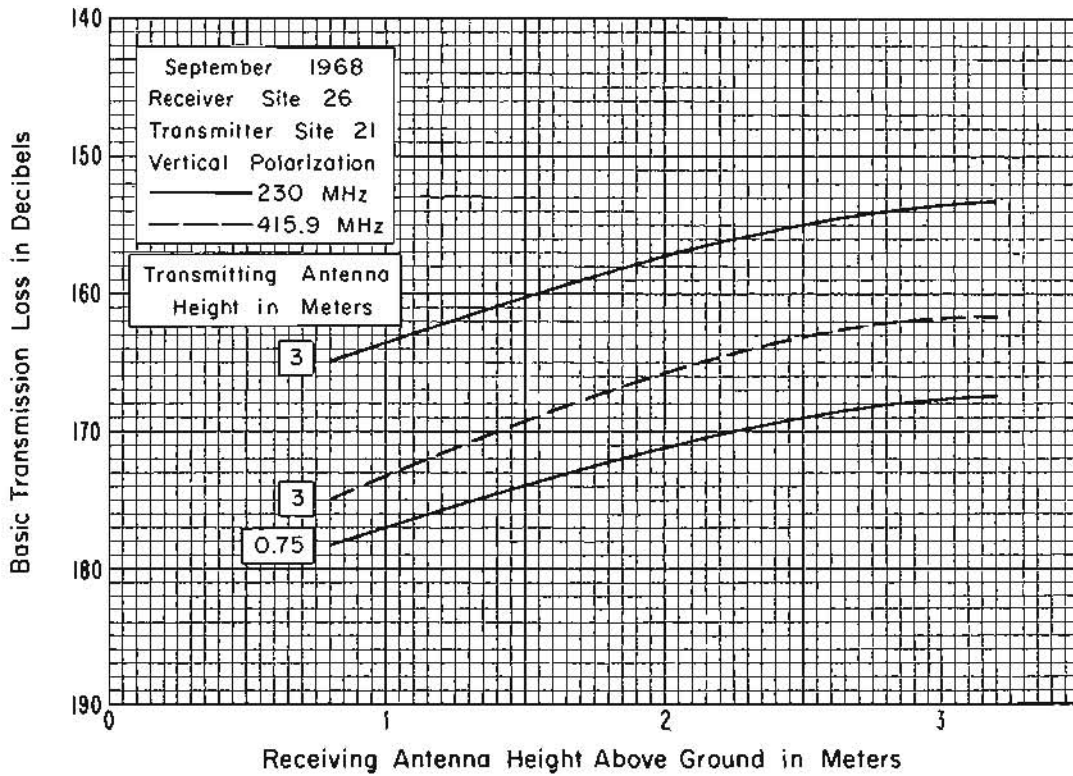


From site 26 toward site 21.

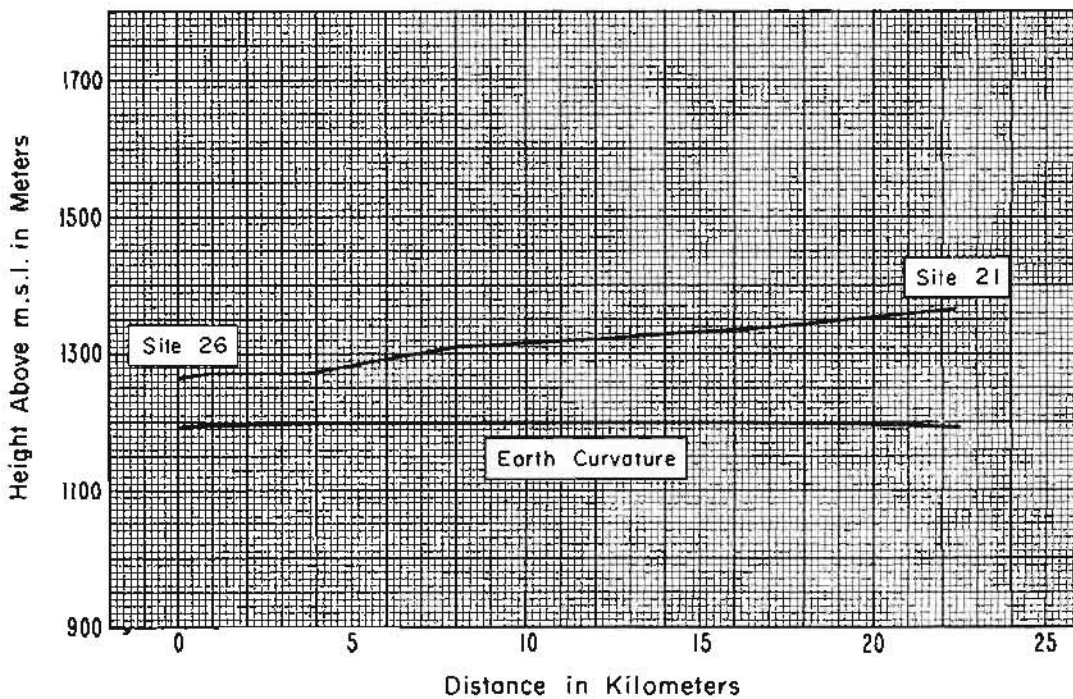


From site 21 toward site 26

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 22 - 23

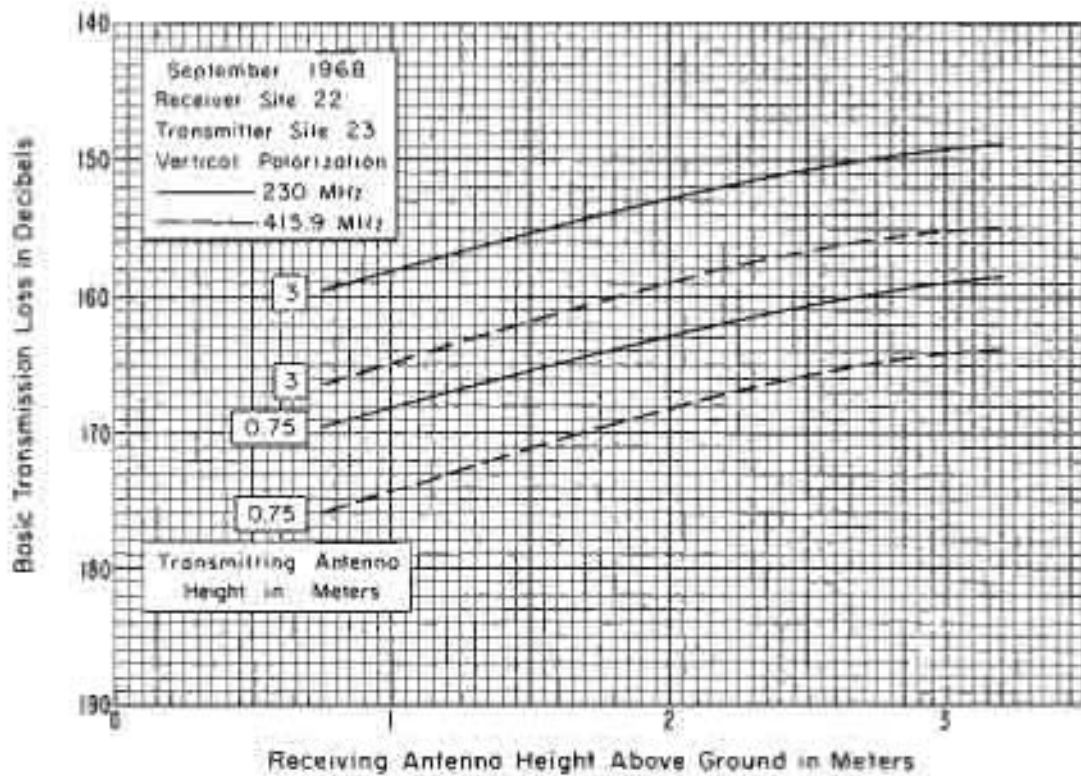


From site 22 toward site 23

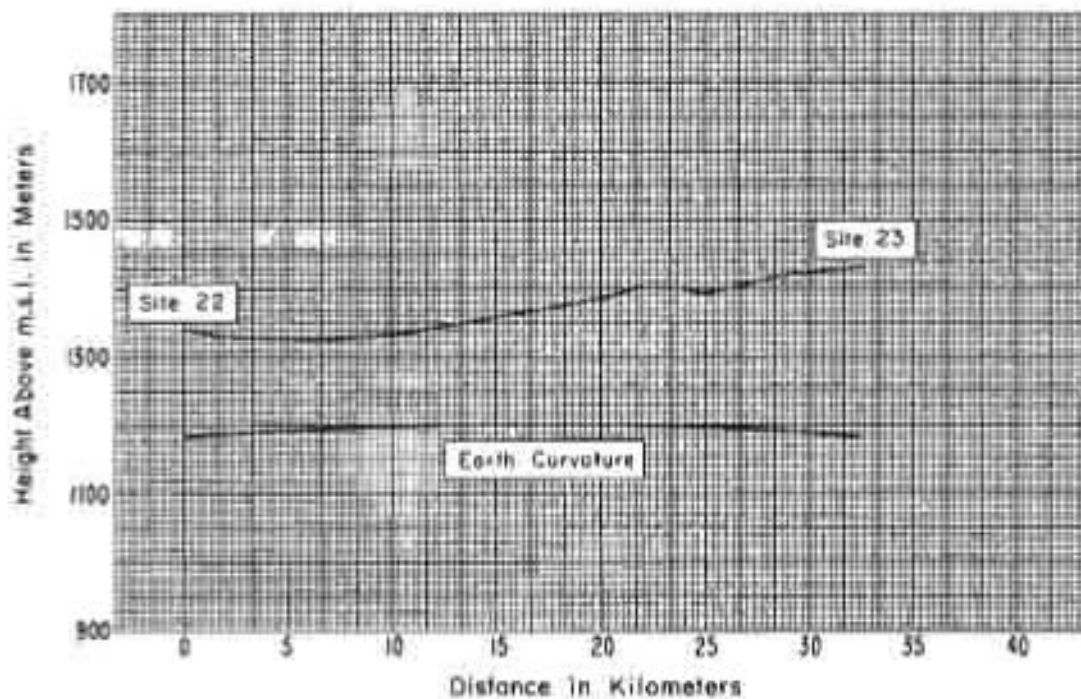


From site 23 toward site 22

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 22 - 24



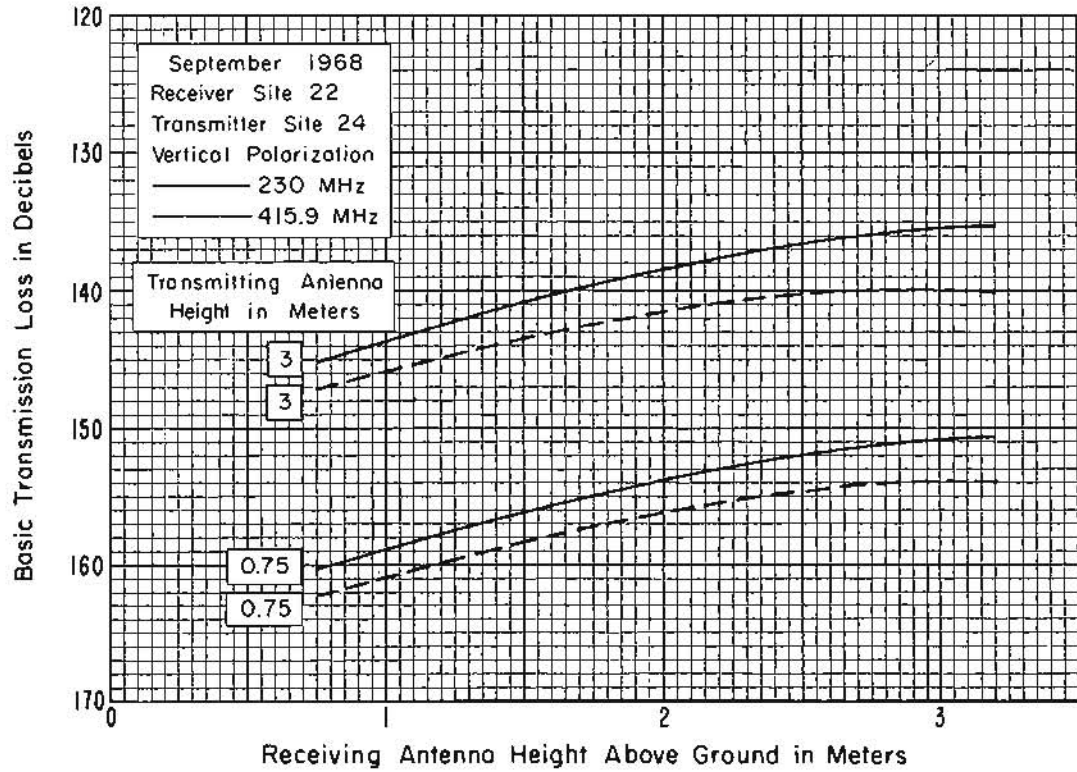
From site 22 toward site 24



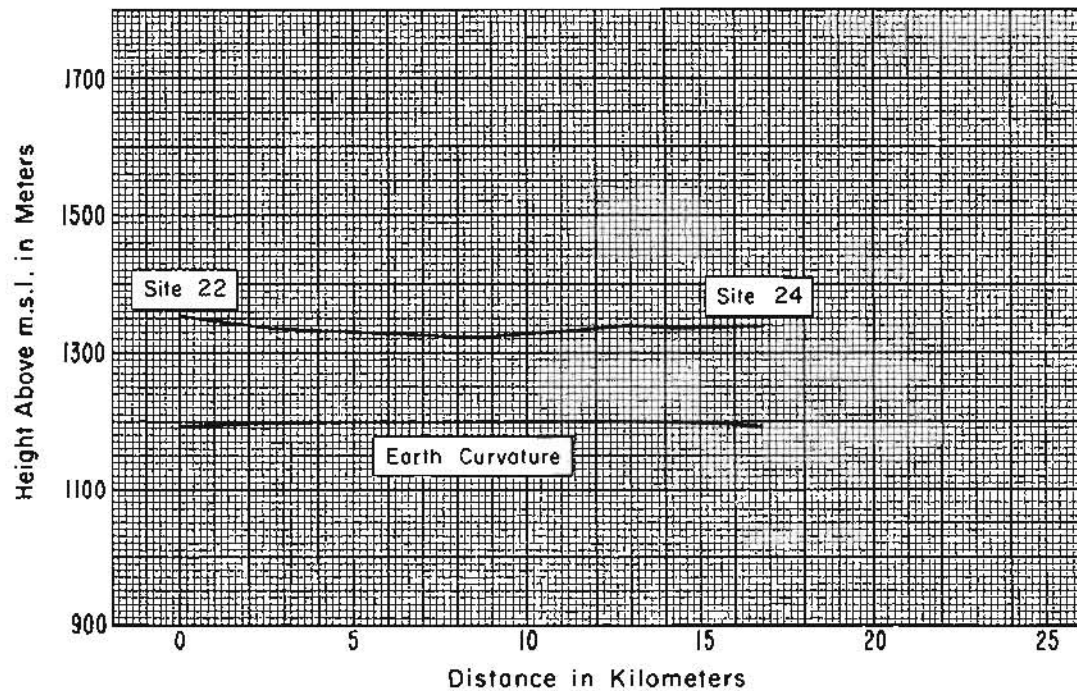
From site 24 toward site 22

IDAHO PATH 22-24

PATH LOSS MEASUREMENTS



TERRAIN PROFILE

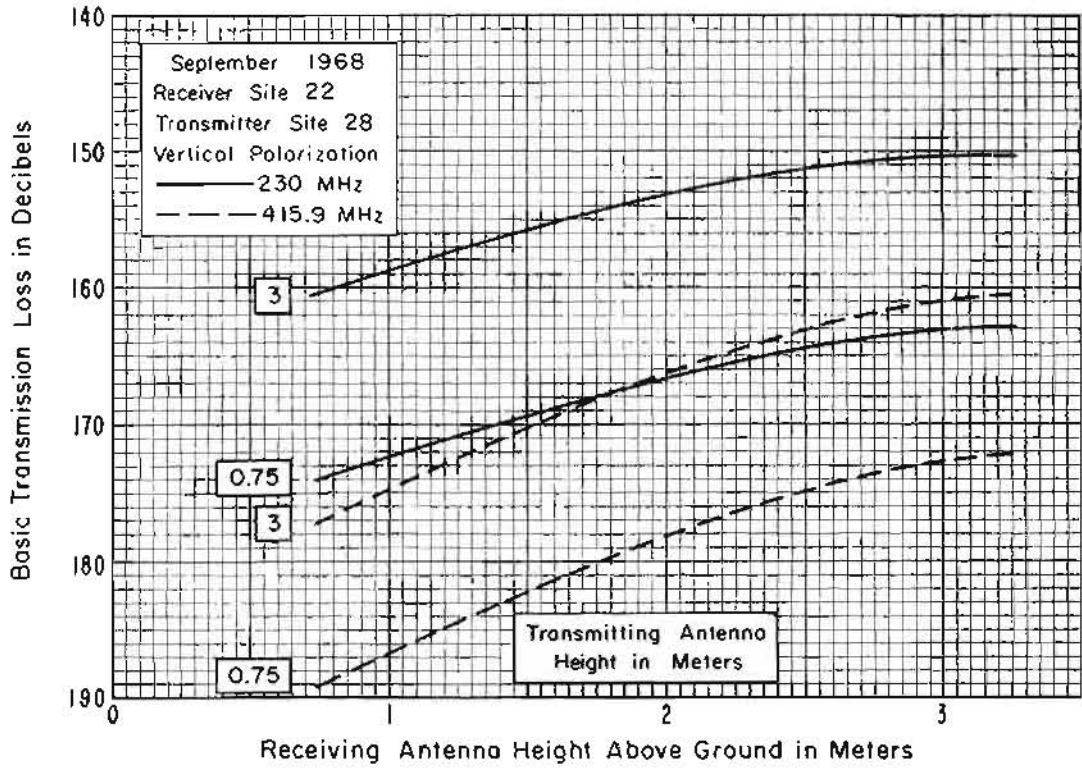


Idaho PATH 22 - 28

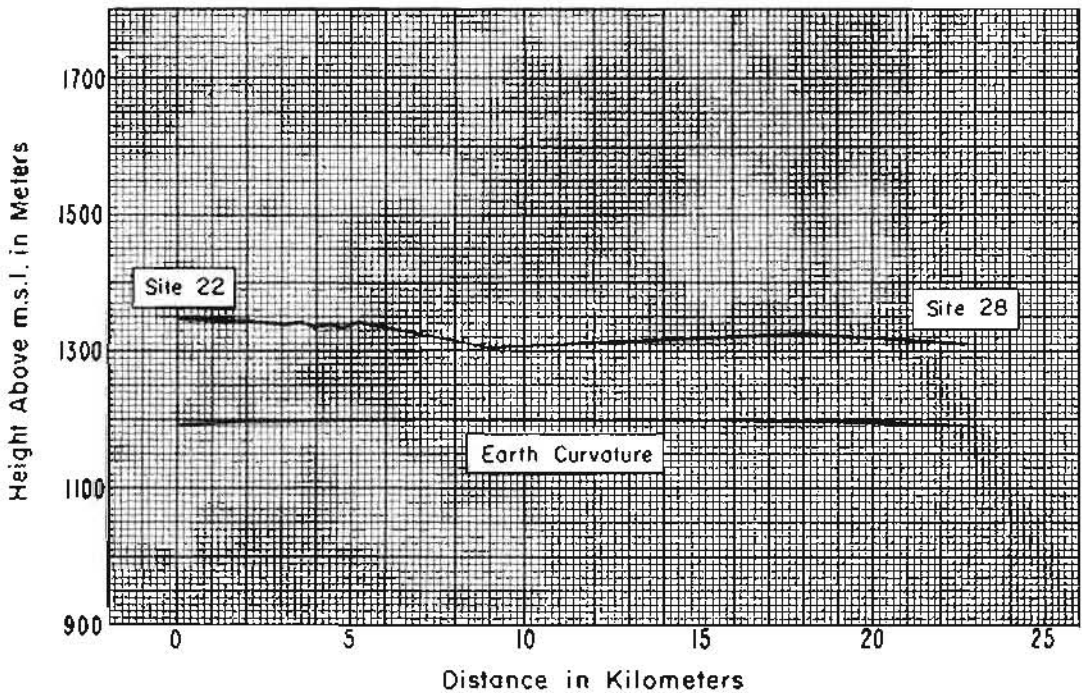


From site 22 toward site 28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 23 - 27

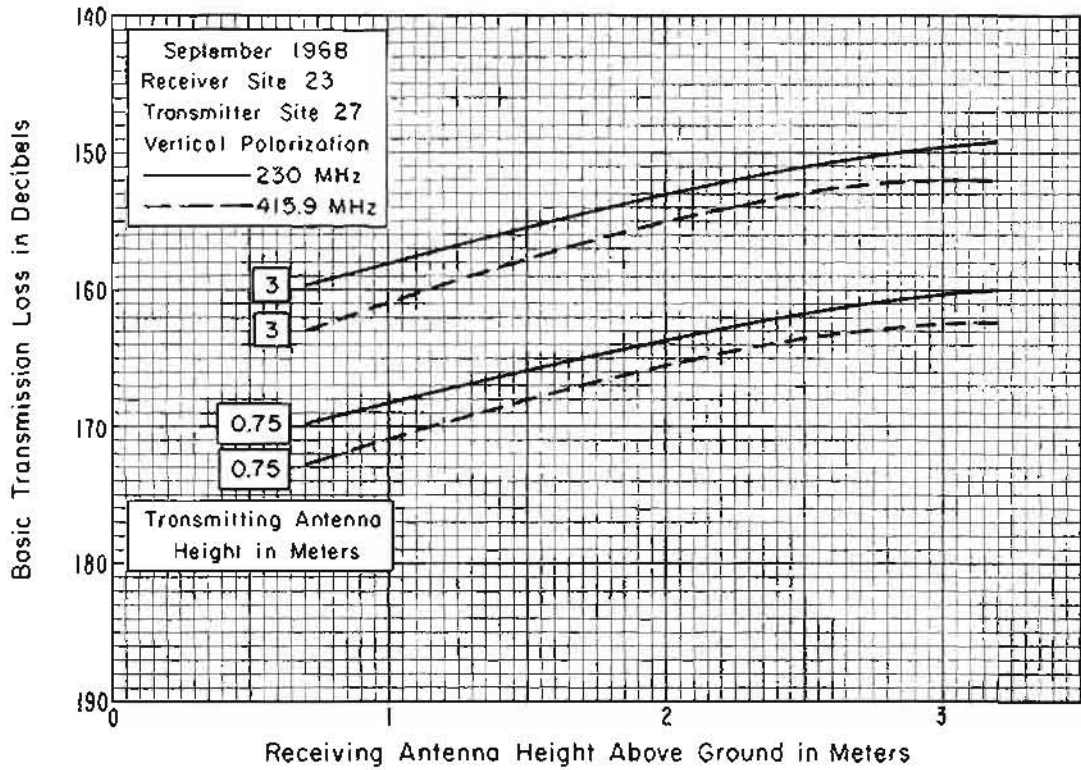


From site 23 toward site 27

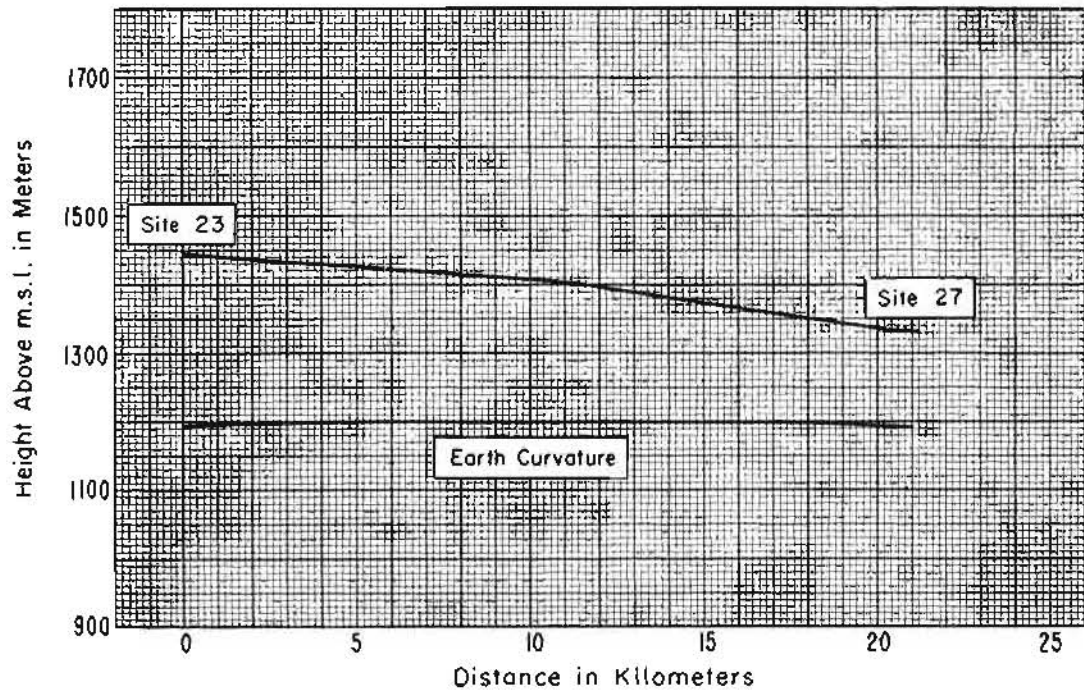


From site 27 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 23 - 28

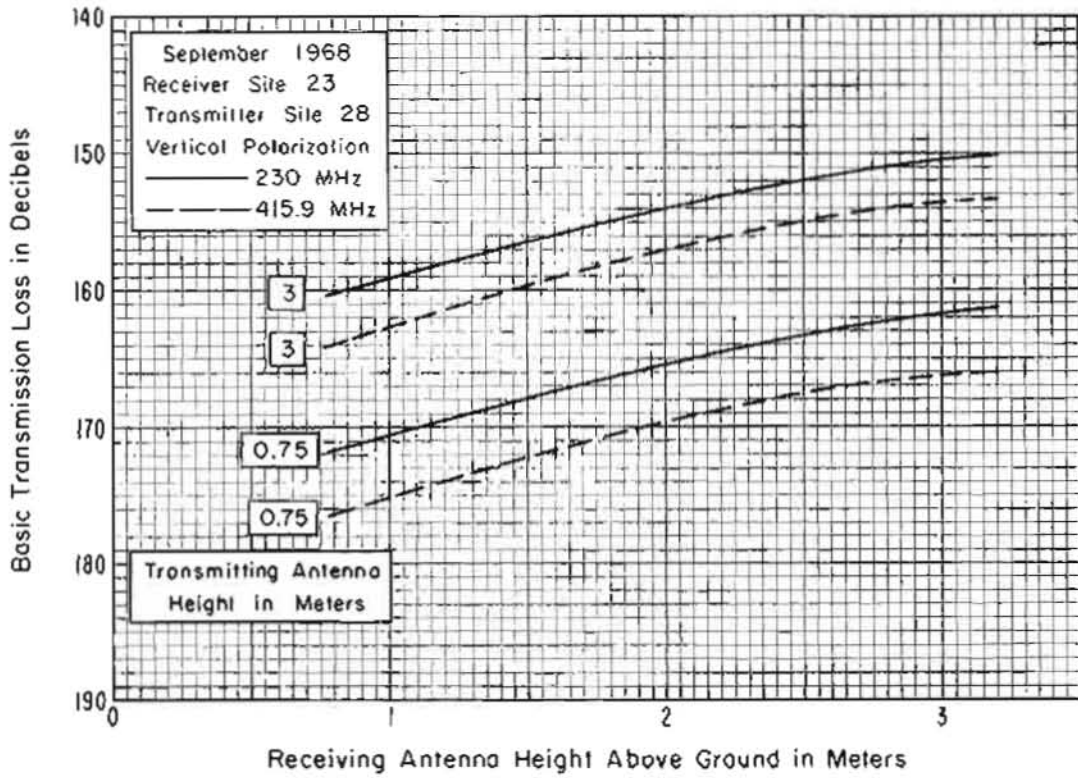


From site 23 toward site 28

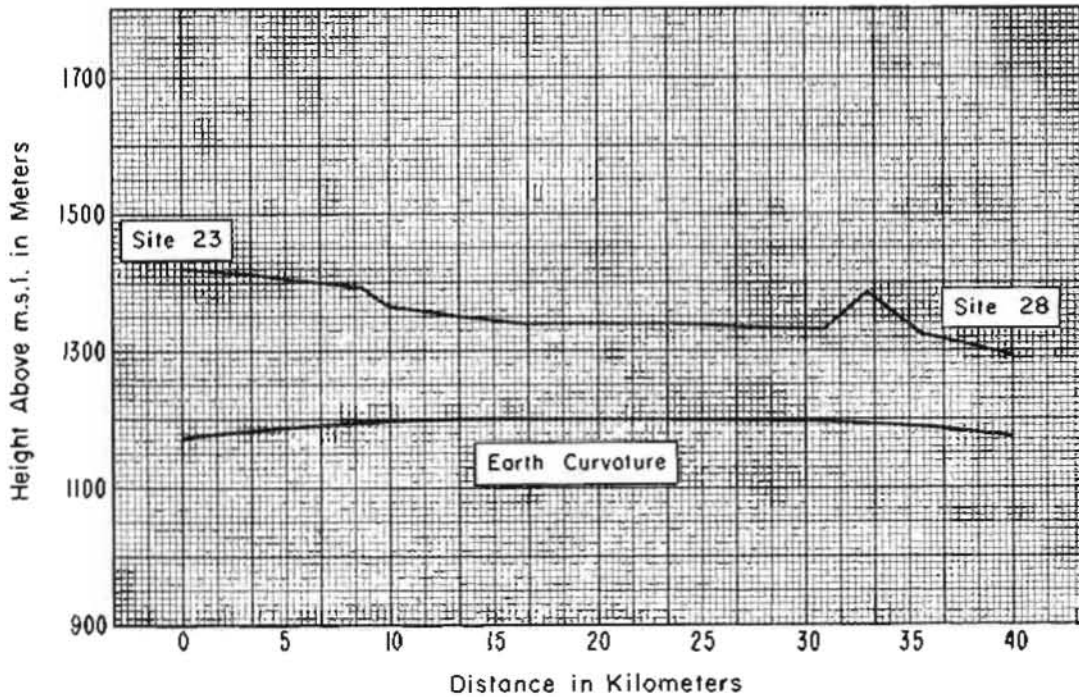


From site 28 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 25 - 26

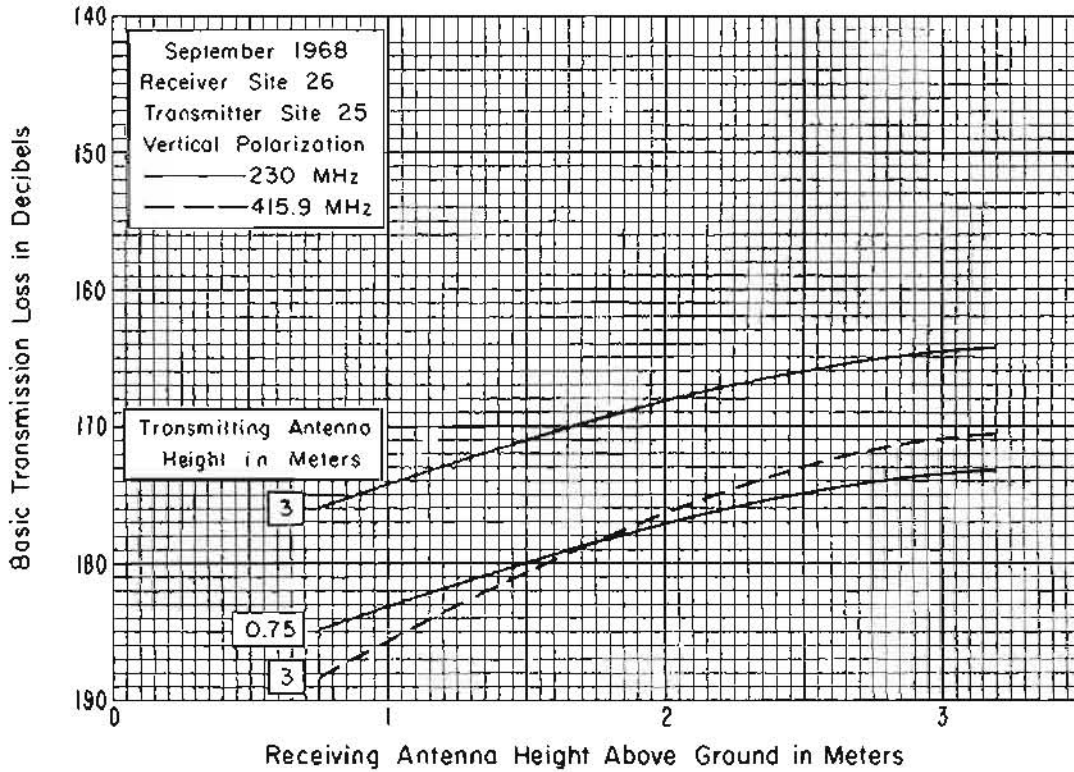


From site 26 toward site 25

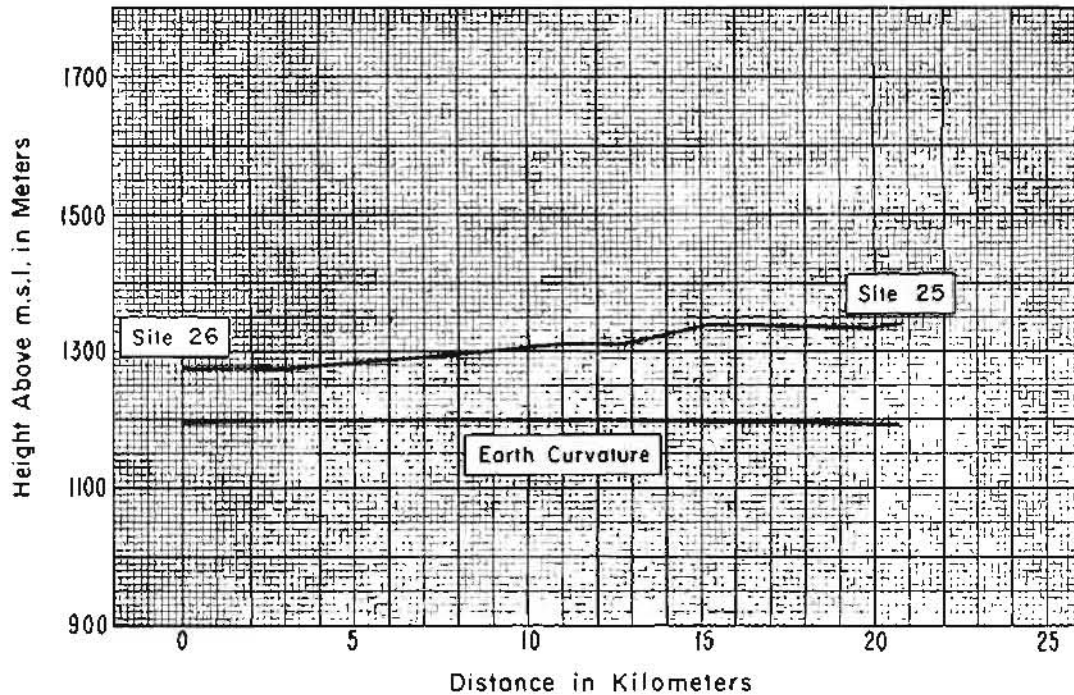


From site 25 toward site 26

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 26 - 29

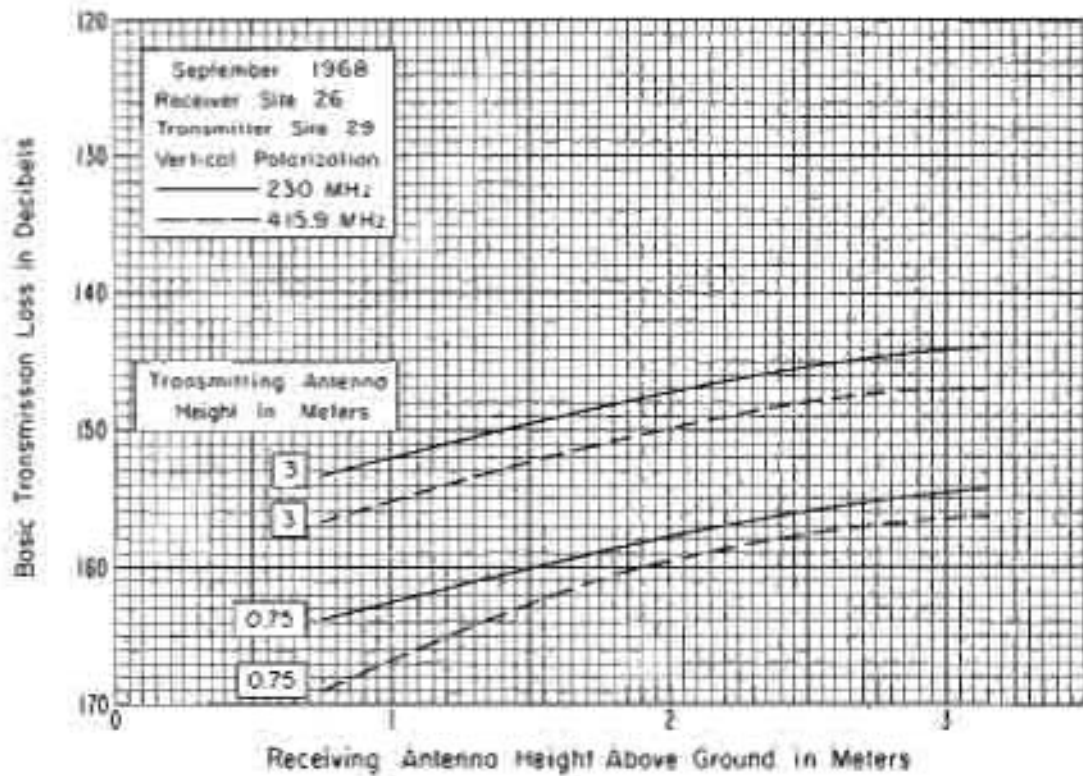


From site 26 toward site 29

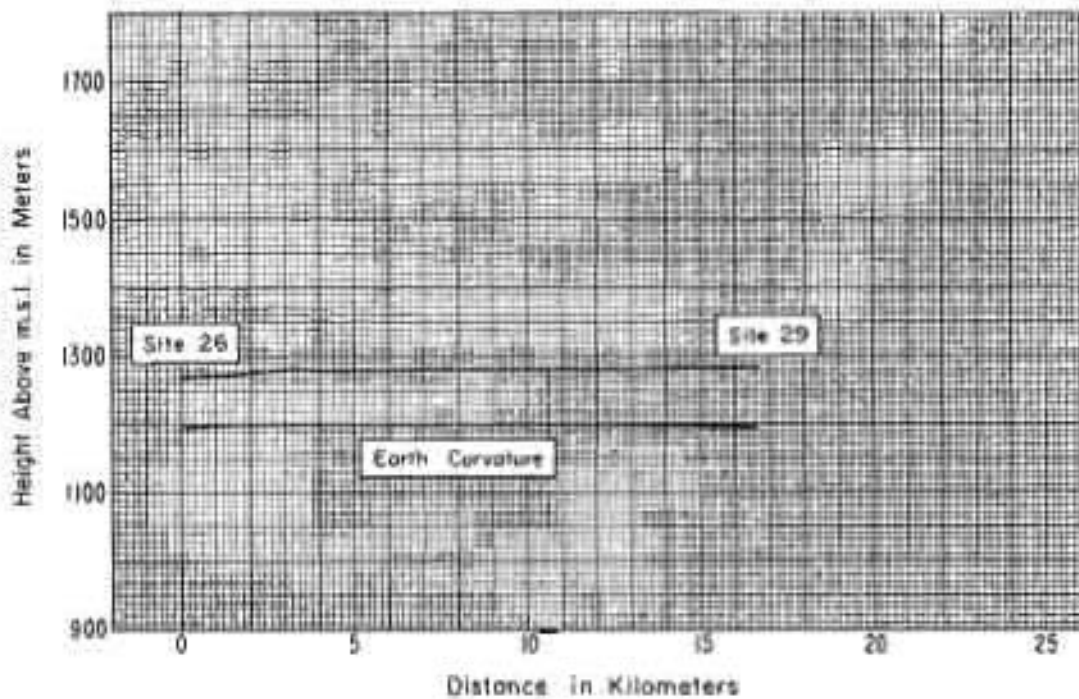


From site 29 toward site 26

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 26 - 30

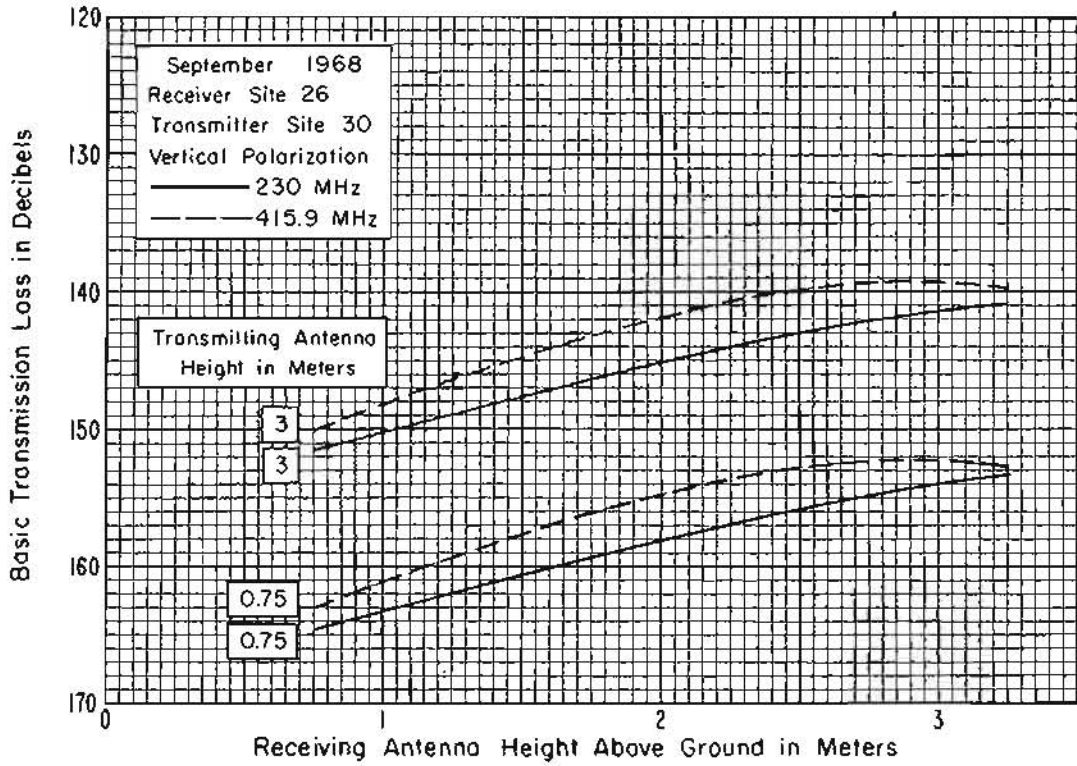


From site 26 toward site 30

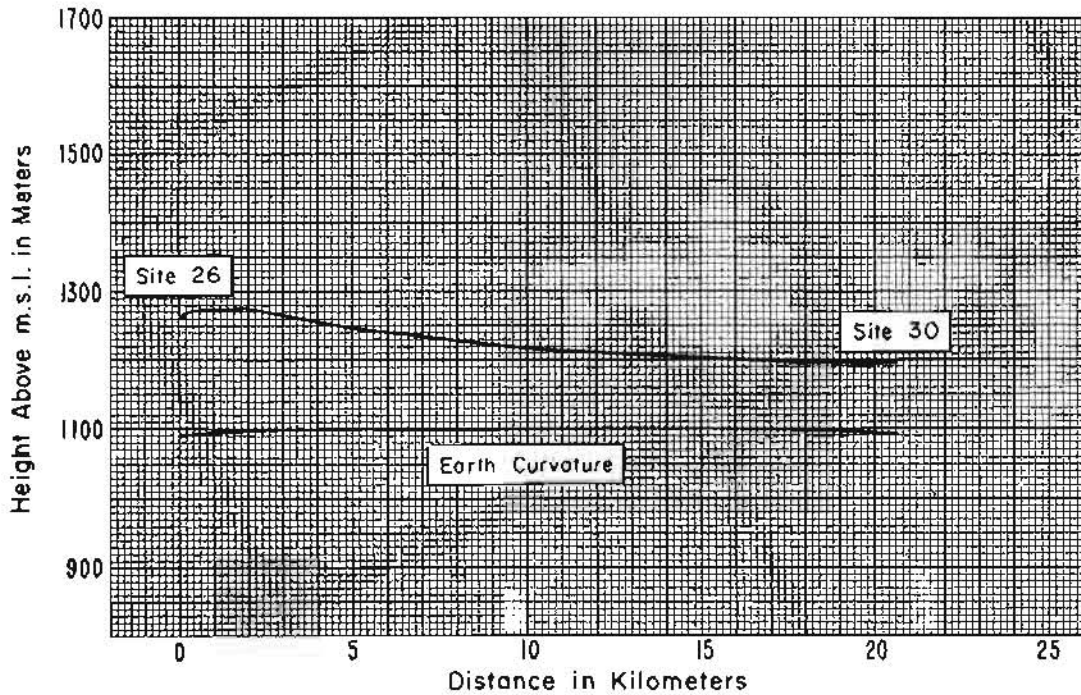


From site 30 toward site 26

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 26 - 32

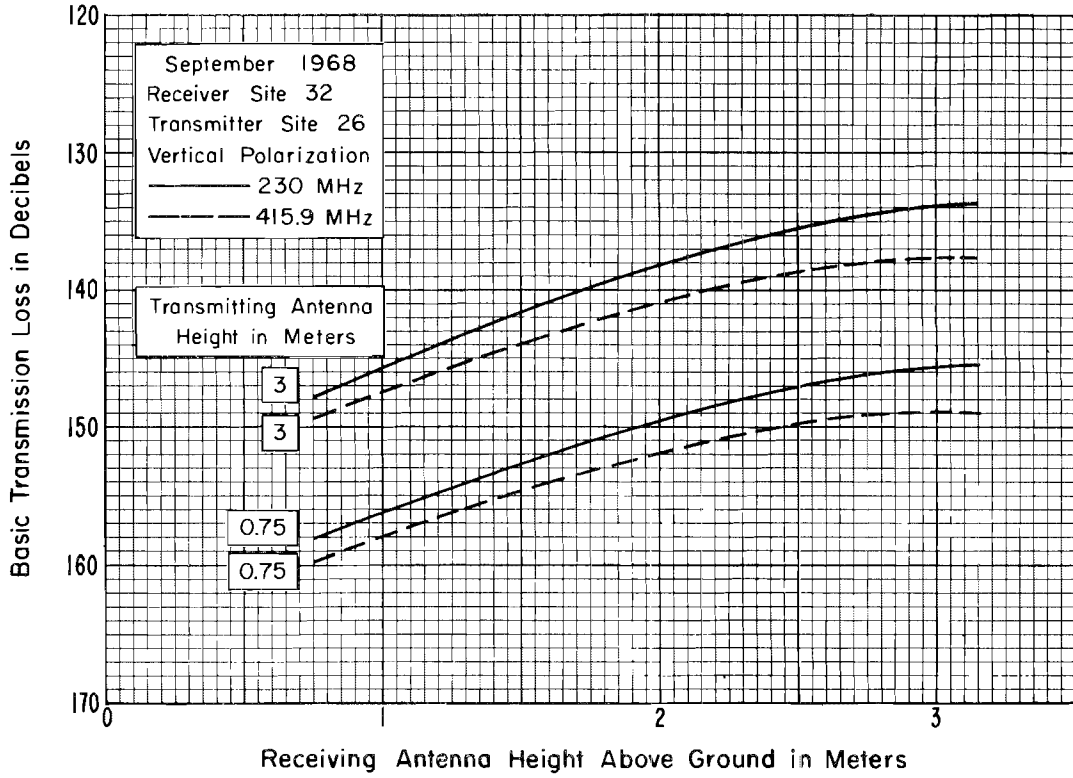


From site 32 toward site 26

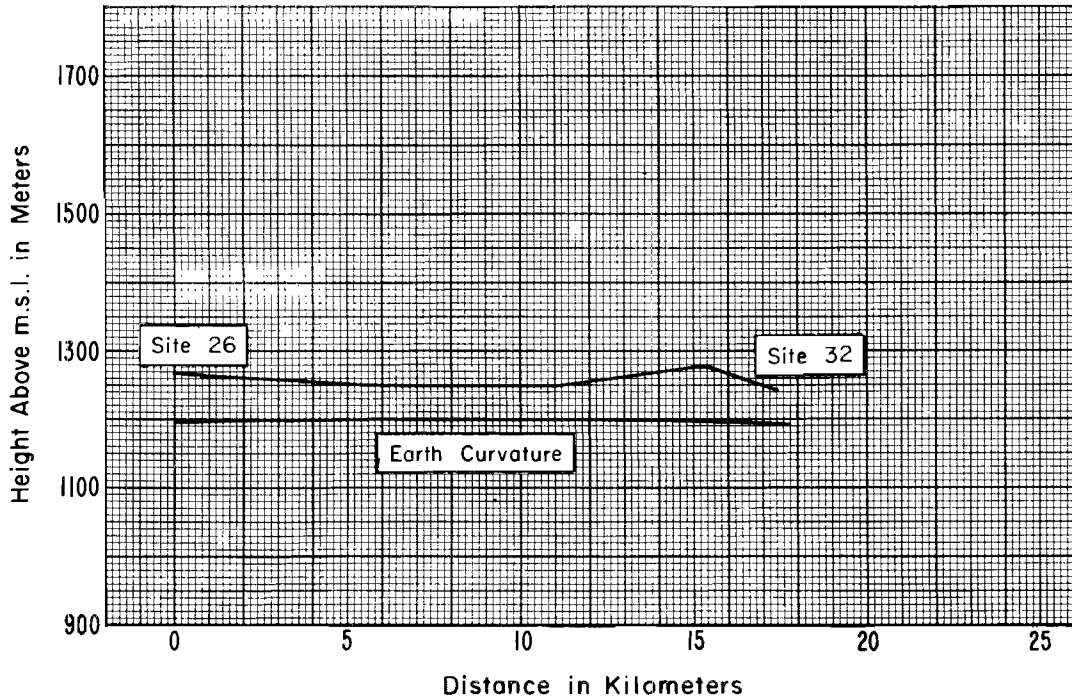


From site 26 toward site 32

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 28 - 31



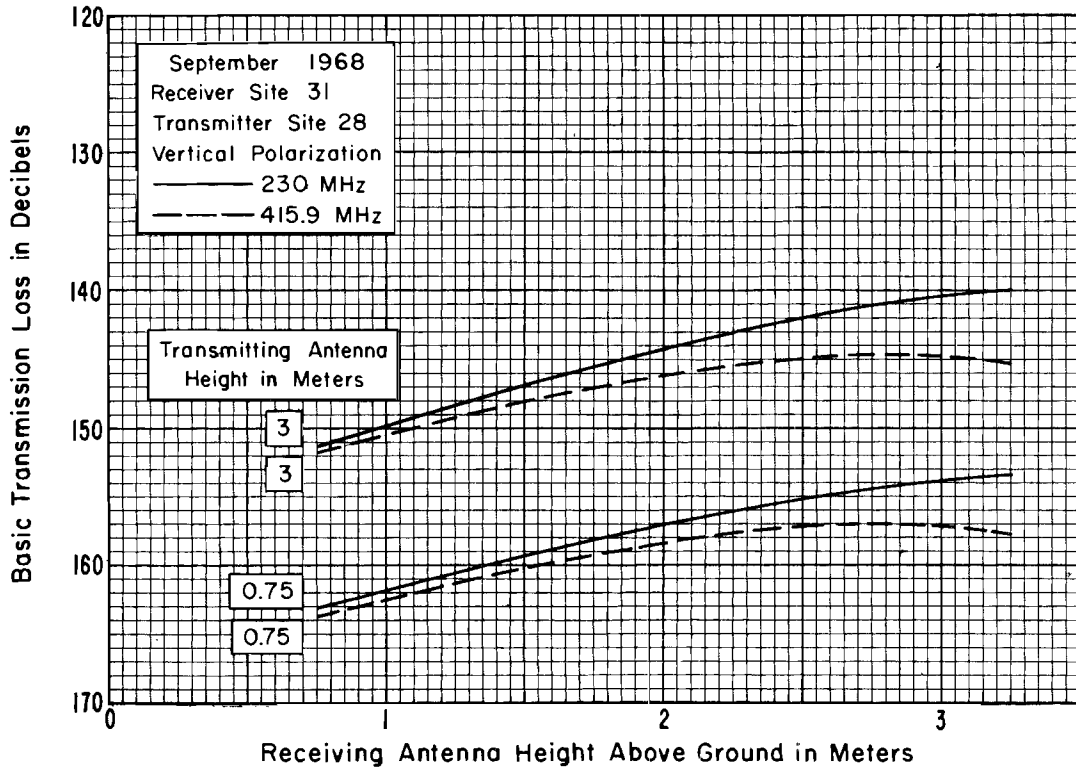
From site 31 toward site 28.



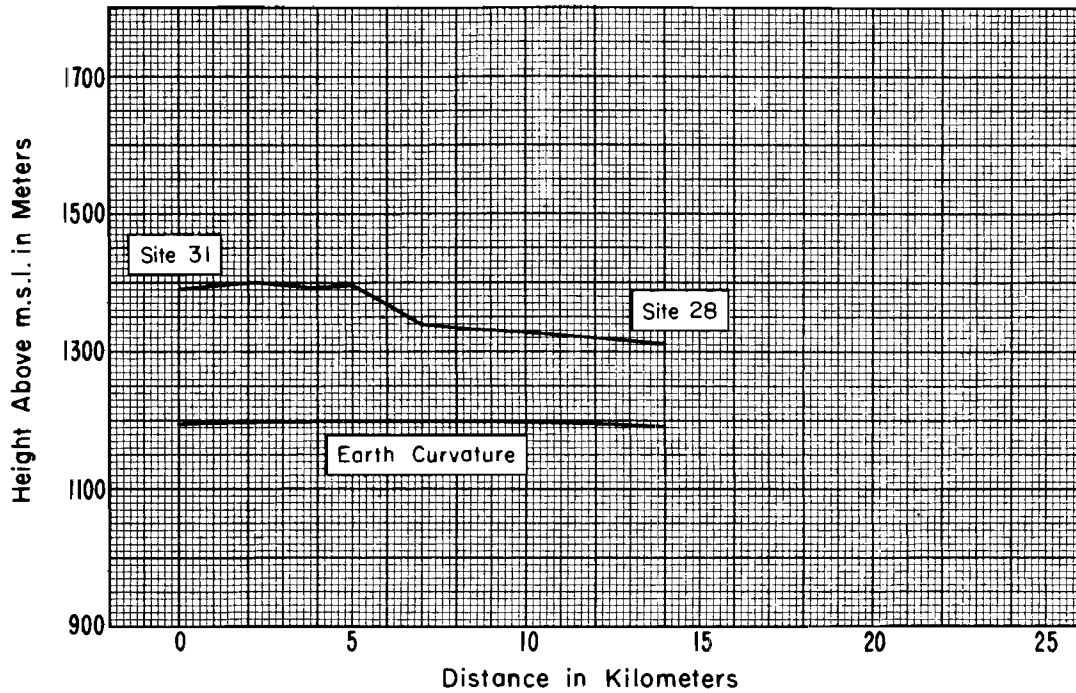
From site 28 toward site 31

IDAHO PATH 28-31

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 28 - 32

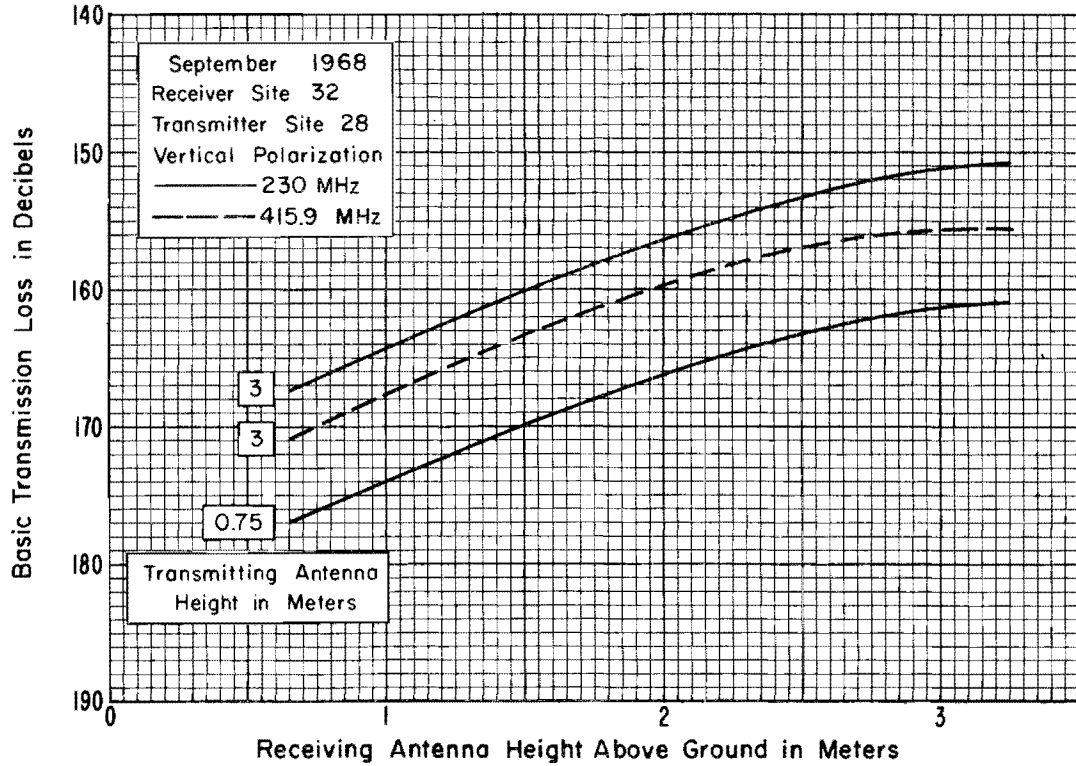


From site 32 toward site 28

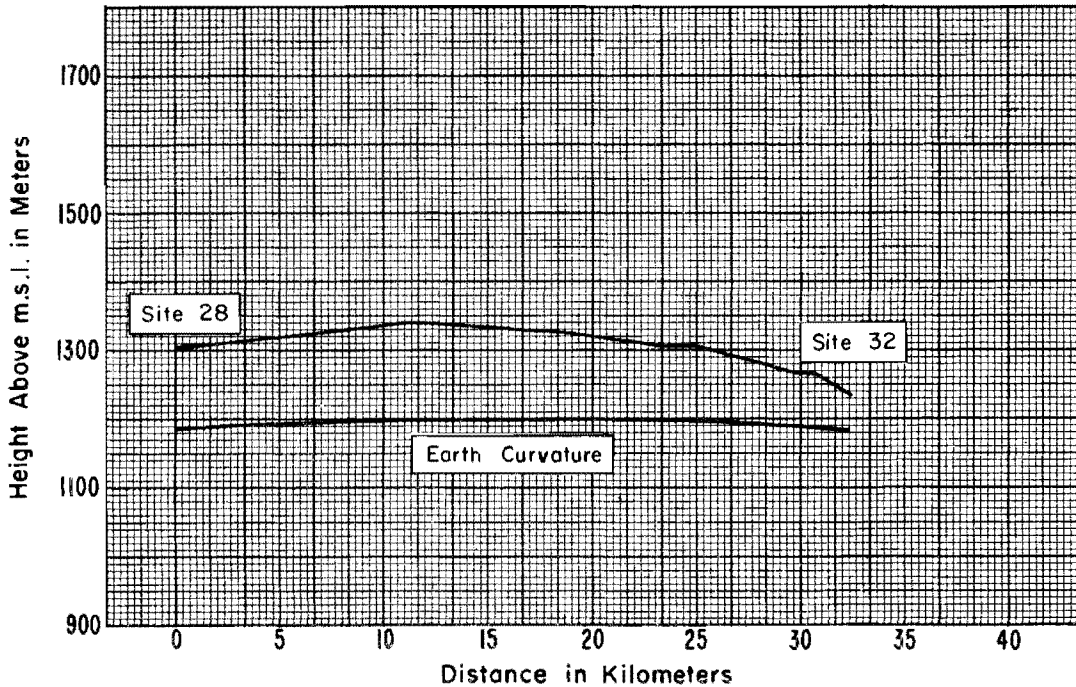


From site 28 toward site 32

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 29 - 32

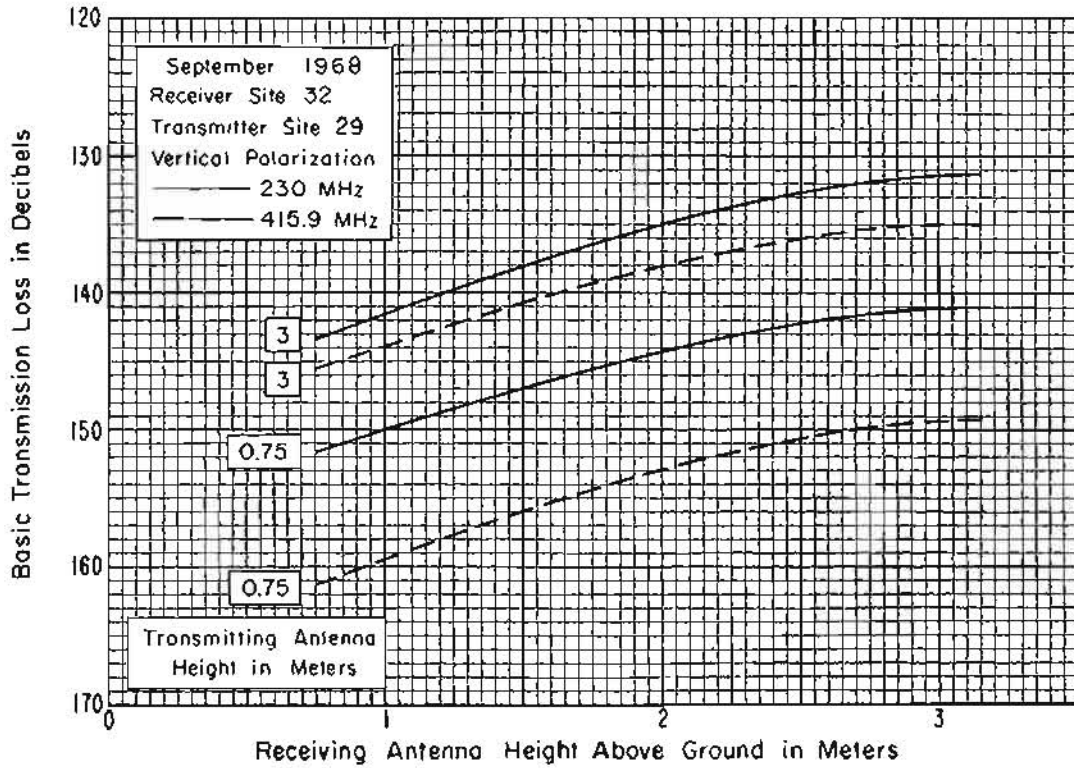


From site 32 toward site 29

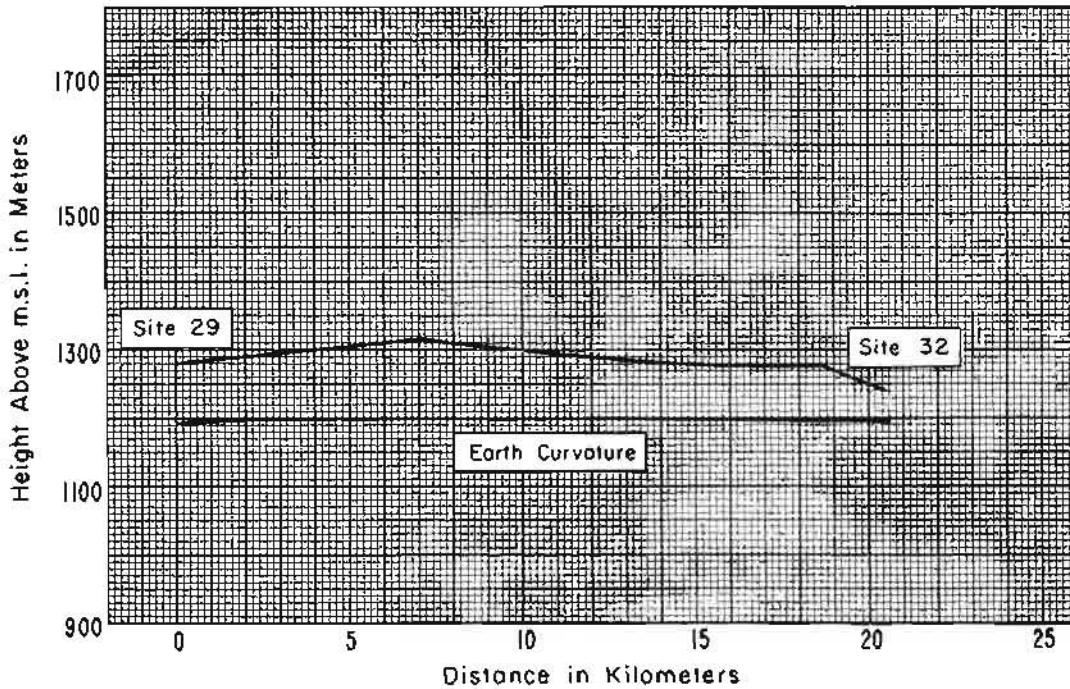


From site 29 toward site 32

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 30 - 32



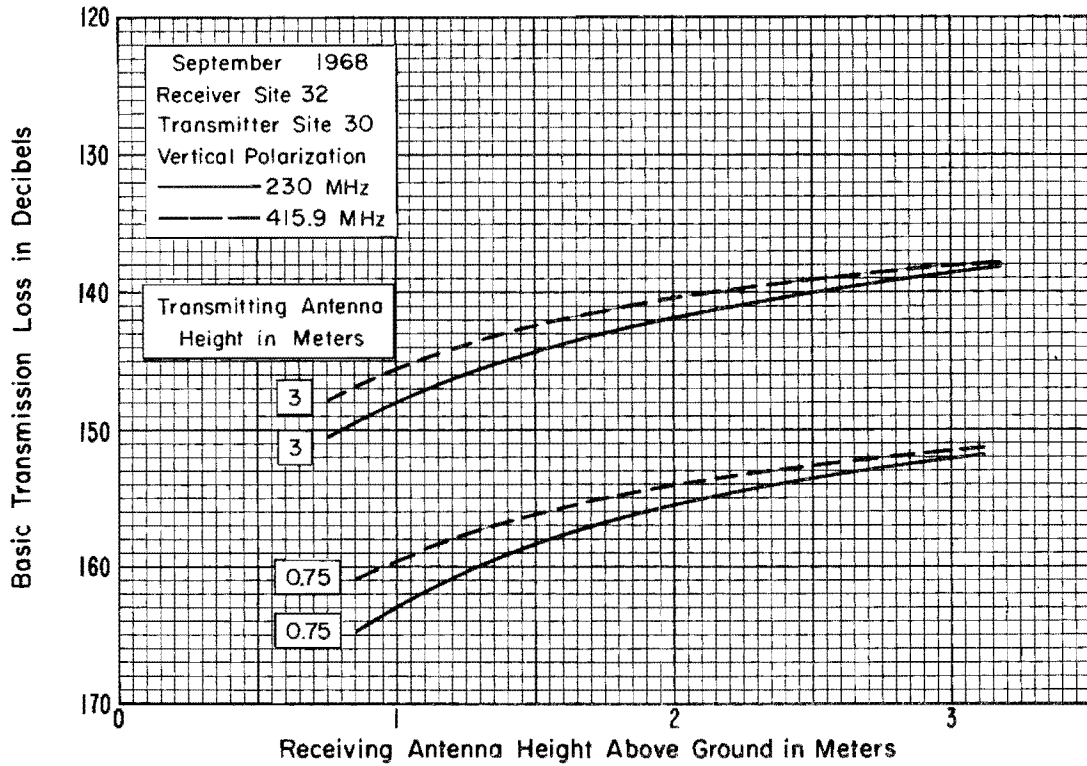
From site 32 toward site 30



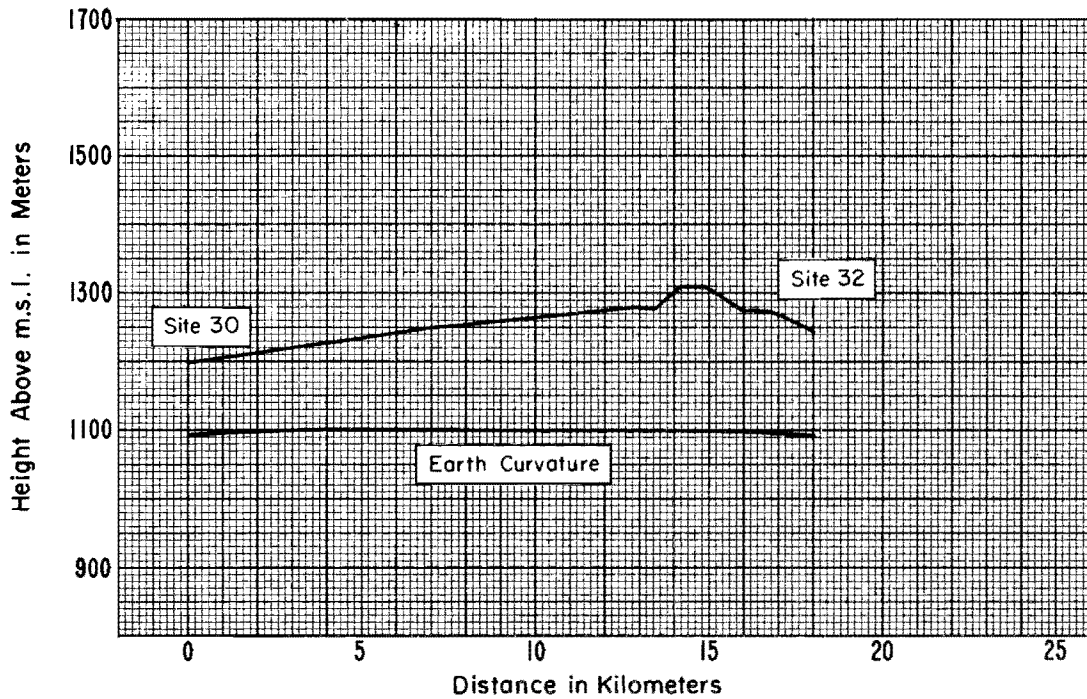
From site 30 toward site 32

IDAHO PATH 30-32

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 34 - 35



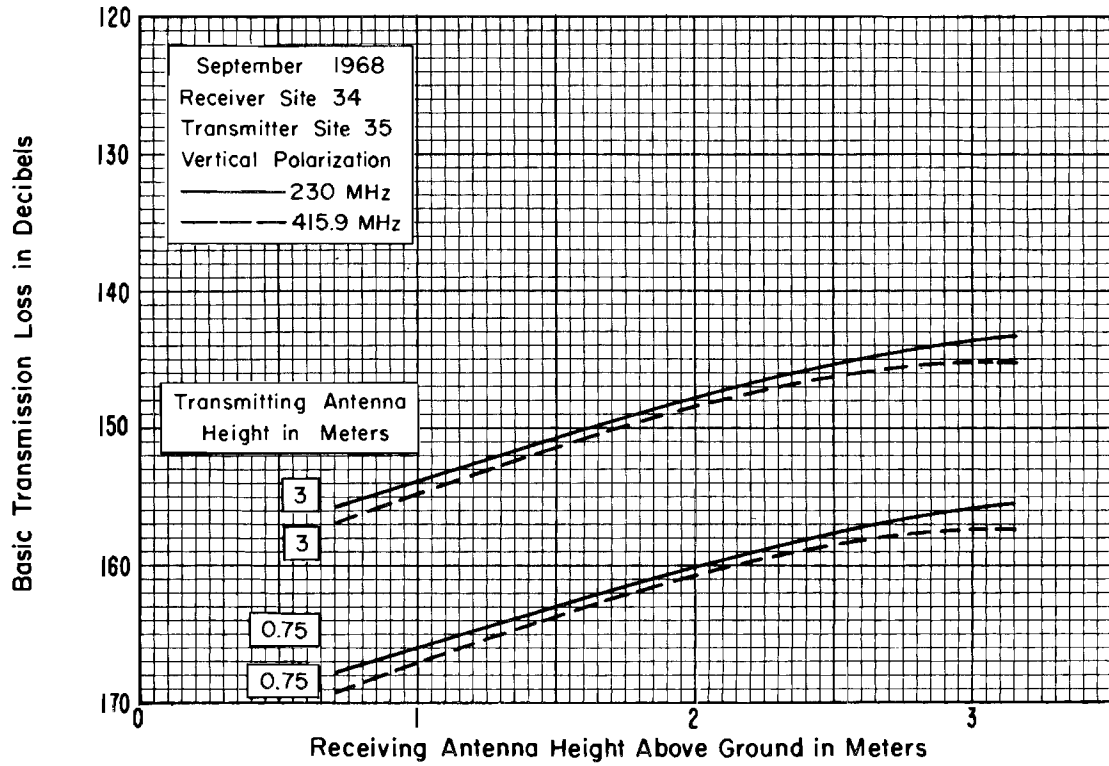
From site 34 toward site 35



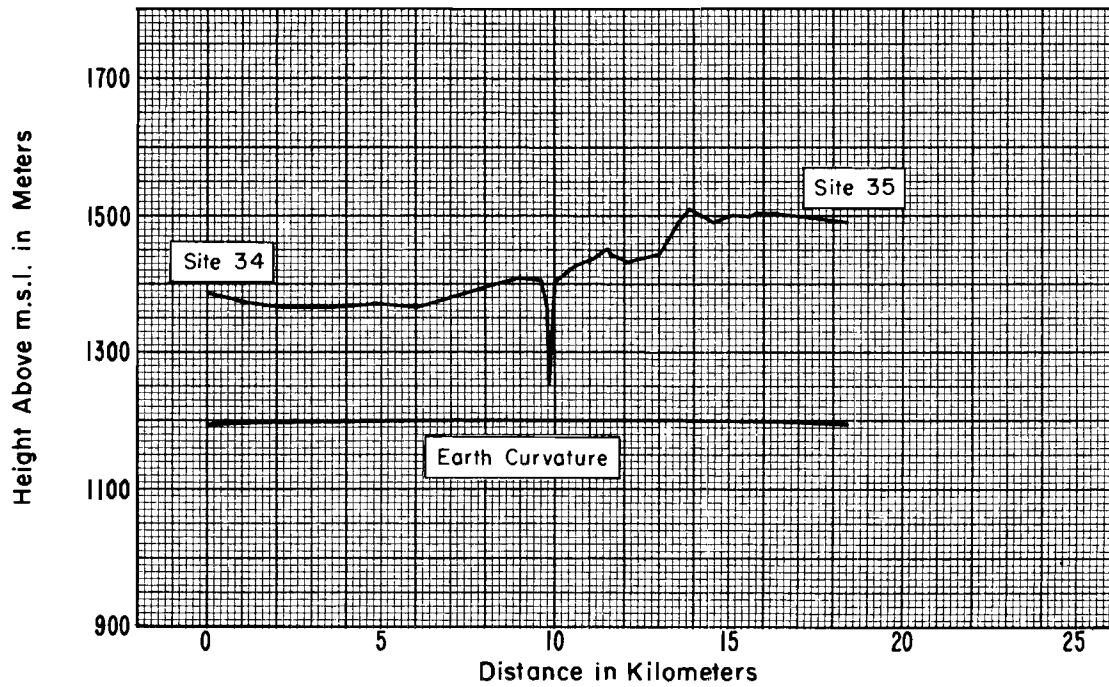
From site 35 toward site 34

IDAHO PATH 34-35

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 34 - 36



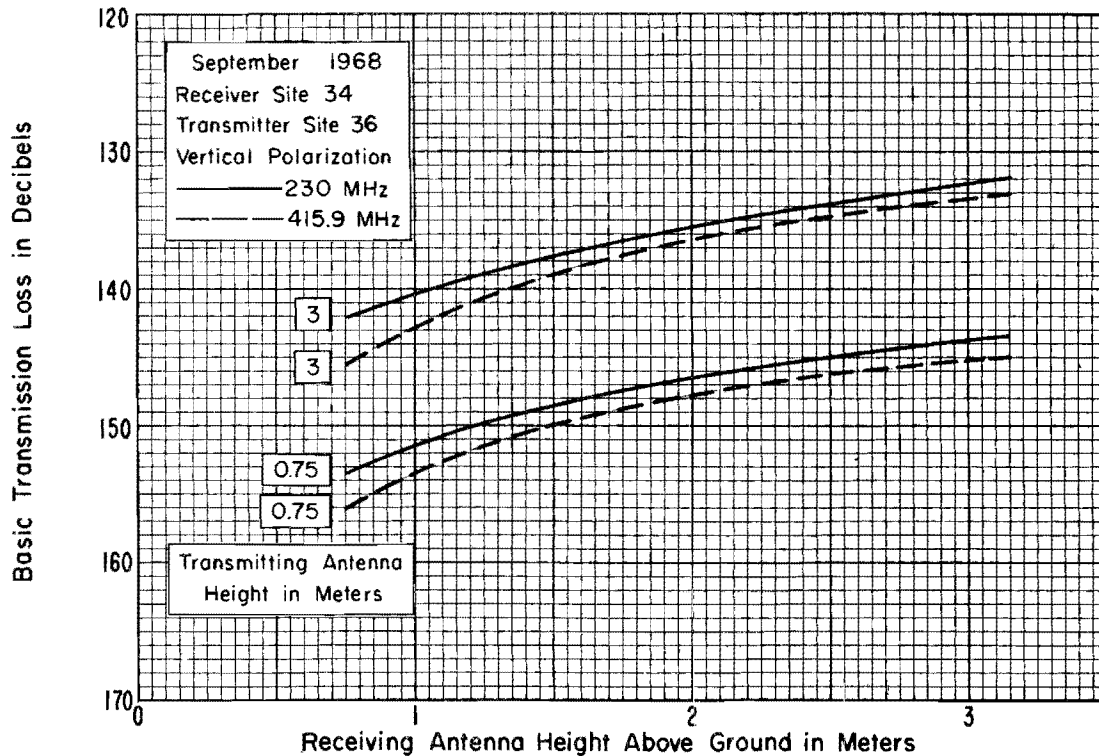
From site 34 toward site 36



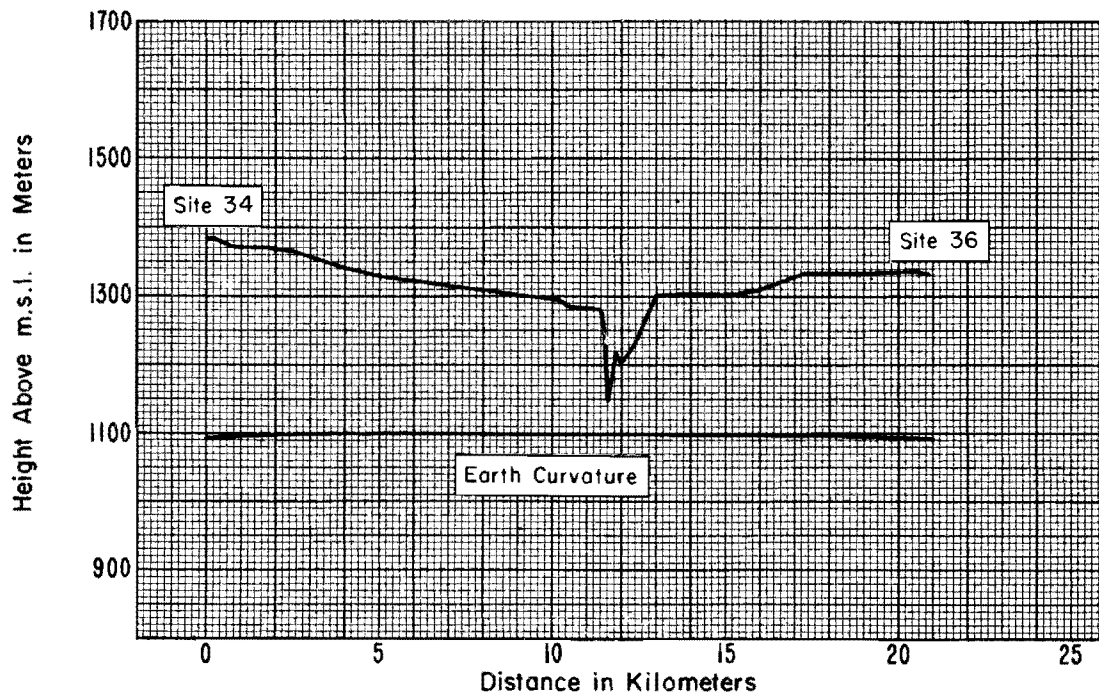
From site 36 toward site 34

IDAHO PATH 34-36

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 34 - 41

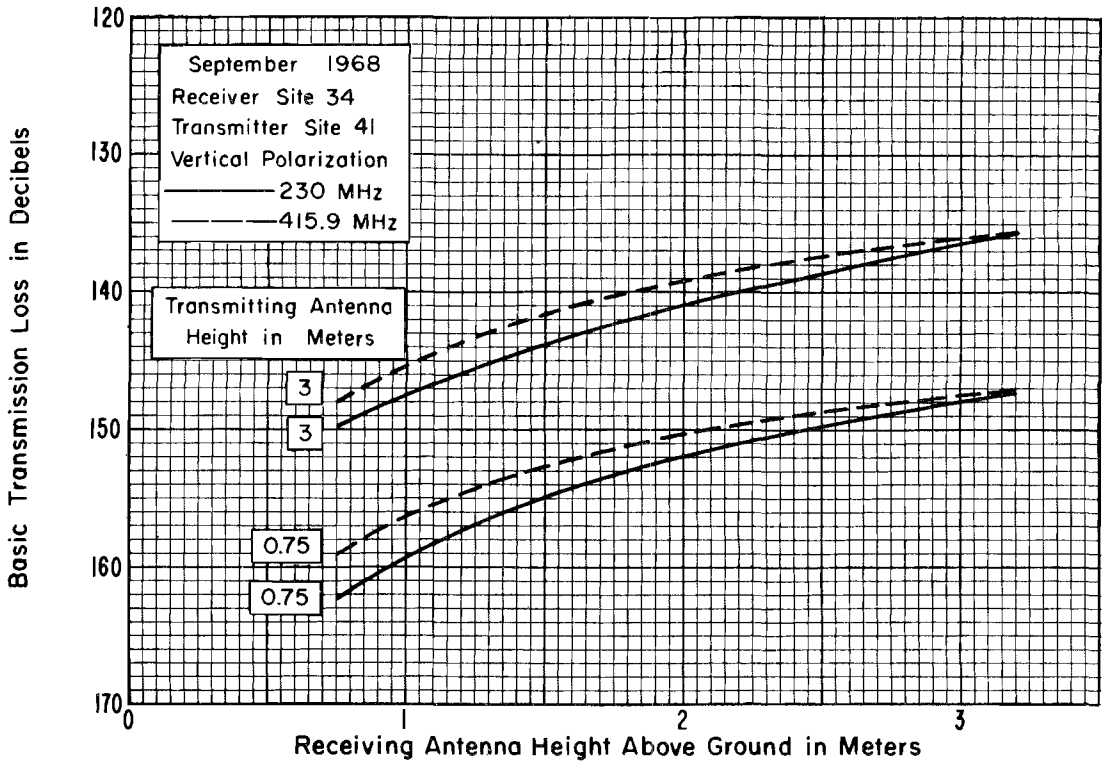


From site 34 toward site 41

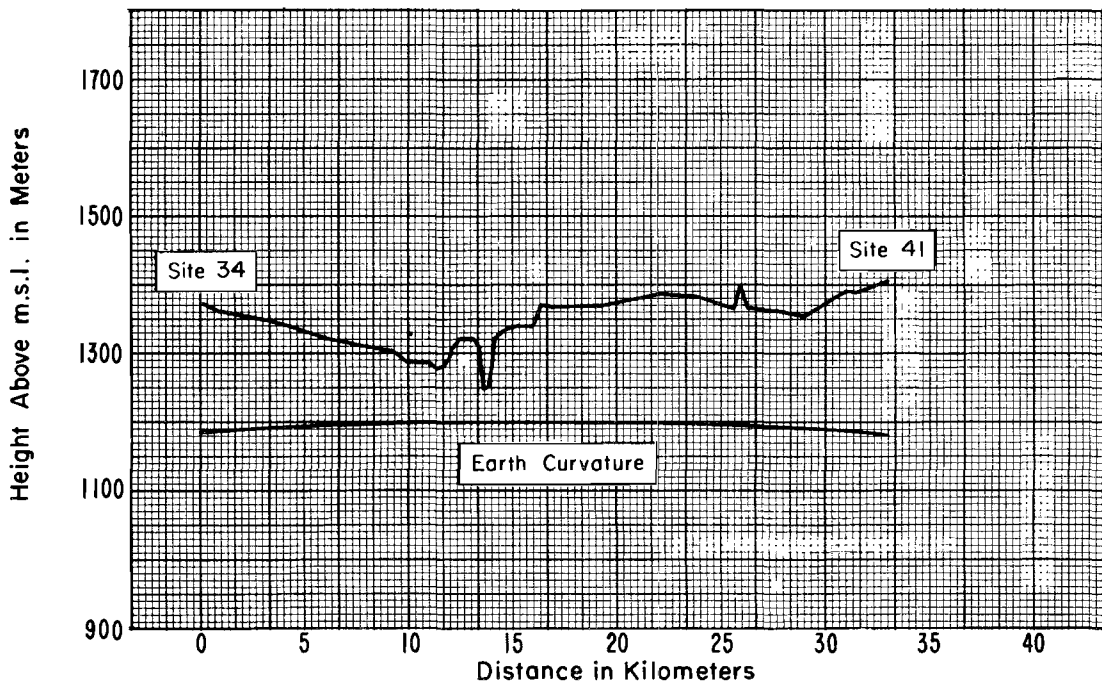


From site 41 toward site 34

PATH LOSS MEASUREMENTS



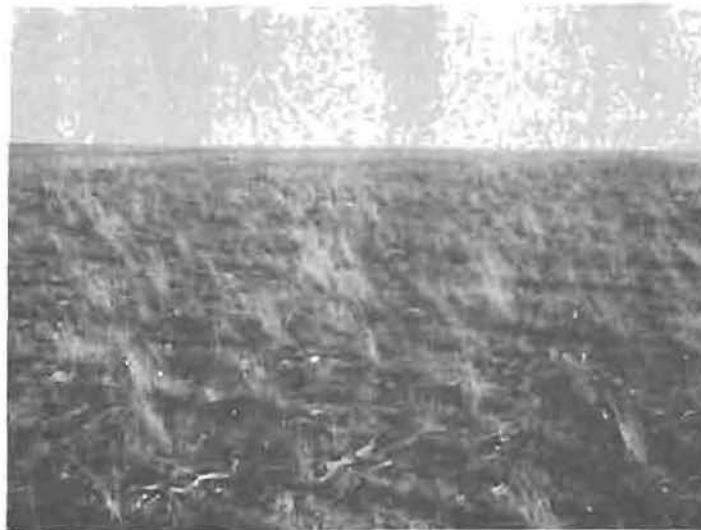
TERRAIN PROFILE



Idaho PATH 35 - 36

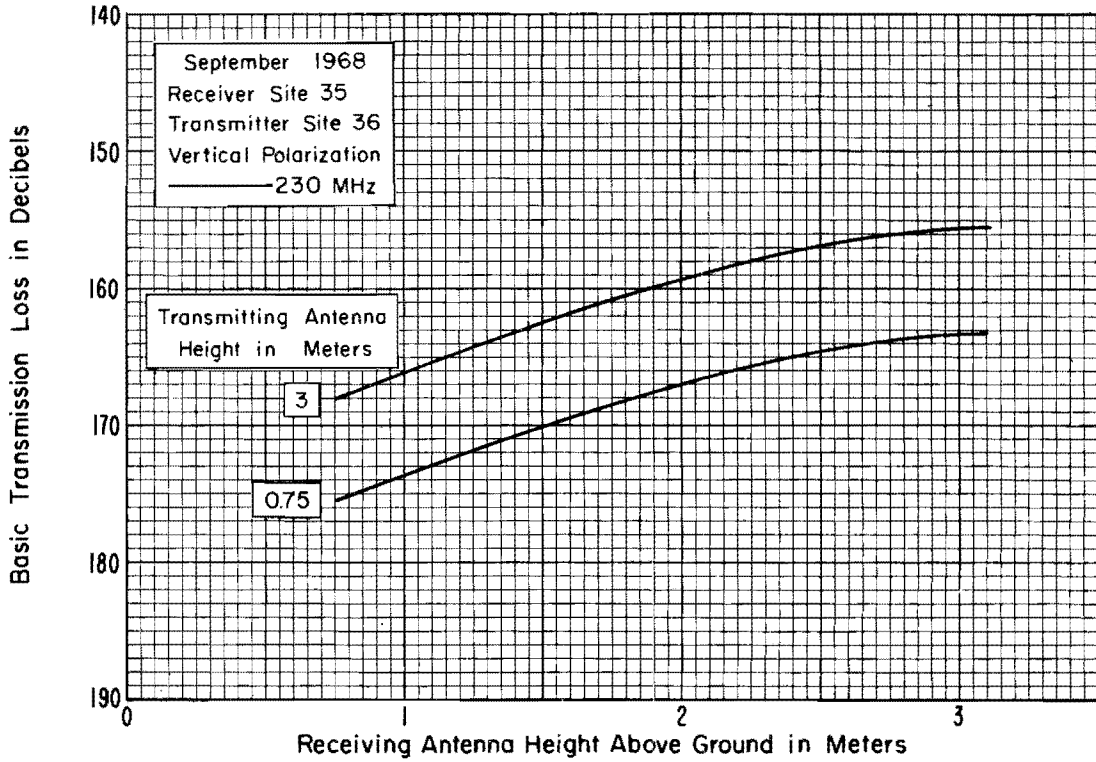


From site 35 toward site 36

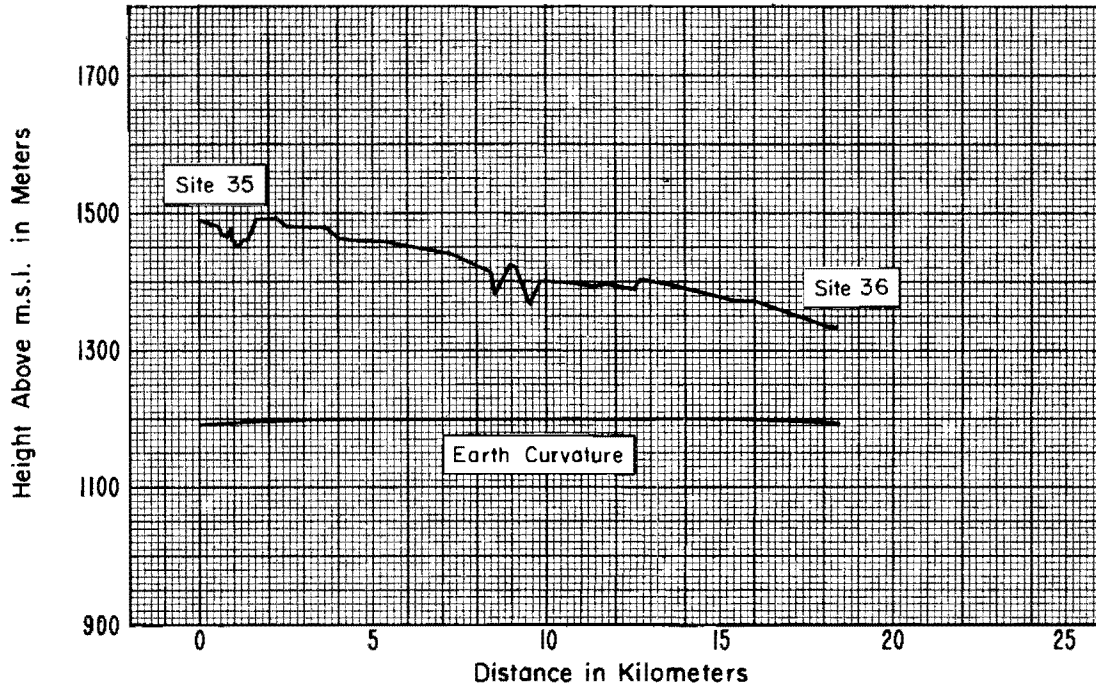


From site 36 toward site 35

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 35 - 41

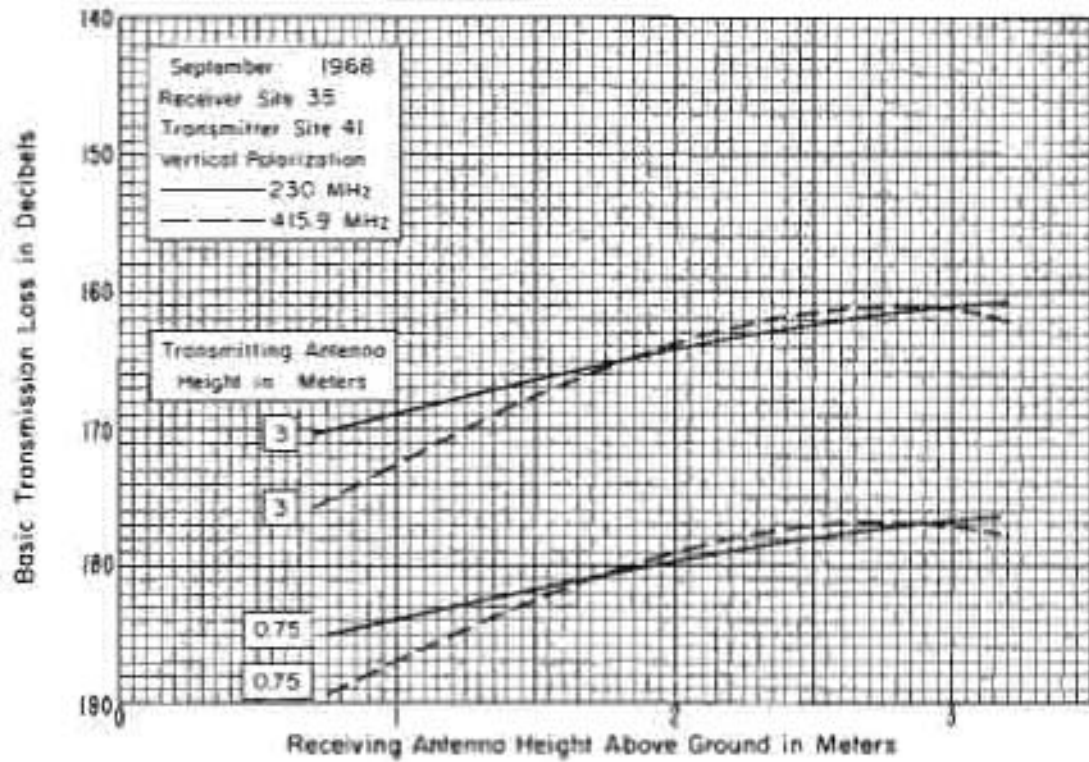


From site 35 toward site 41

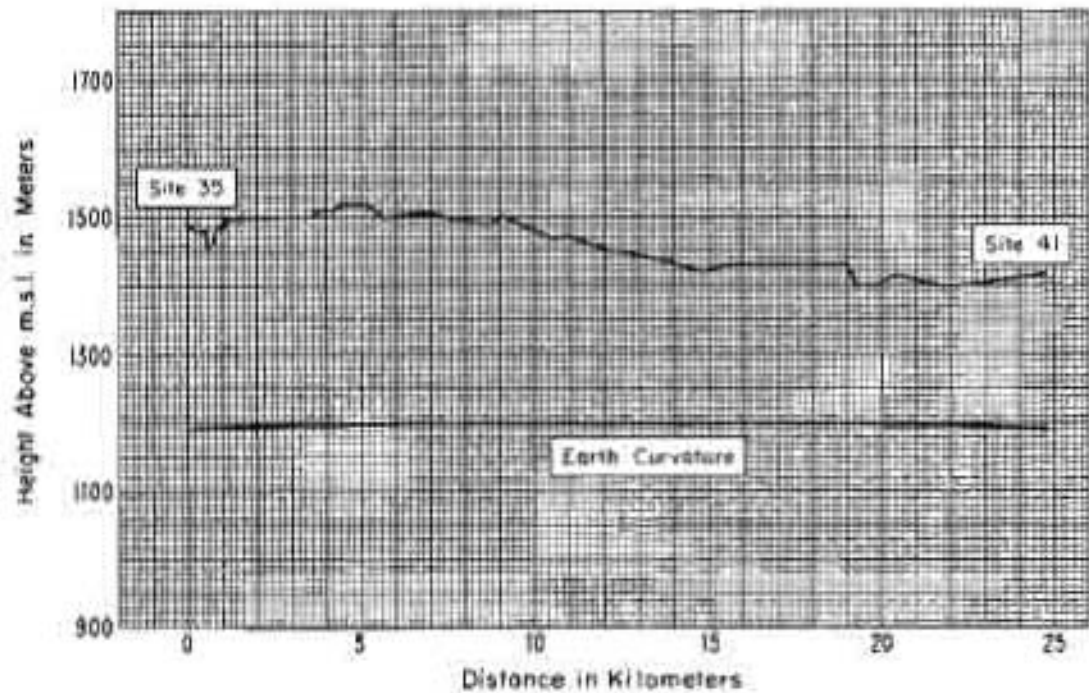


From site 41 toward site 35

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 36 - 41

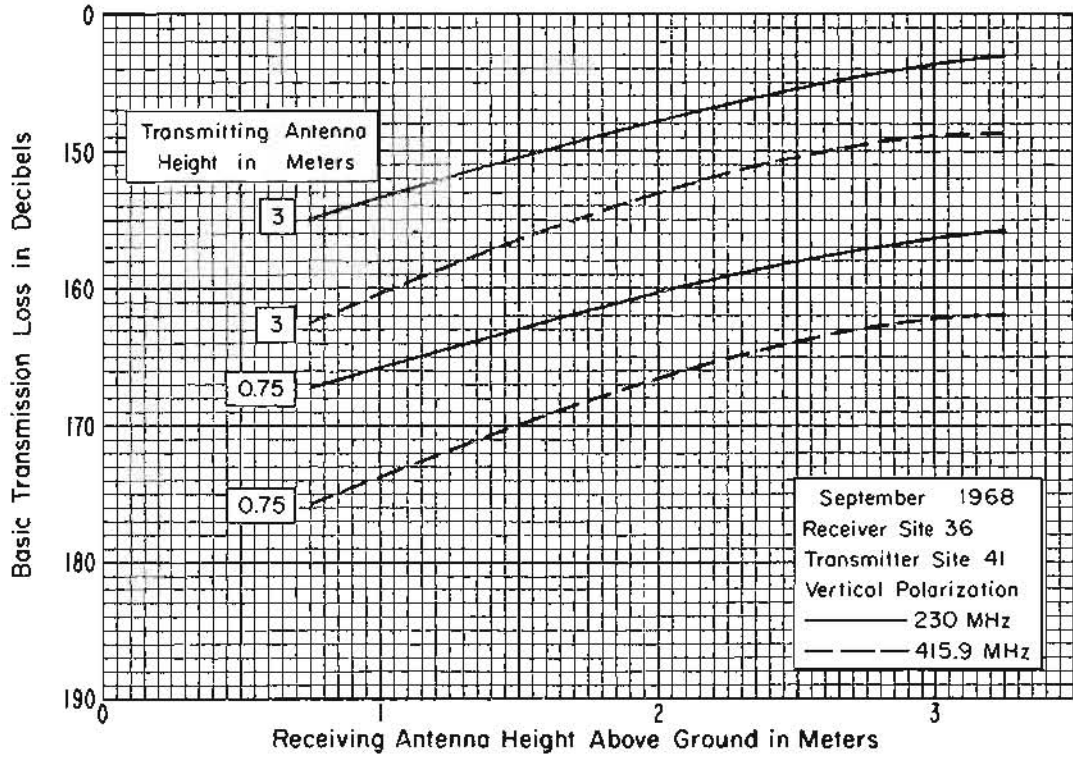


From site 36 toward site 41

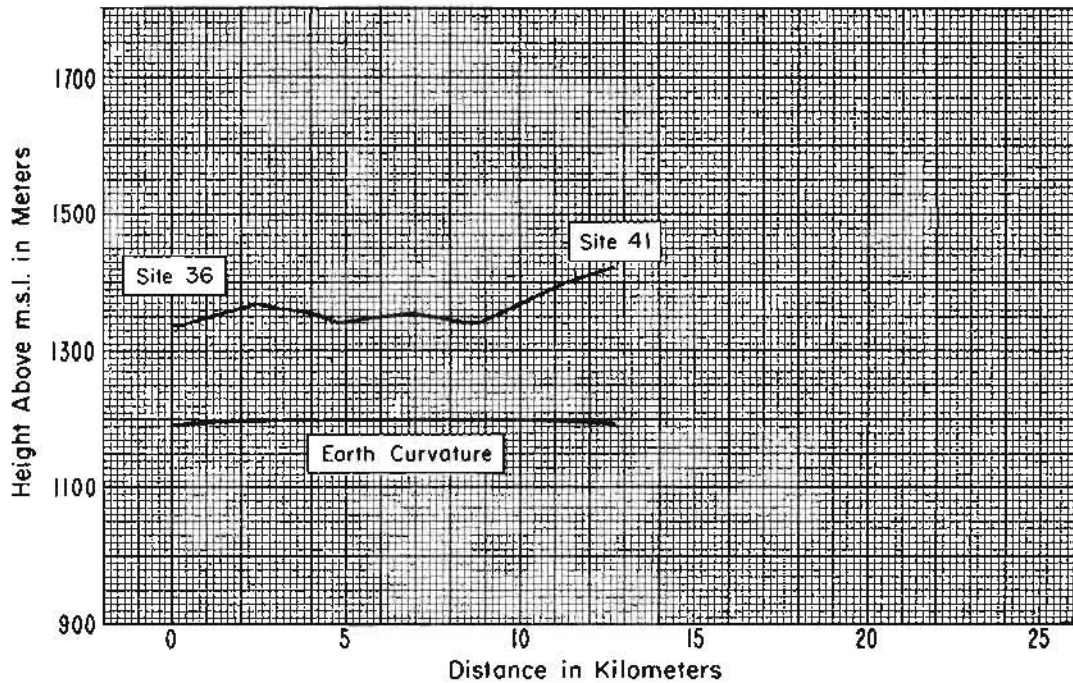


From site 41 toward site 36

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 37 - 38

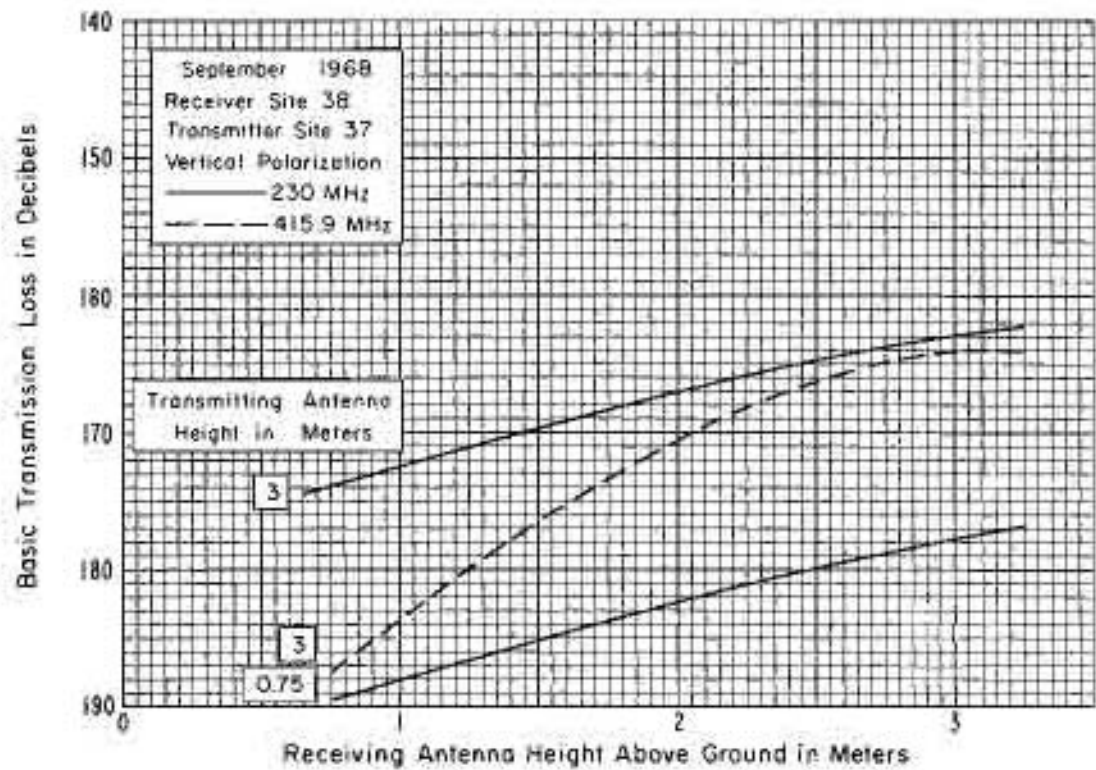


From site 38 toward site 37

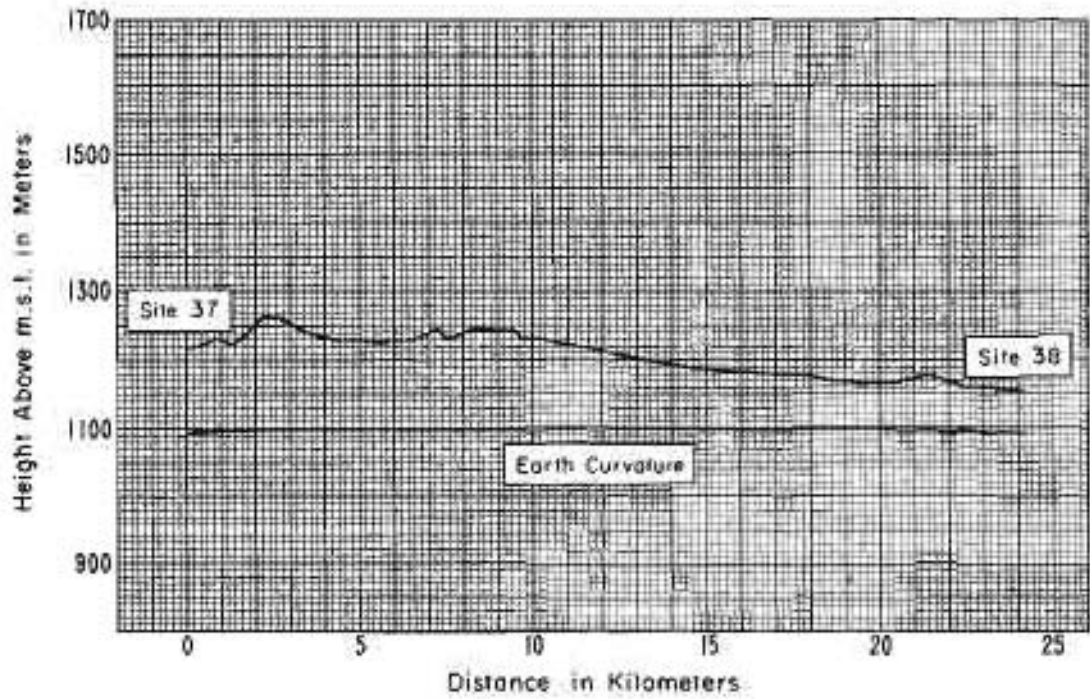


From site 37 toward site 38

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 37 - 41

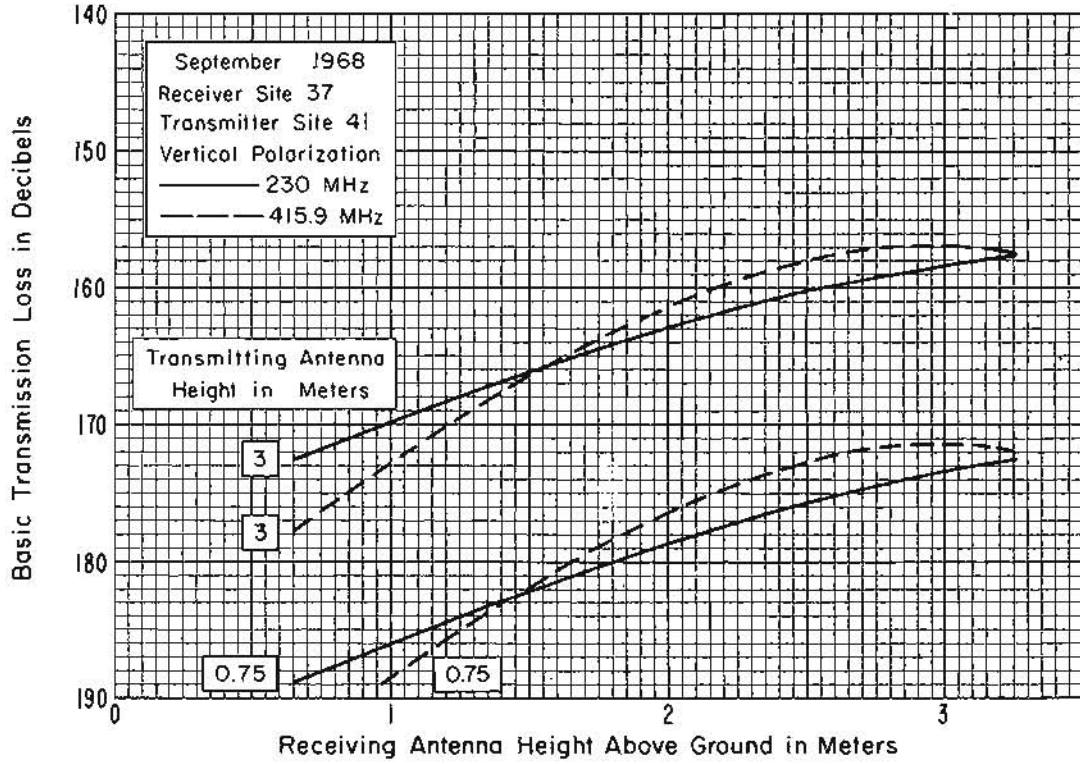


From site 37 toward site 41

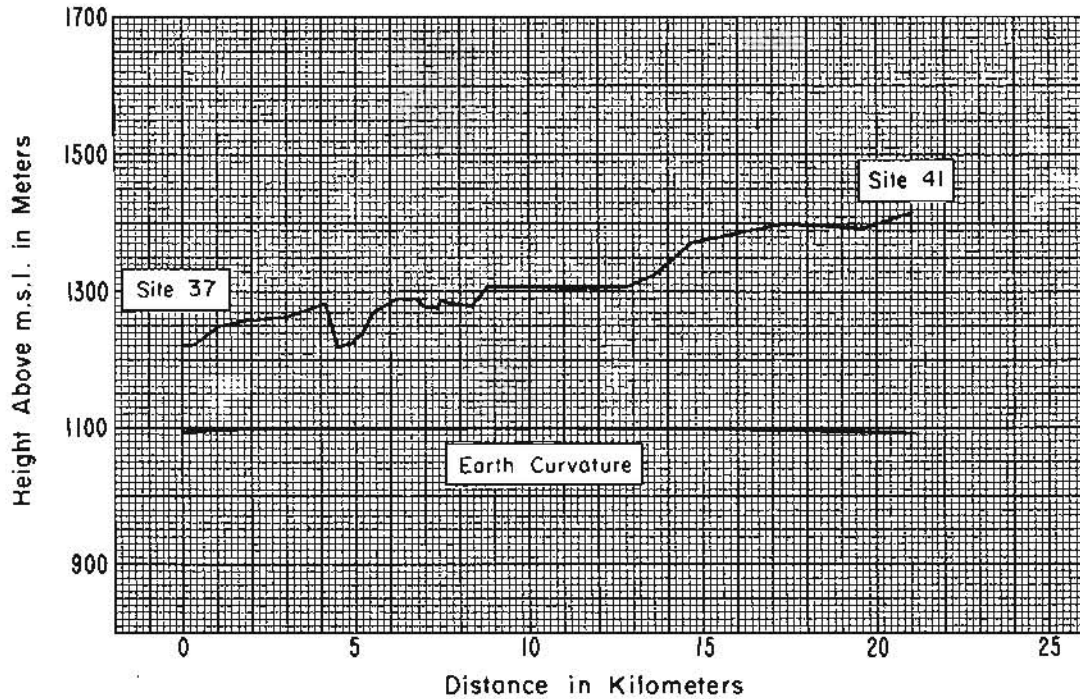


From site 41 toward site 37

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Idaho PATH 38 - 39

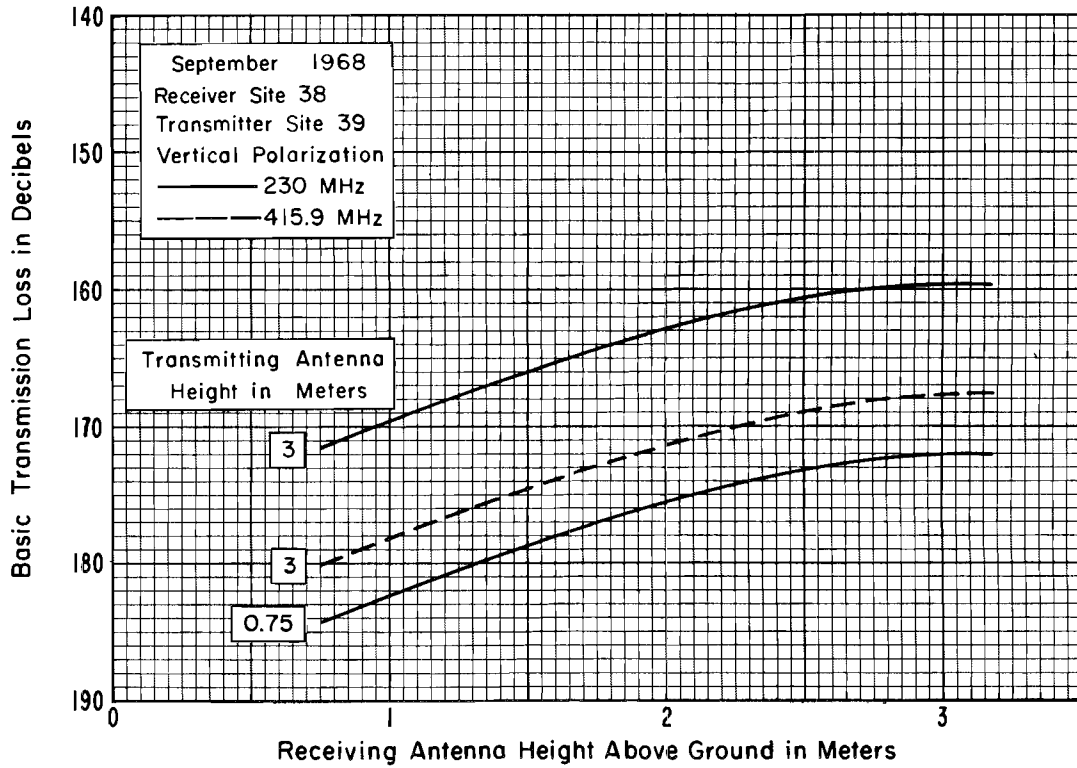


From site 38 toward site 39

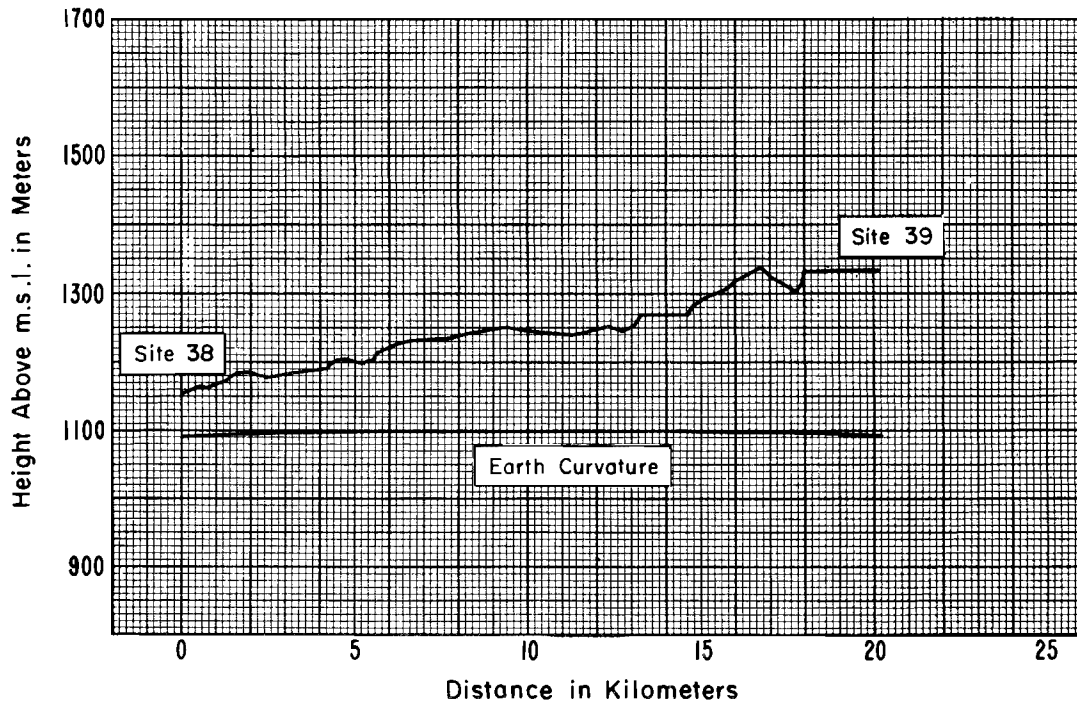


From site 39 toward site 38

PATH LOSS MEASUREMENTS



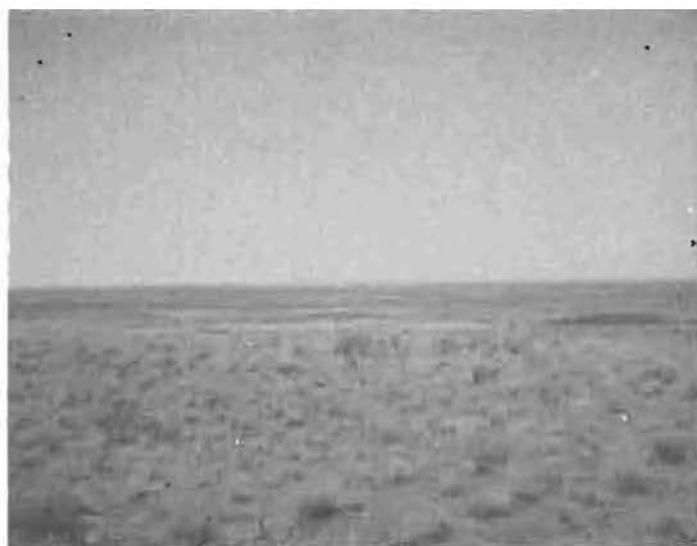
TERRAIN PROFILE



Washington PATH 3 - 6



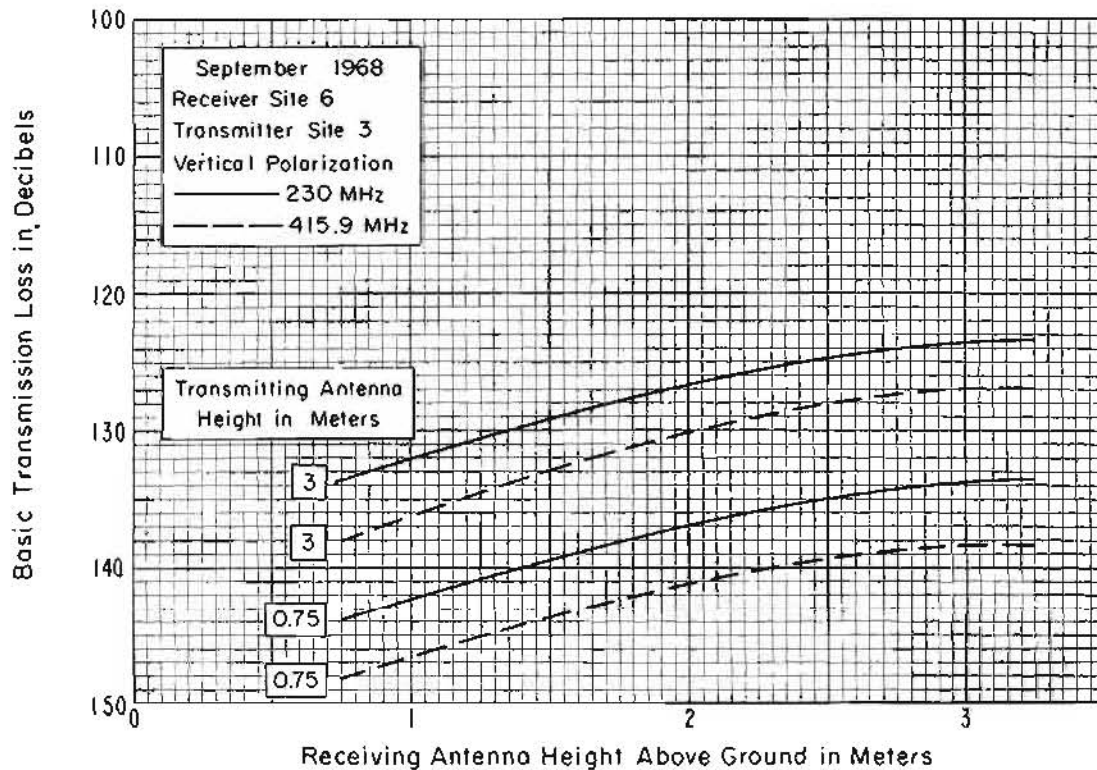
From site 6 toward site 3



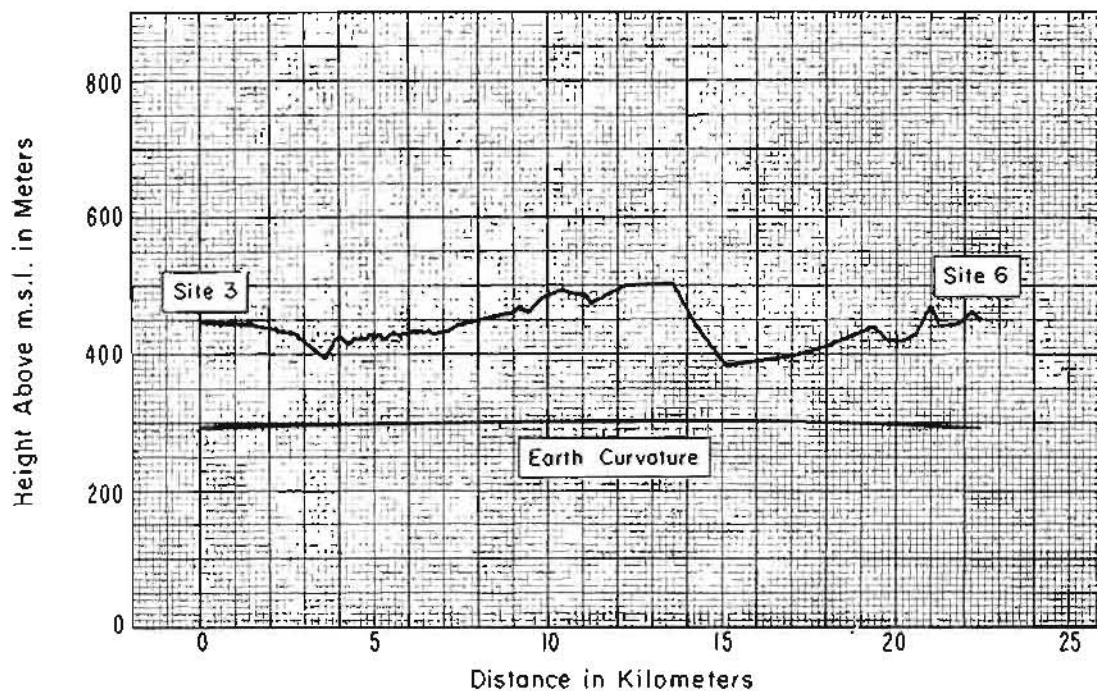
From site 3 toward site 6

WASHINGTON PATH 3—6

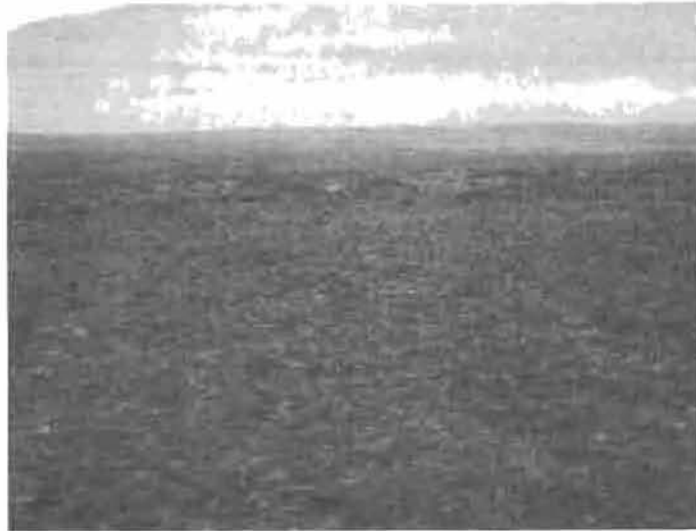
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 3 - 11



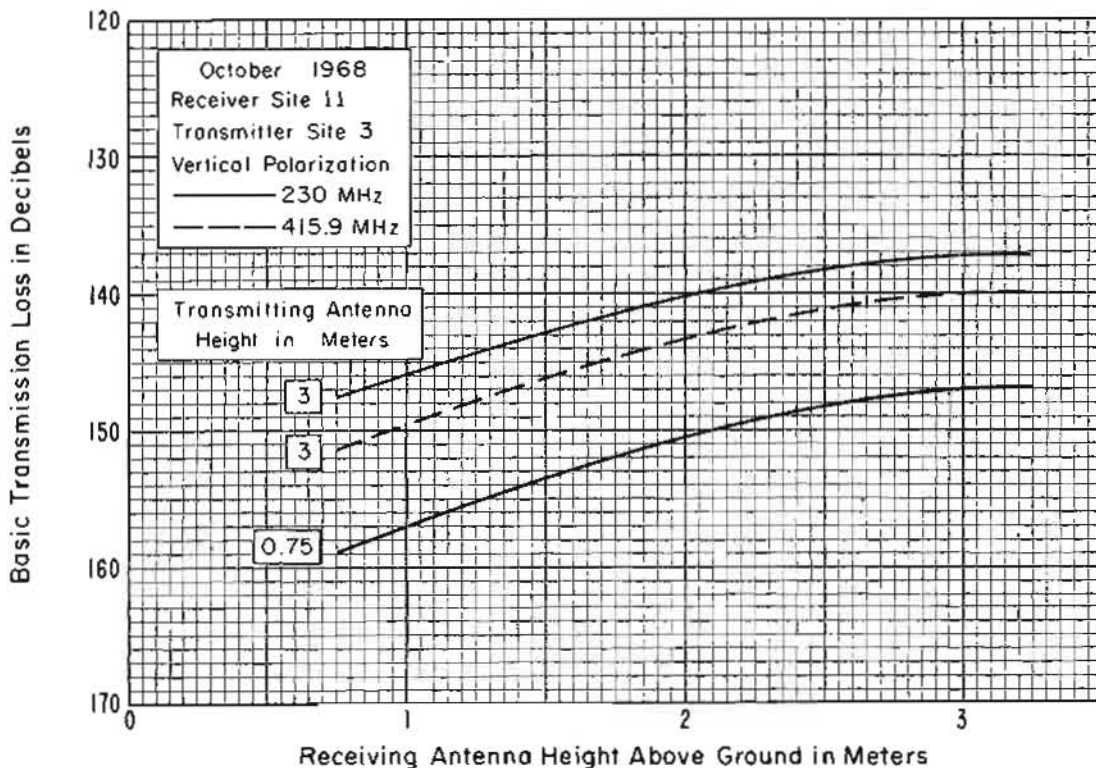
From site 11 toward site 3



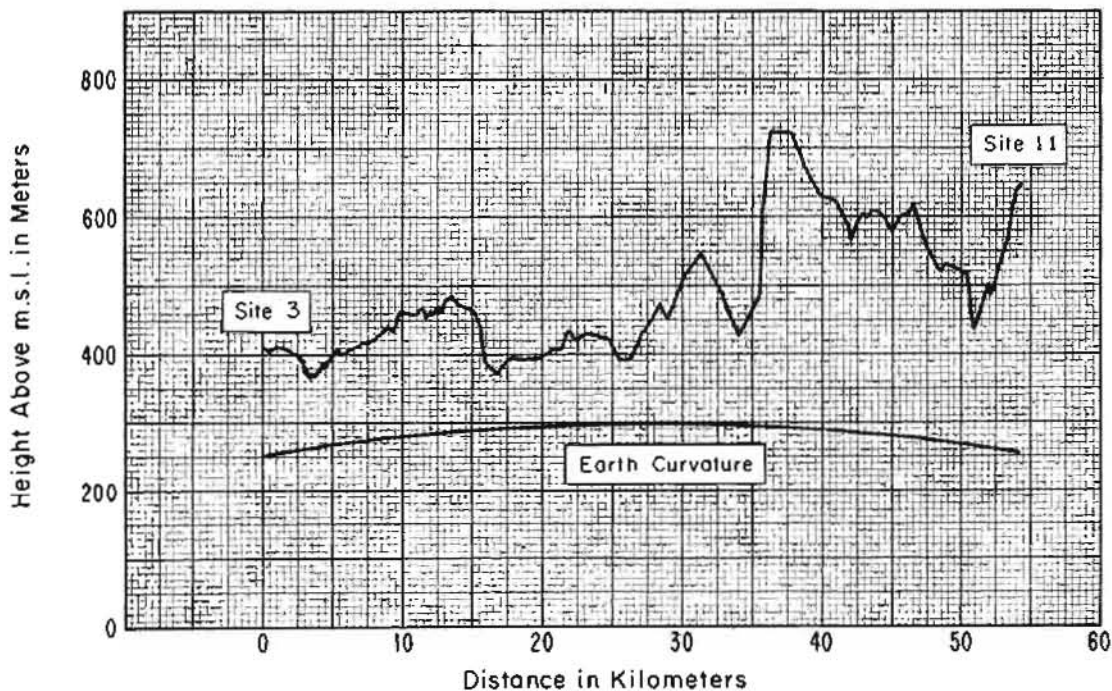
From site 3 toward site 11

WASHINGTON PATH 3—11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 5 - 6



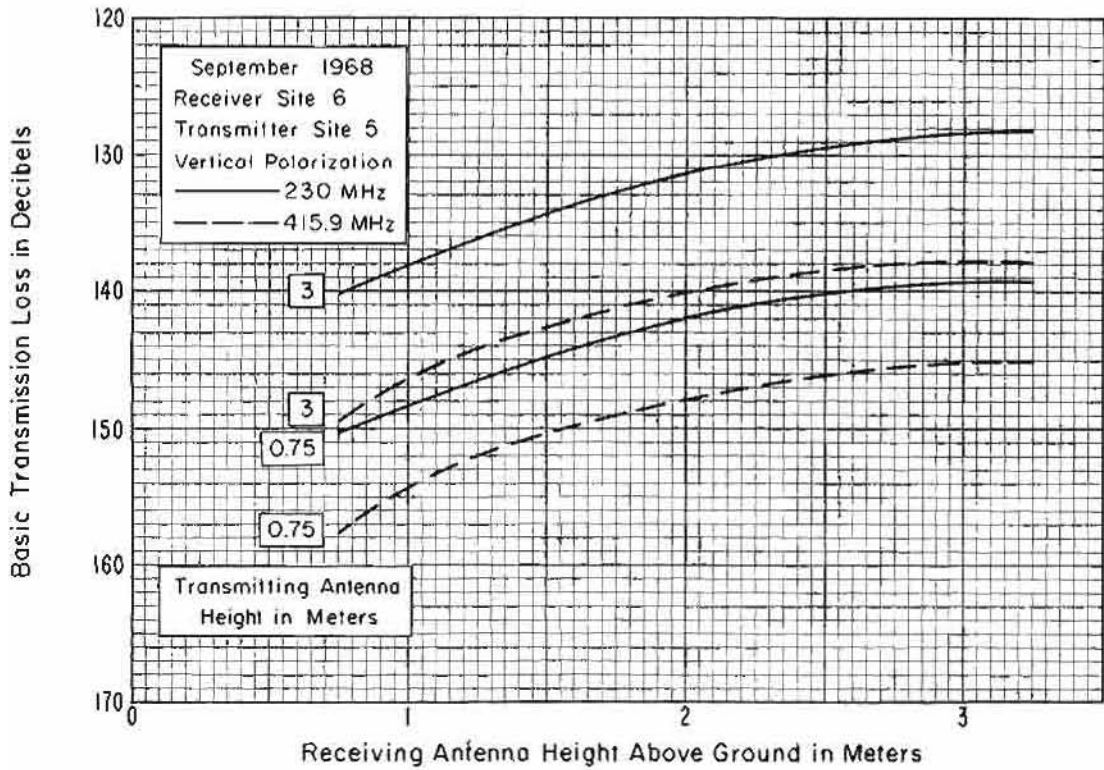
From site 6 toward site 5



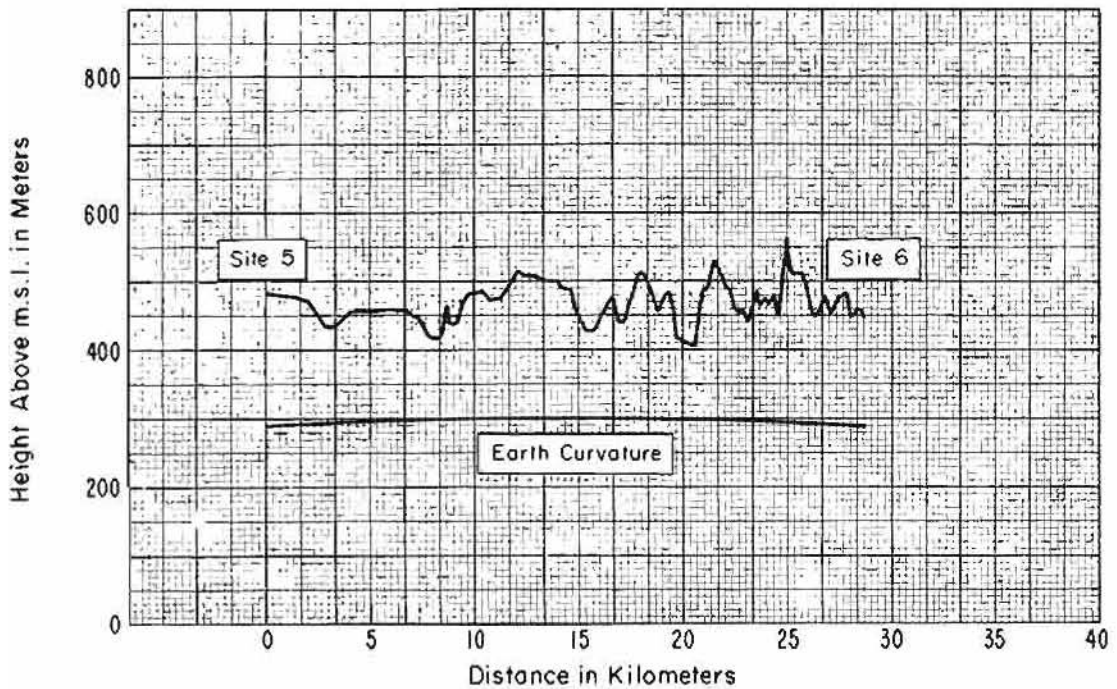
From site 5 toward site 6

WASHINGTON PATH 5—6

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 7



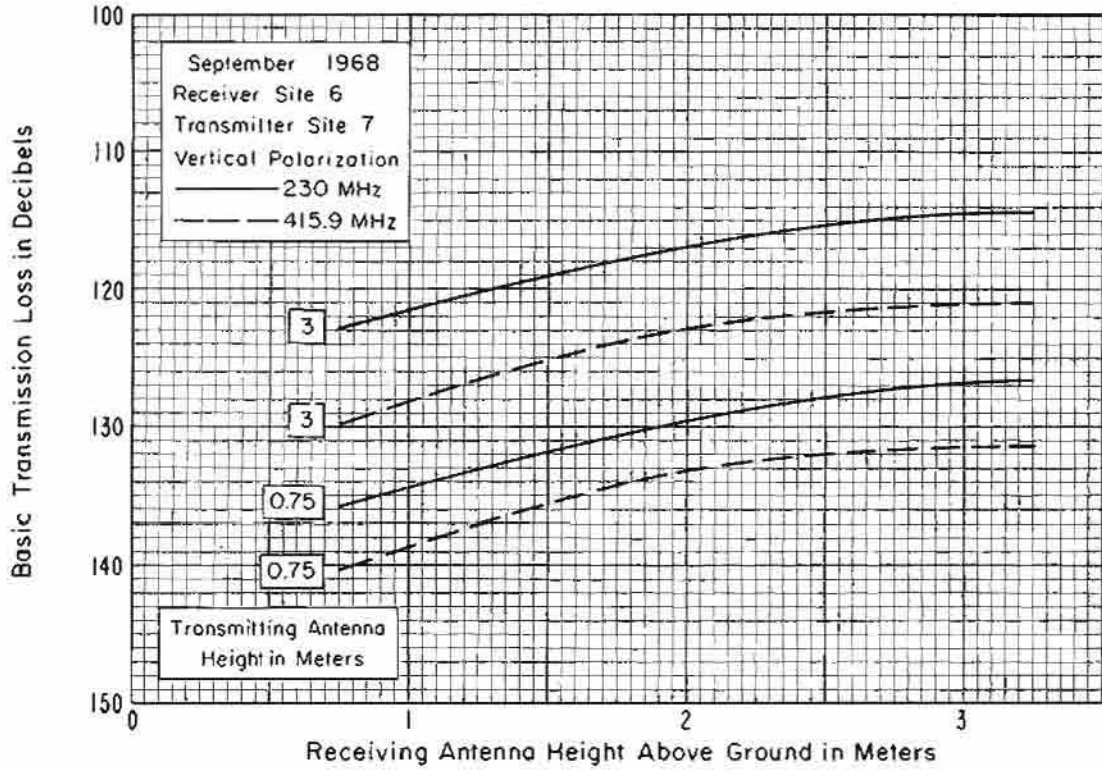
From site 6 toward site 7



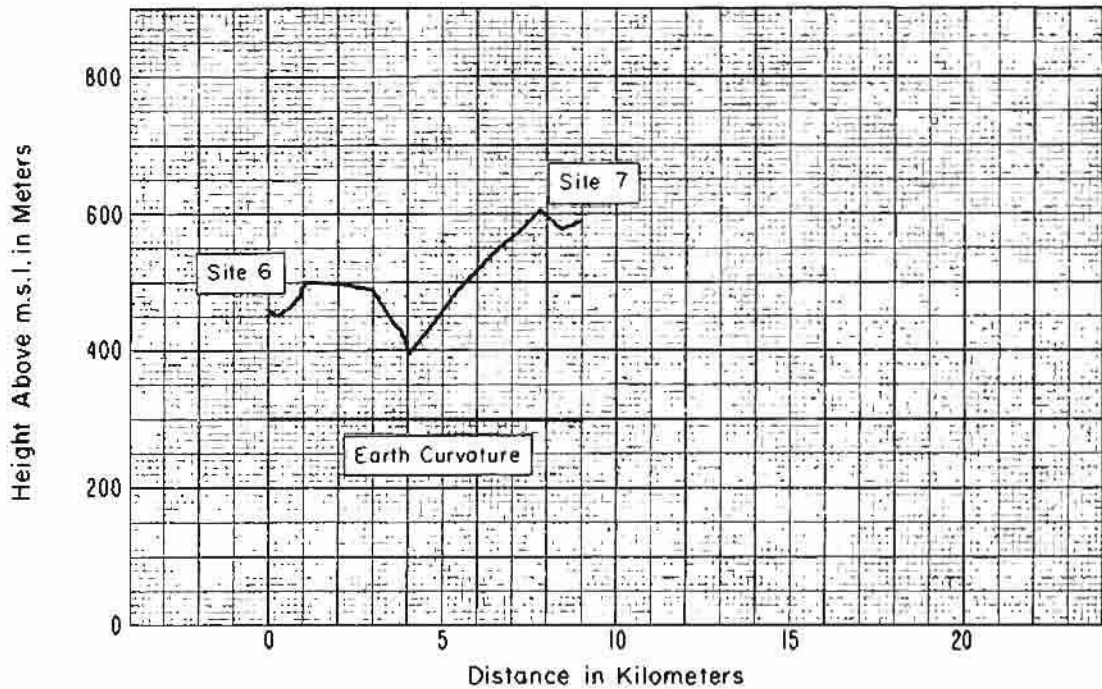
From site 7 toward site 6

WASHINGTON PATH 6 — 7

PATH LOSS MEASUREMENTS



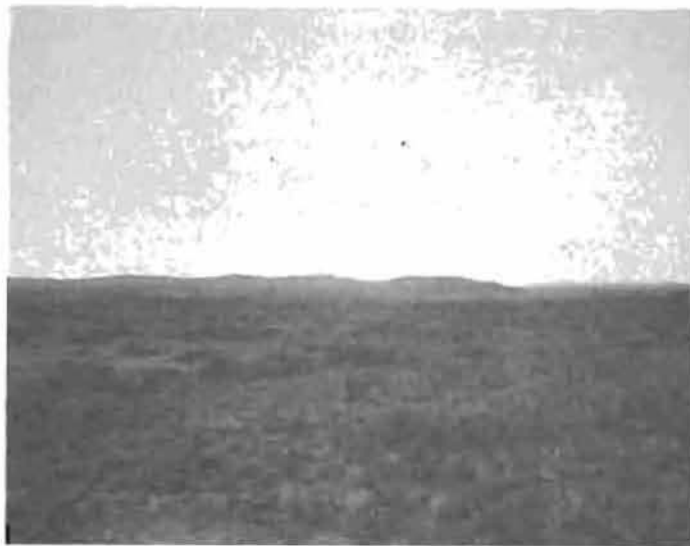
TERRAIN PROFILE



Washington PATH 6 - 8

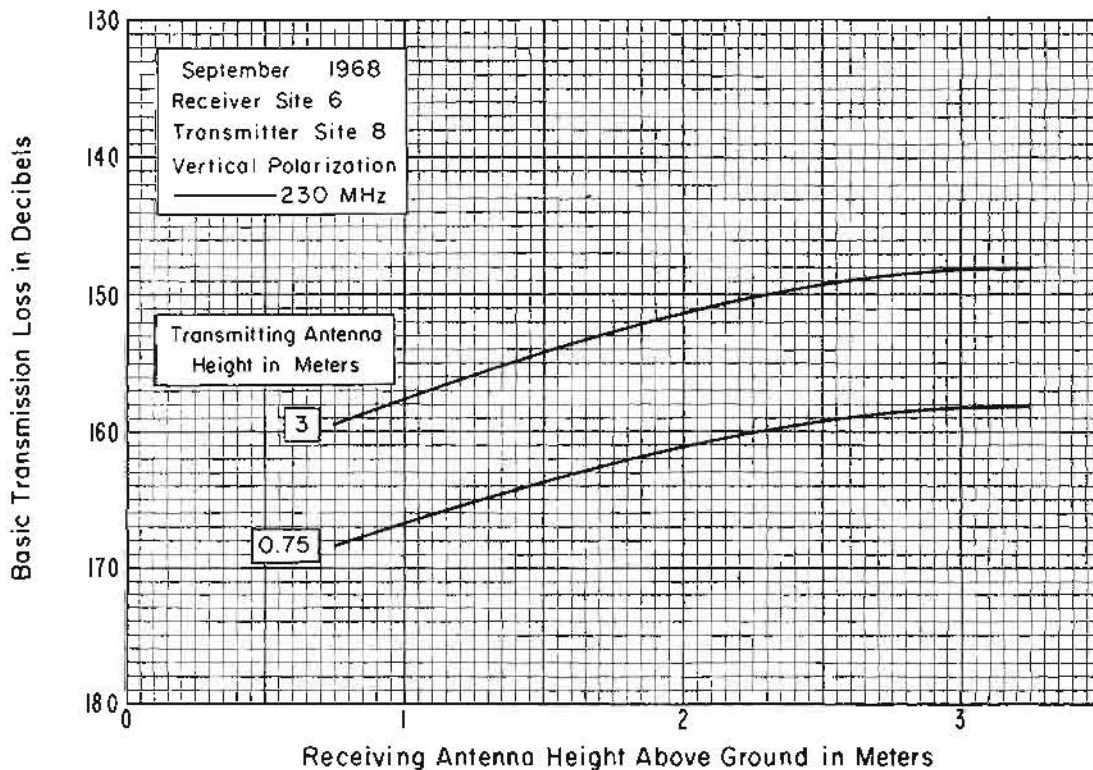


From site 6 toward site 8

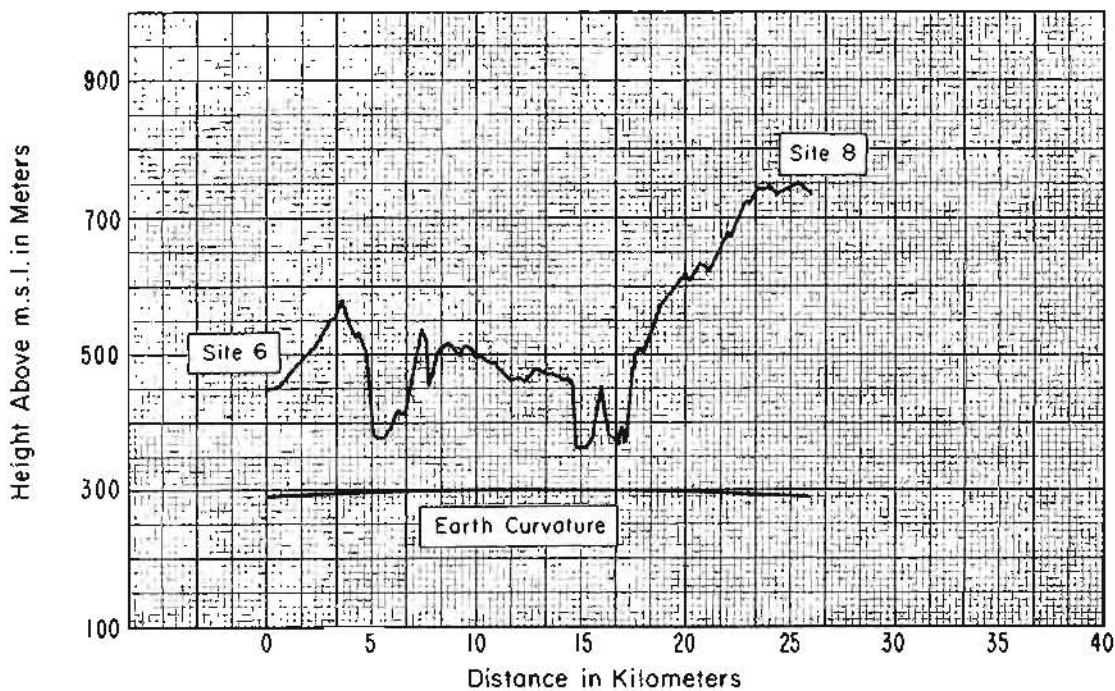


From site 8 toward site 6

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 9

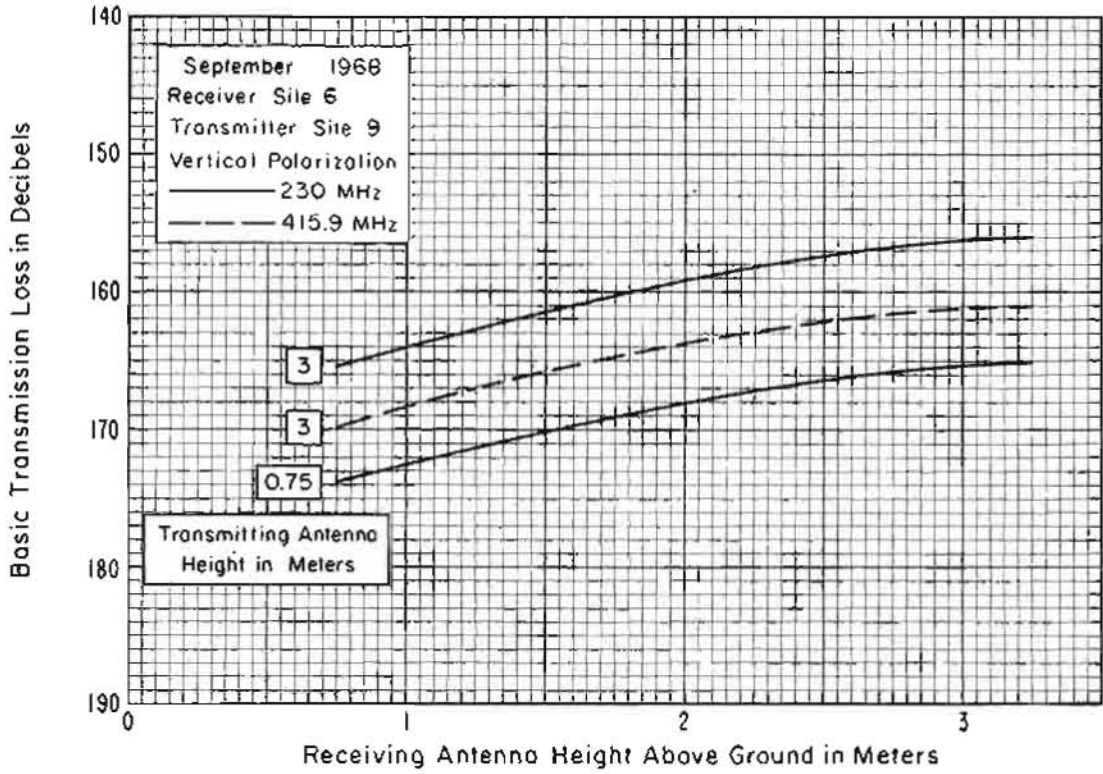


From site 6 toward site 9

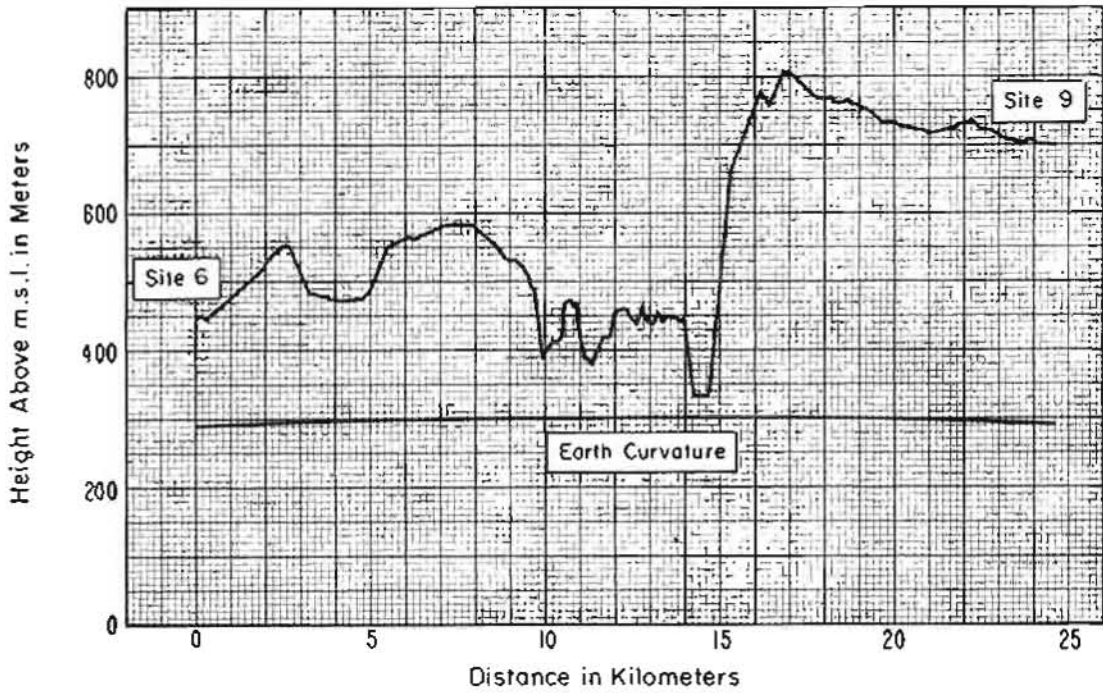


From site 9 toward site 6

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 10



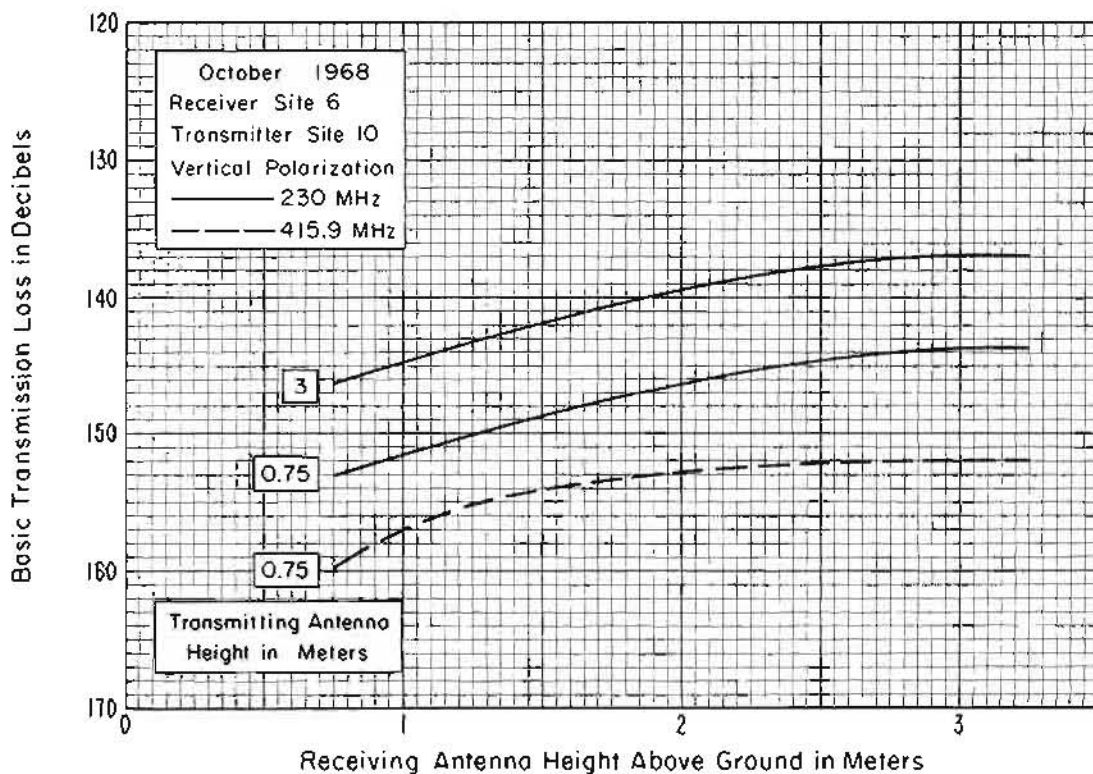
From site 6 toward site 10



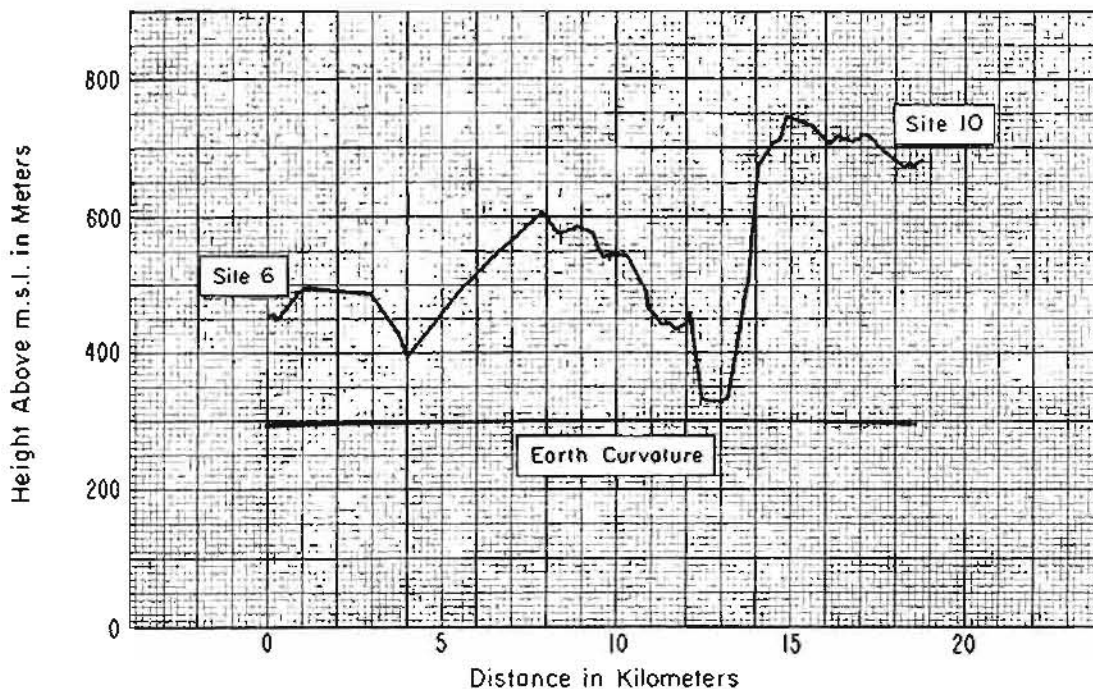
From site 10 toward site 6

WASHINGTON PATH 6 — 10

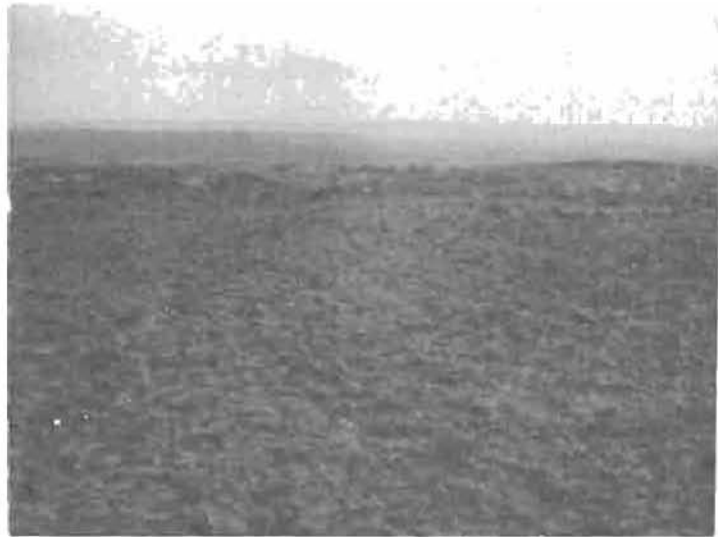
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 11



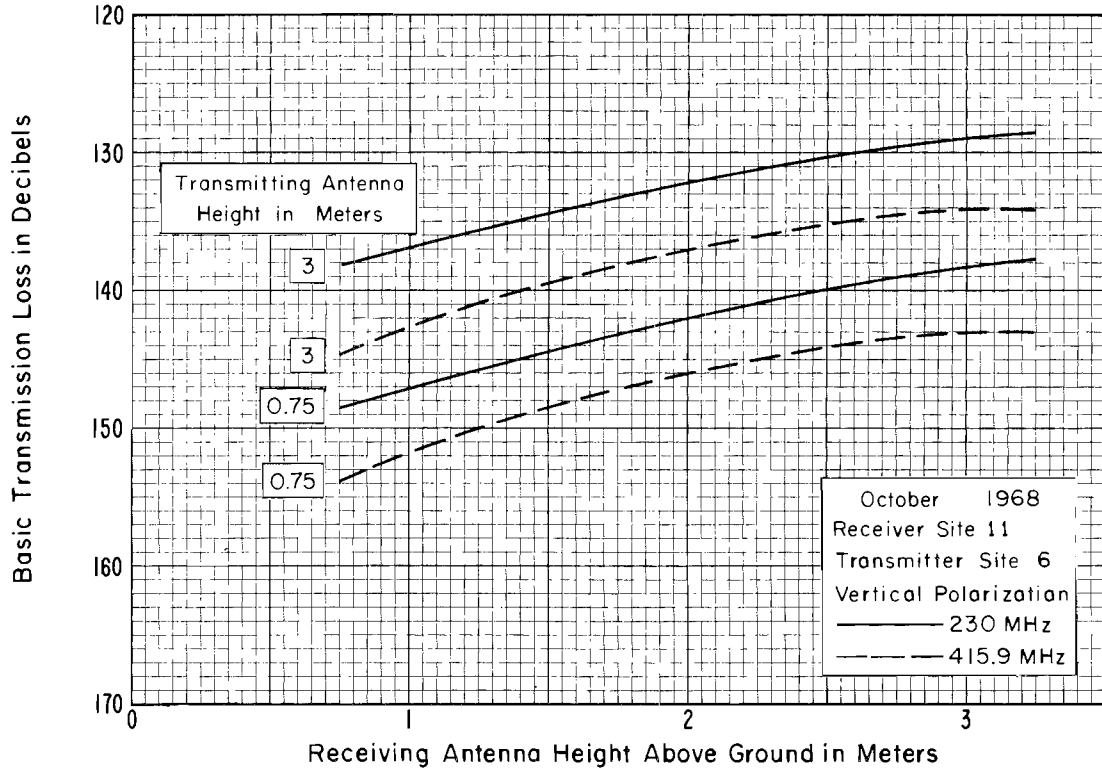
From site 11 toward site 6



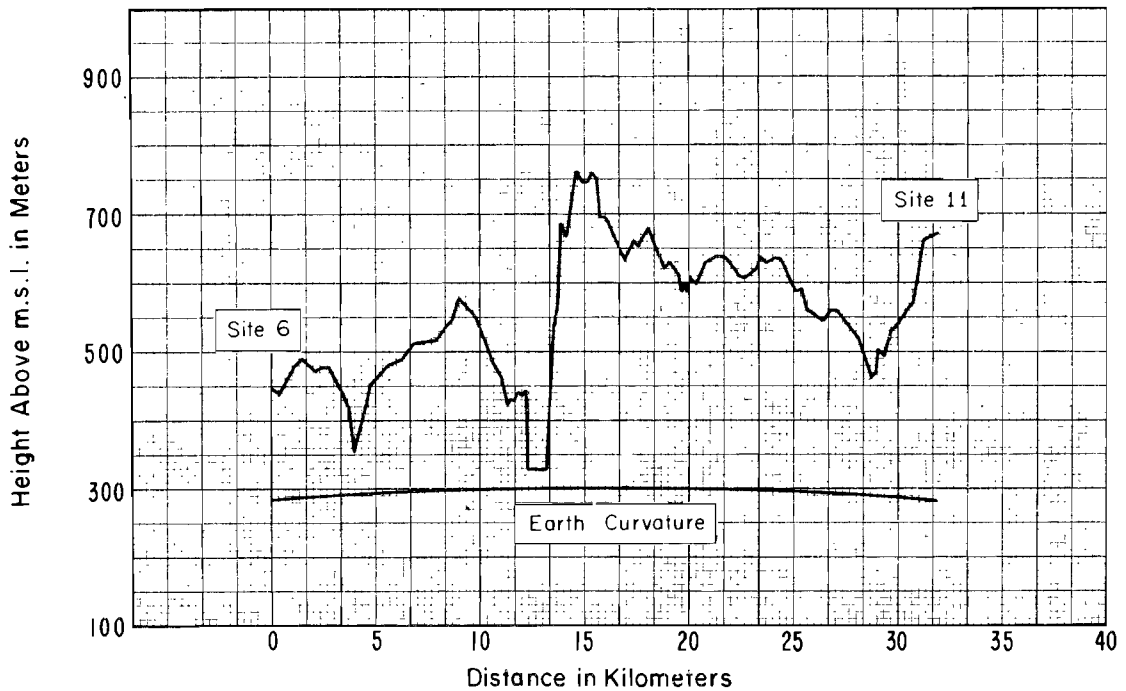
From site 6 toward site 11

WASHINGTON PATH 6—11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 12



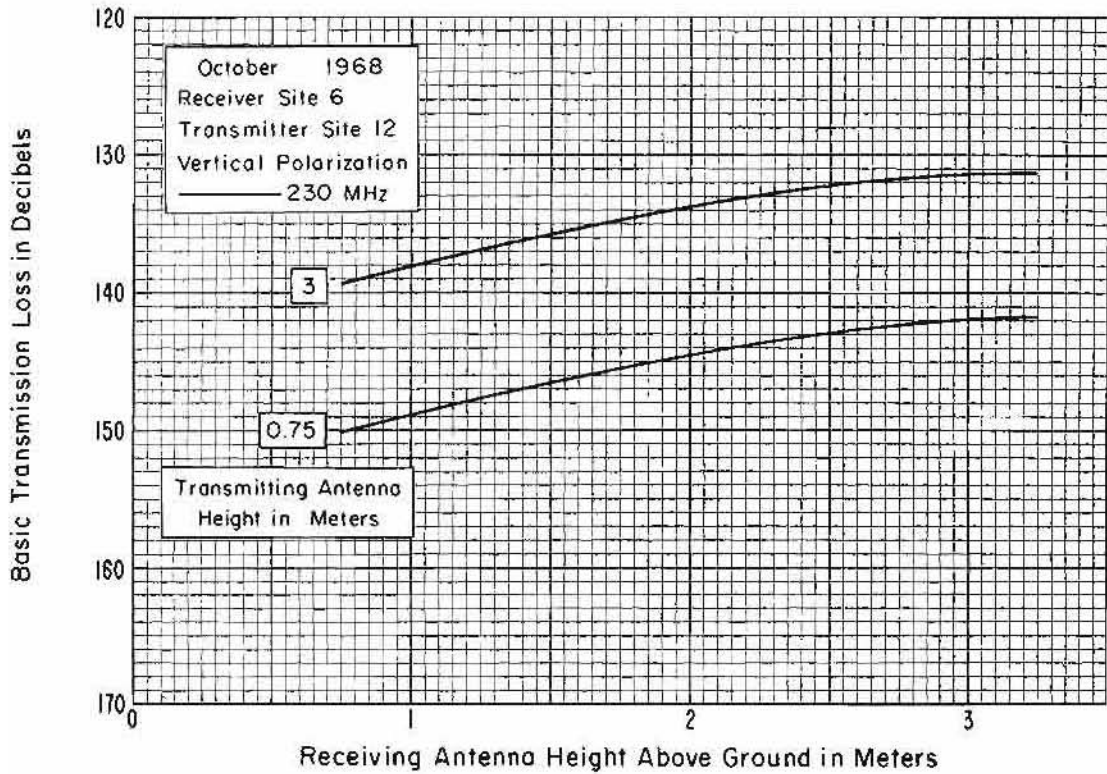
From site 6 toward site 12



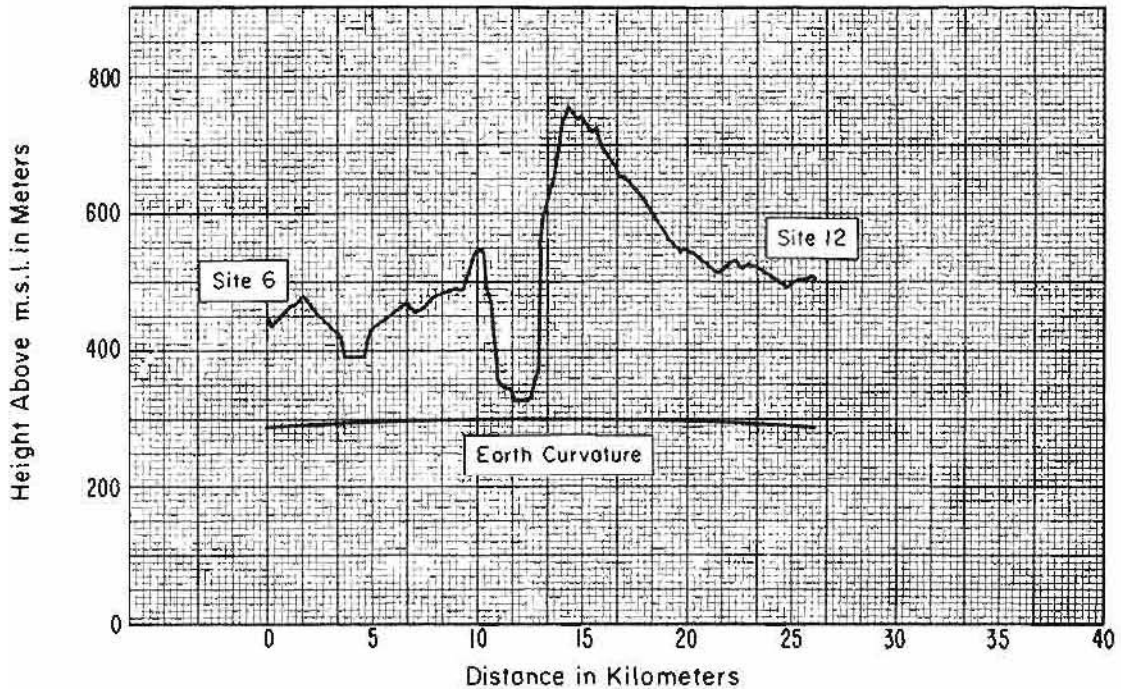
From site 12 toward site 6

WASHINGTON PATH 6 — 12

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 13

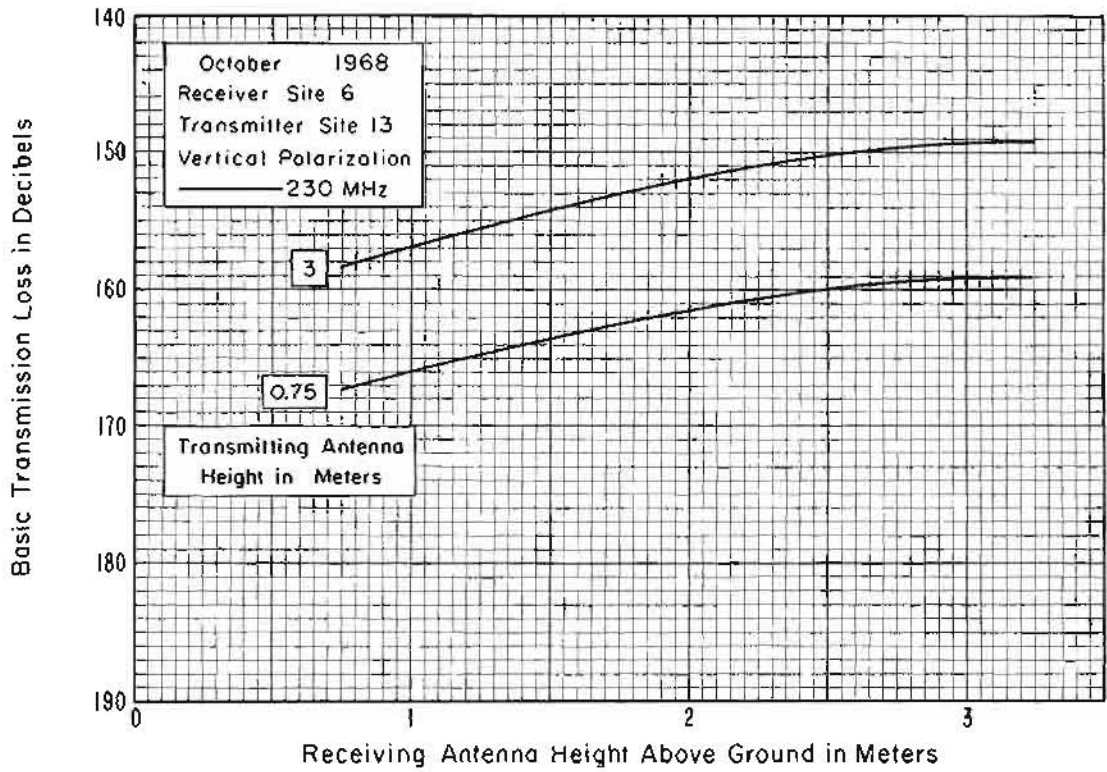


From site 6 toward site 13

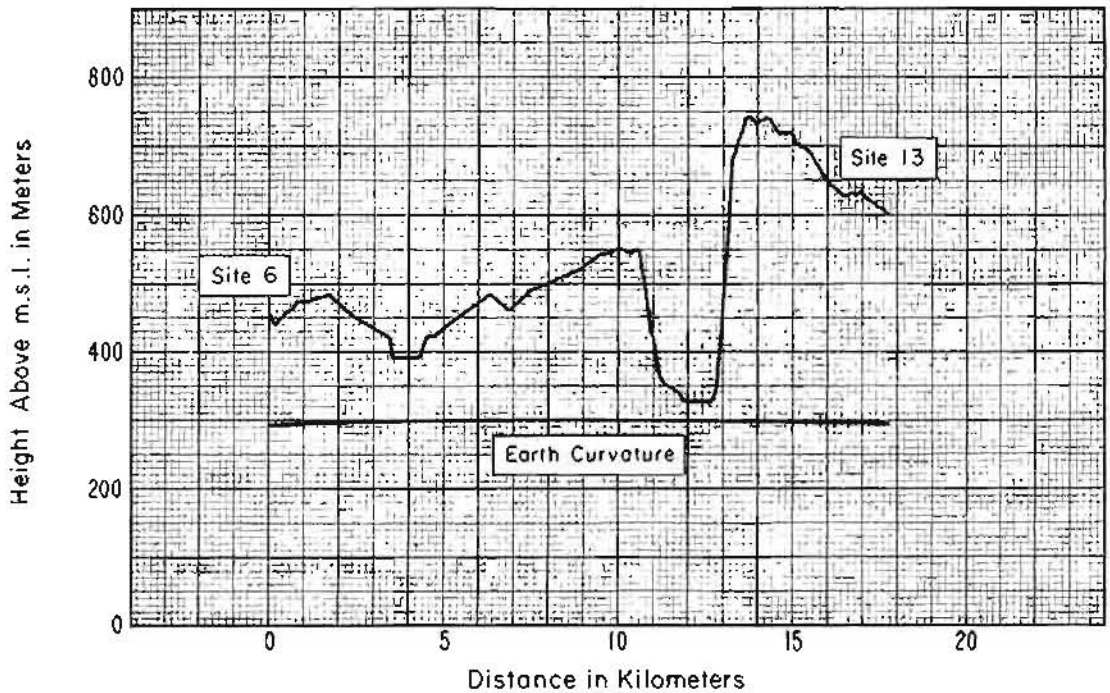


From site 13 toward site 6

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 33

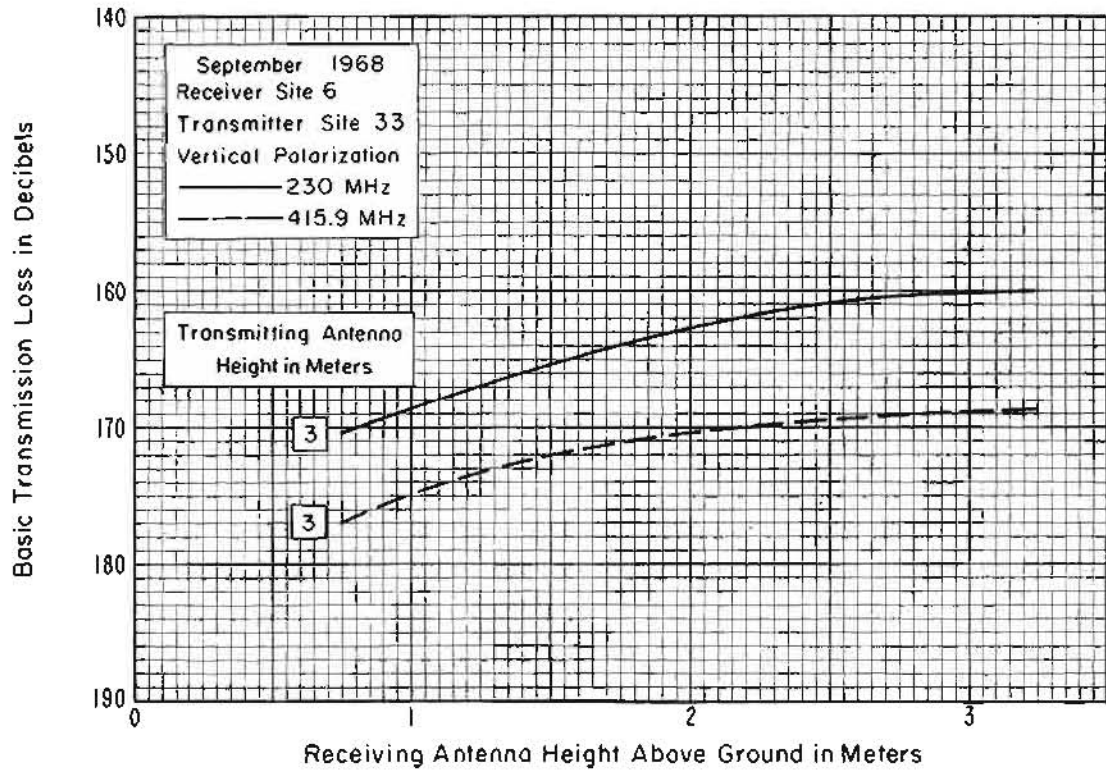


From site 6 toward site 33

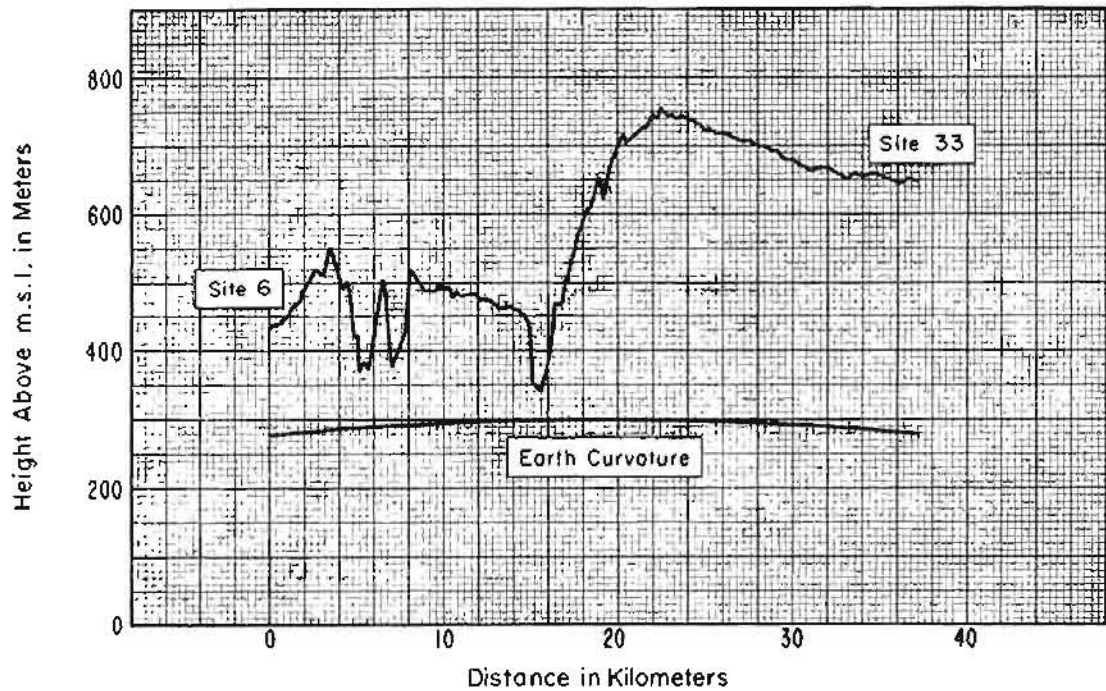


From site 33 toward site 6

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 6 - 56

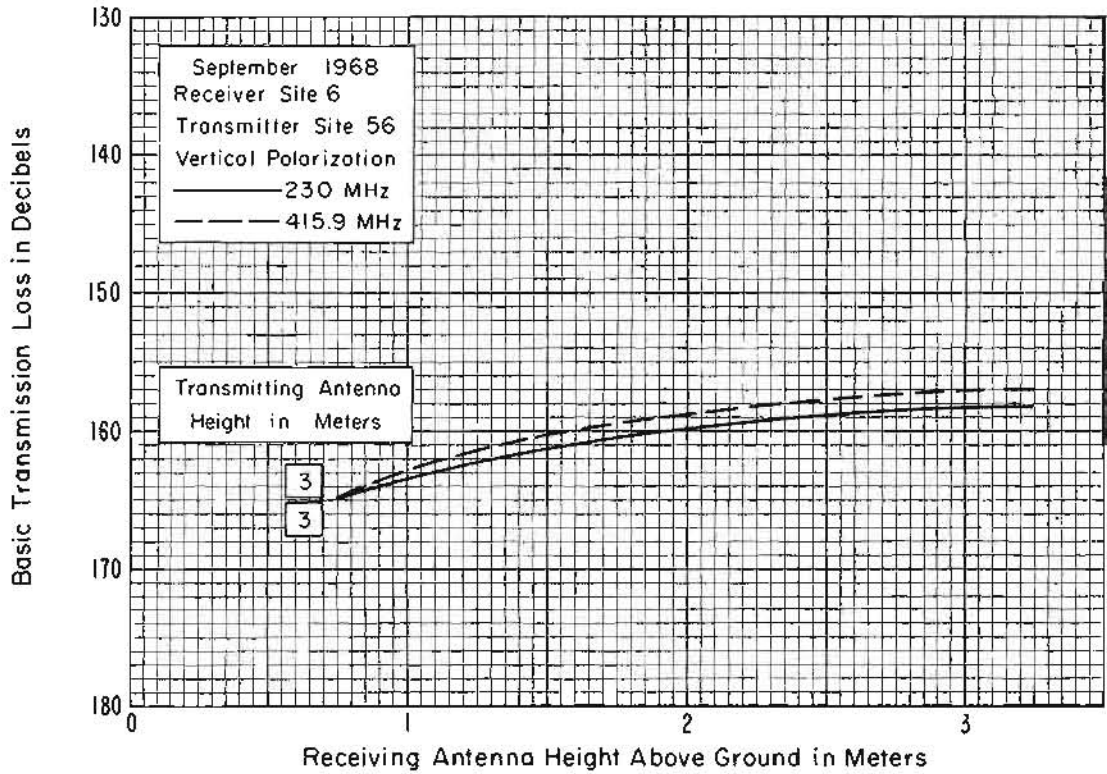


From site 6 toward site 56

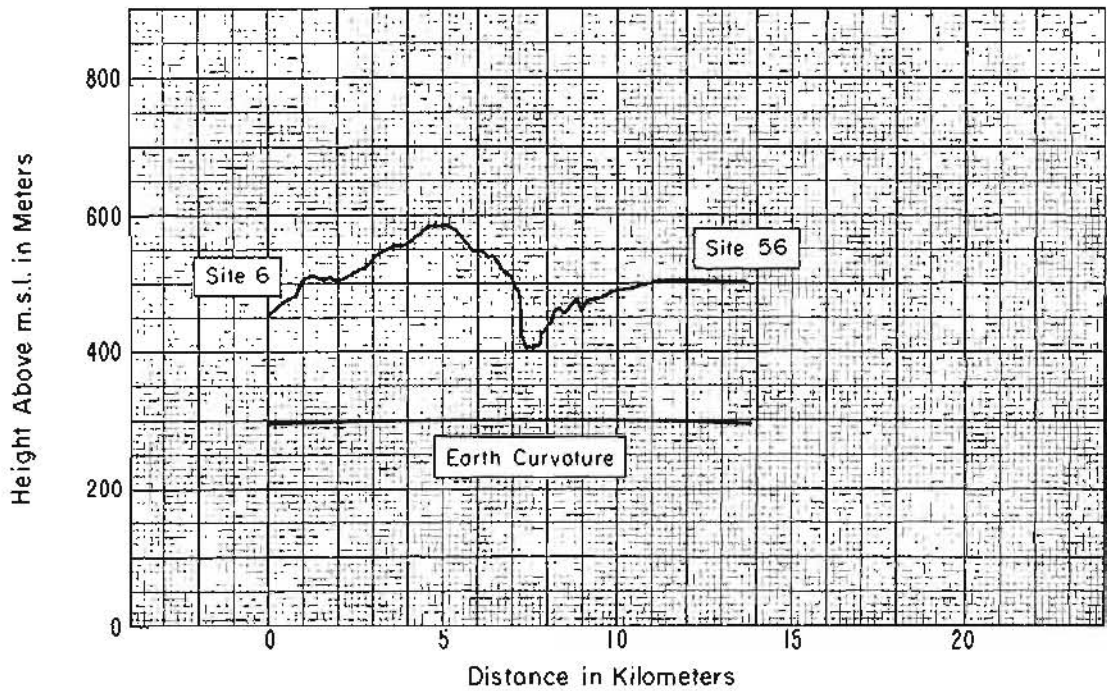


From site 56 toward site 6

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 7 - 11



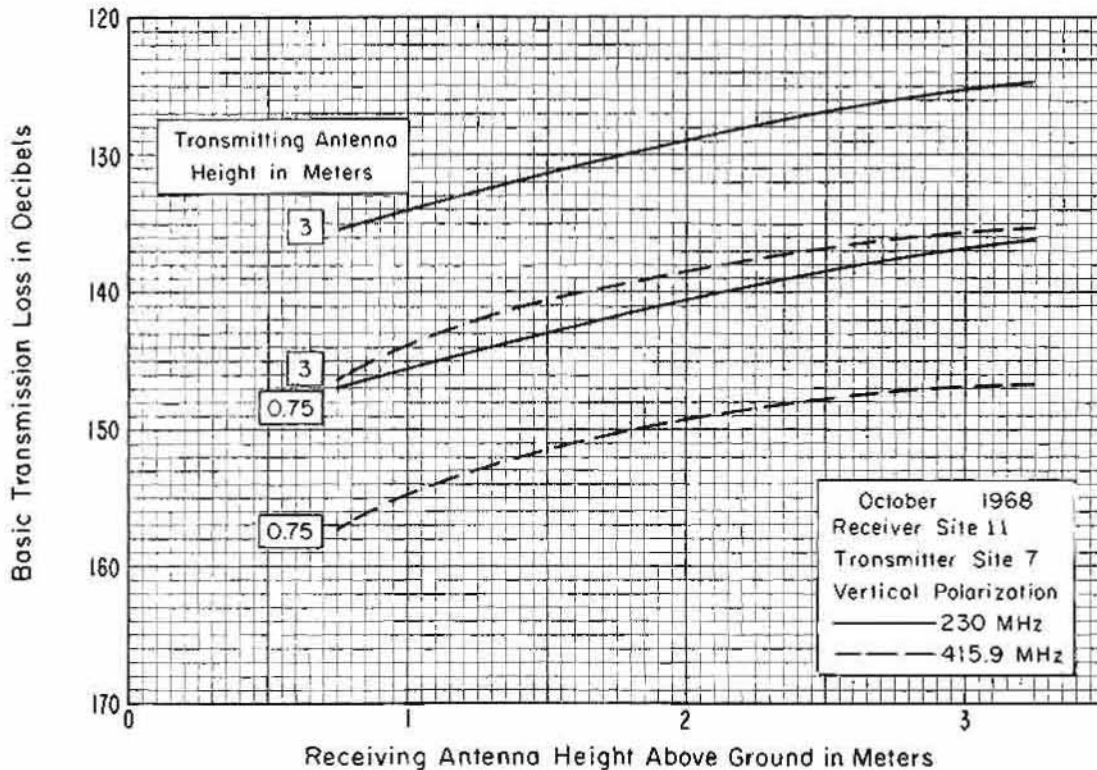
From site 11 toward site 7



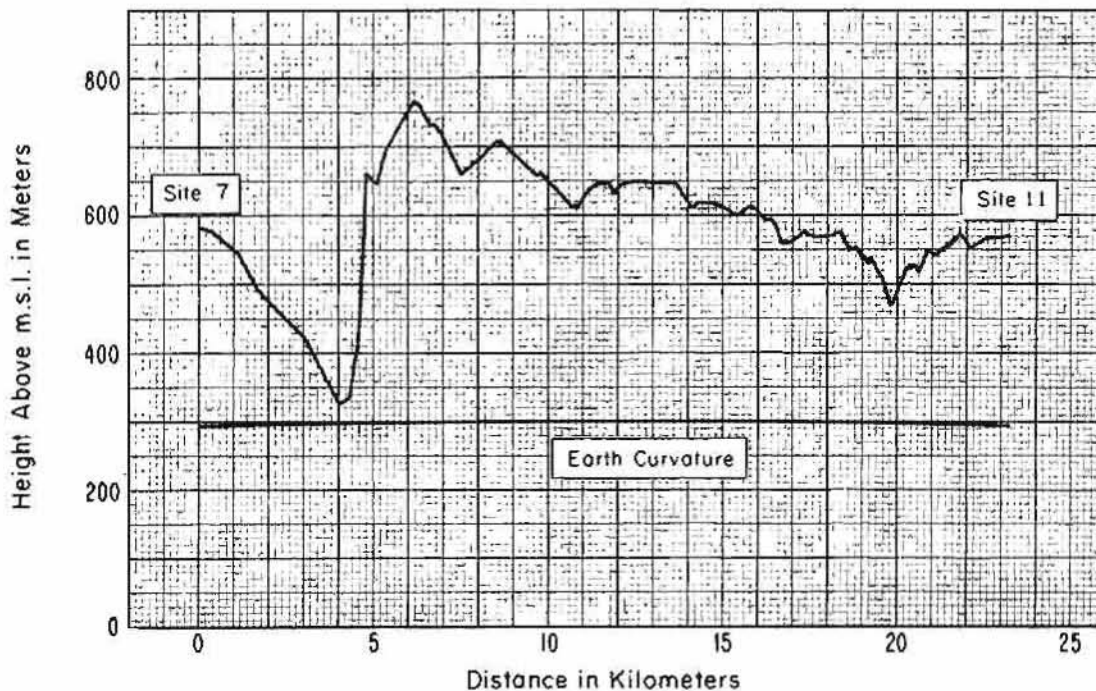
From site 7 toward site 11

WASHINGTON PATH 7—11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 8 - 11



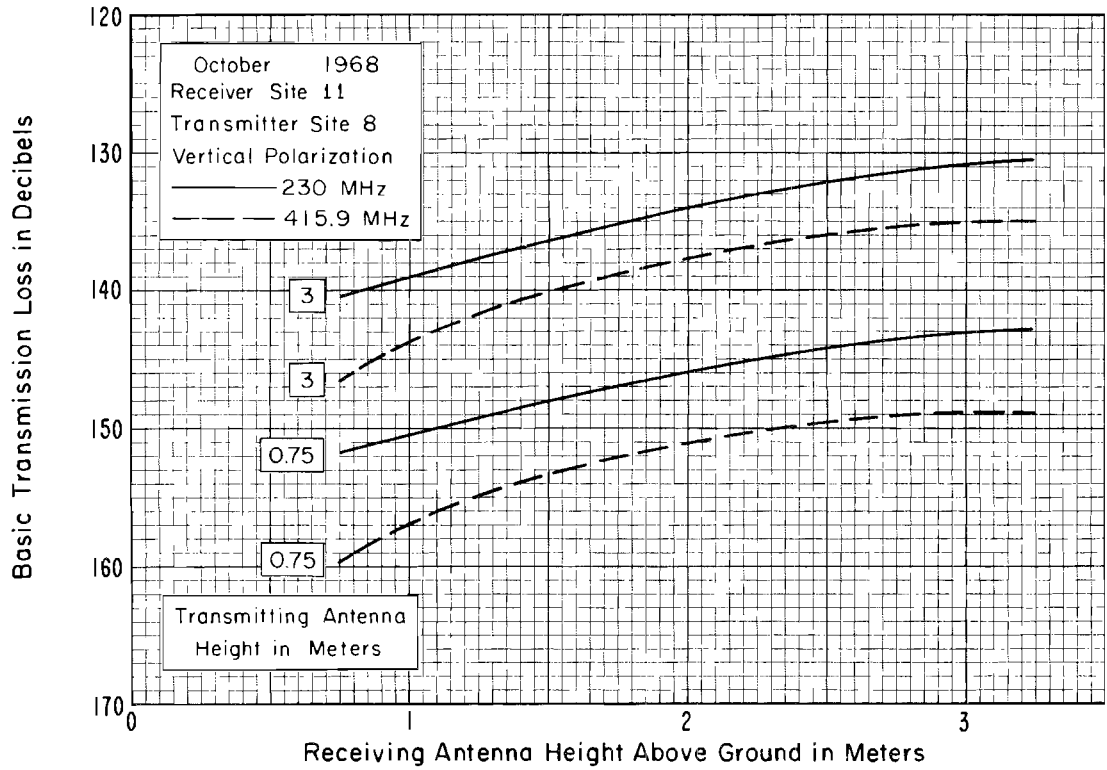
From site 11 toward site 8



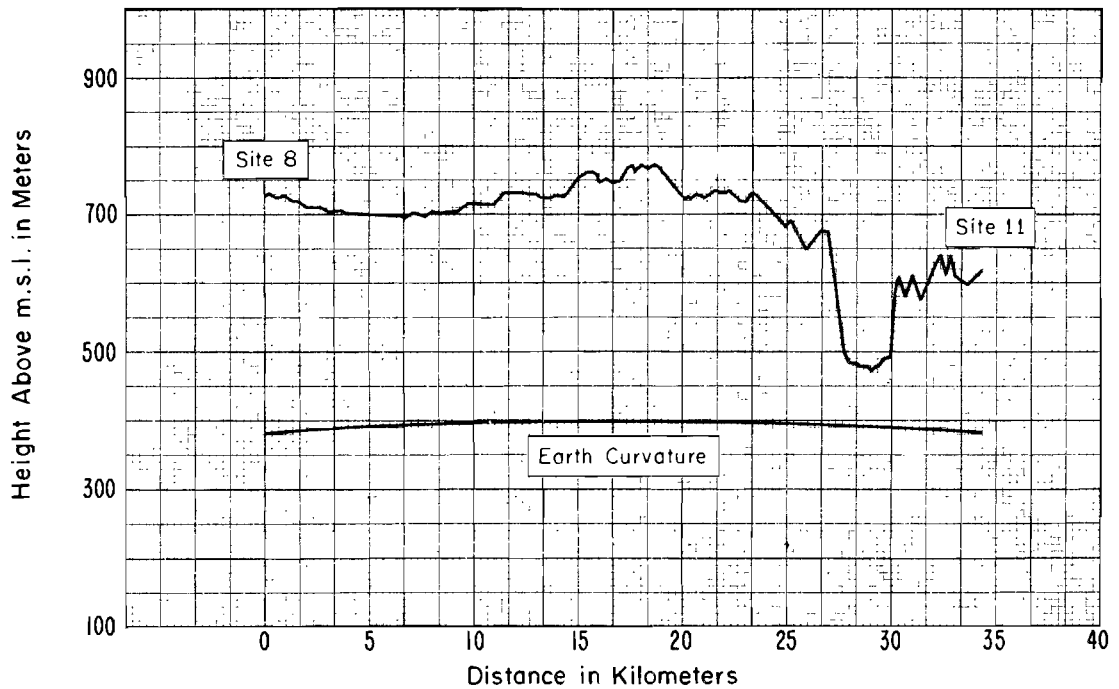
From site 8 toward site 11

WASHINGTON PATH 8—11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 8 - 34

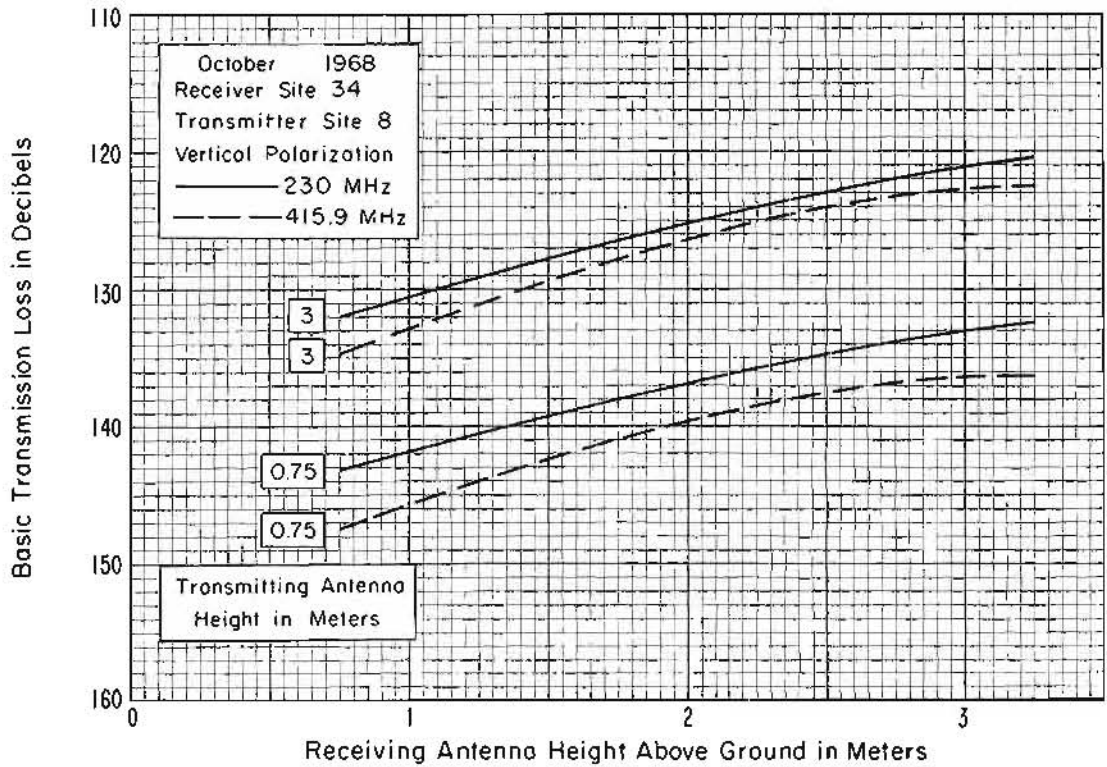


From site 34 toward site 8

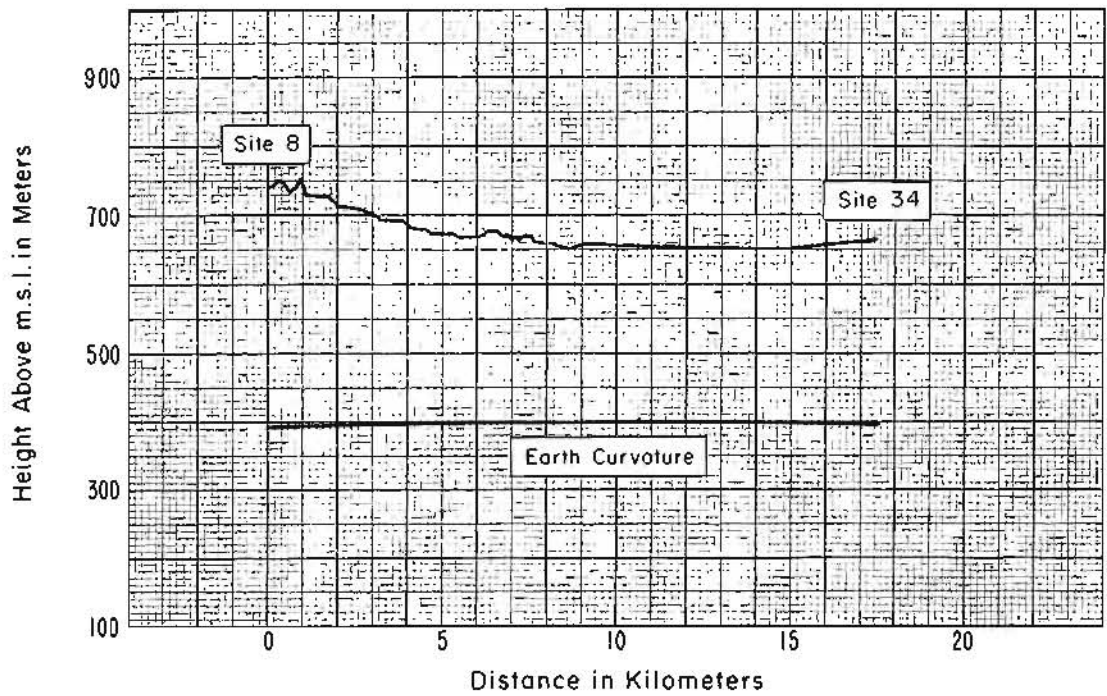


From site 8 toward site 34

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 11

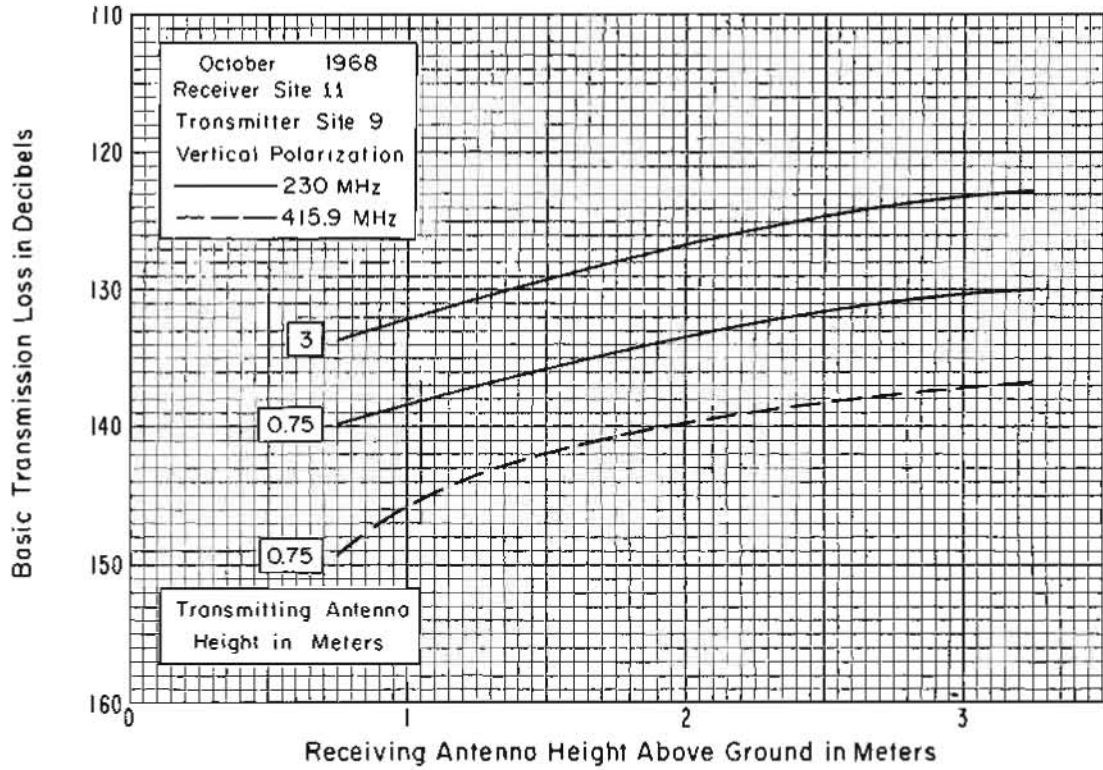


From site 11 toward site 9

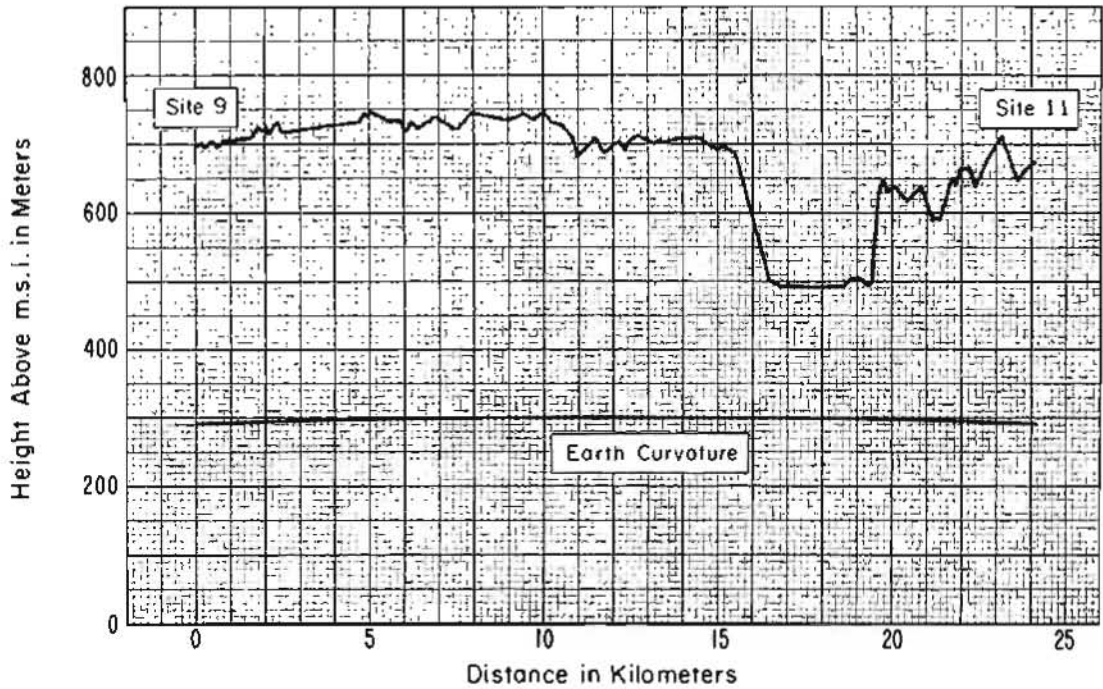


From site 9 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 36

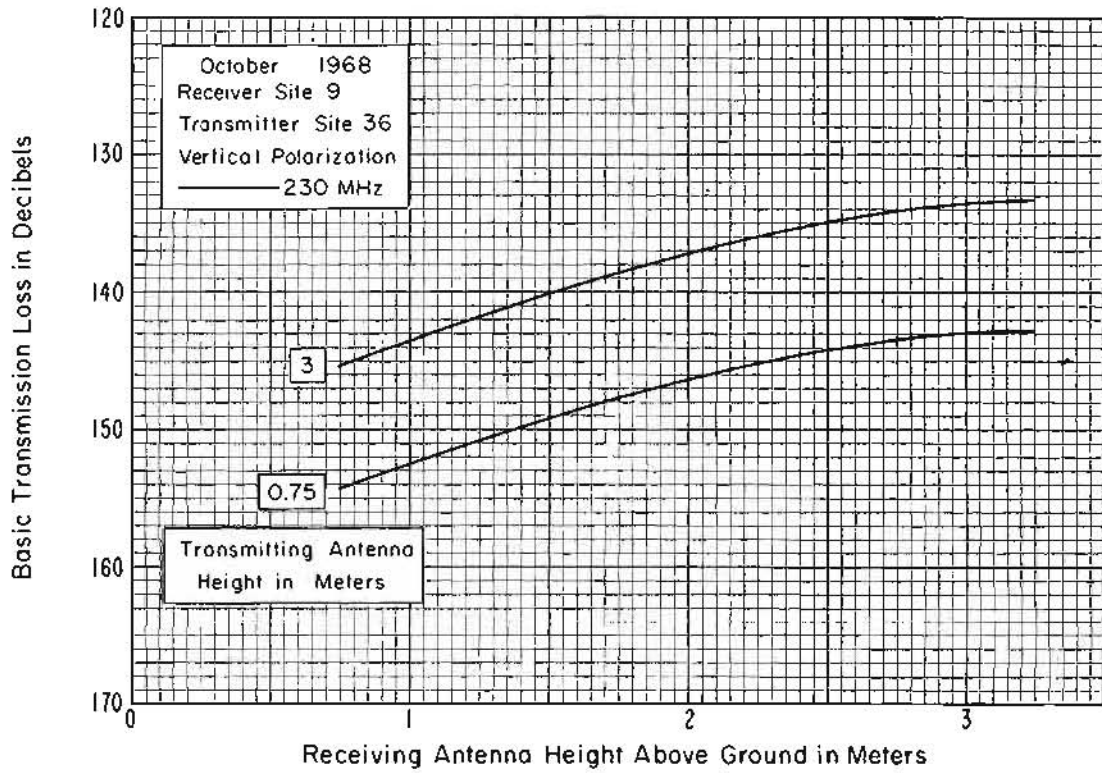


From site 9 toward site 36

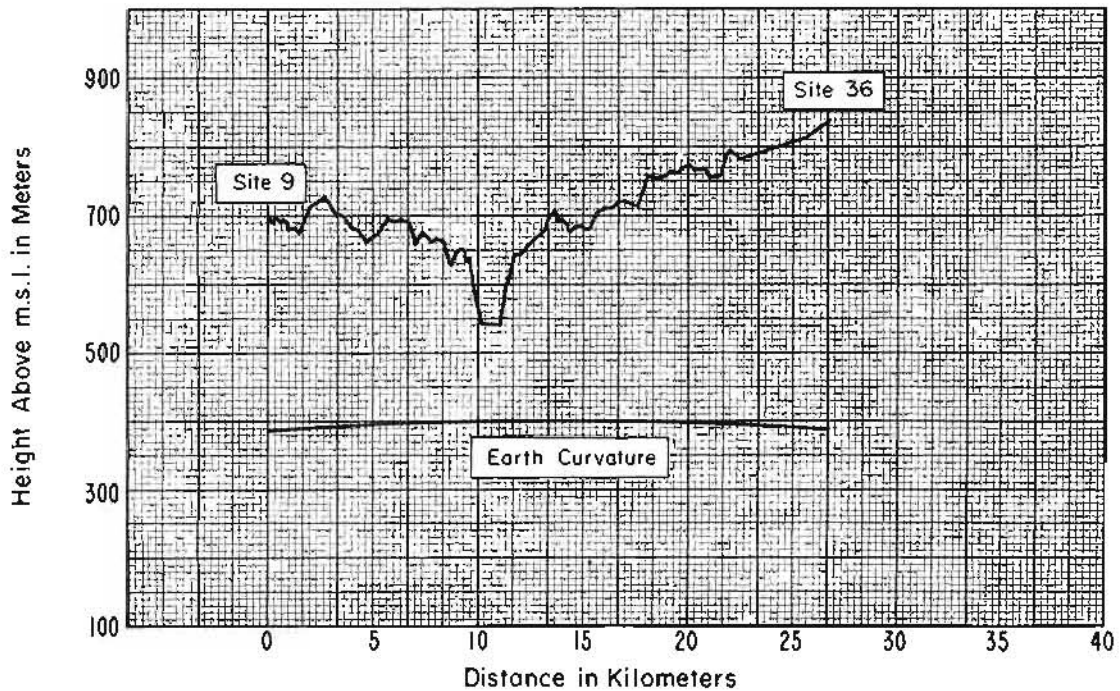


From site 36 toward site 9

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 37

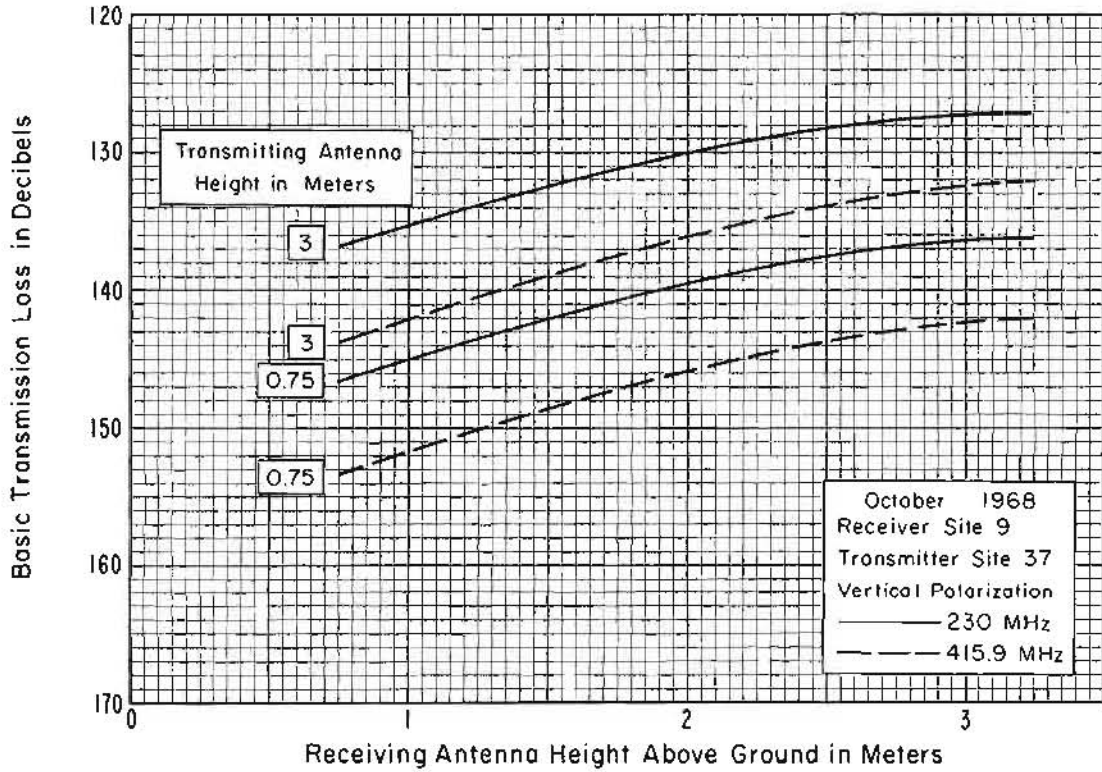


From site 9 toward site 37

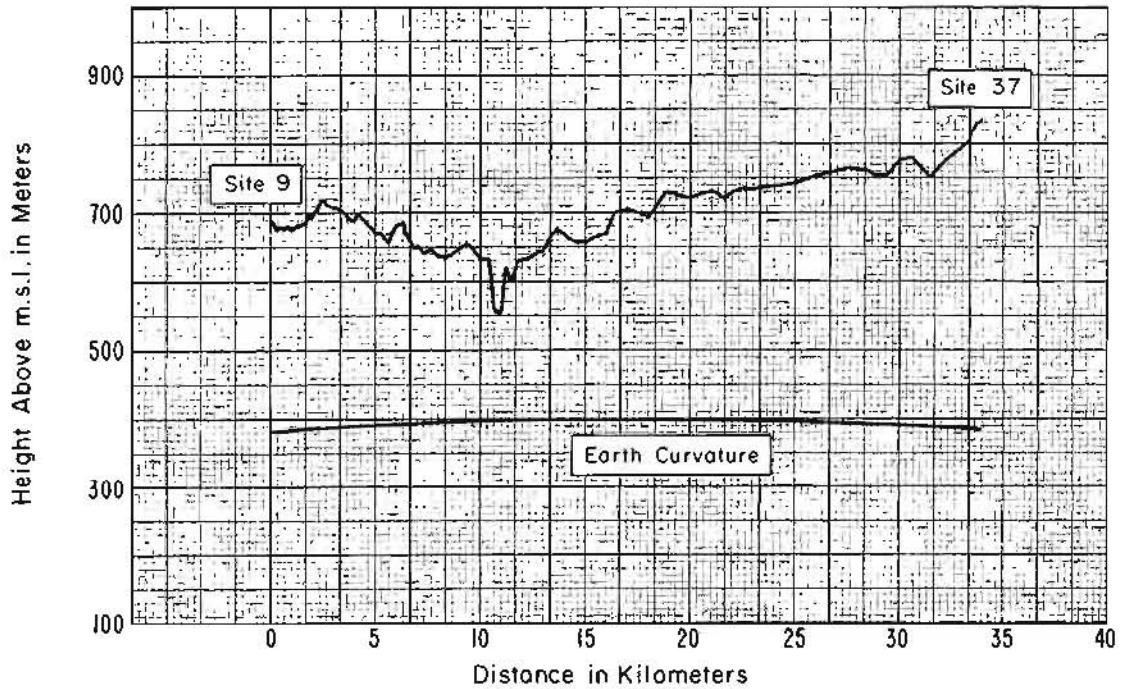


From site 37 toward site 9

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 38



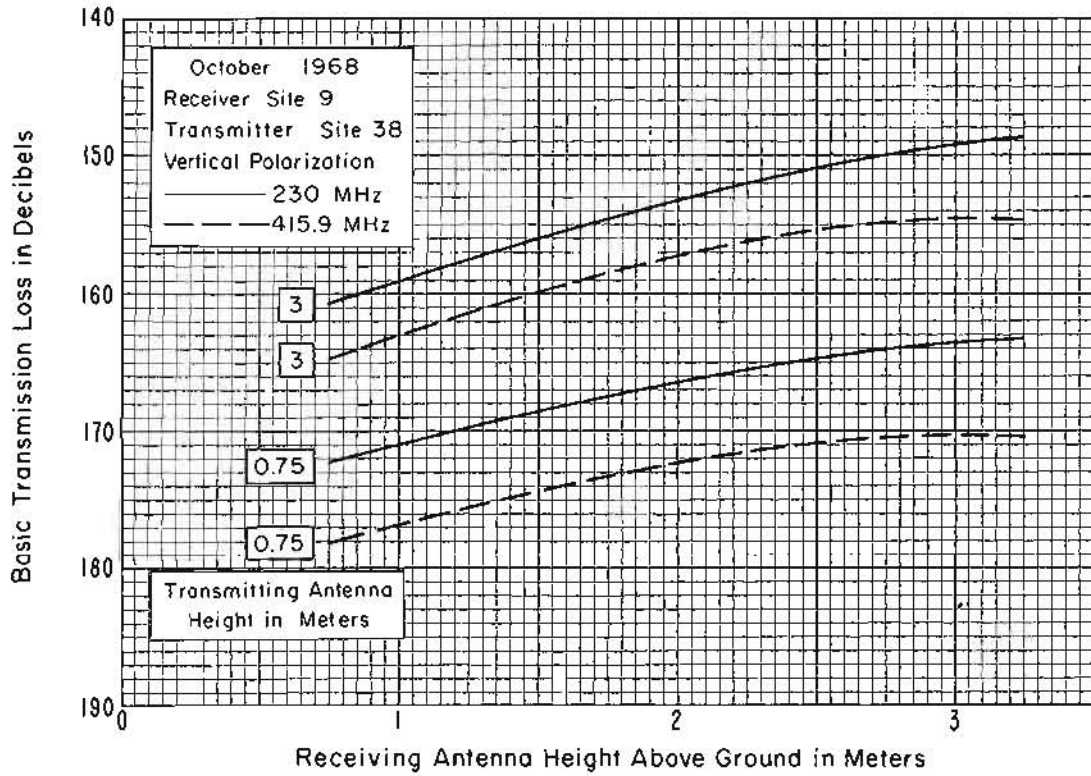
From site 9 toward site 38



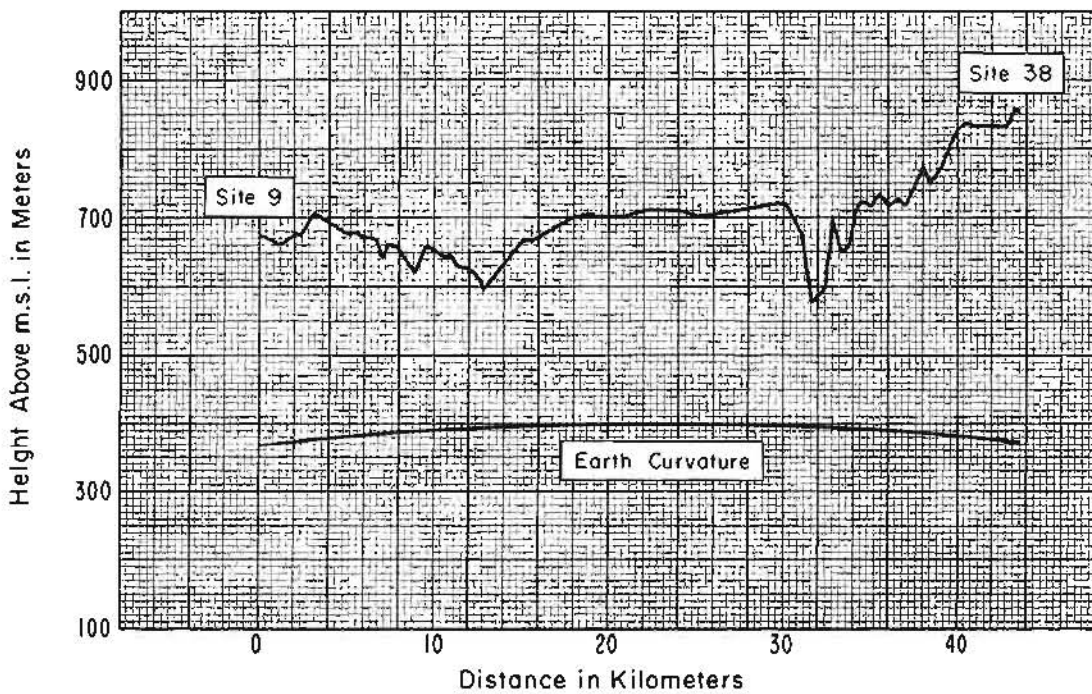
From site 38 toward site 9

WASHINGTON PATH 9 — 38

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 39

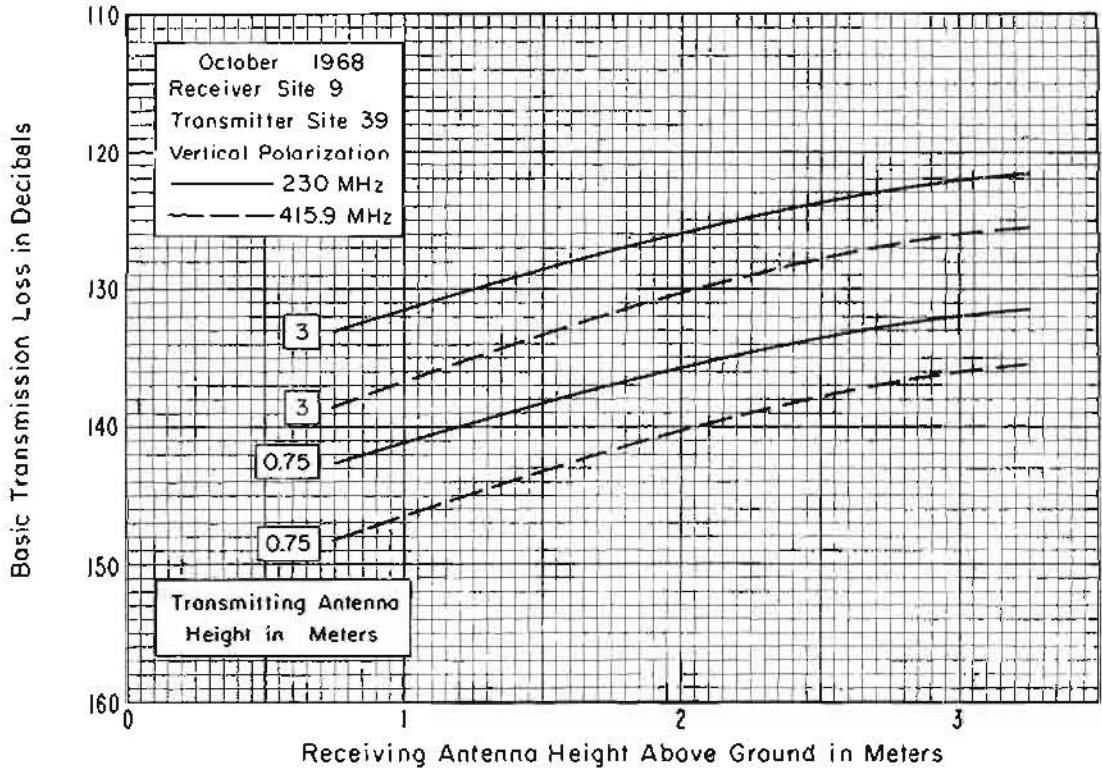


From site 9 toward site 39

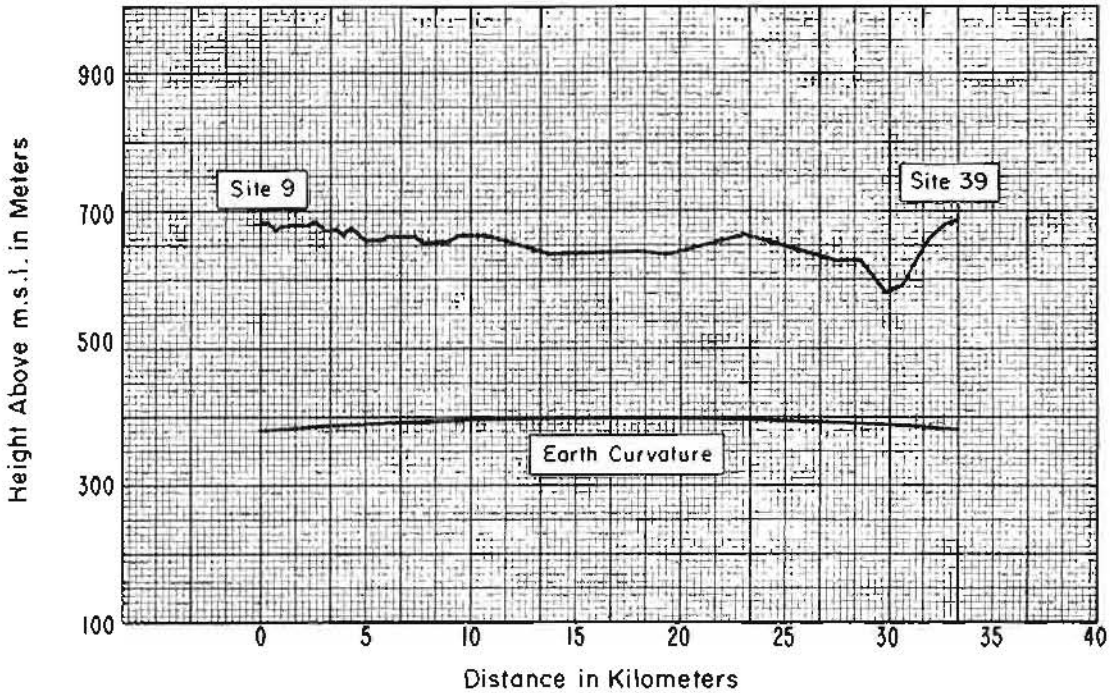


From site 39 toward site 9

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 40

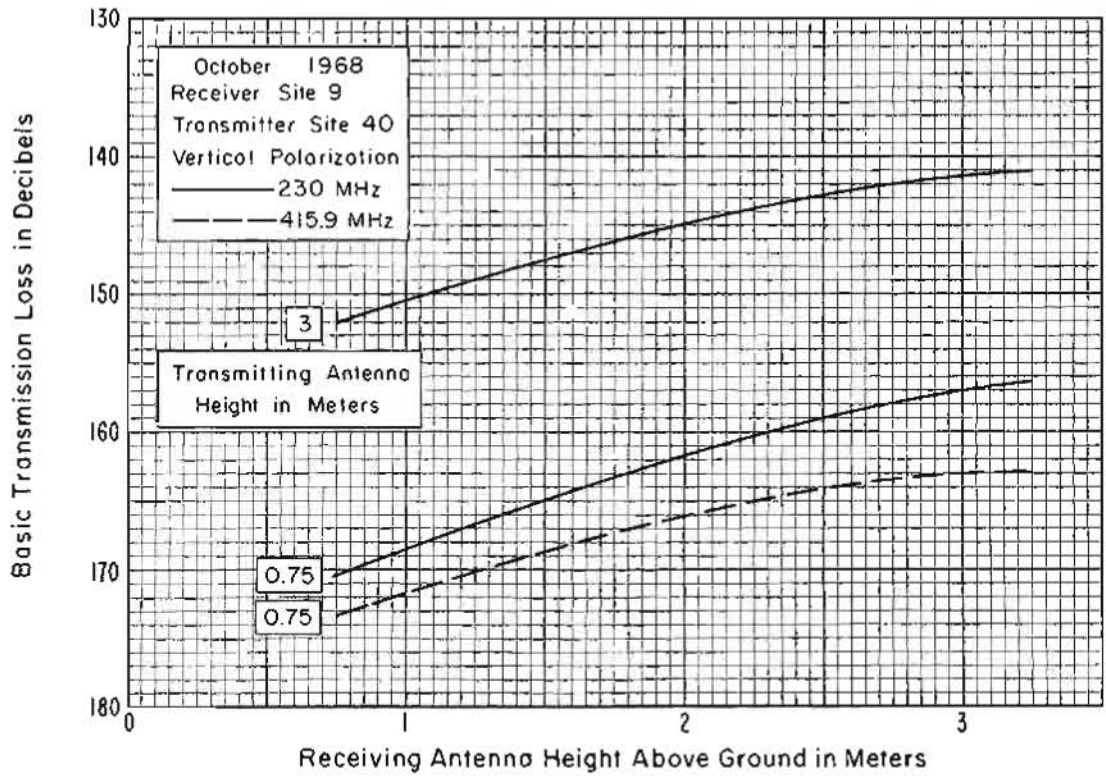


From site 9 toward site 40

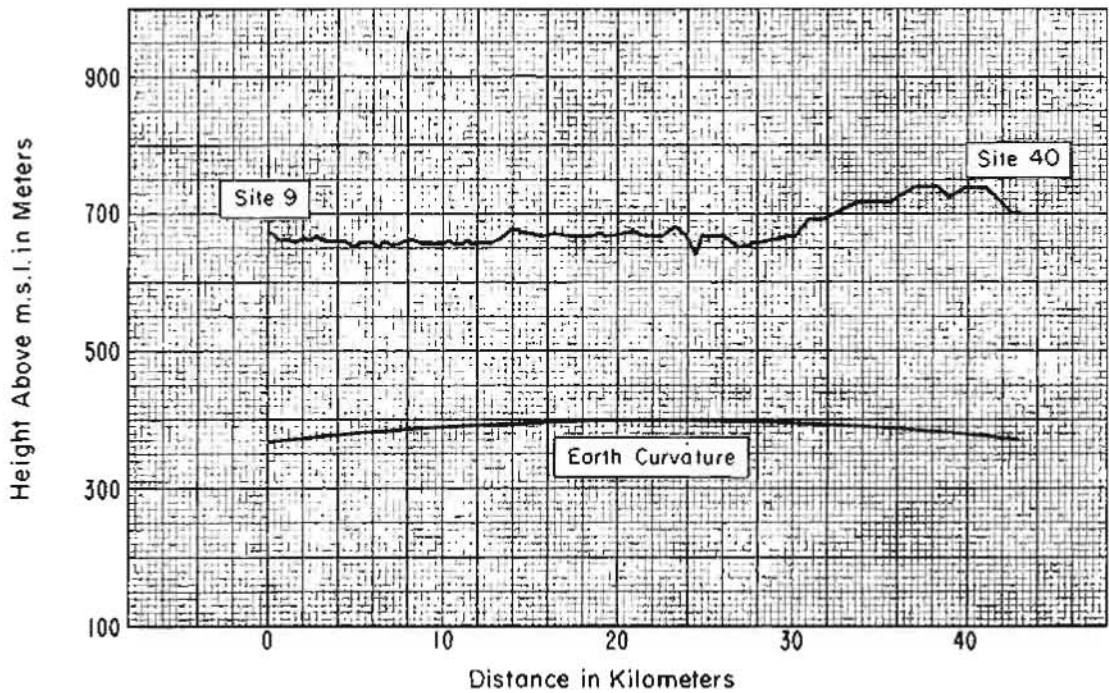


From site 40 toward site 9

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 9 - 42

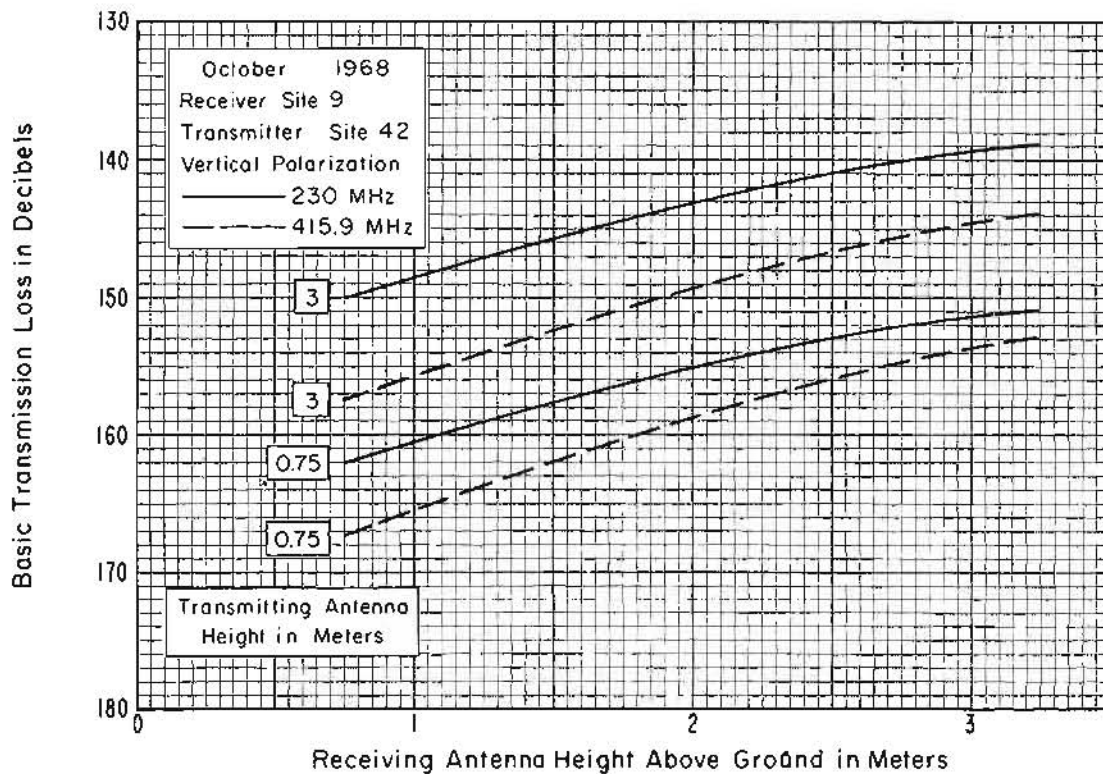


From site 9 toward site 42

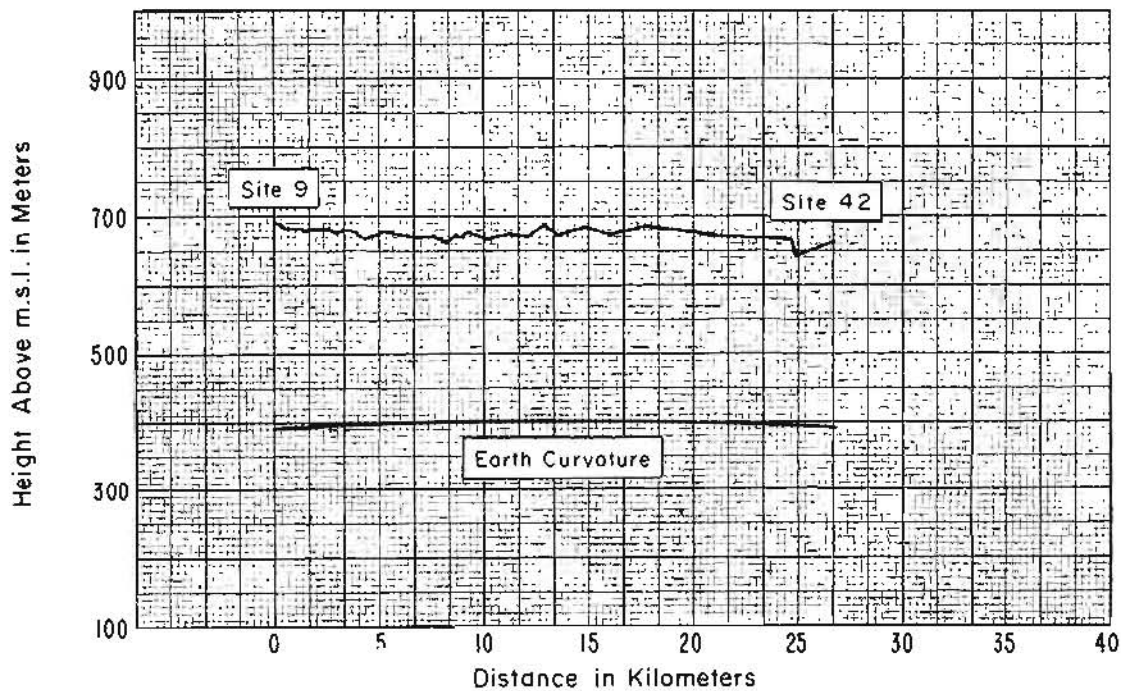


From site 42 toward site 9

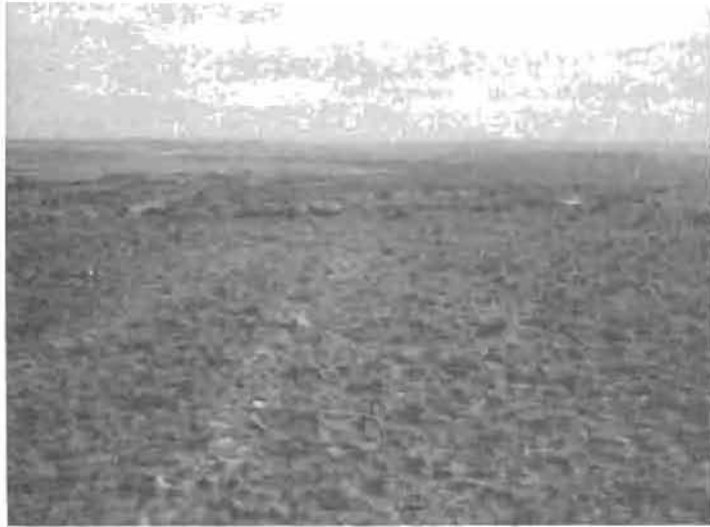
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 10 - 11



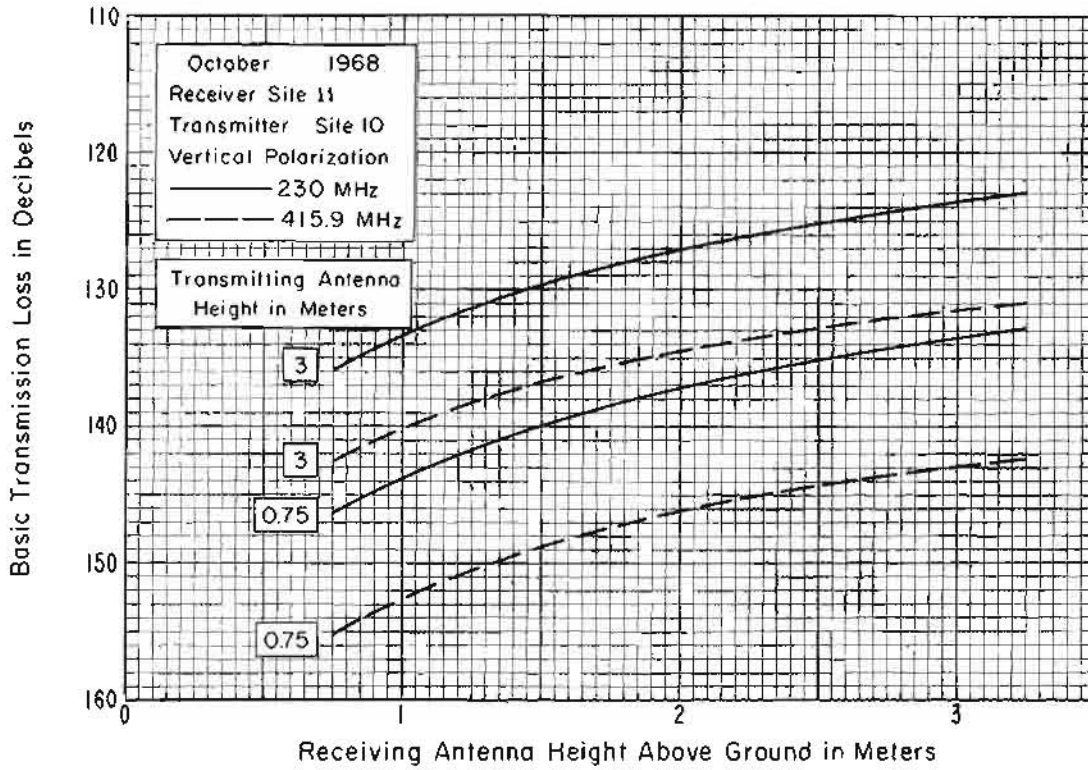
From site 11 toward site 10



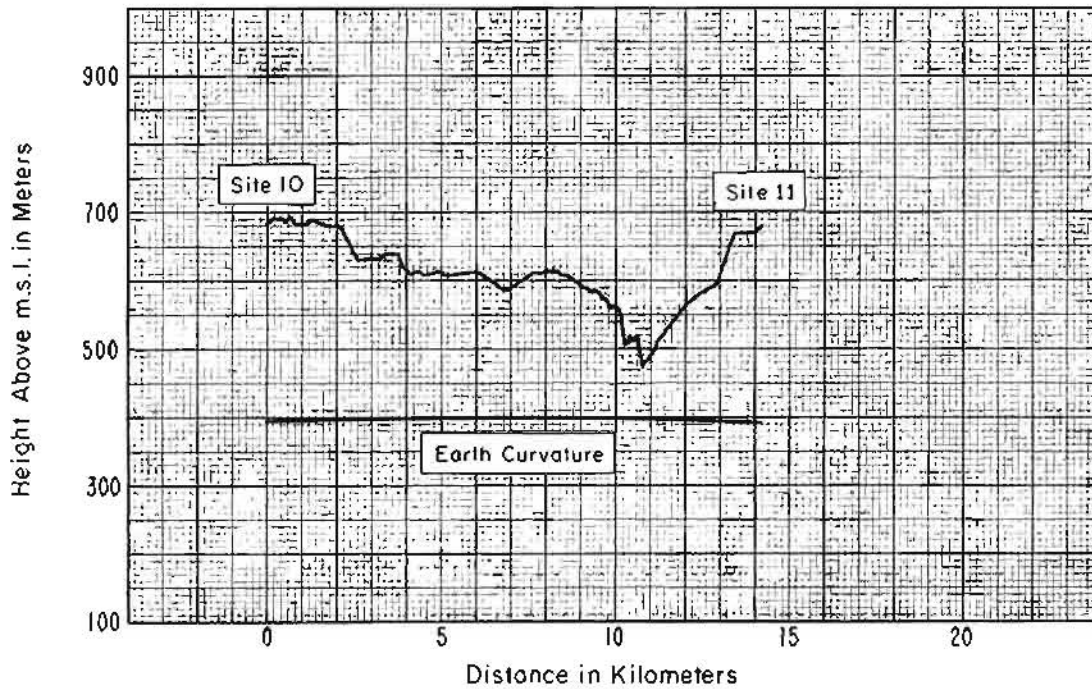
From site 10 toward site 11

WASHINGTON PATH 10—11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 12



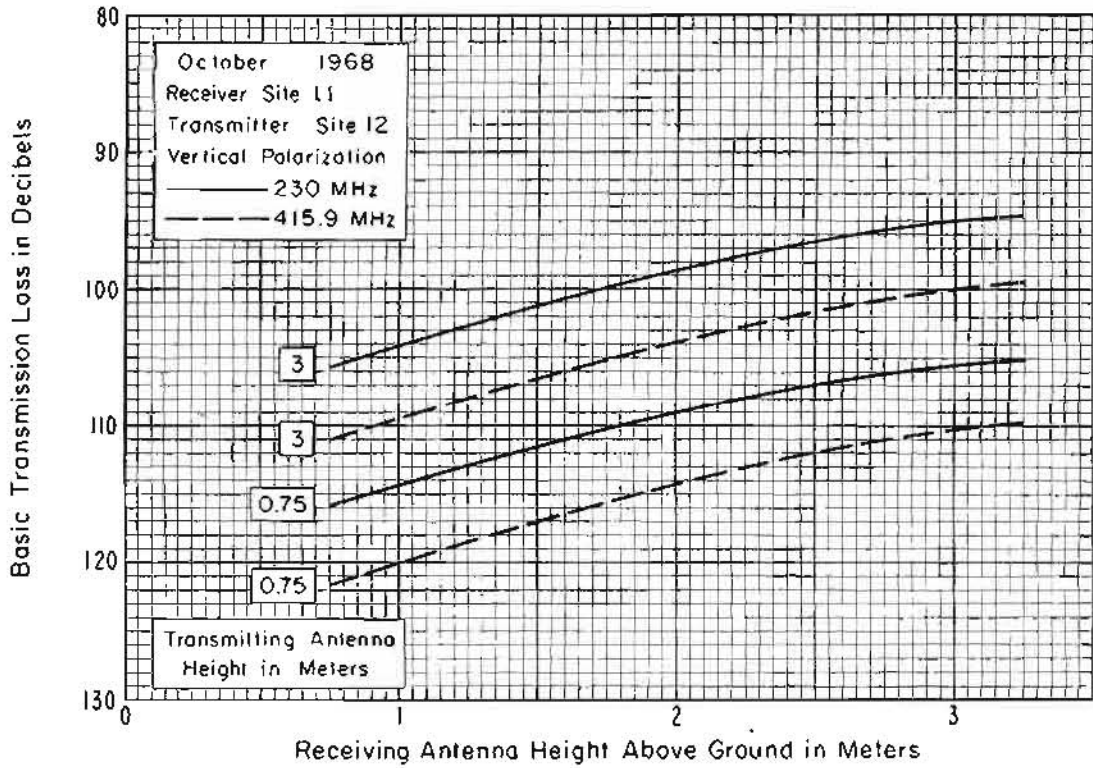
From site 11 toward site 12



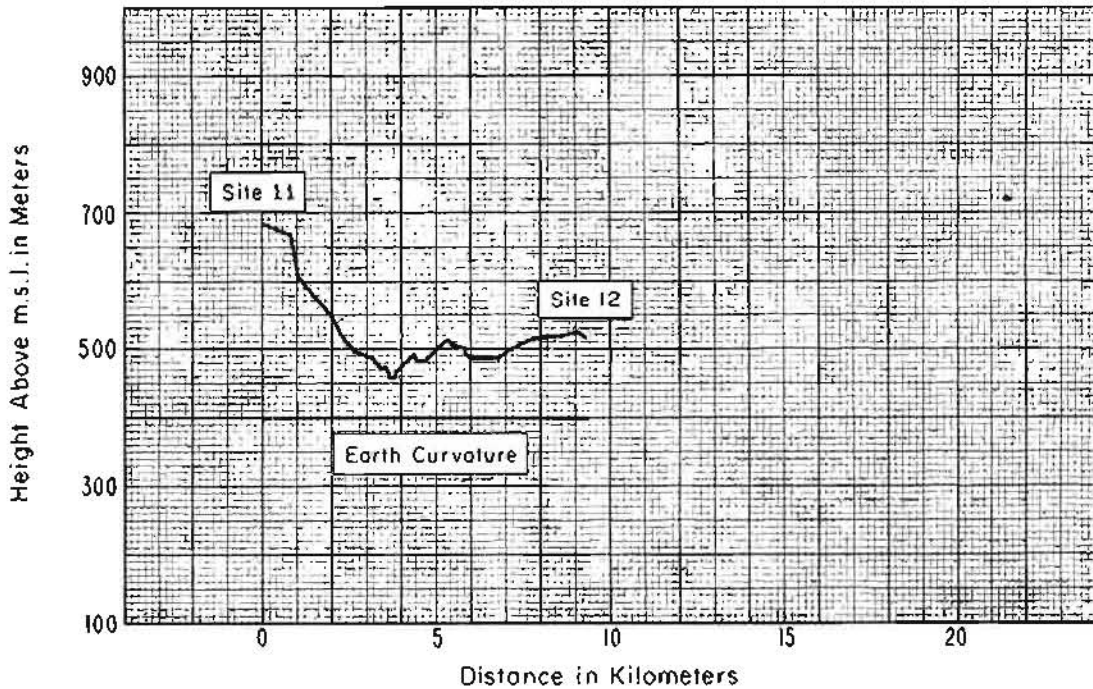
From site 12 toward site 11

WASHINGTON PATH 11—12

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 13

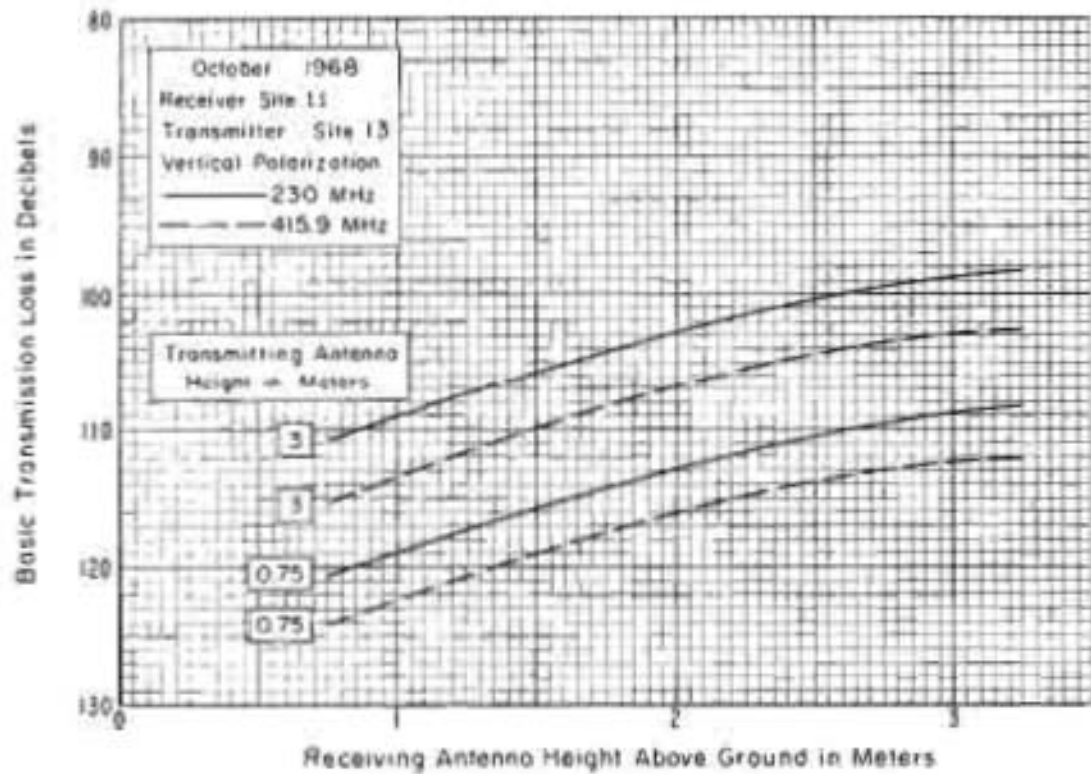


From site 11 toward site 13

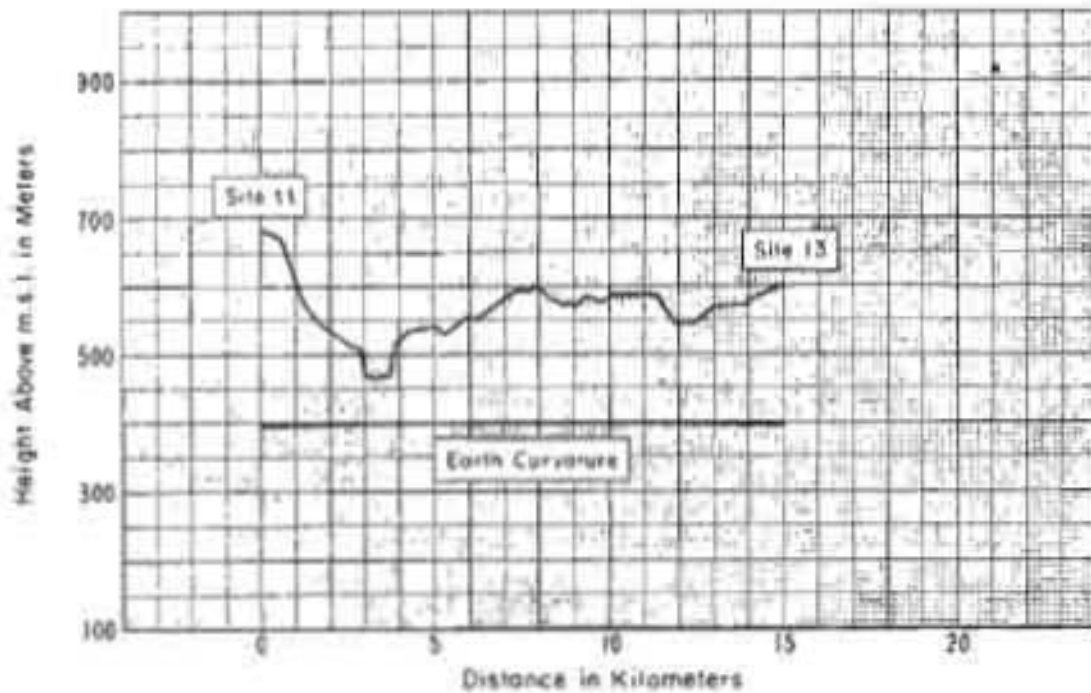


From site 13 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 29

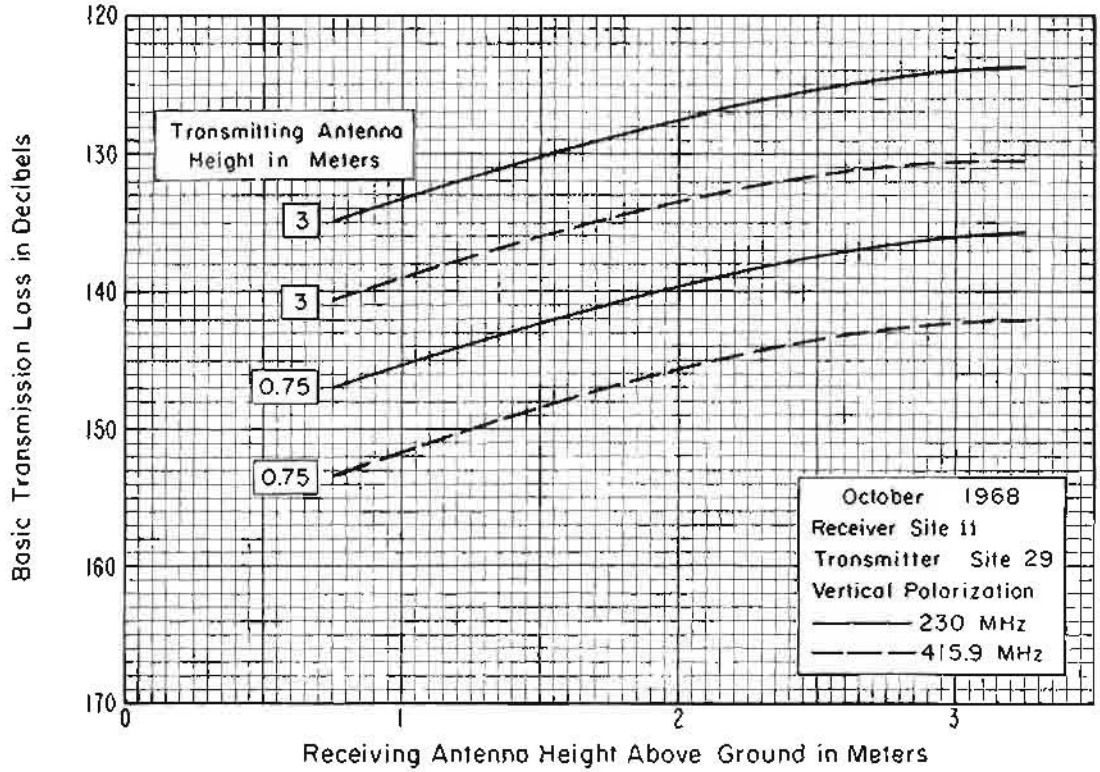


From site 11 toward site 29

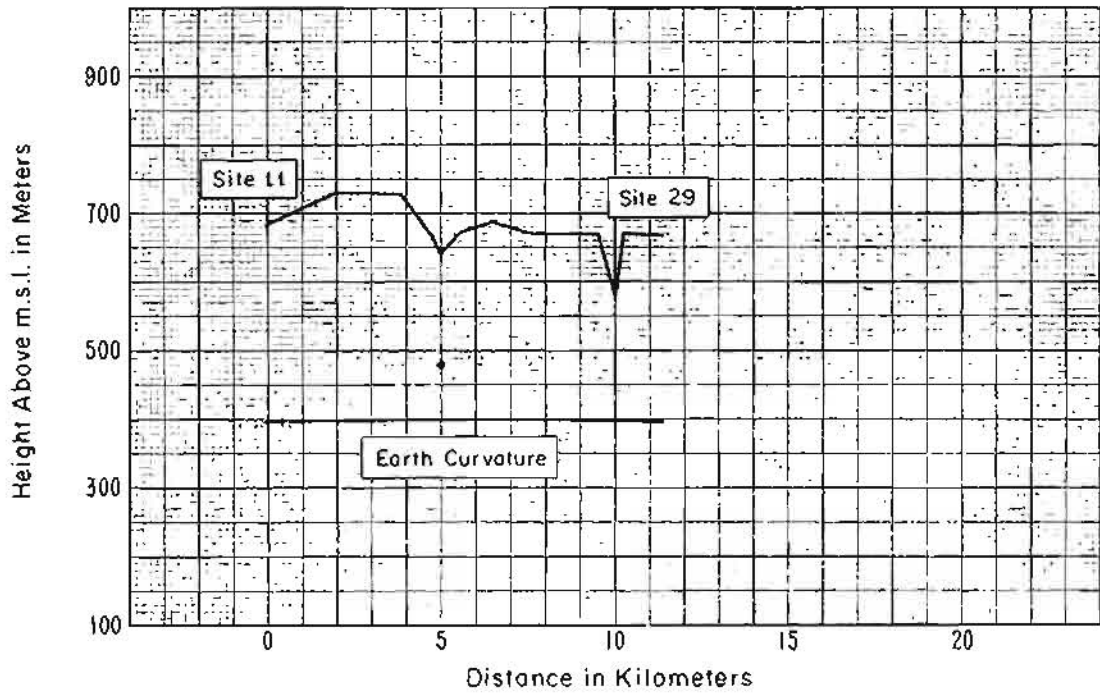


From site 29 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 30

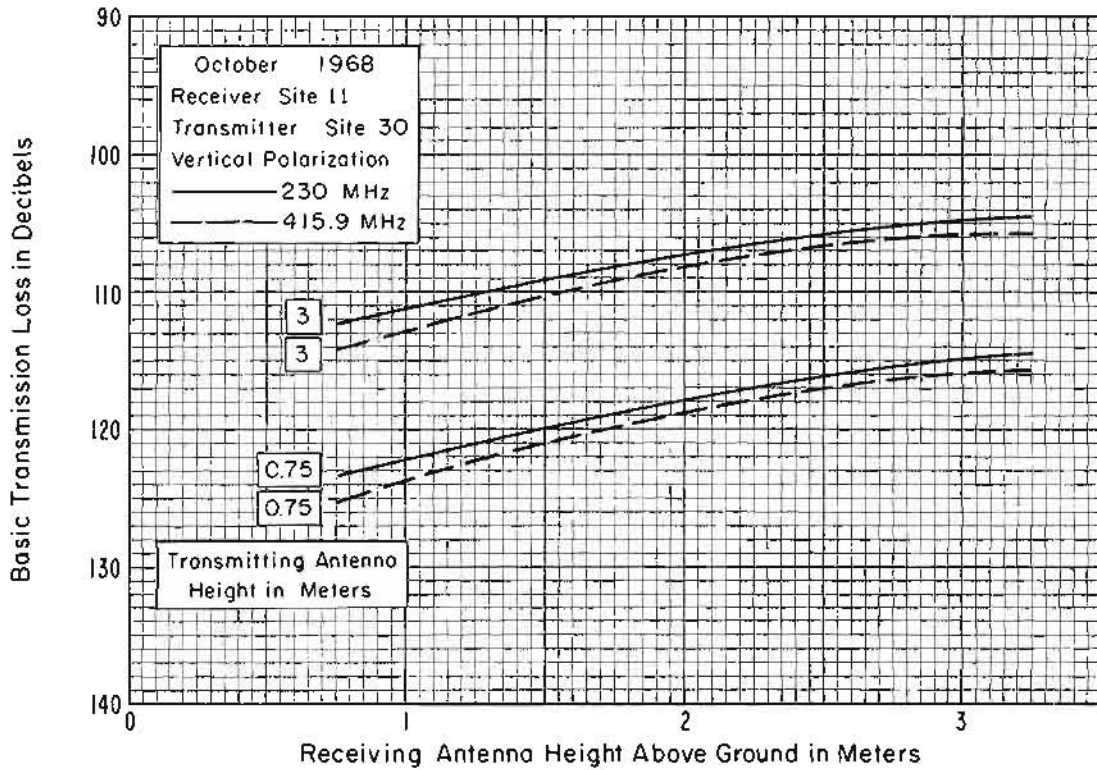


From site 11 toward site 30

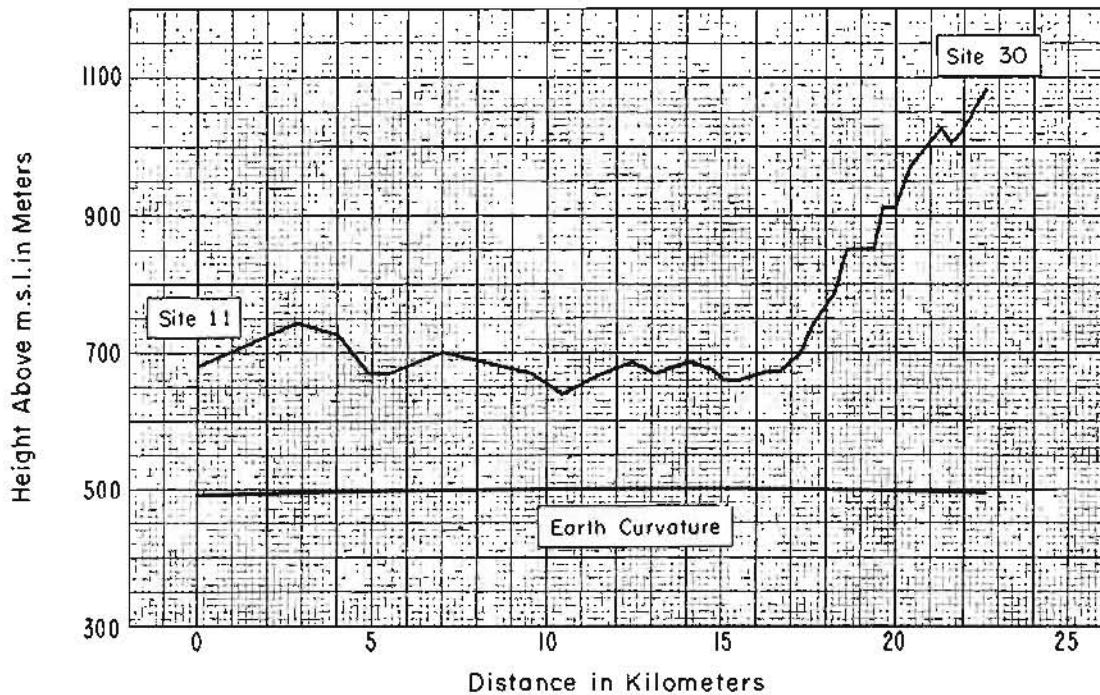


From site 30 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 30A

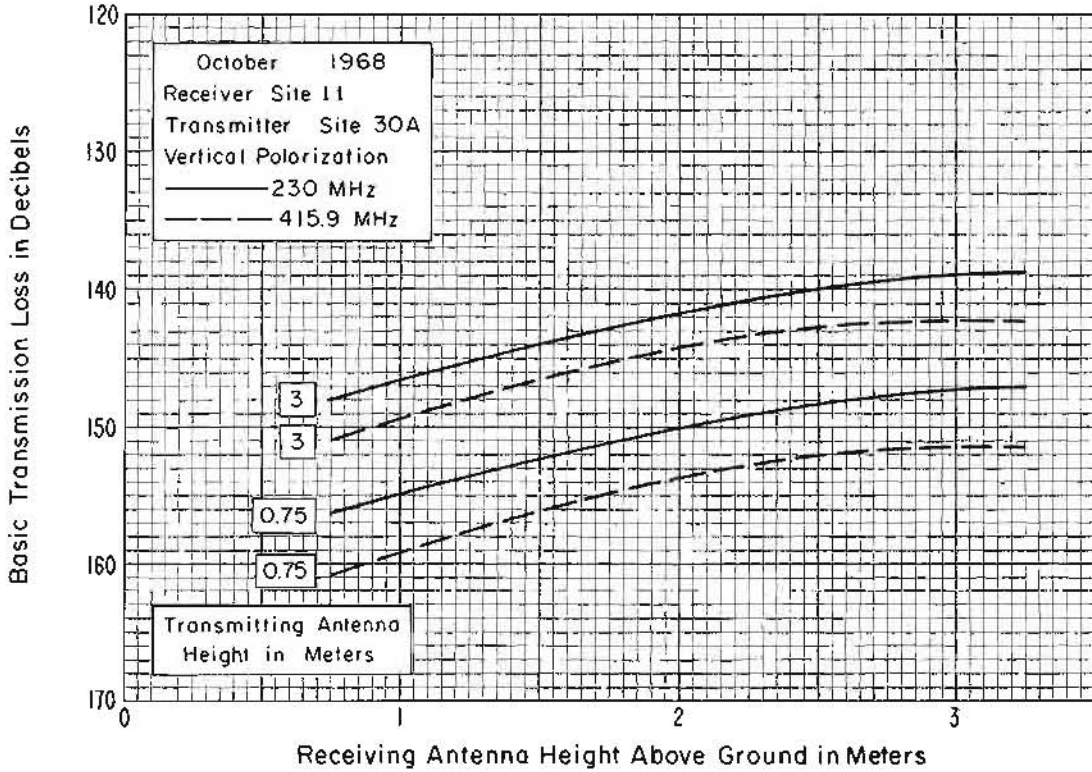


From site 11 toward site 30A

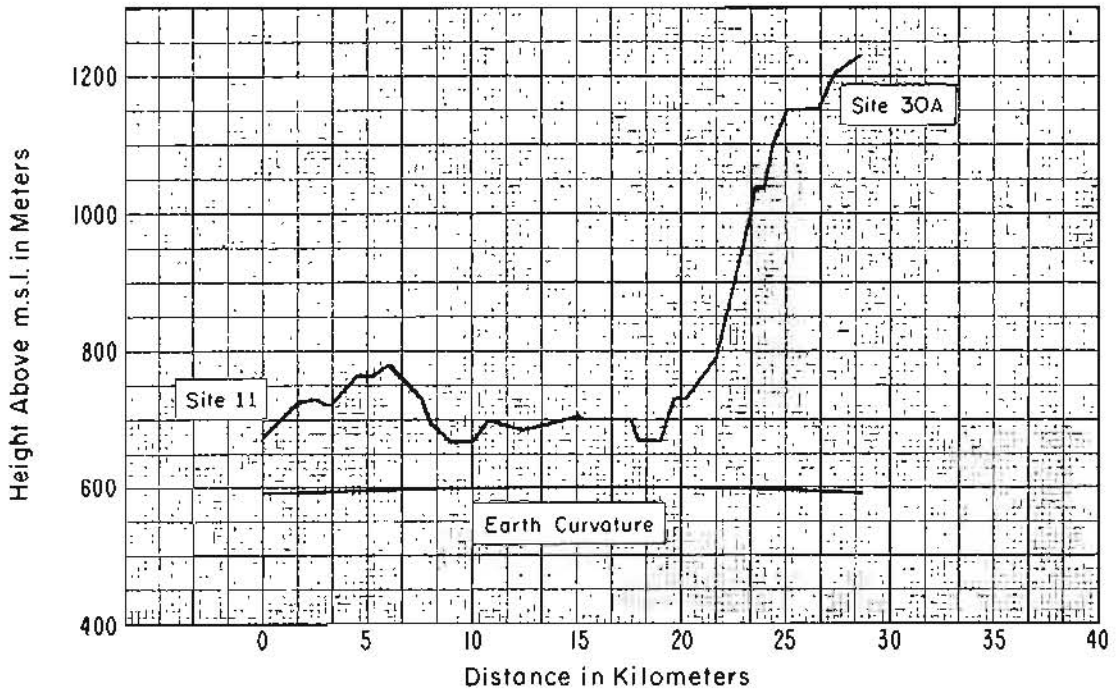


From site 30A toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 31

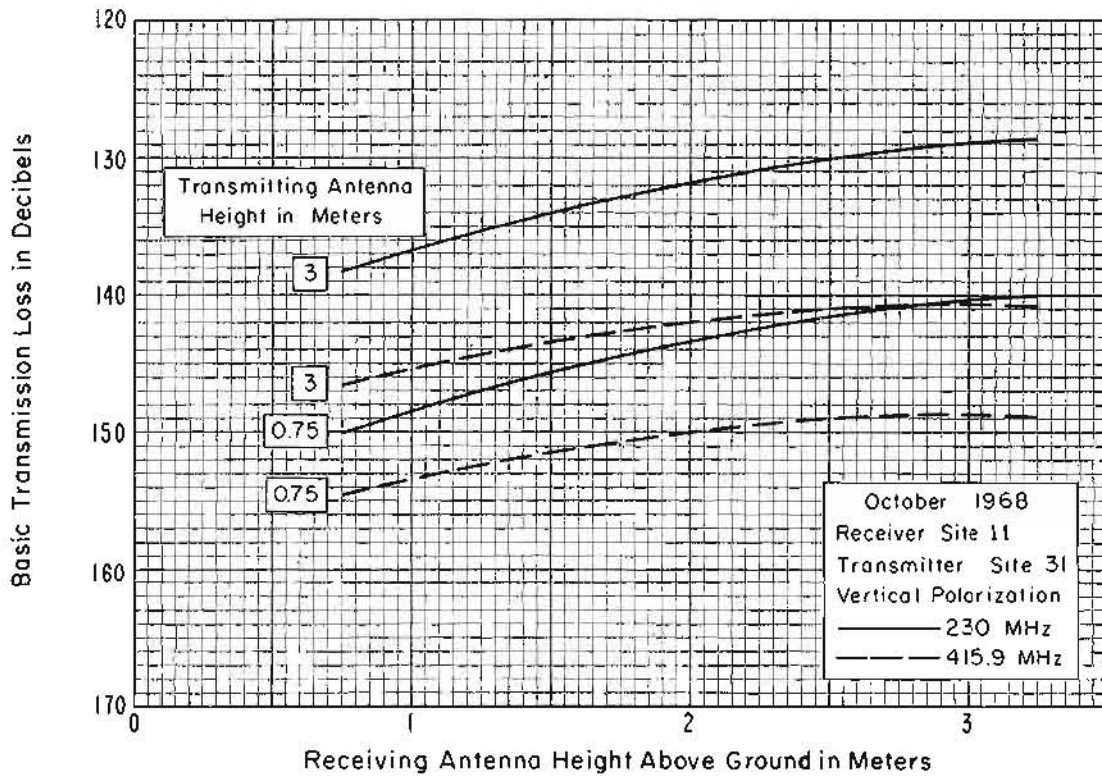


From site 11 toward site 31

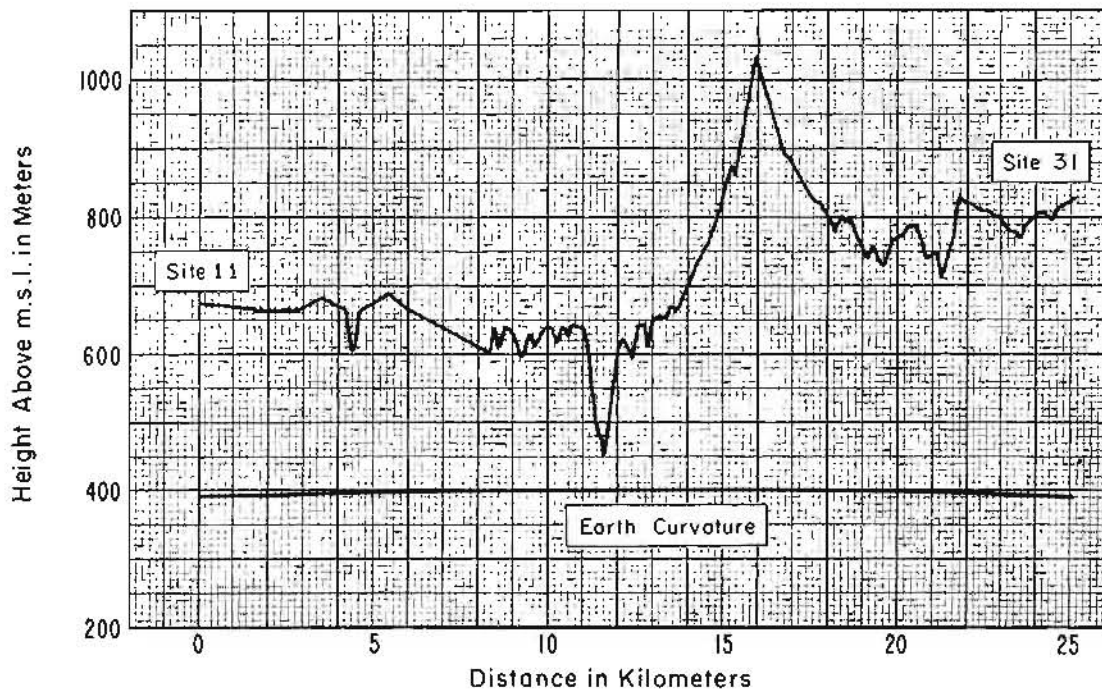


From site 31 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 32

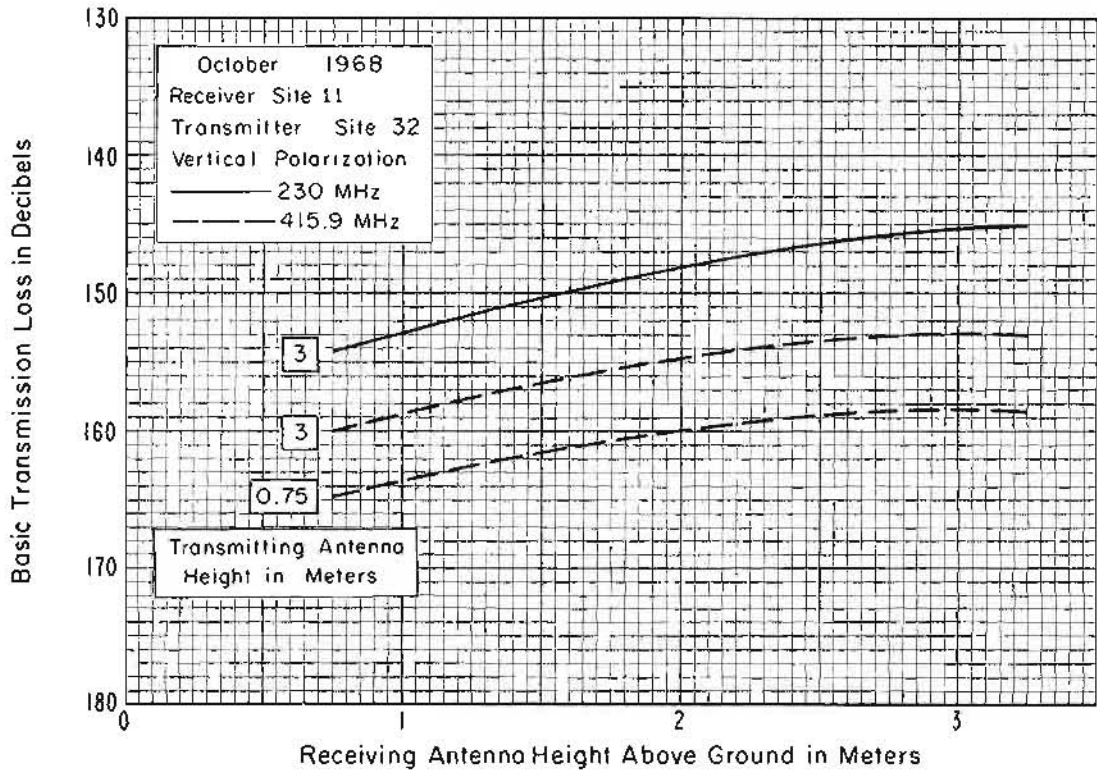


From site 11 toward site 32.

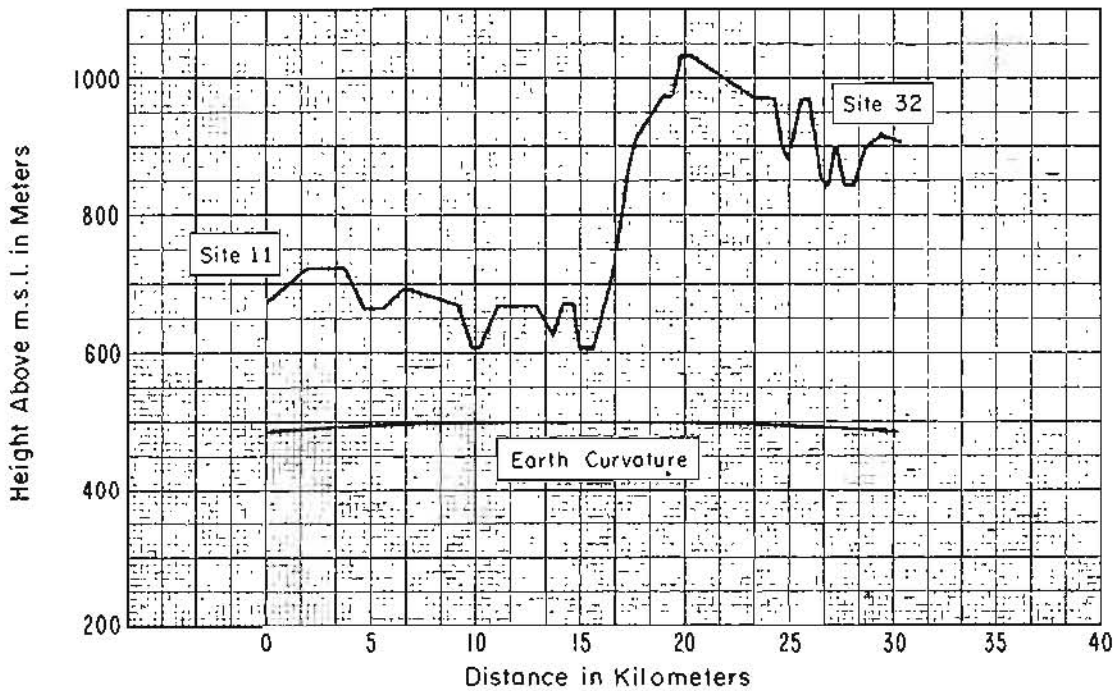


From site 32 toward site 11.

PATH LOSS MEASUREMENTS



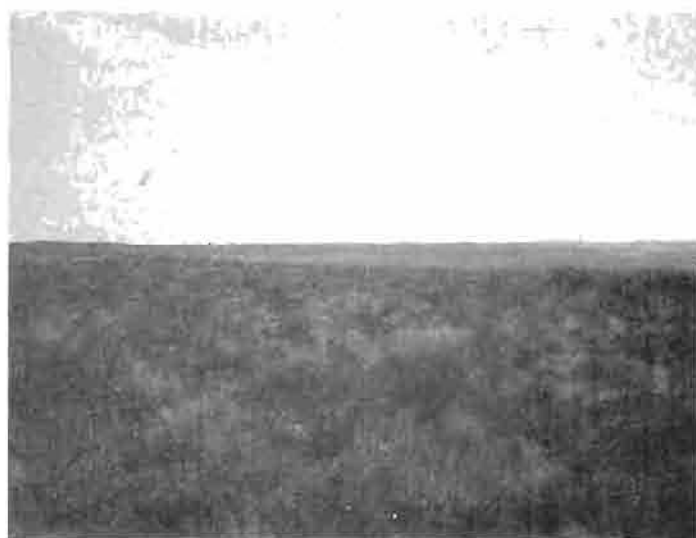
TERRAIN PROFILE



Washington PATH 11 - 33

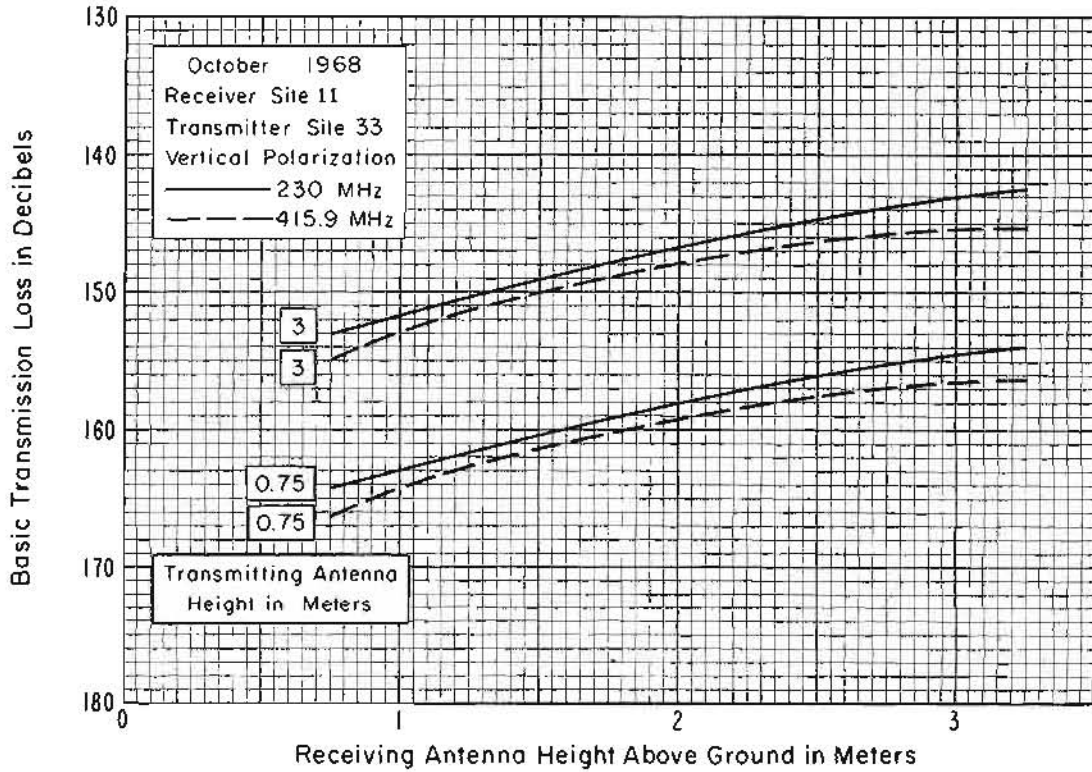


From site 11 toward site 33

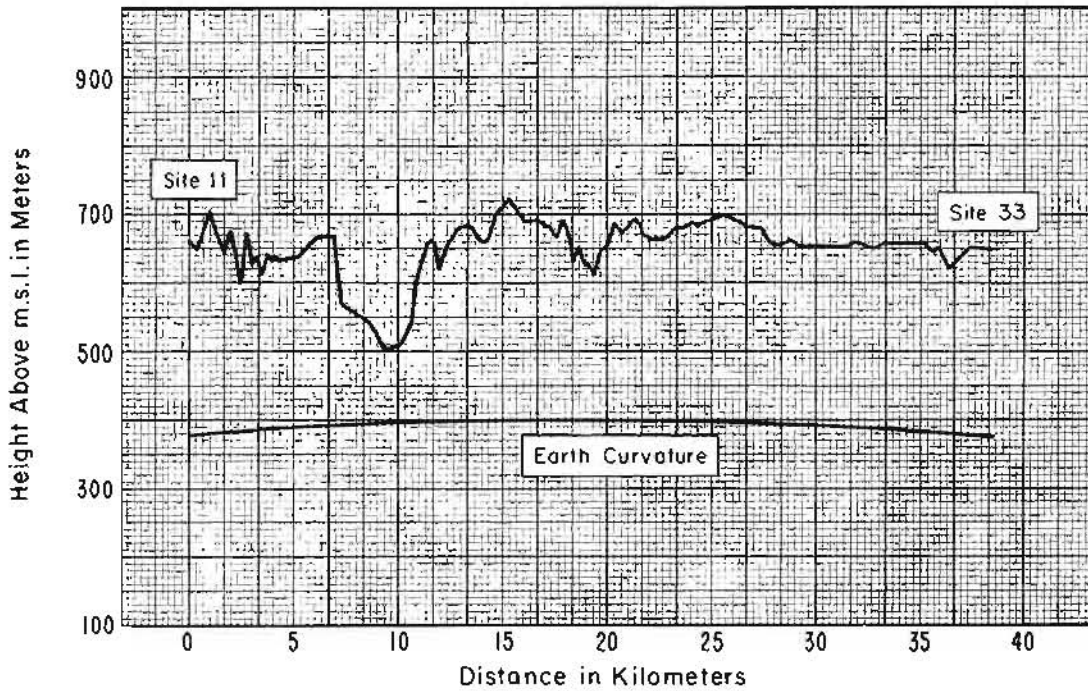


From site 33 toward site 11

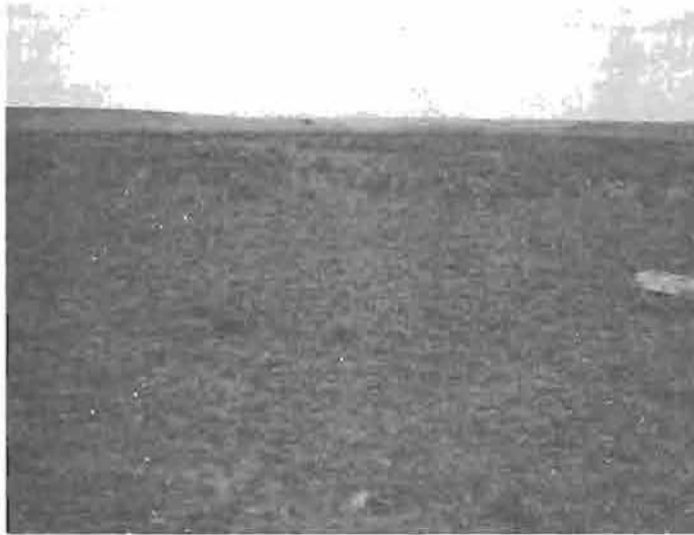
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 34

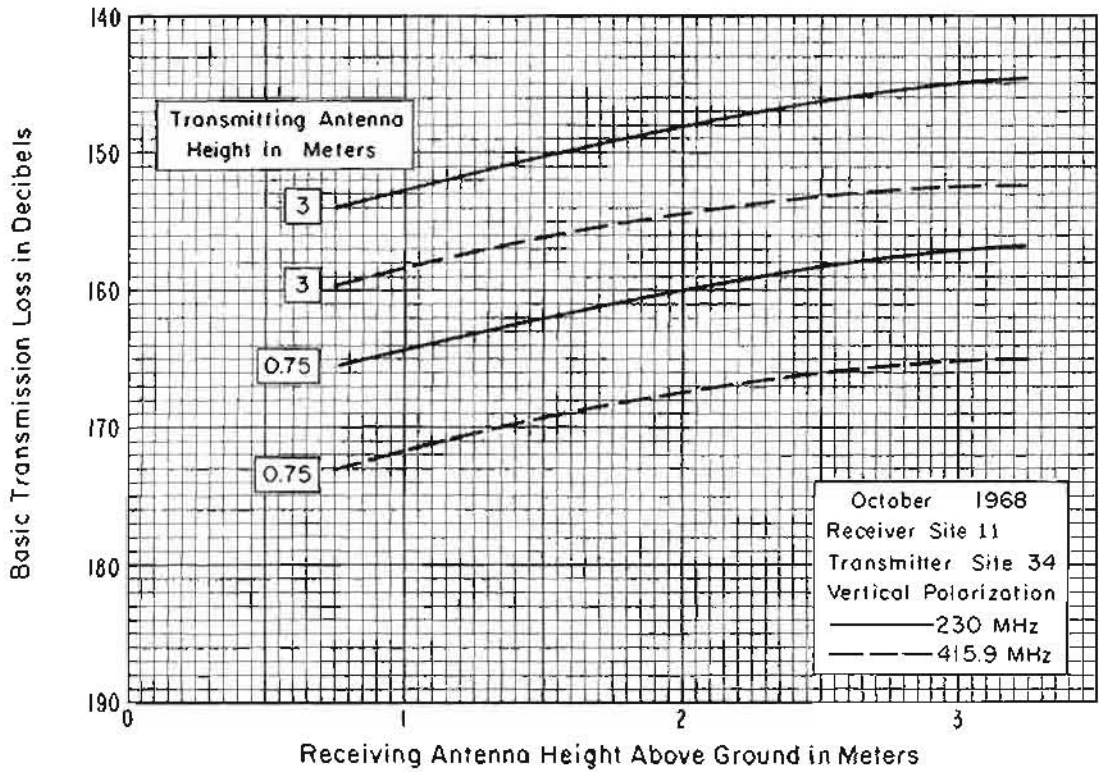


From site 11 toward site 34

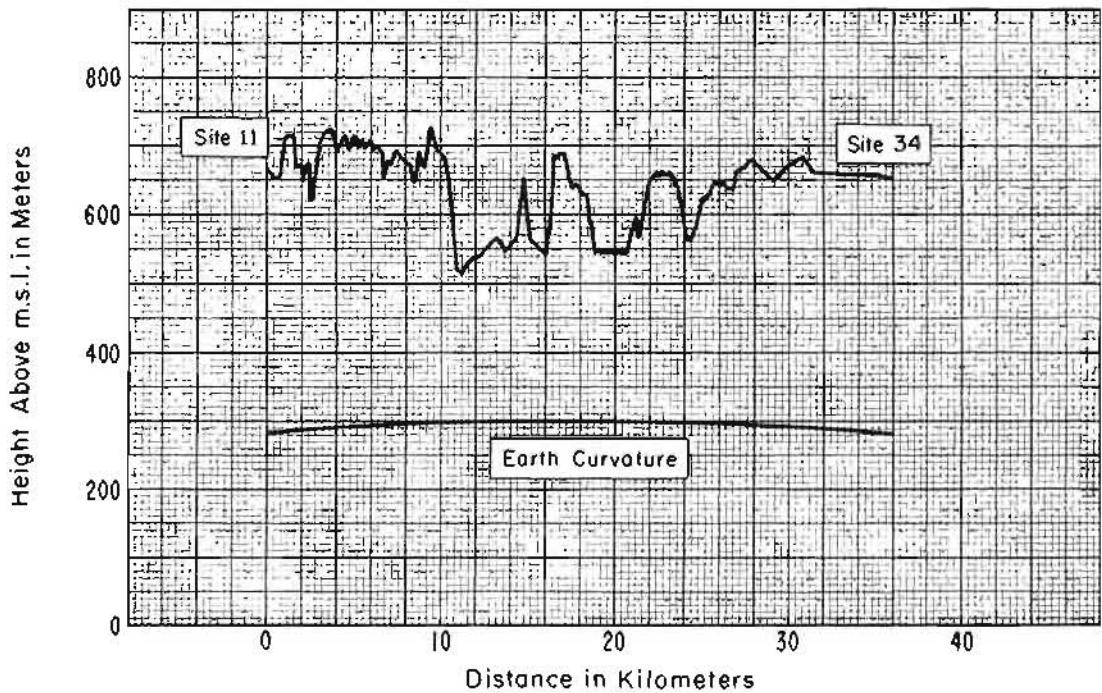


From site 34 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 36

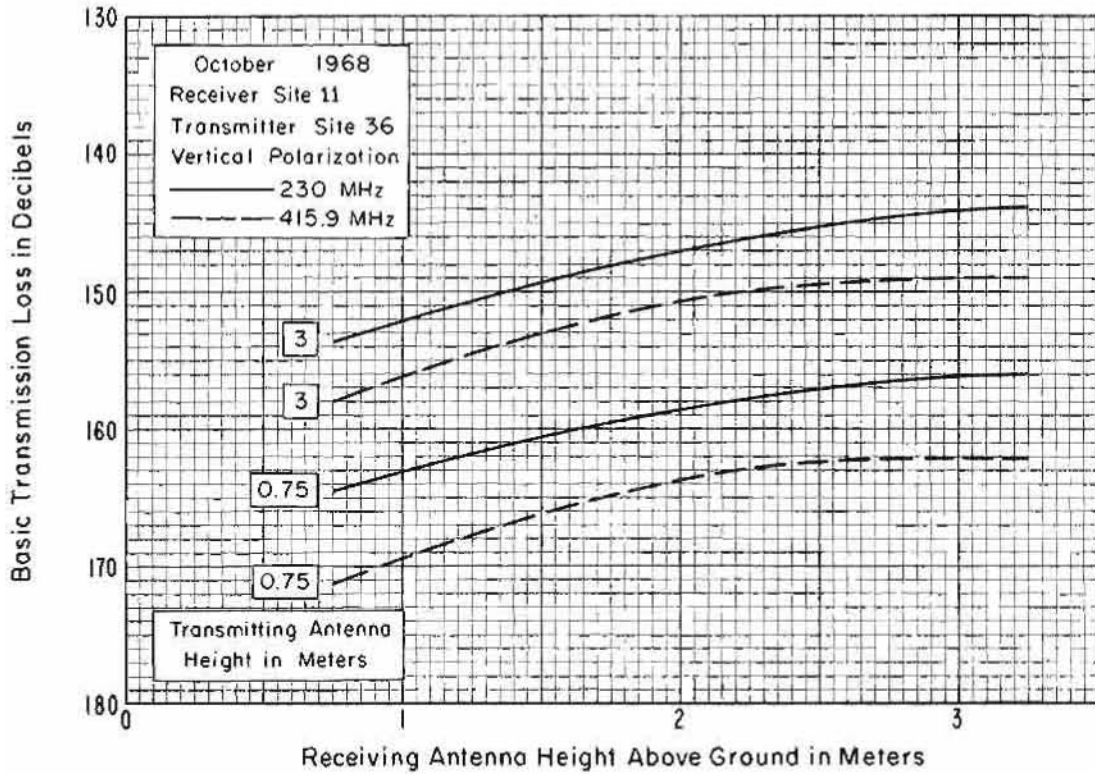


From site 11 toward site 36

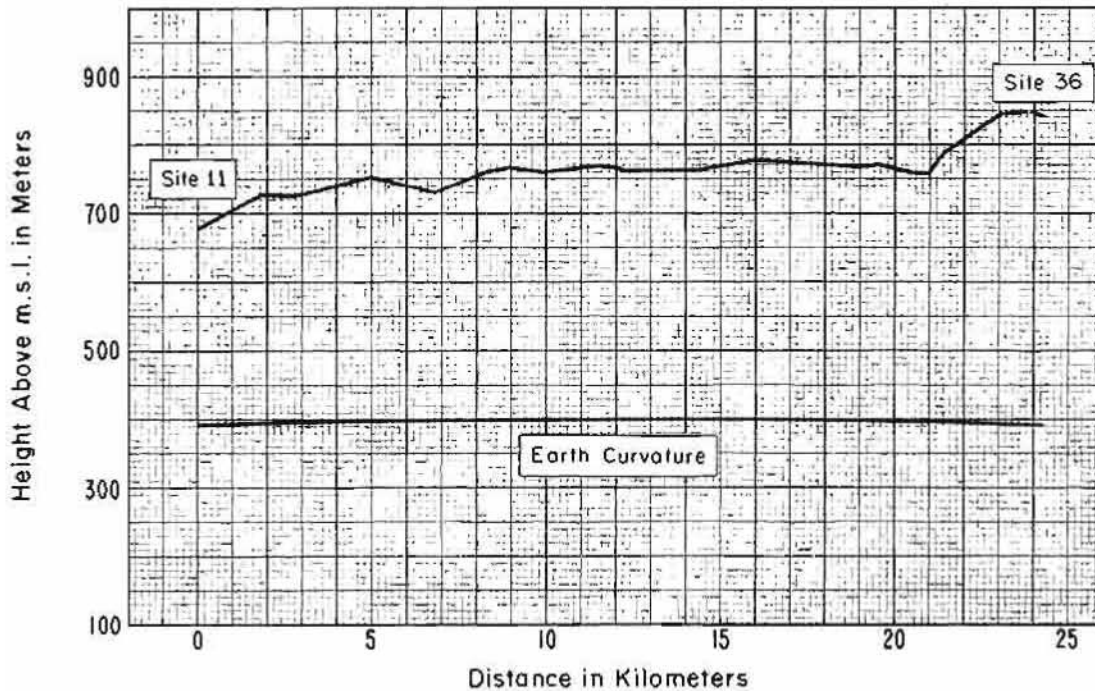


From site 36 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 11 - 56

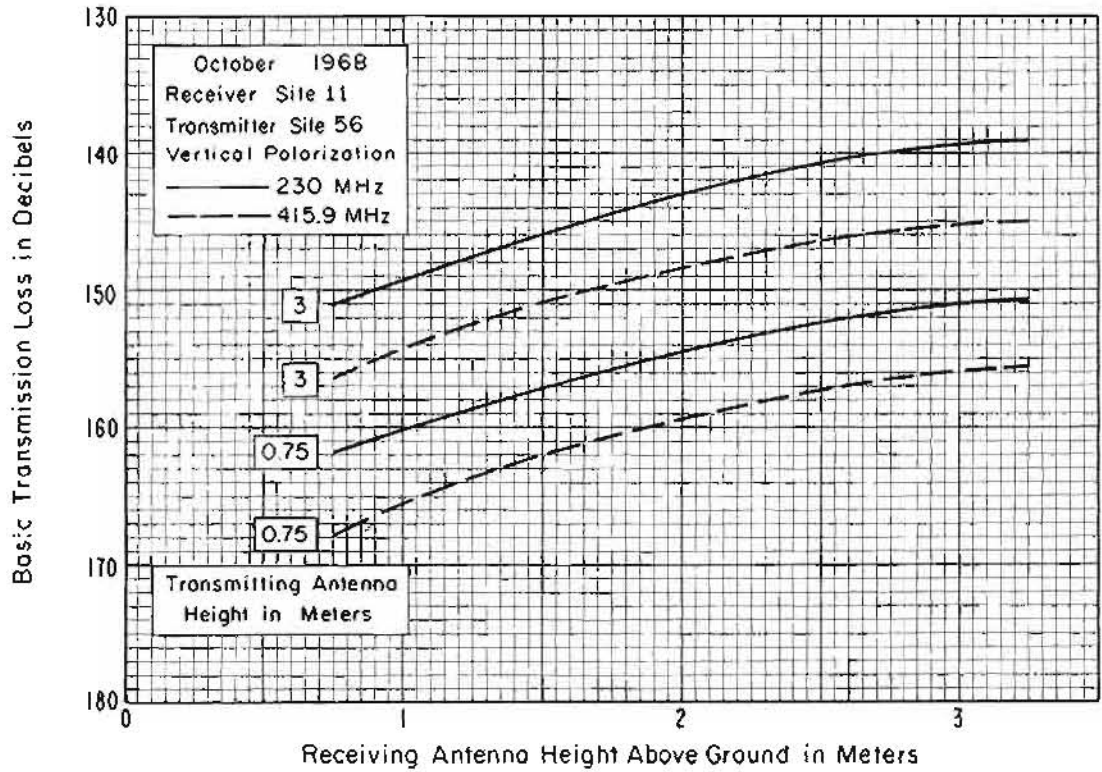


From site 11 toward site 56

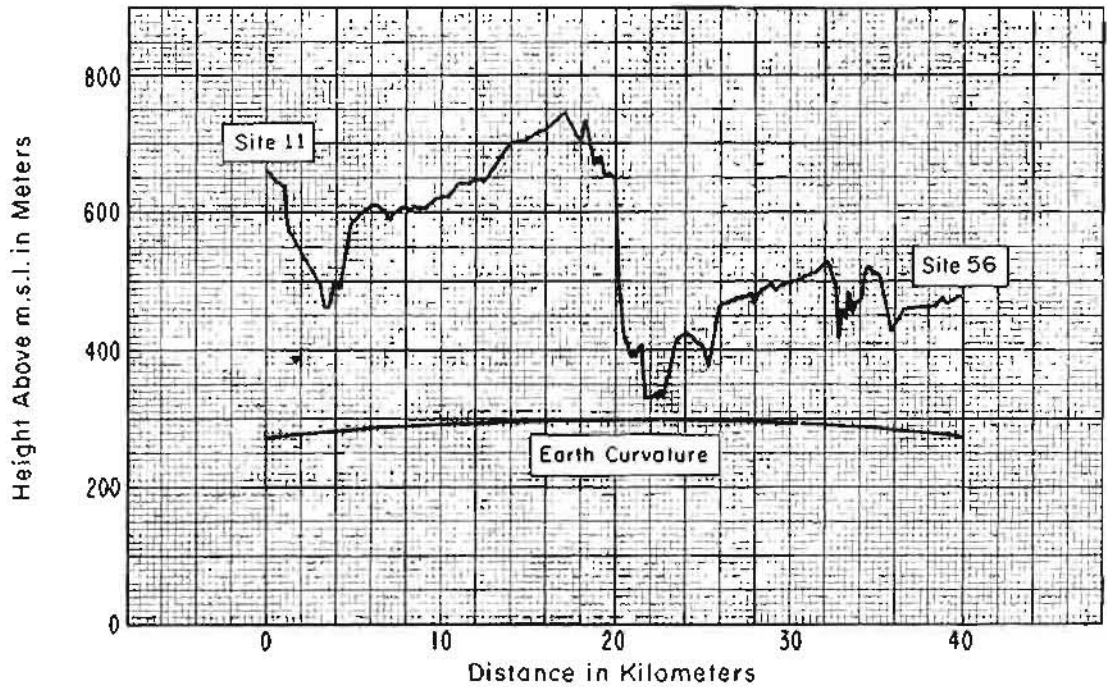


From site 56 toward site 11

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 17 - 23

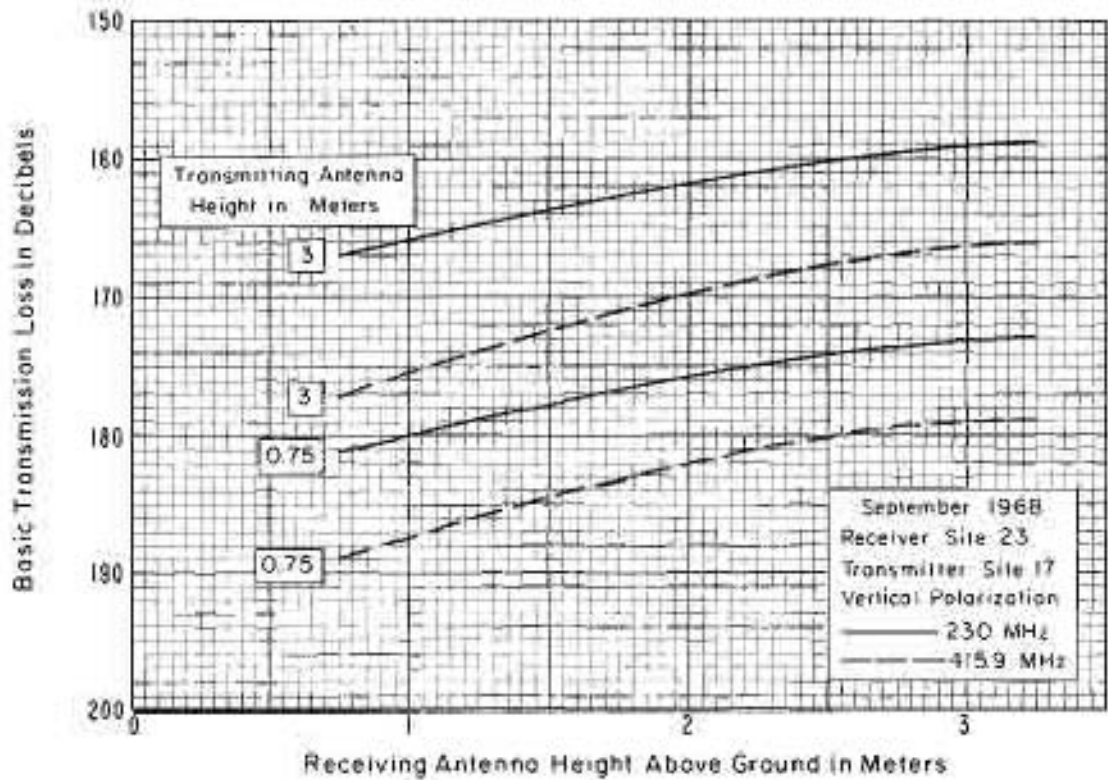


From site 23 toward site 17

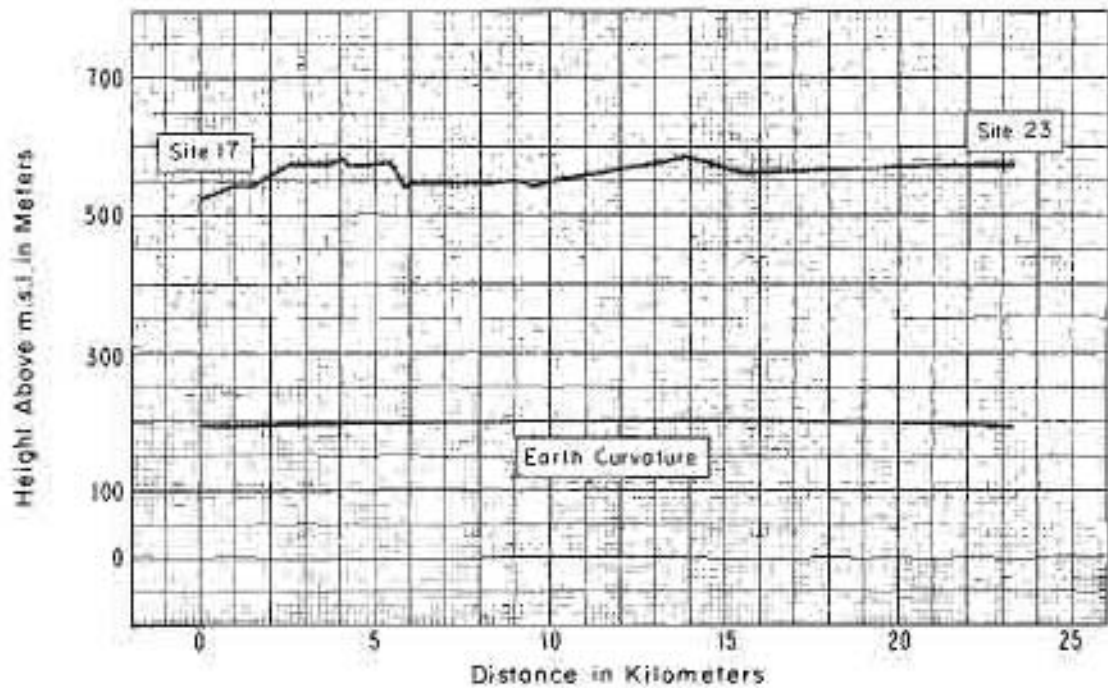


From site 17 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 17 - 28

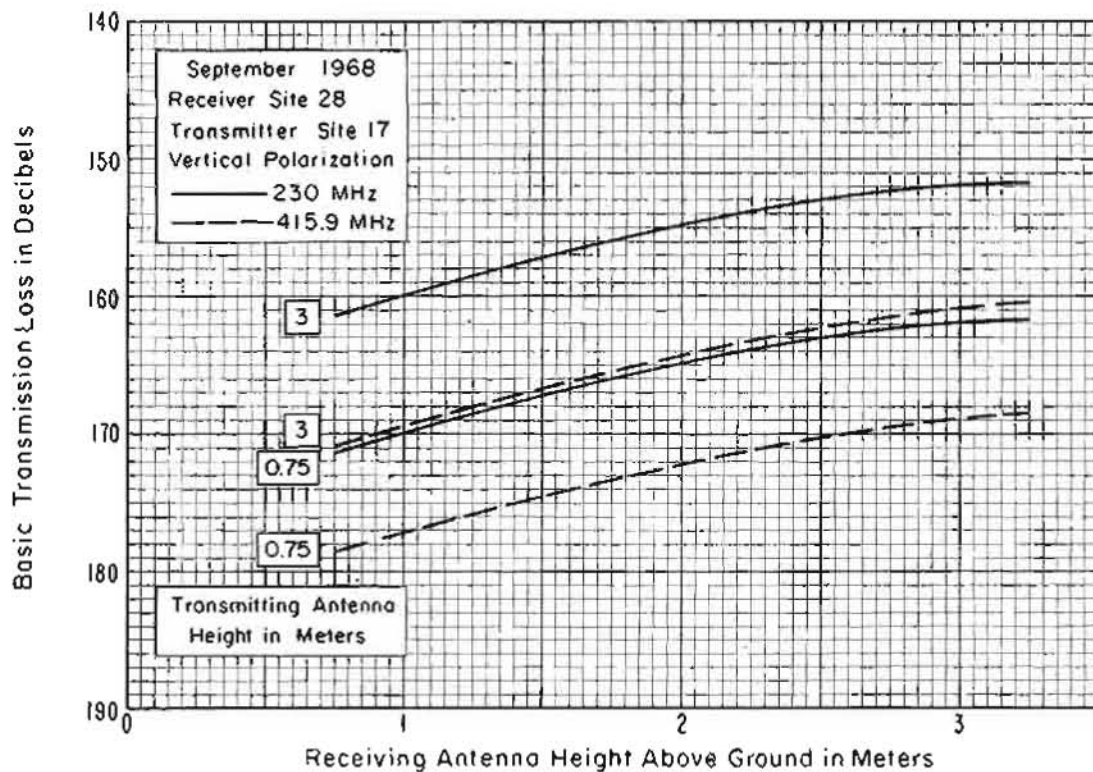


From site 28 toward site 17

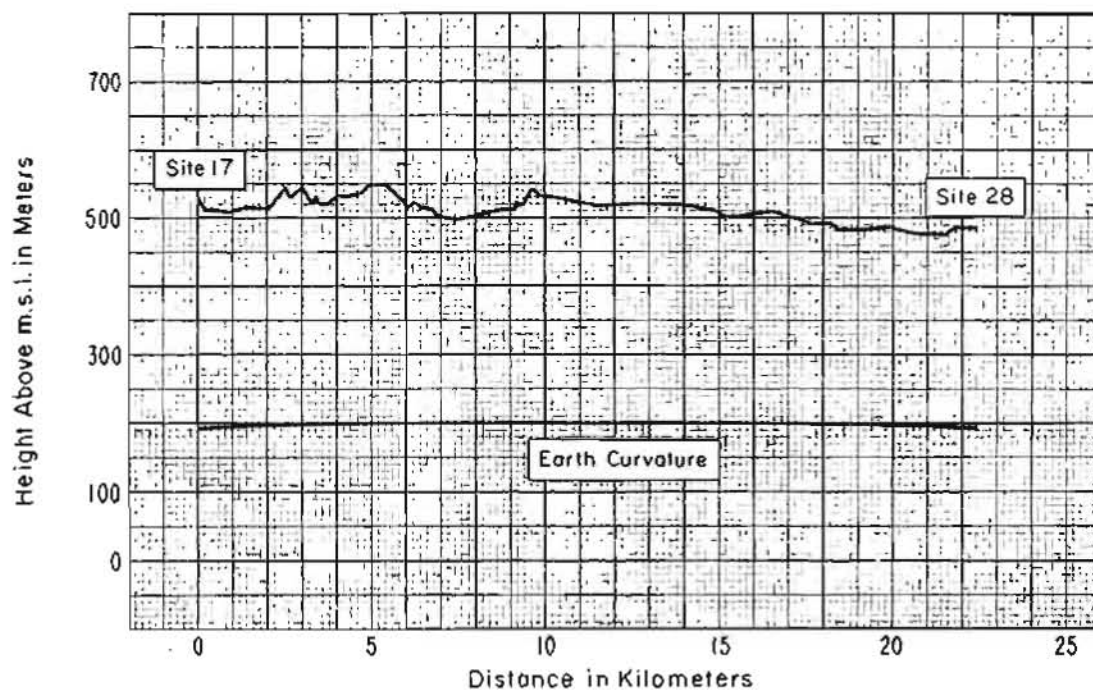


From site 17 toward site 28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 18 - 23

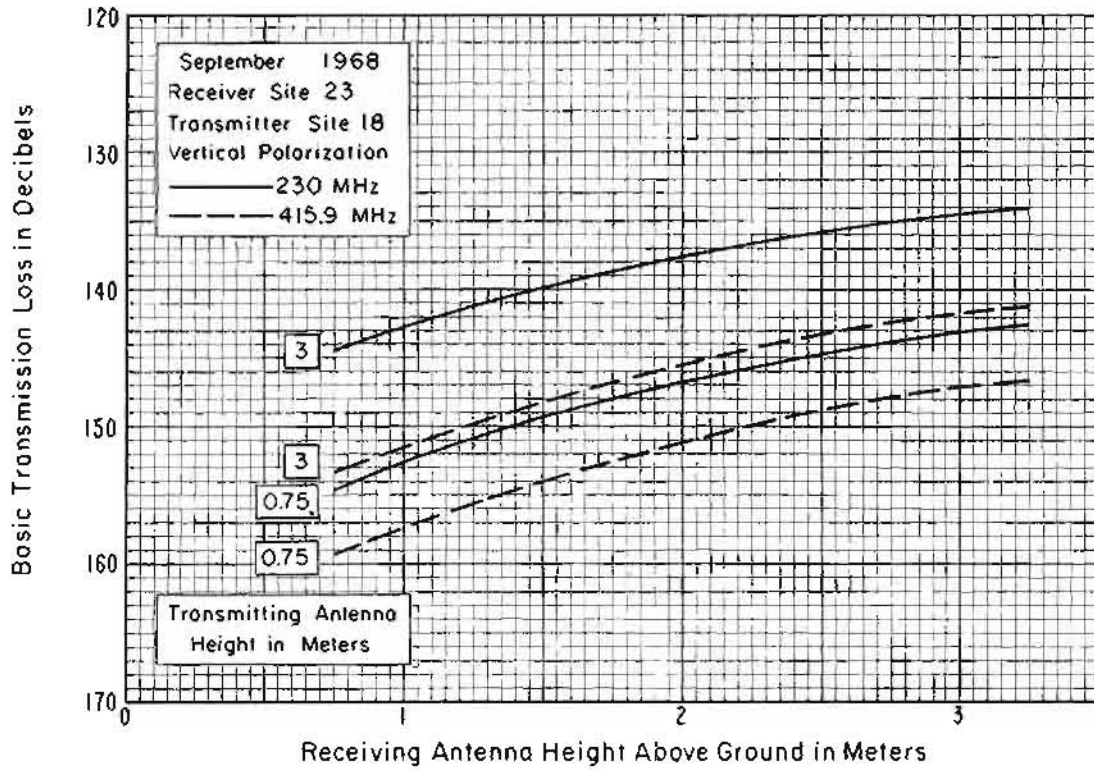


From site 23 toward site 18

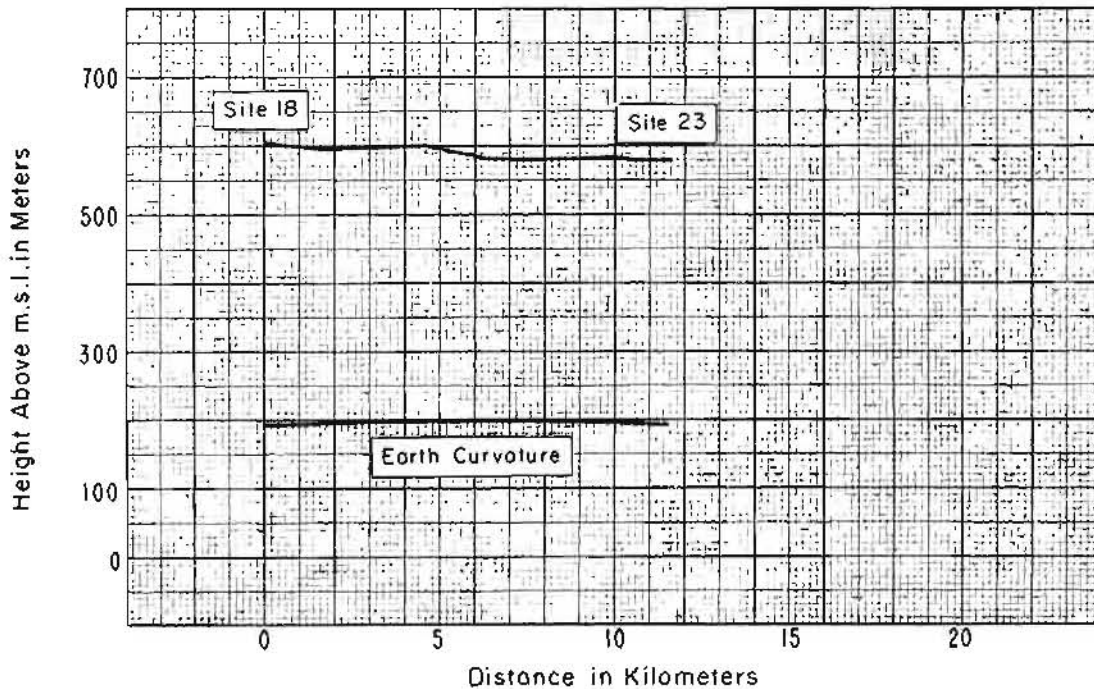


From site 18 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 20 - 23

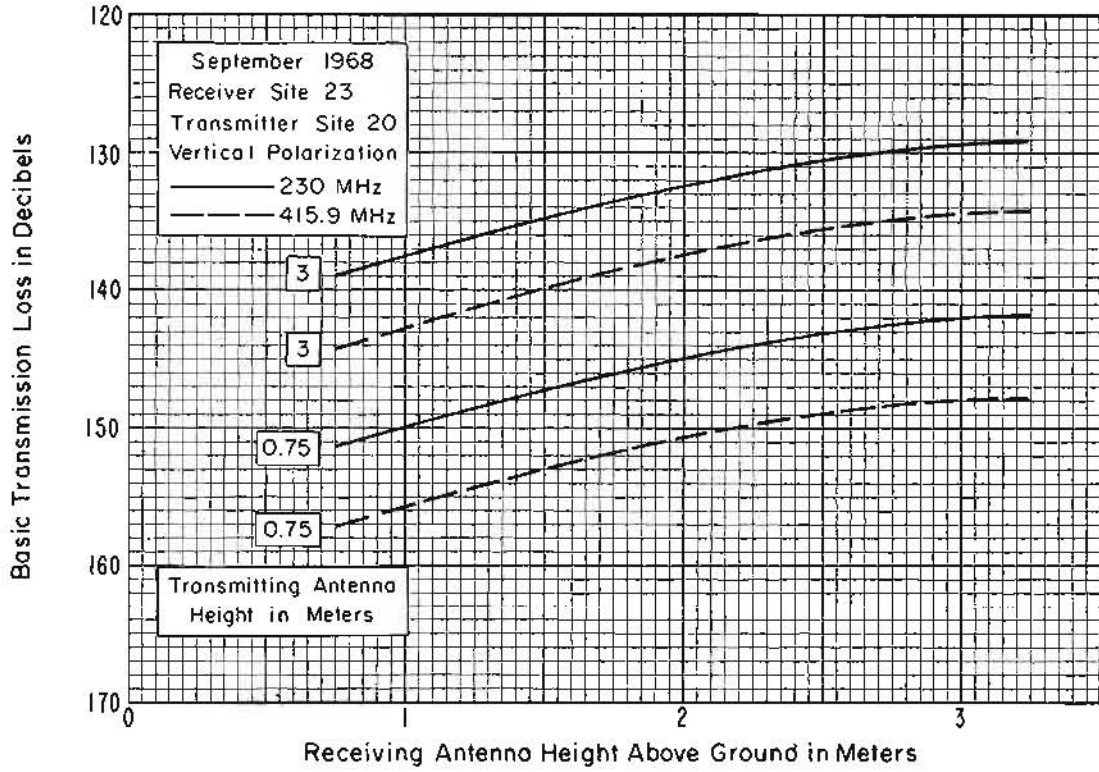


From site 23 toward site 20

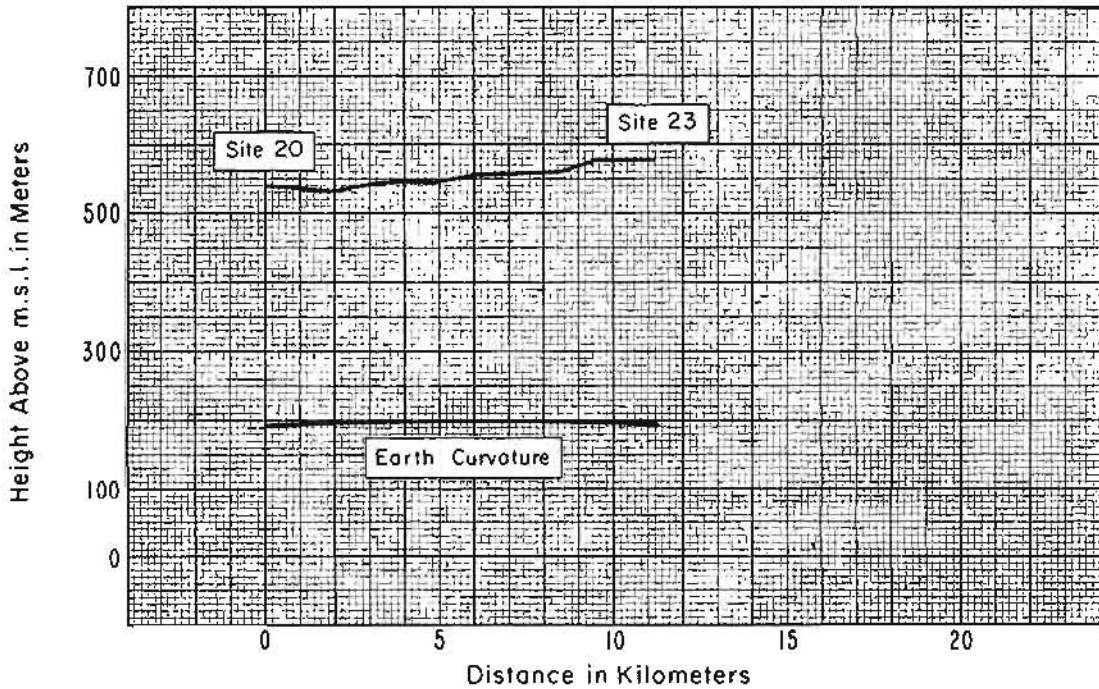


From site 20 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 20 - 28



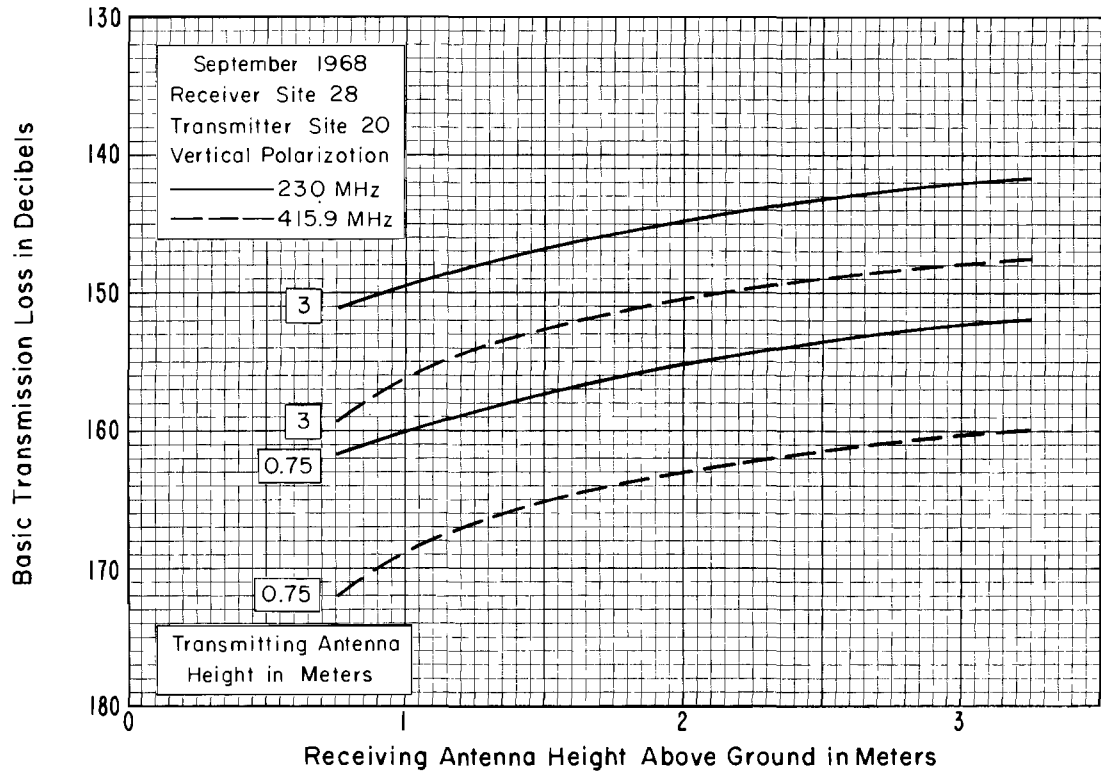
From site 28 toward site 20



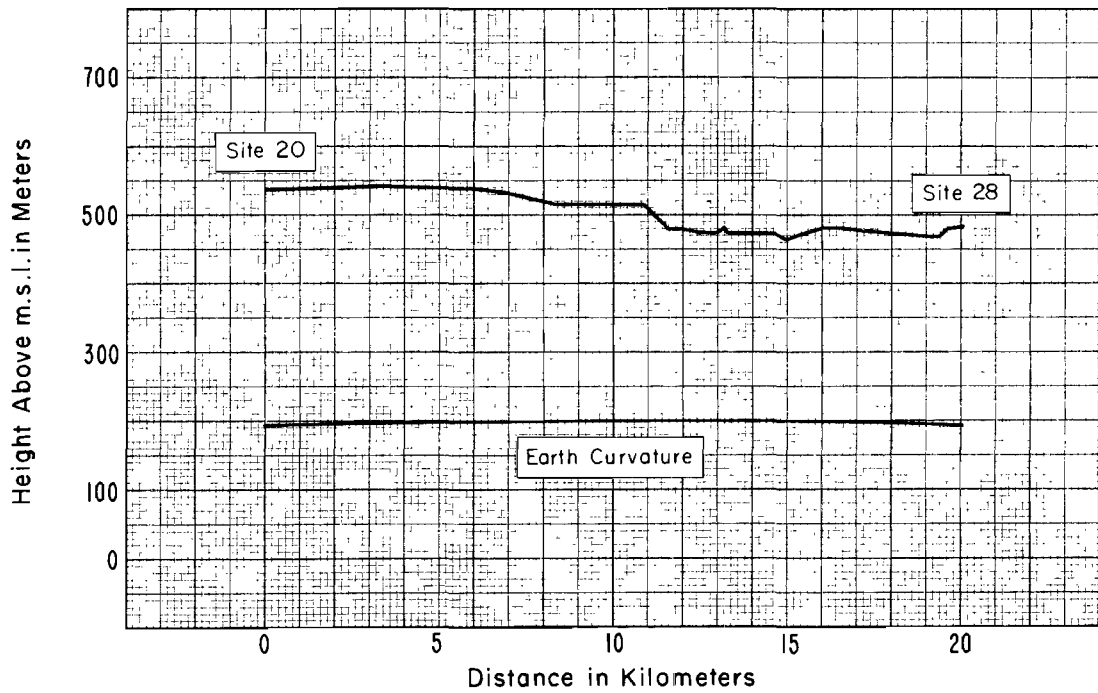
From site 20 toward site 28

WASHINGTON PATH 20 — 28

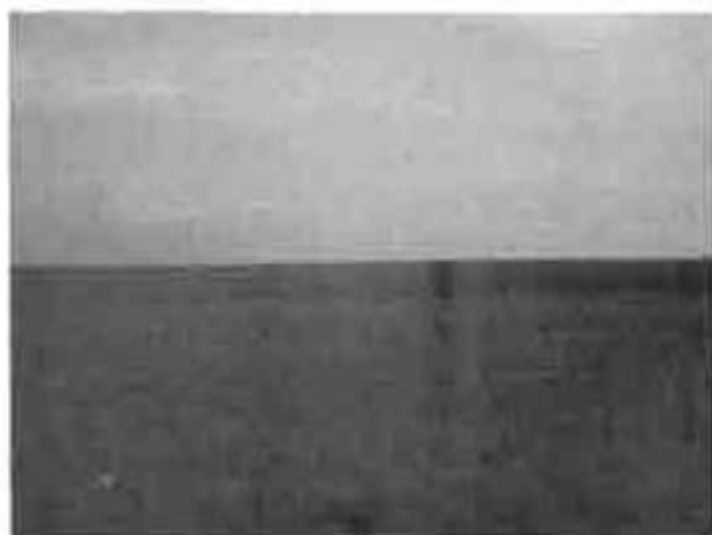
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 21 - 23



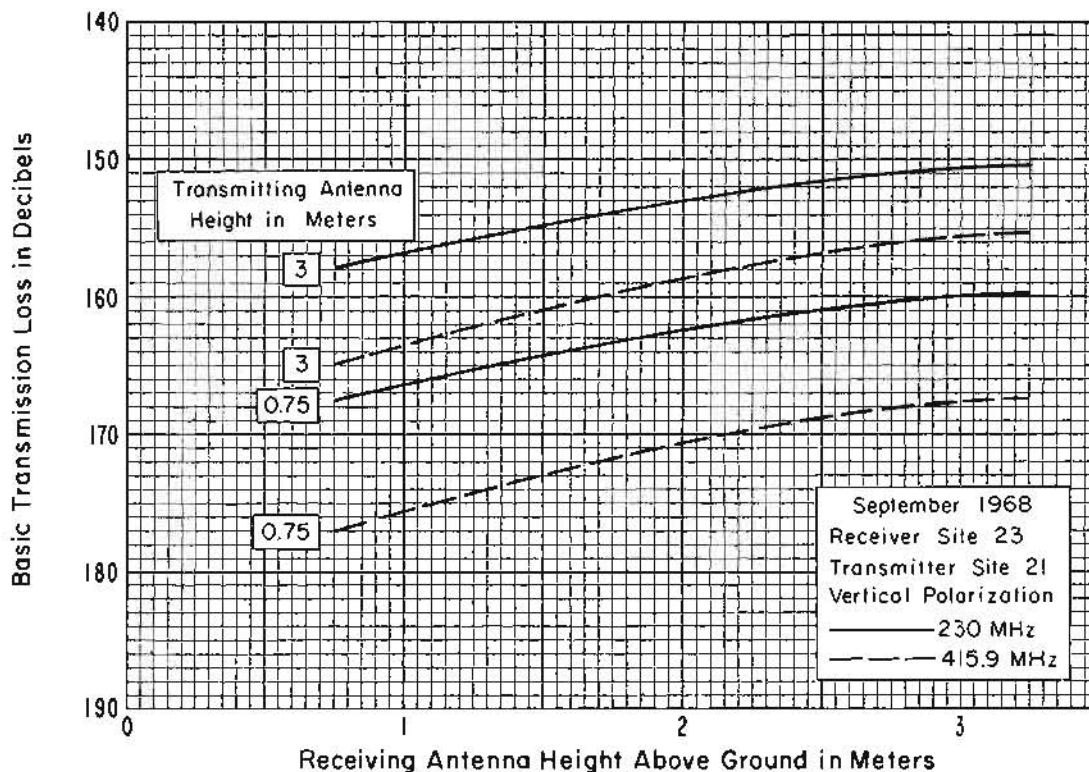
From site 23 toward site 21



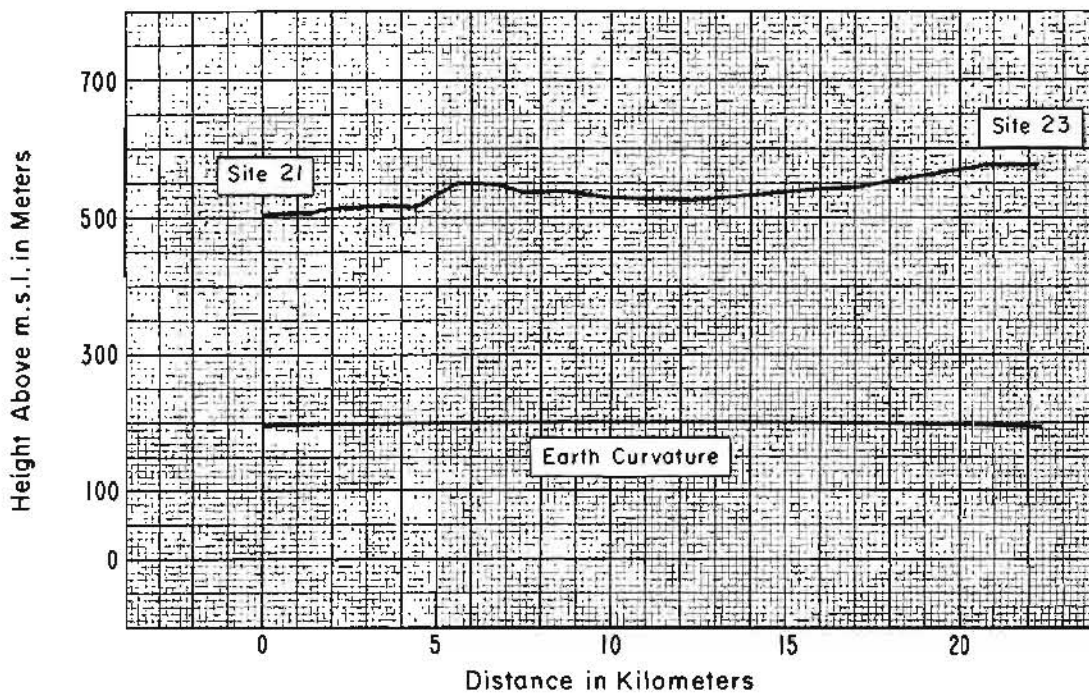
From site 21 toward site 23

WASHINGTON PATH 21—23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 21 - 28



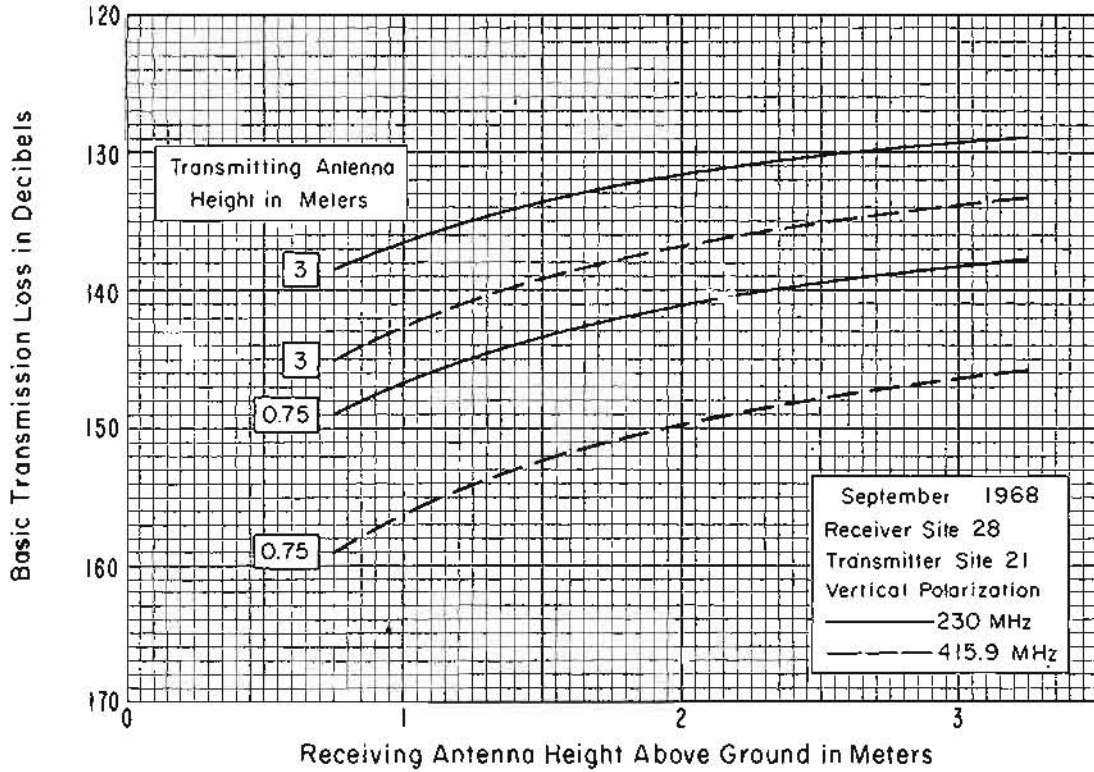
From site 28 toward site 21



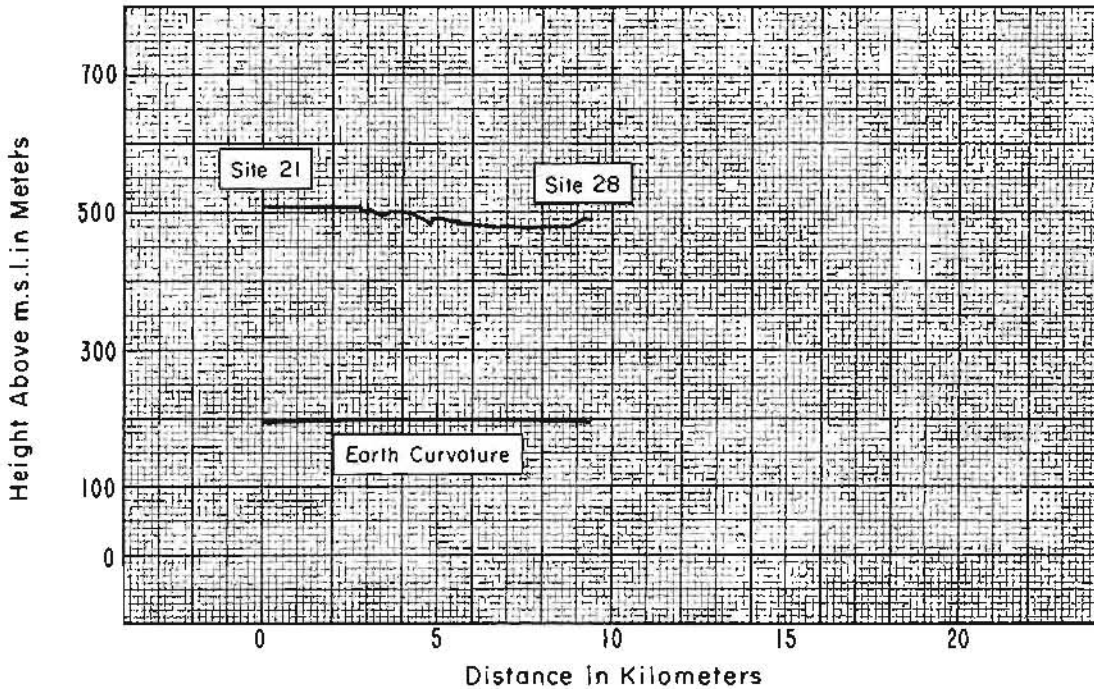
From site 21 toward site 28

WASHINGTON PATH 21—28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 22 - 23

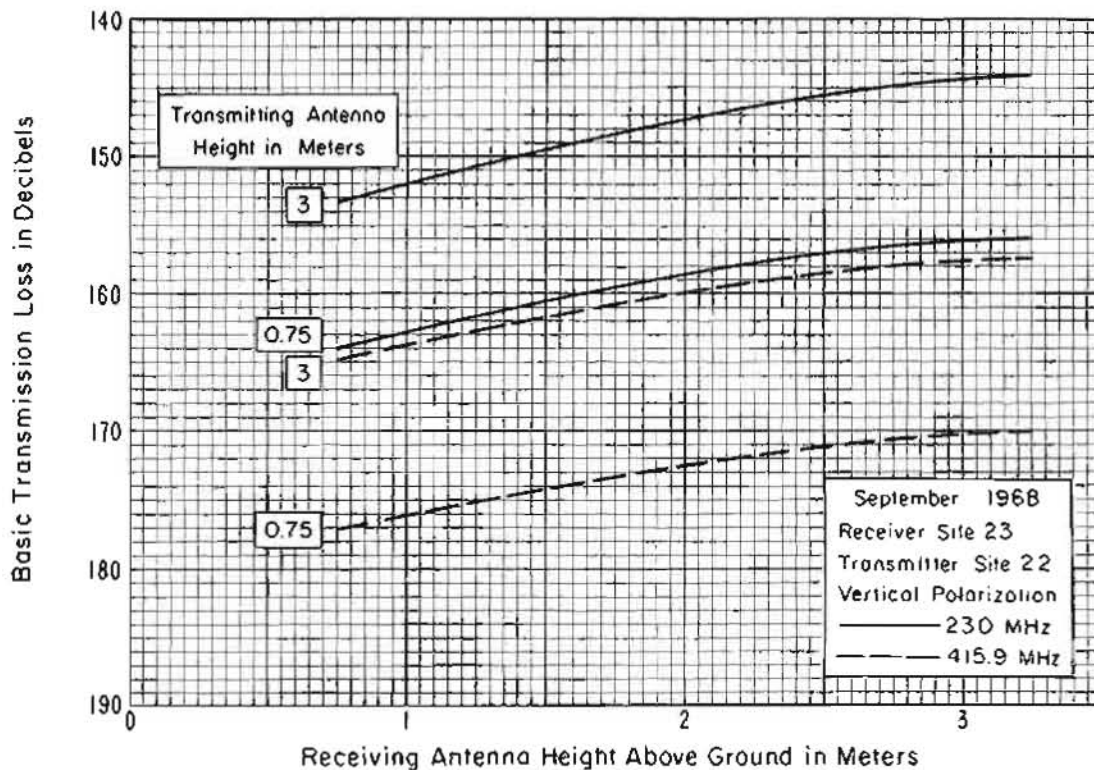


From site 23 toward site 22.

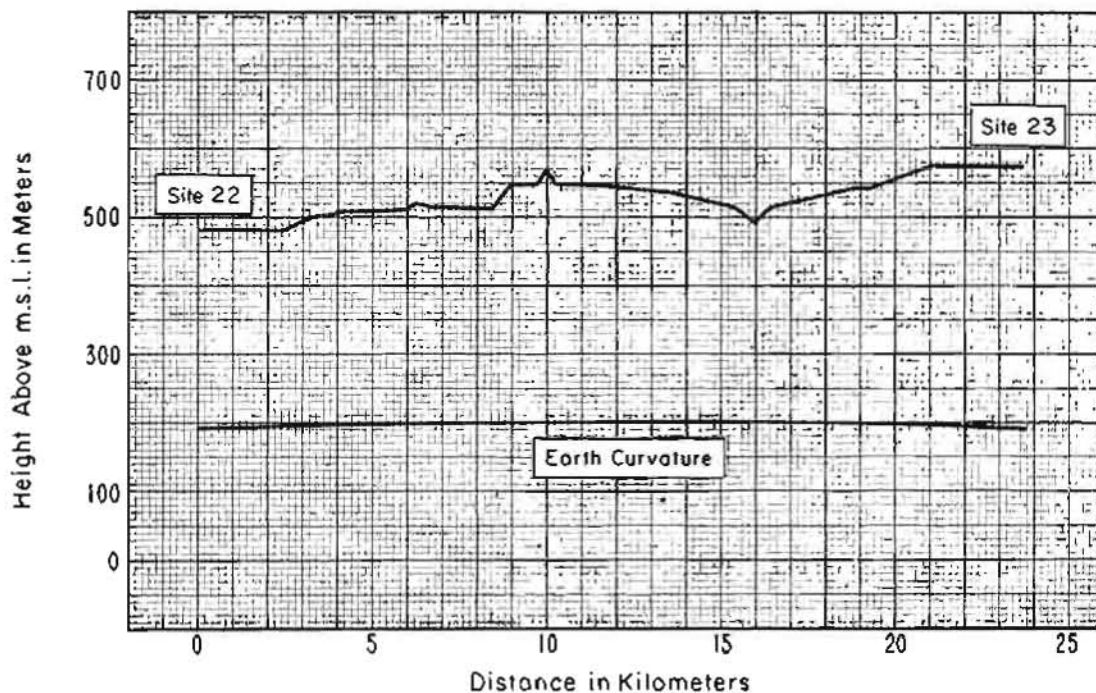


From site 22 toward site 23

PATH LOSS MEASUREMENTS



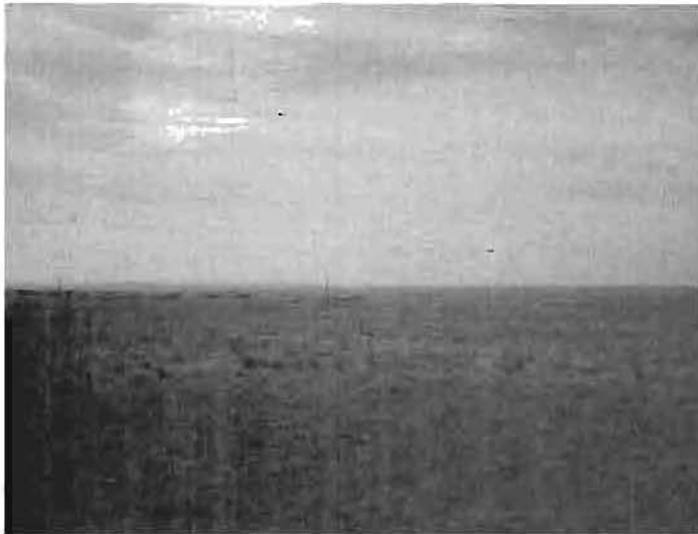
TERRAIN PROFILE



Washington PATH 22 - 28

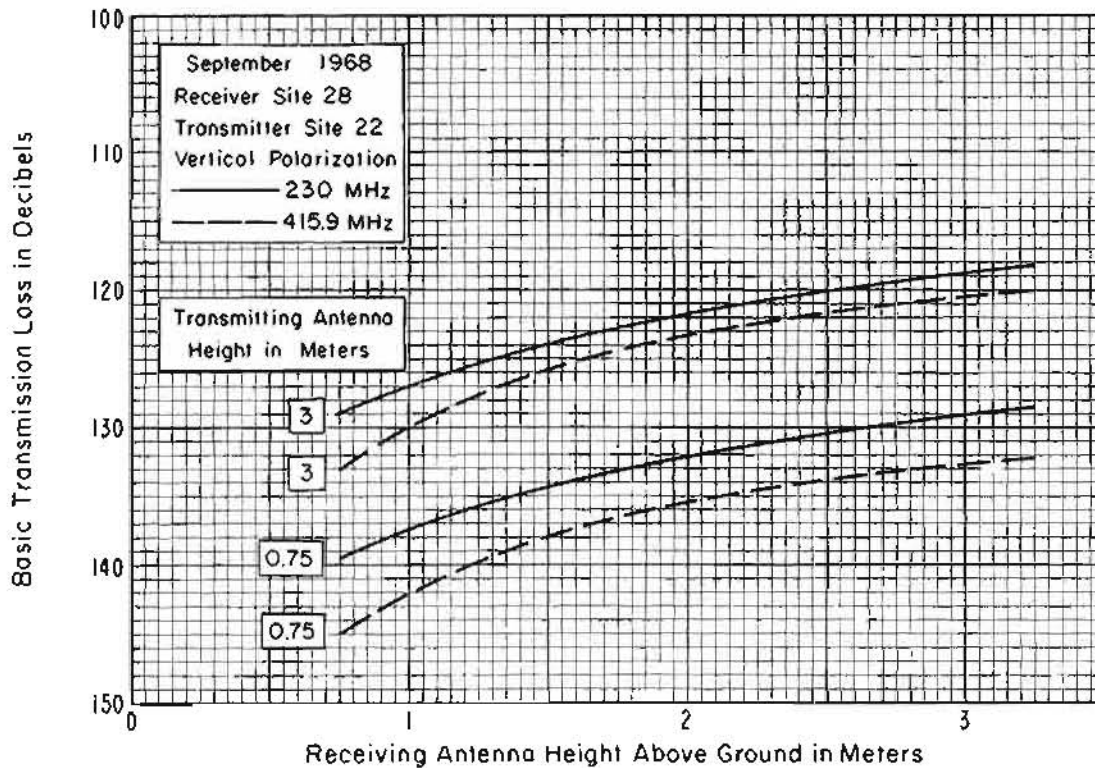


From site 28 toward site 22

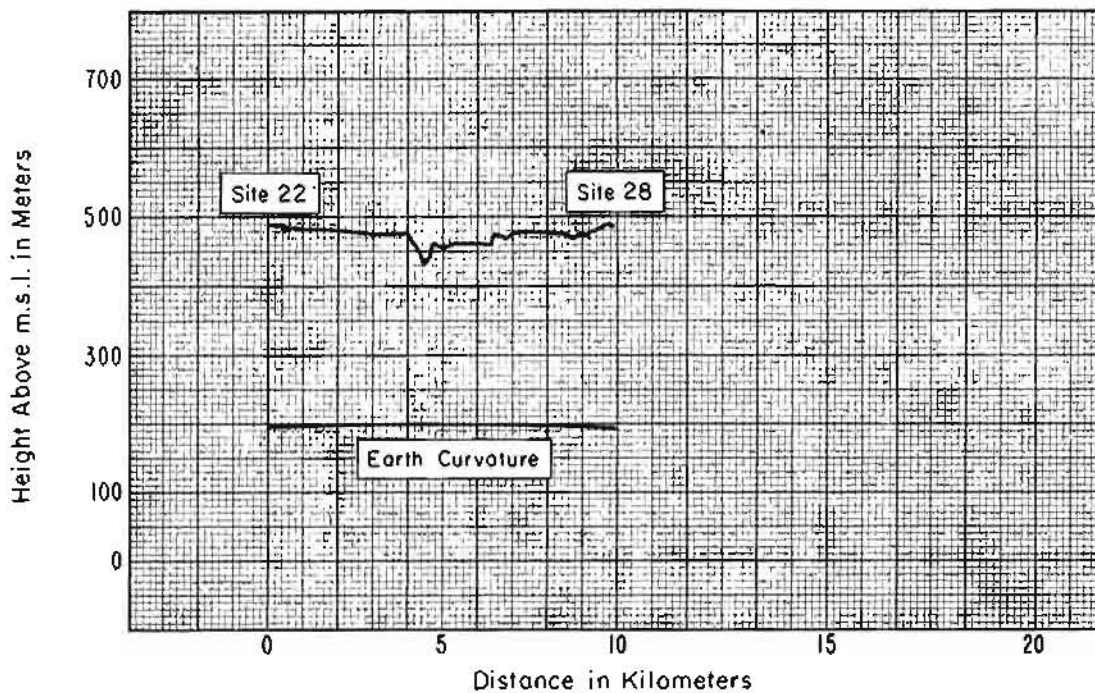


From site 22 toward site 28

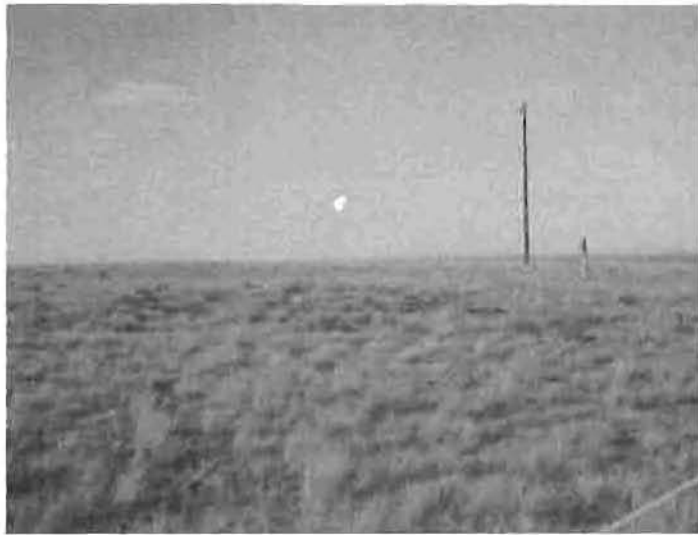
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



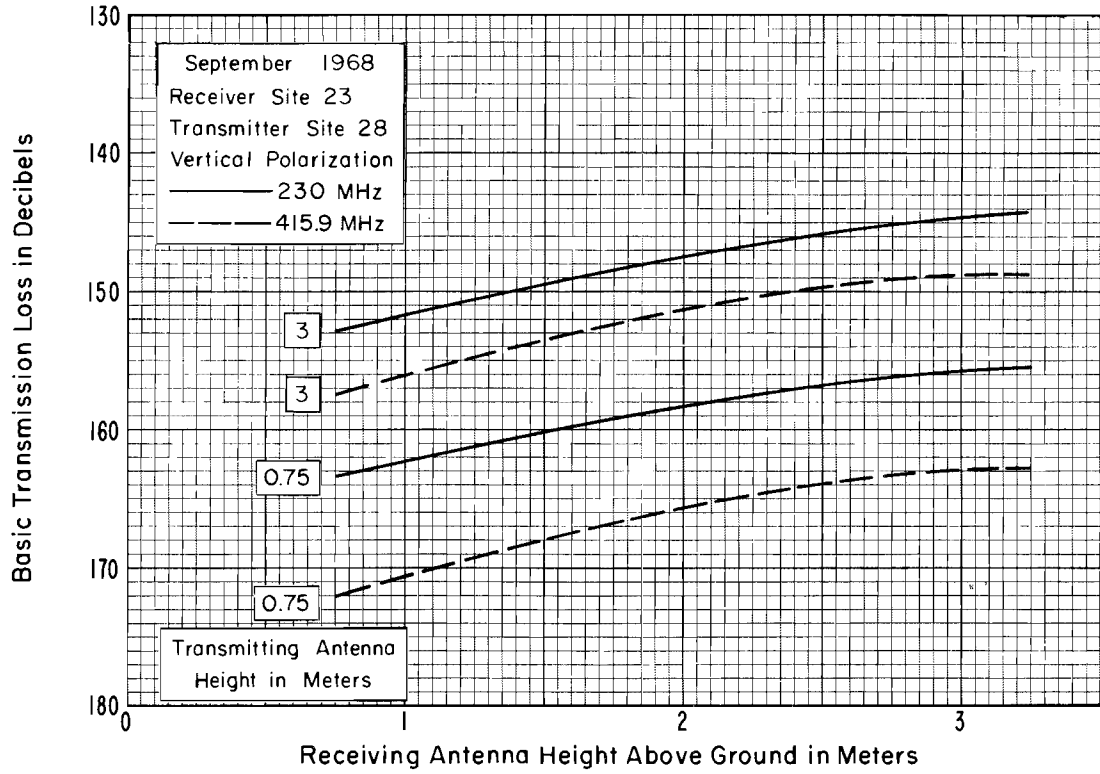
Washington PATH 23 - 28



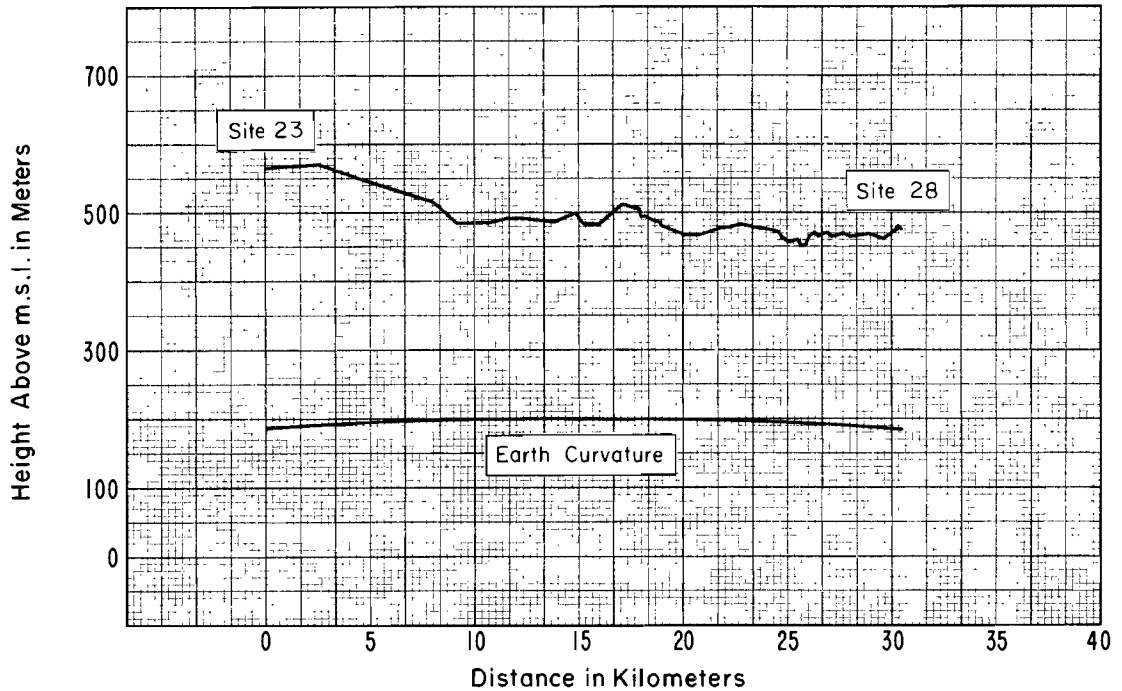
From site 28 toward site 23

WASHINGTON PATH 23 — 28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 23 - 43

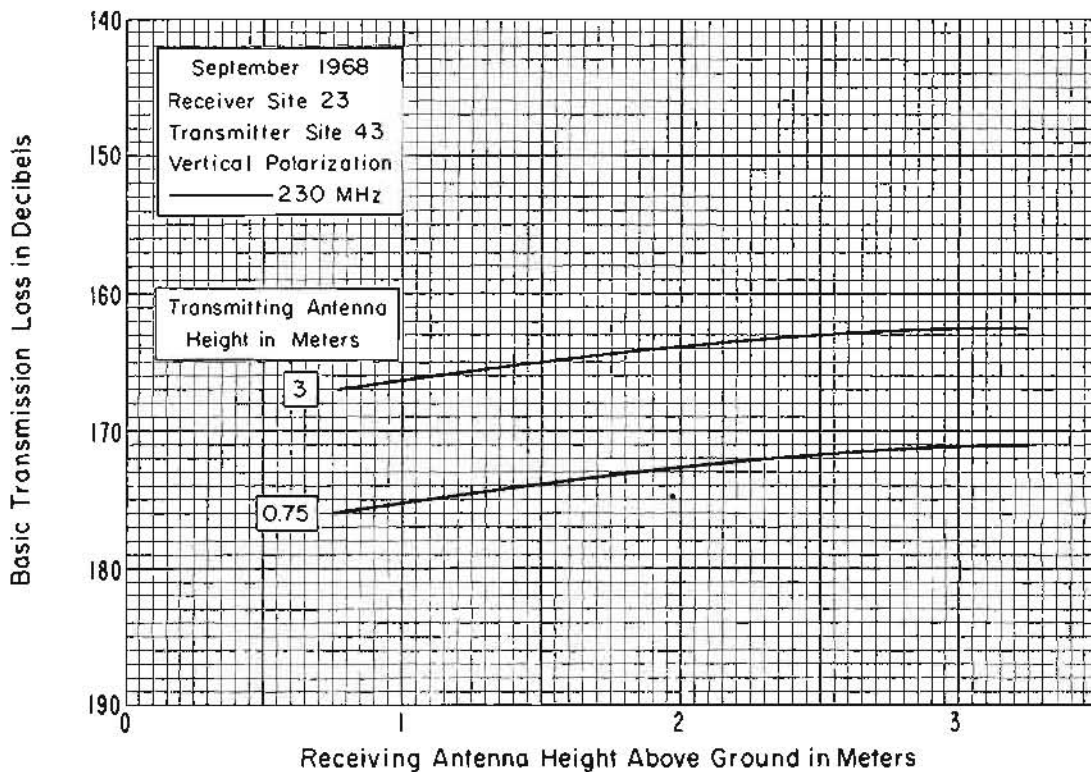


From site 23 toward site 43

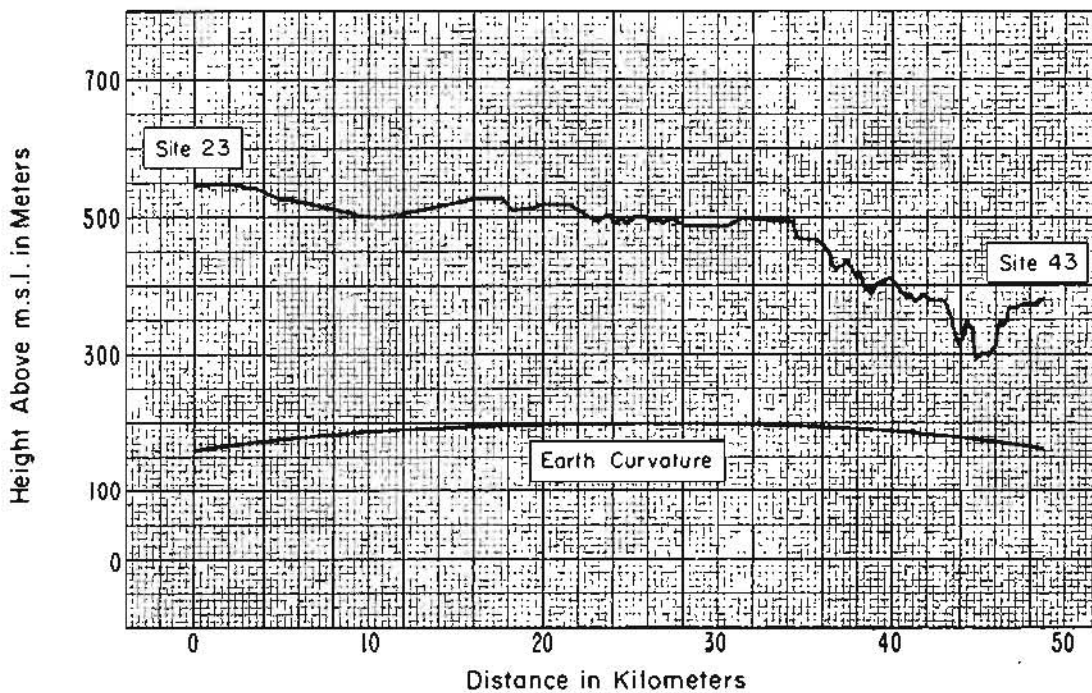


From site 43 toward site 23

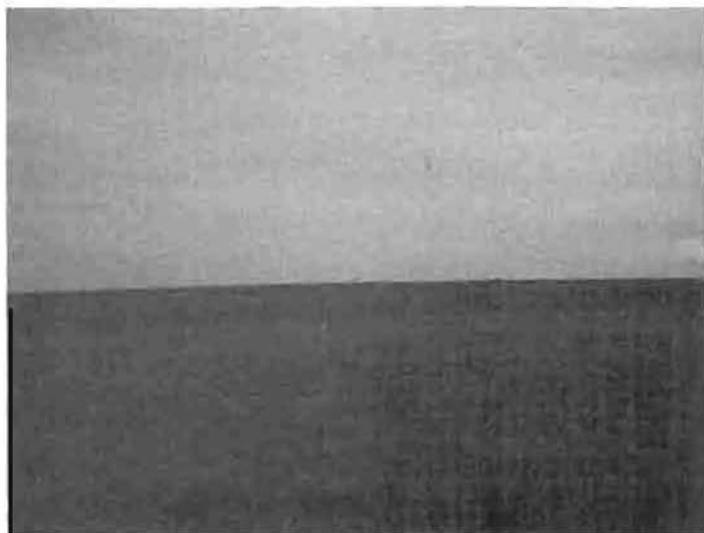
PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 23 - 44

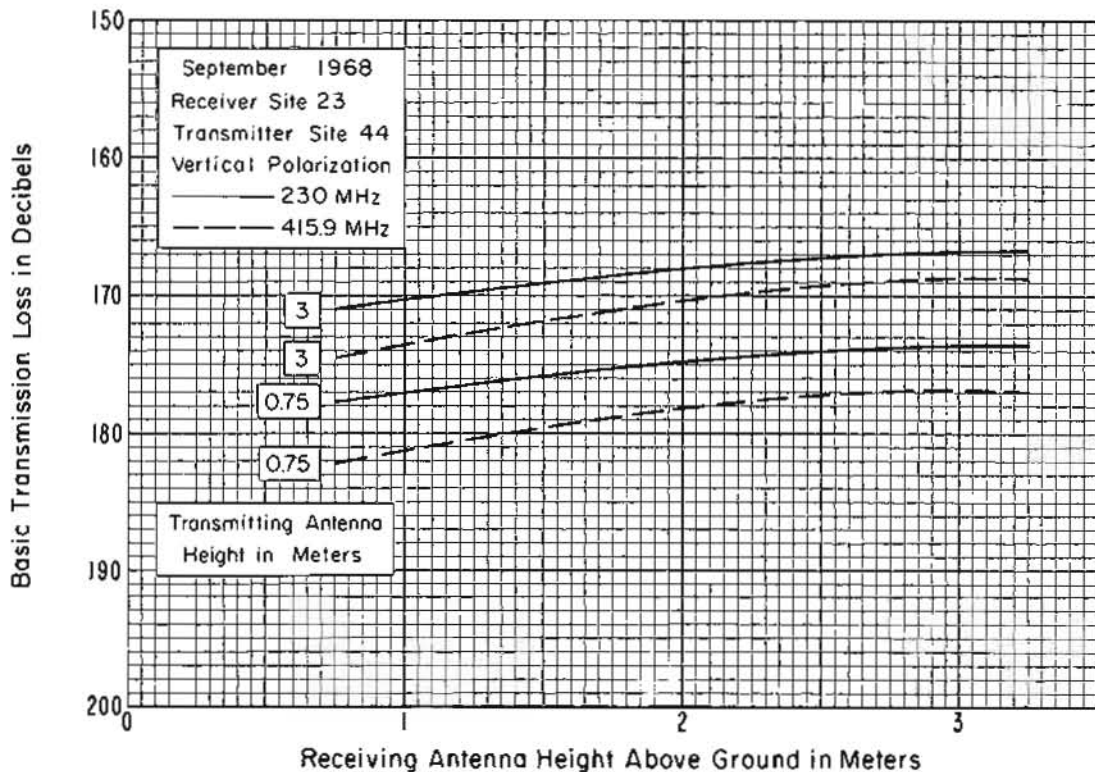


From site 23 toward site 44

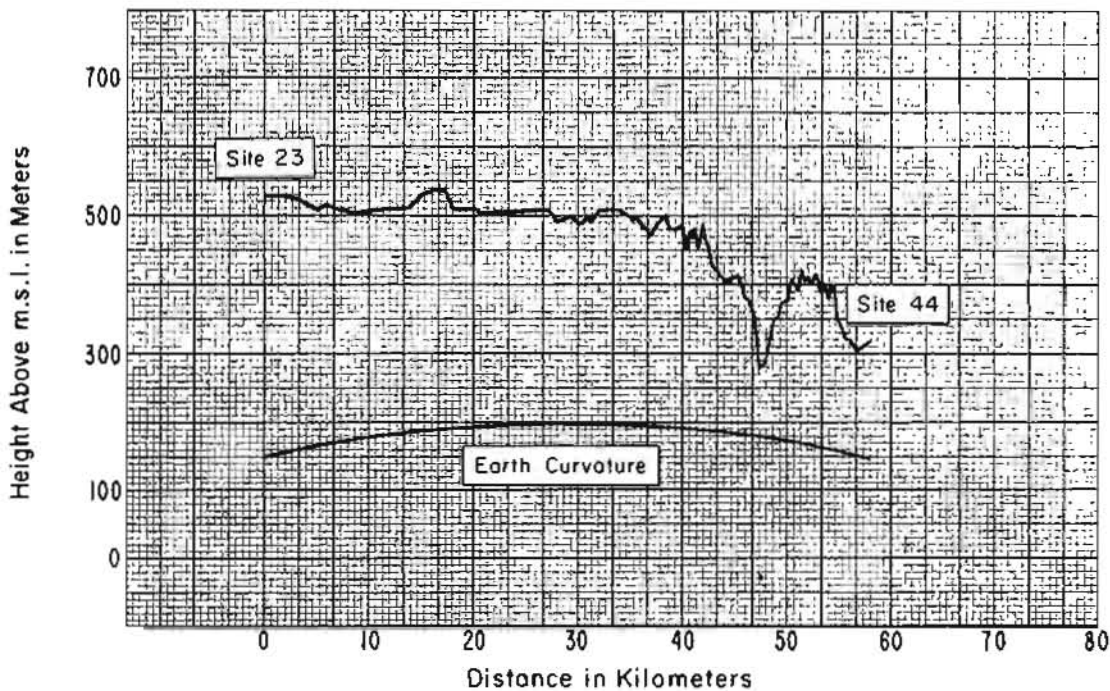


From site 44 toward site 23

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 28 - 43

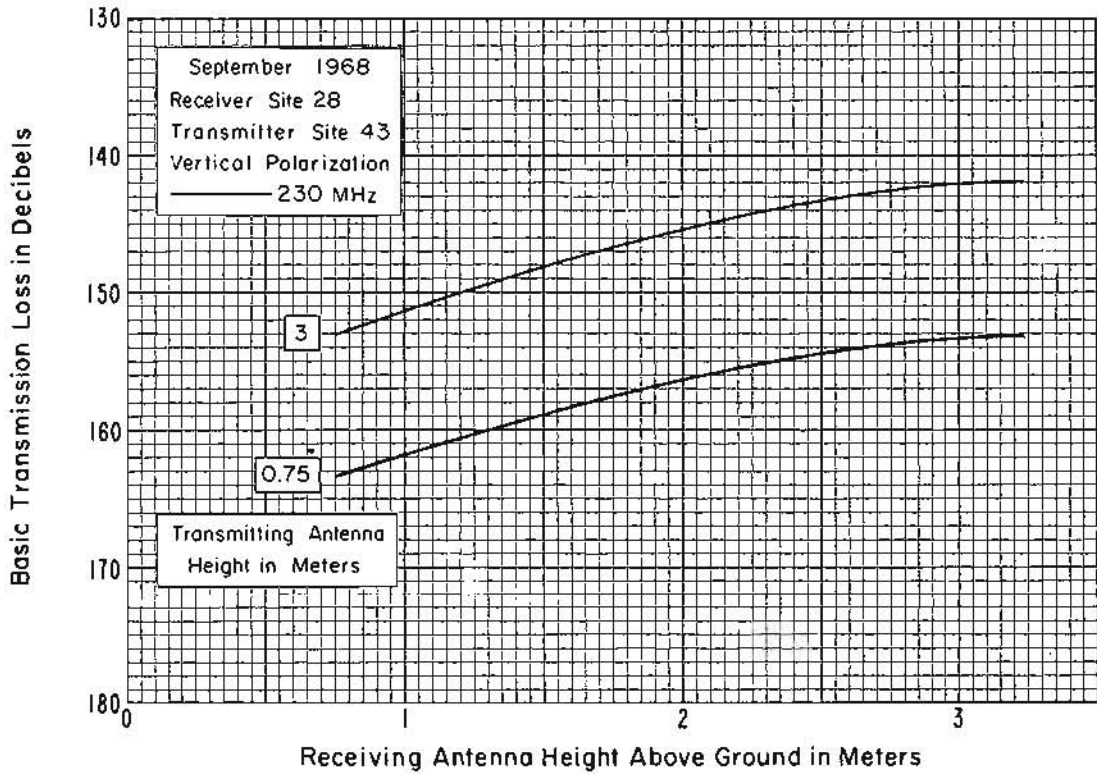


From site 28 toward site 43

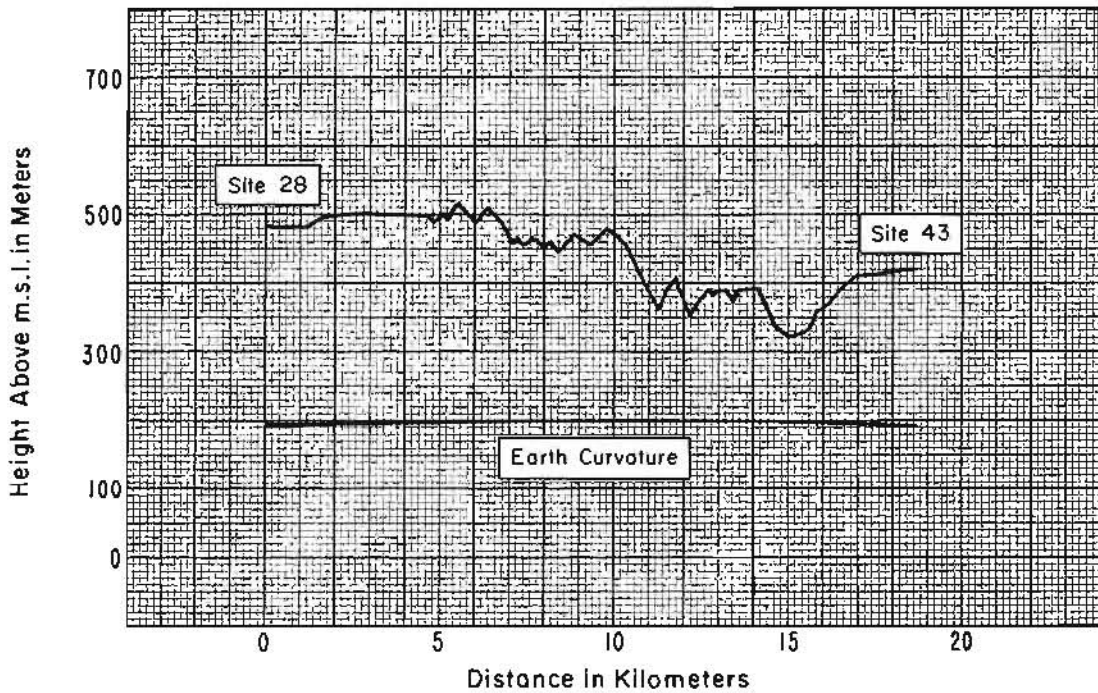


From site 43 toward site 28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 28 - 44

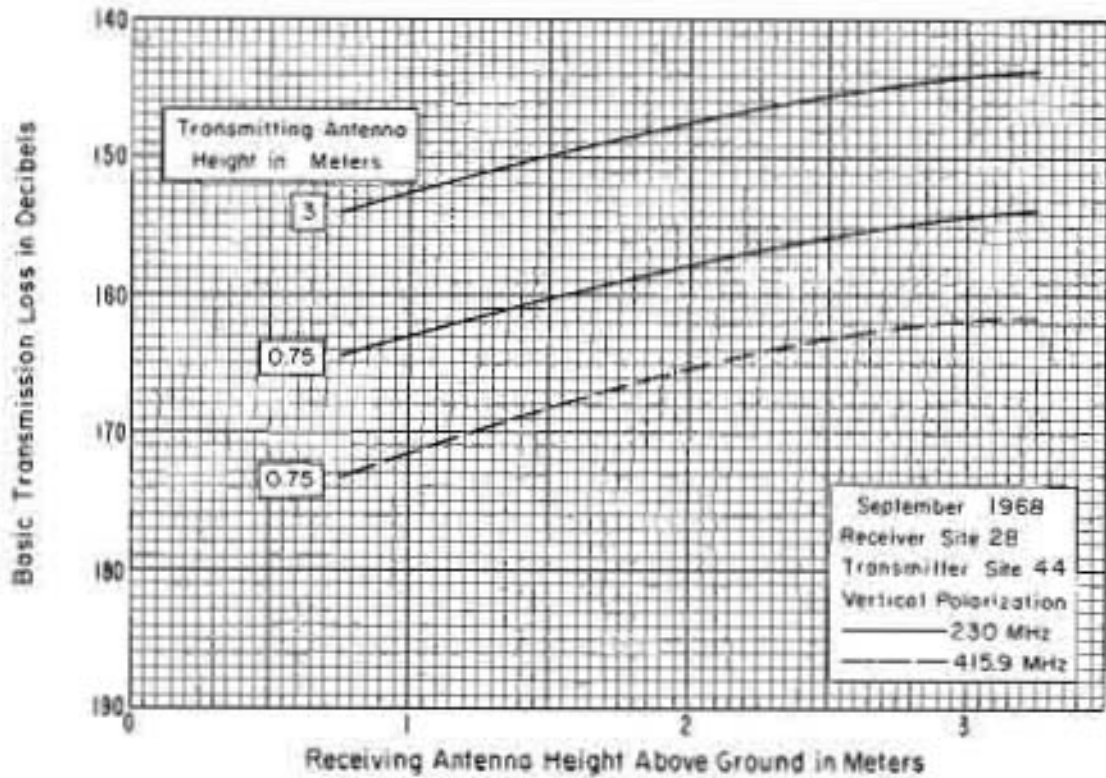


From site 28 toward site 44

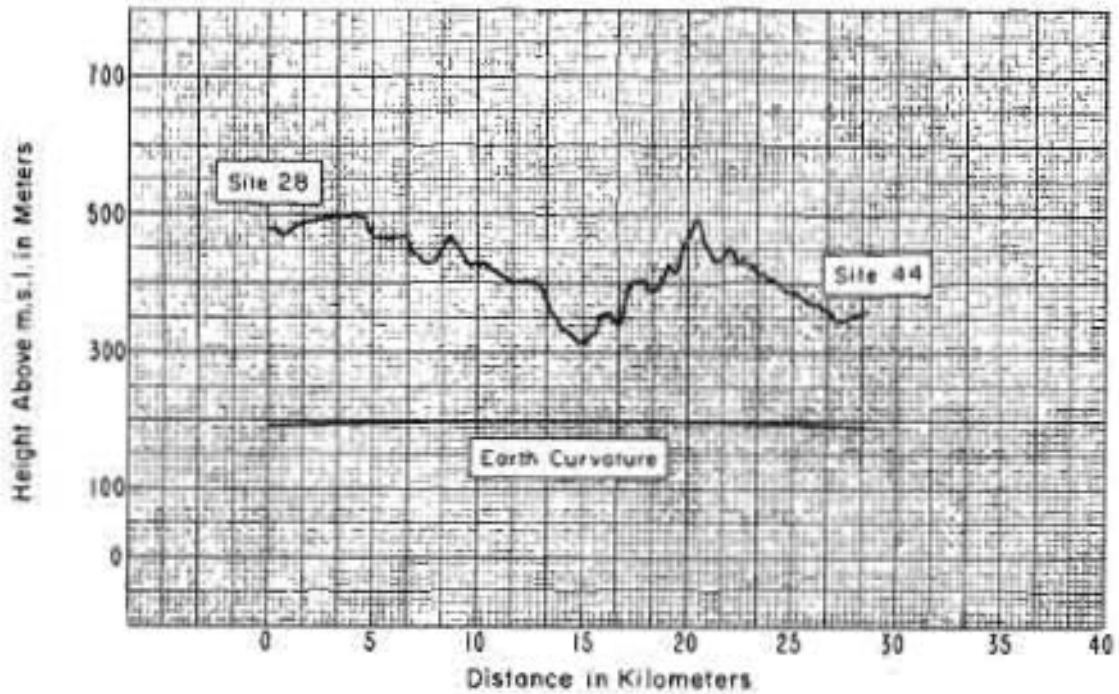


From site 44 toward site 28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 28 - 45

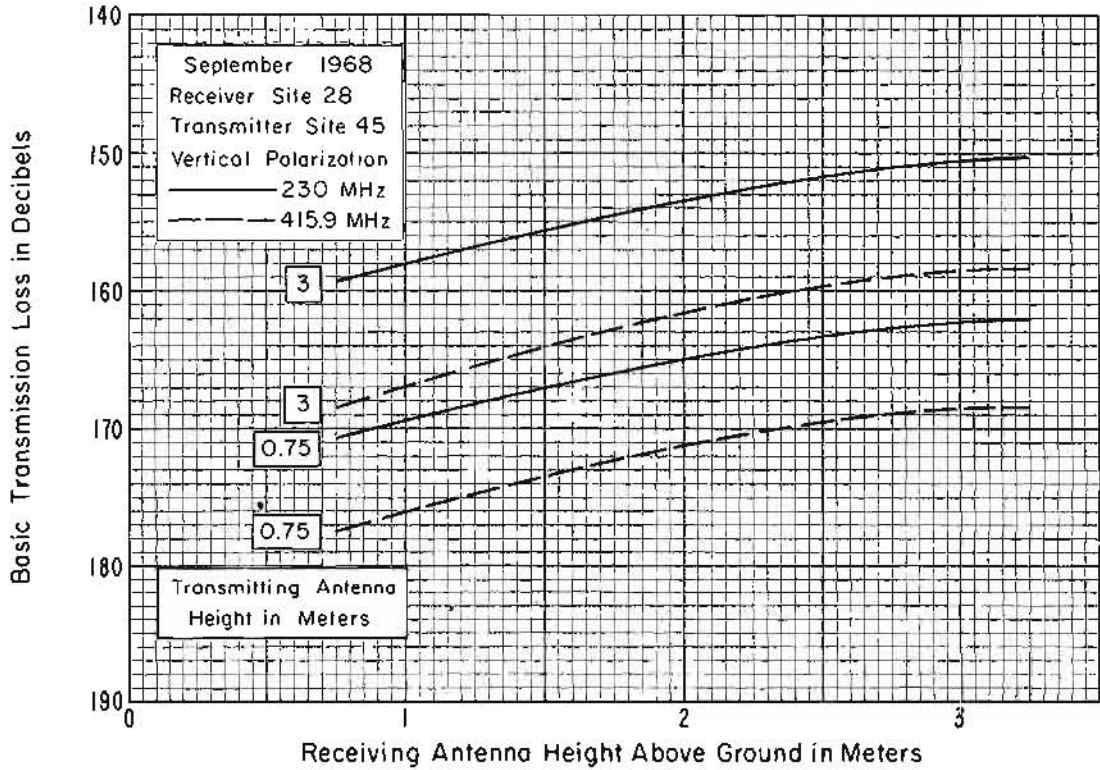


From site 28 toward site 45

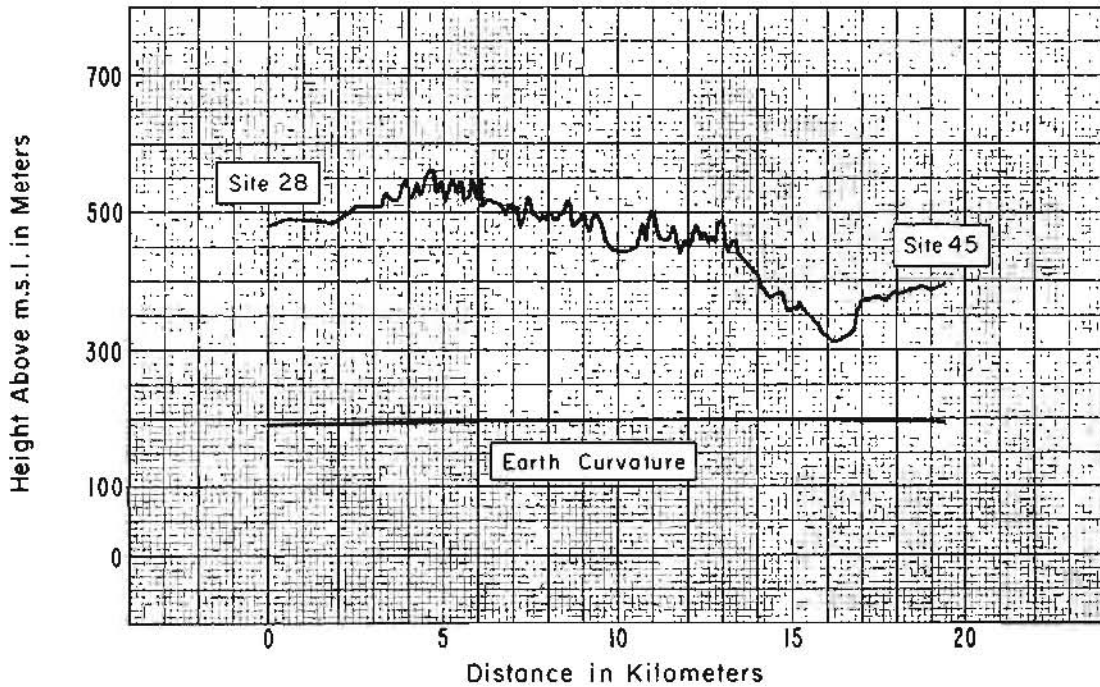


From site 45 toward site 28

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 34 - 36

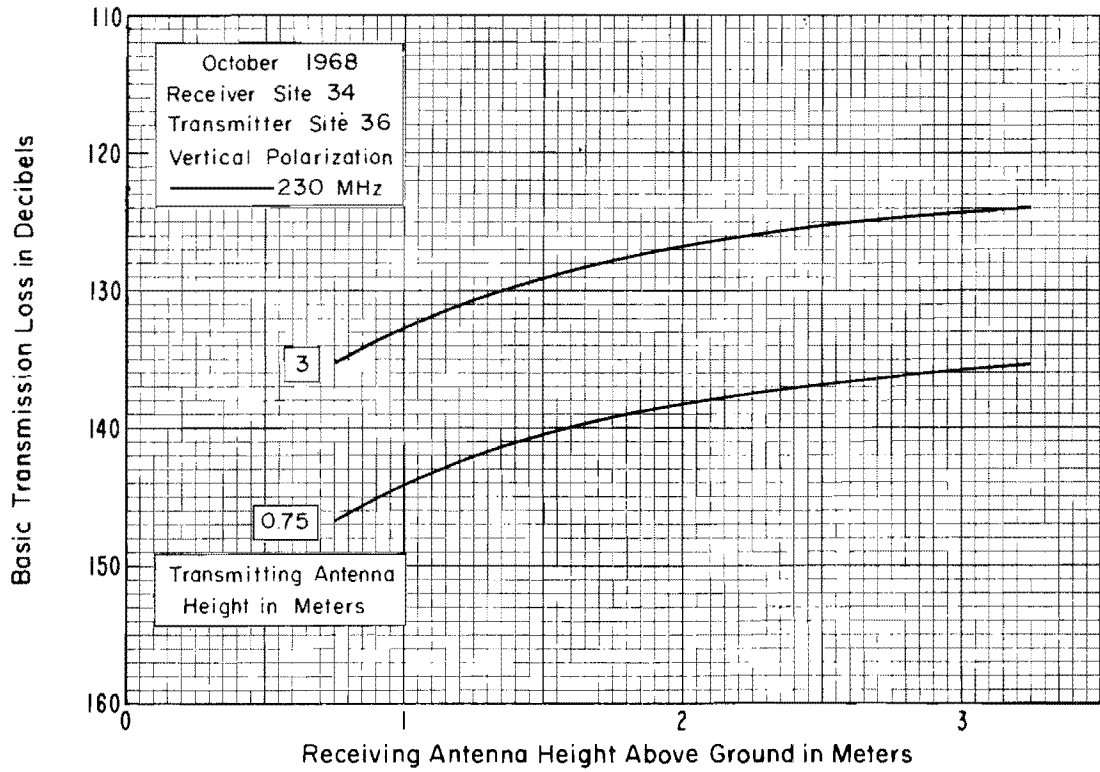


From site 34 toward site 36

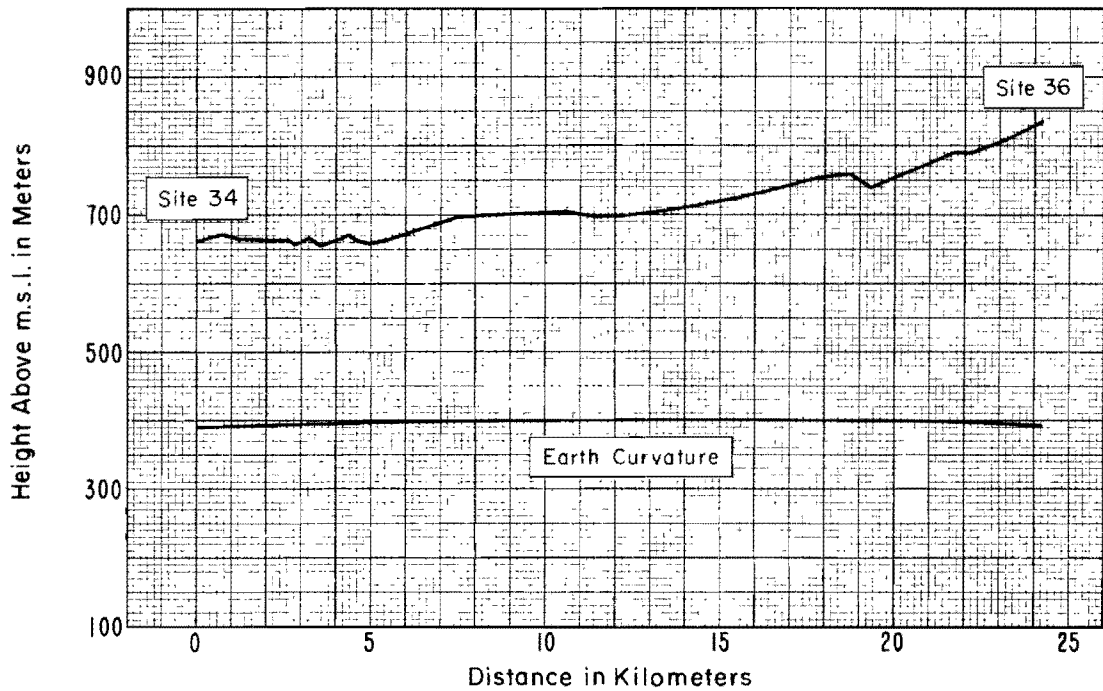


From site 36 toward site 34

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 34 - 37

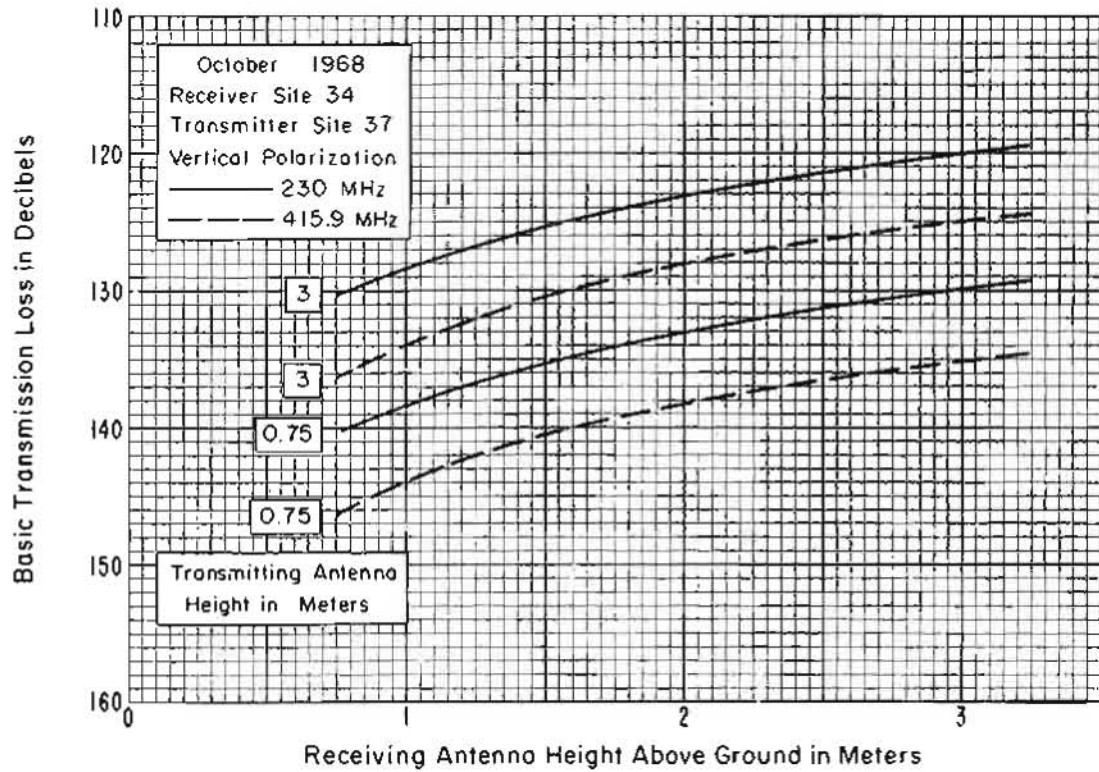


From site 34 toward site 37

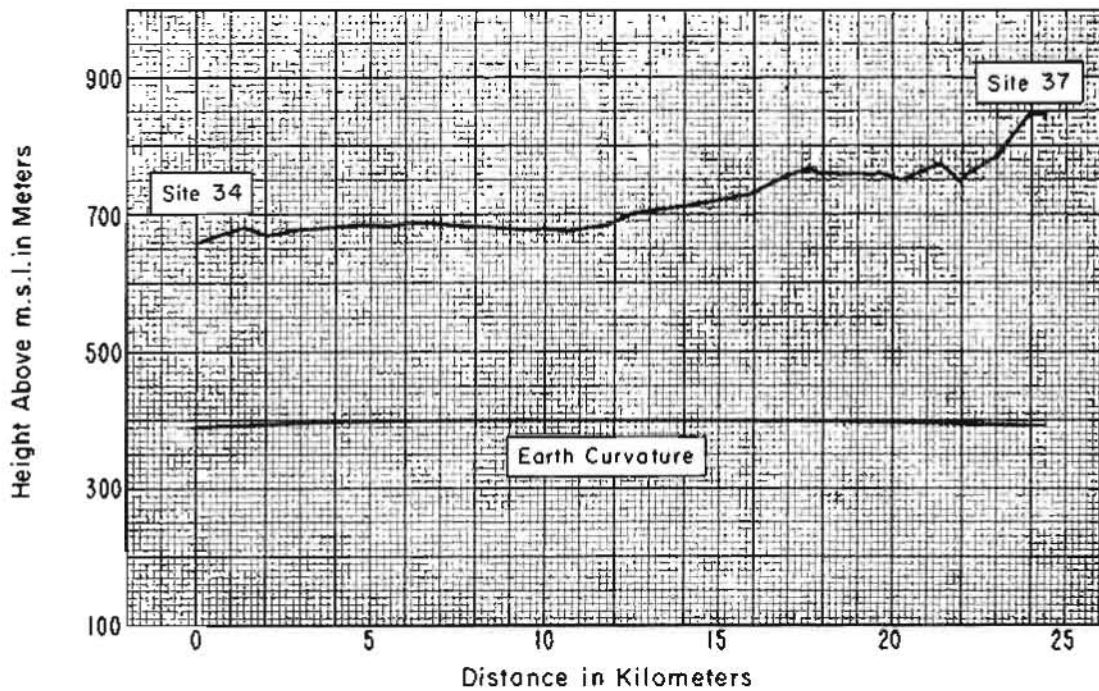


From site 37 toward site 34

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 34 - 38

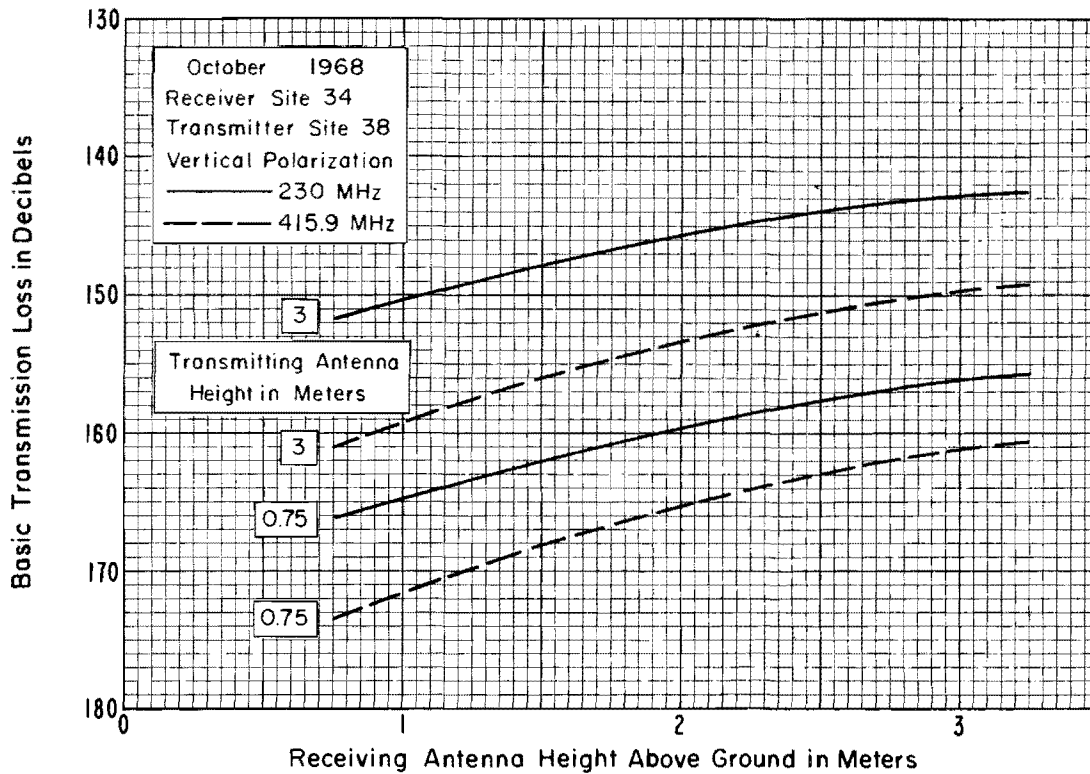


From site 34 toward site 38

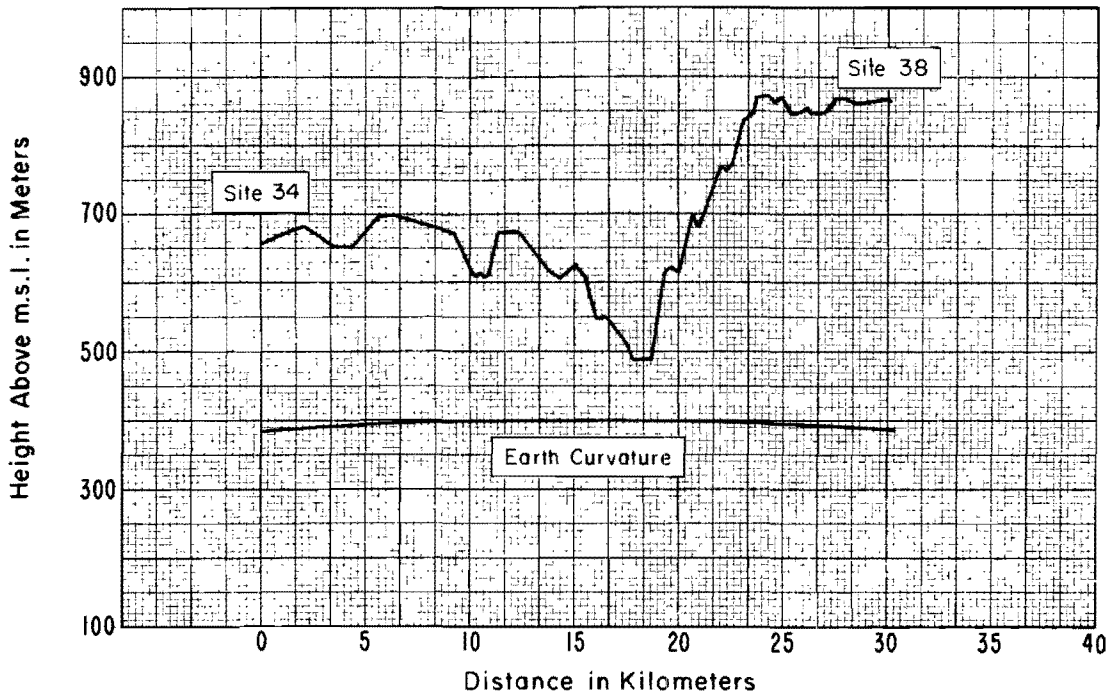


From site 38 toward site 34

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 34 - 39

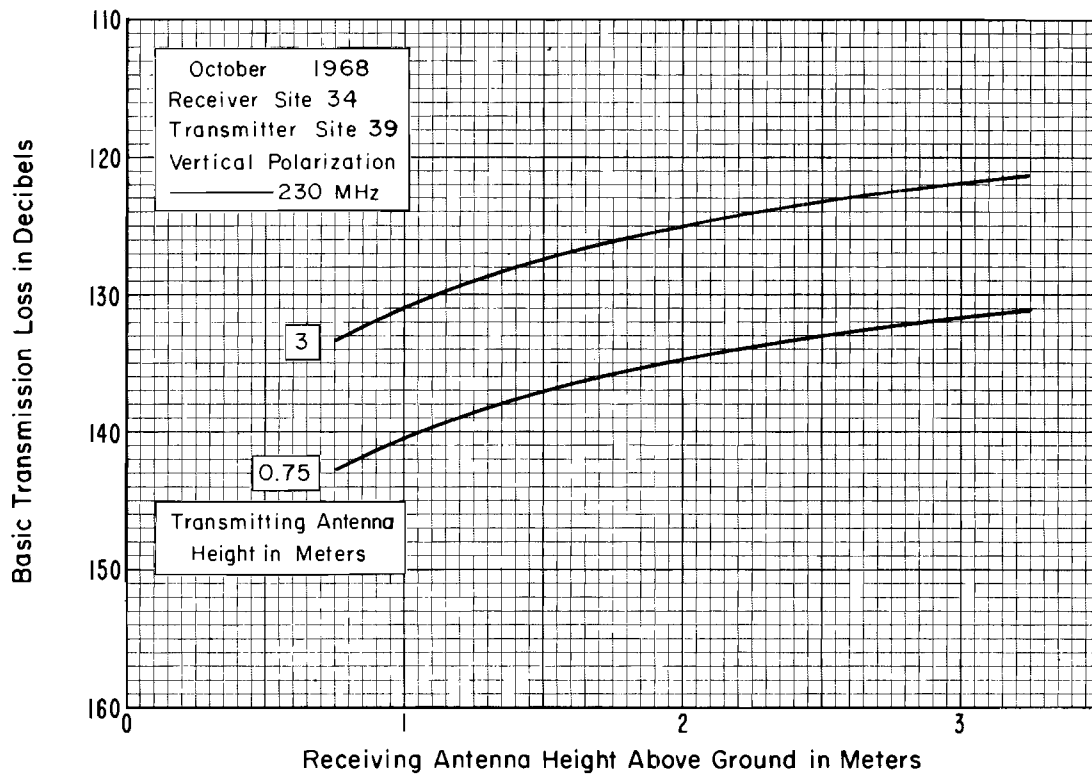


From site 34 toward site 39

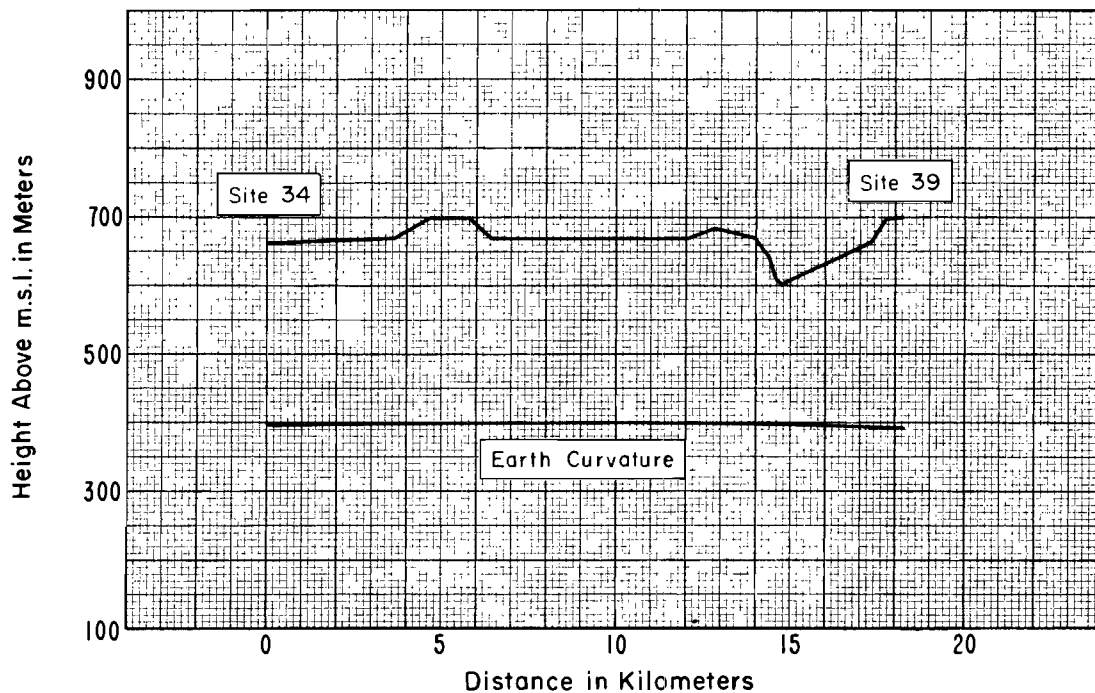


From site 39 toward site 34

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH 34 - 42

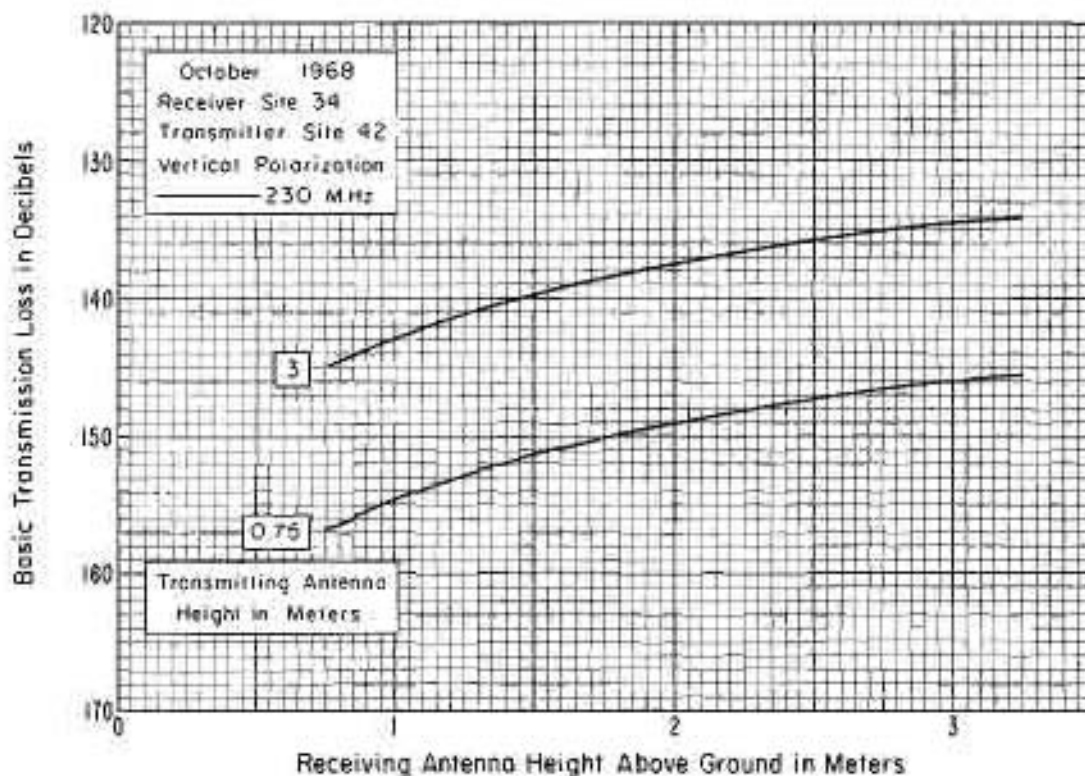


From site 34 toward site 42

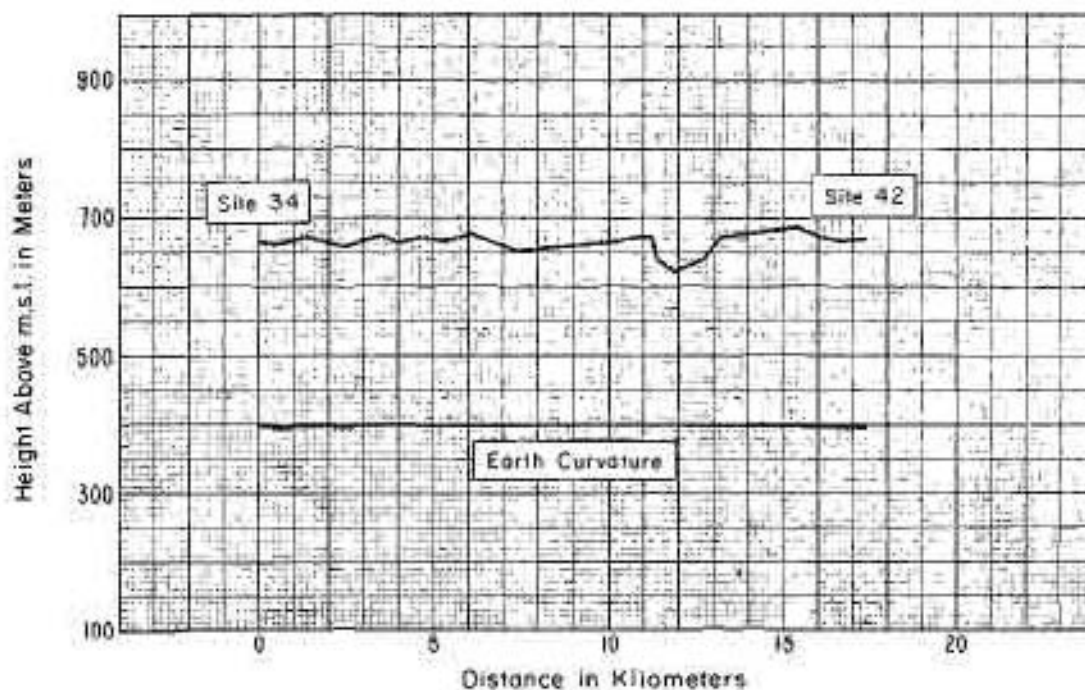


From site 42 toward site 34

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - B



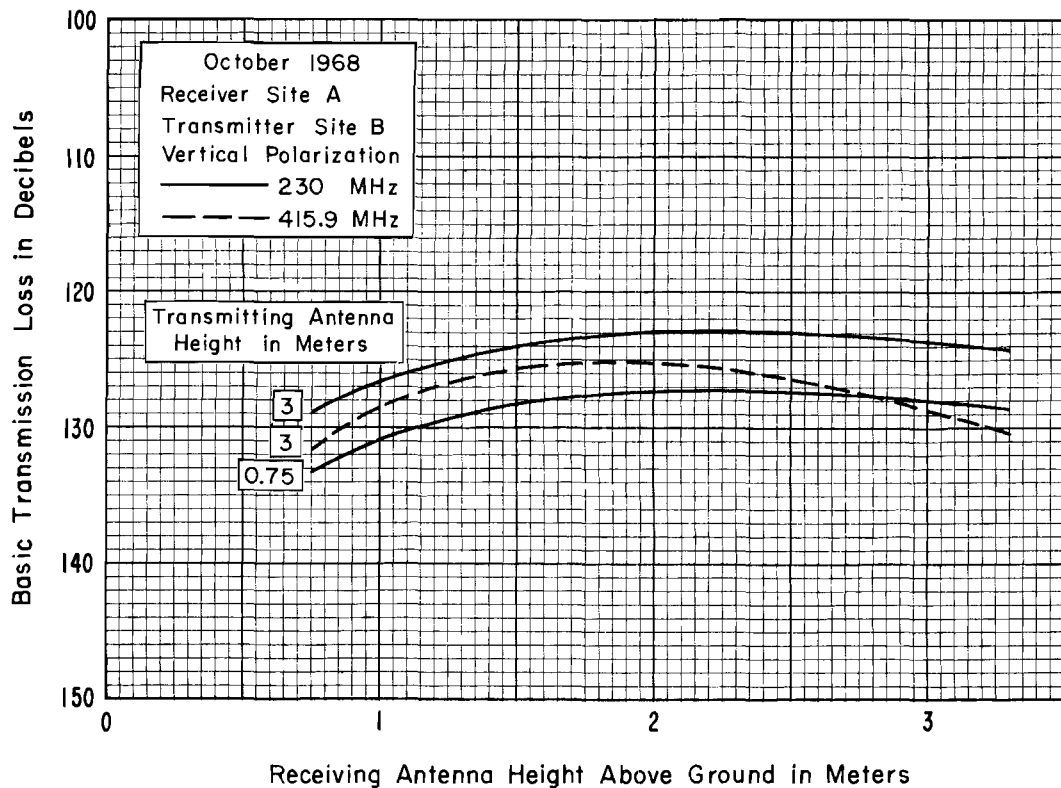
From site A toward site B



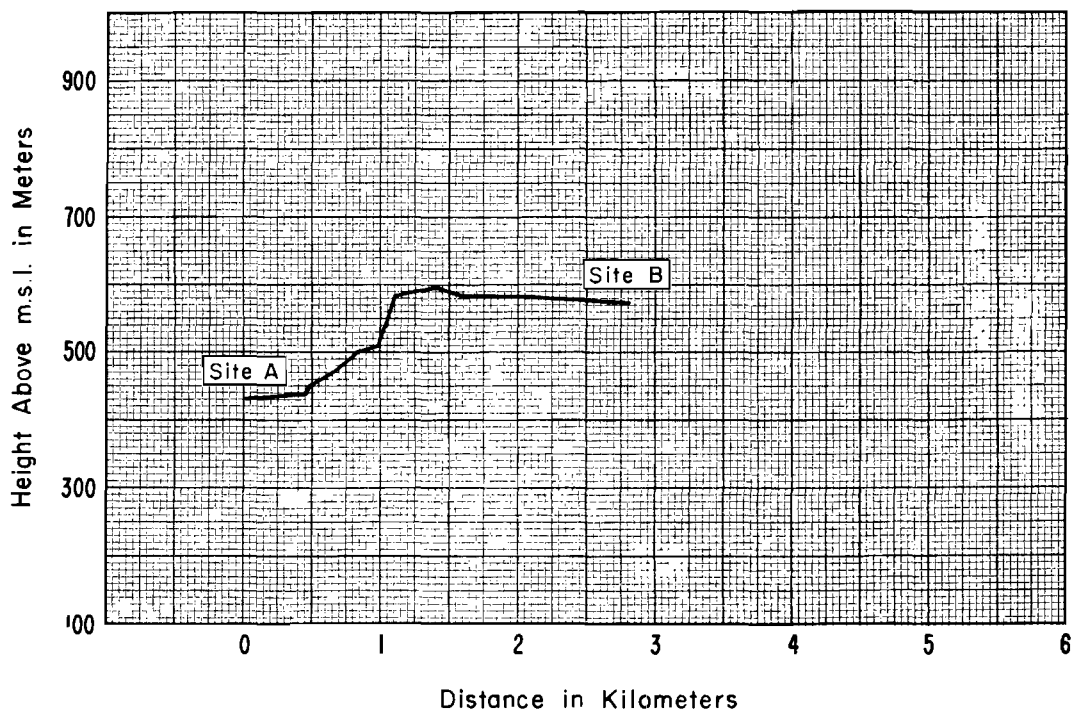
From site B toward site A

WASHINGTON PATH A - B

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - C



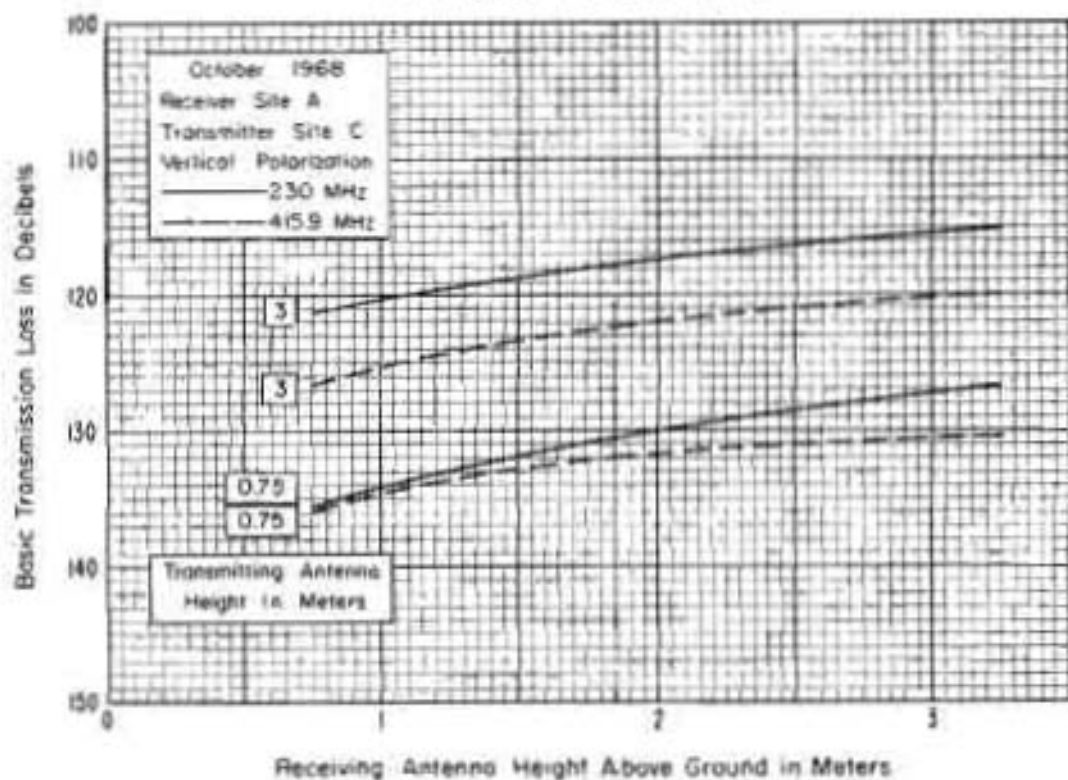
From site A toward site C



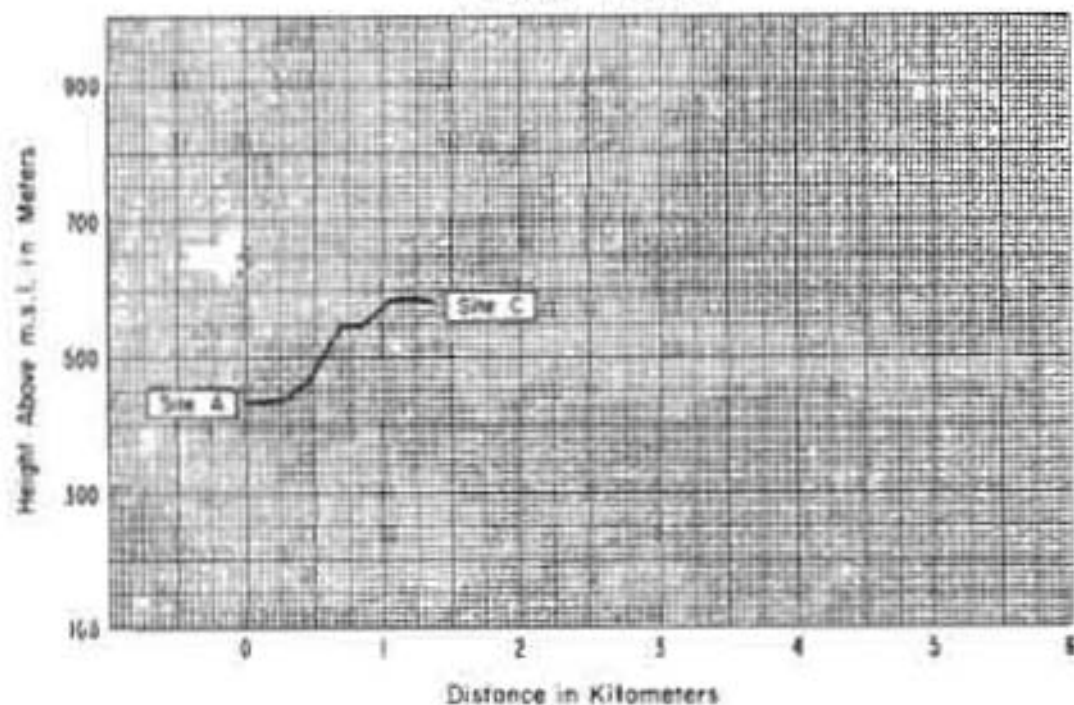
From site C toward site A

WASHINGTON PATH A-C

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - D



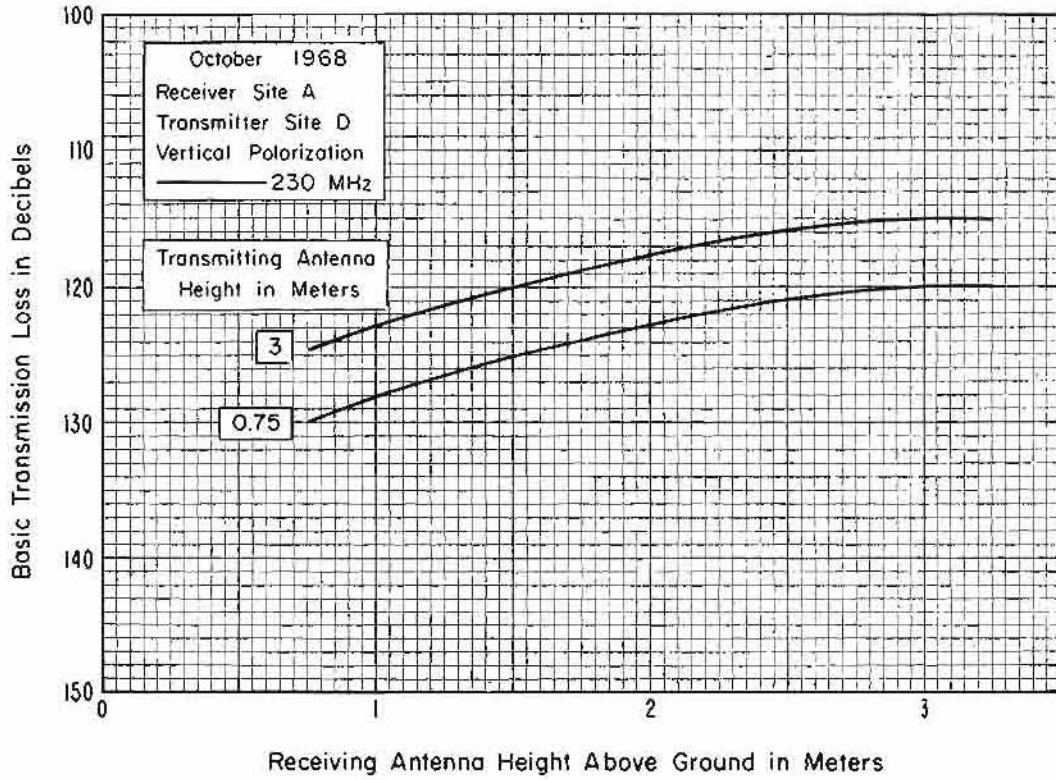
From site A toward site D



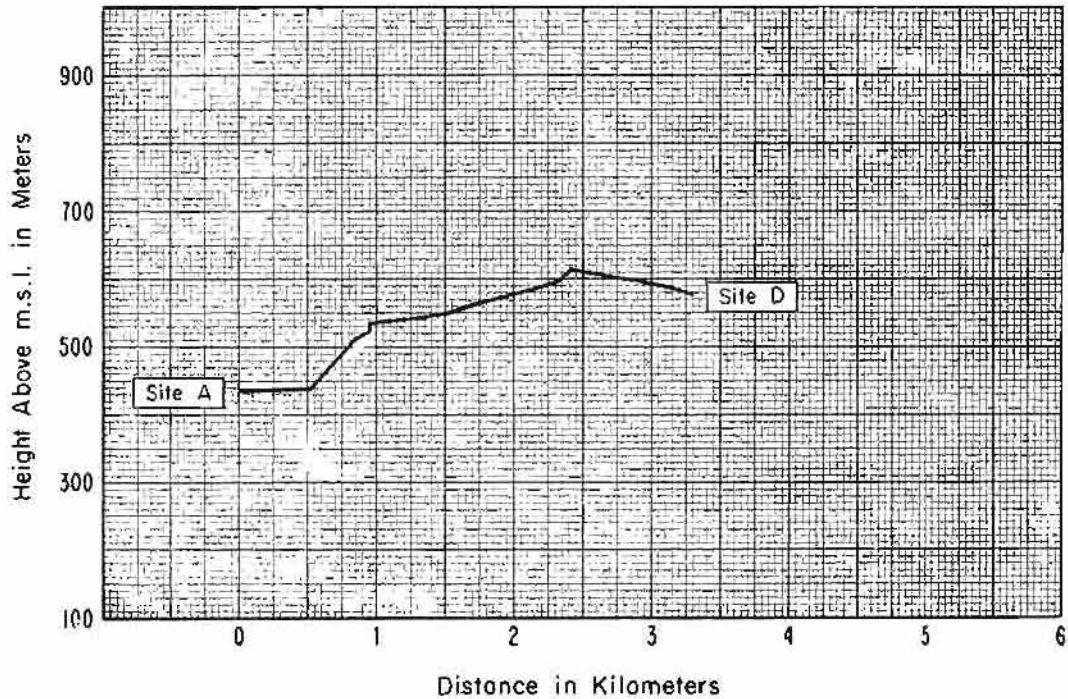
From site D toward site A

WASHINGTON PATH A-D

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - E



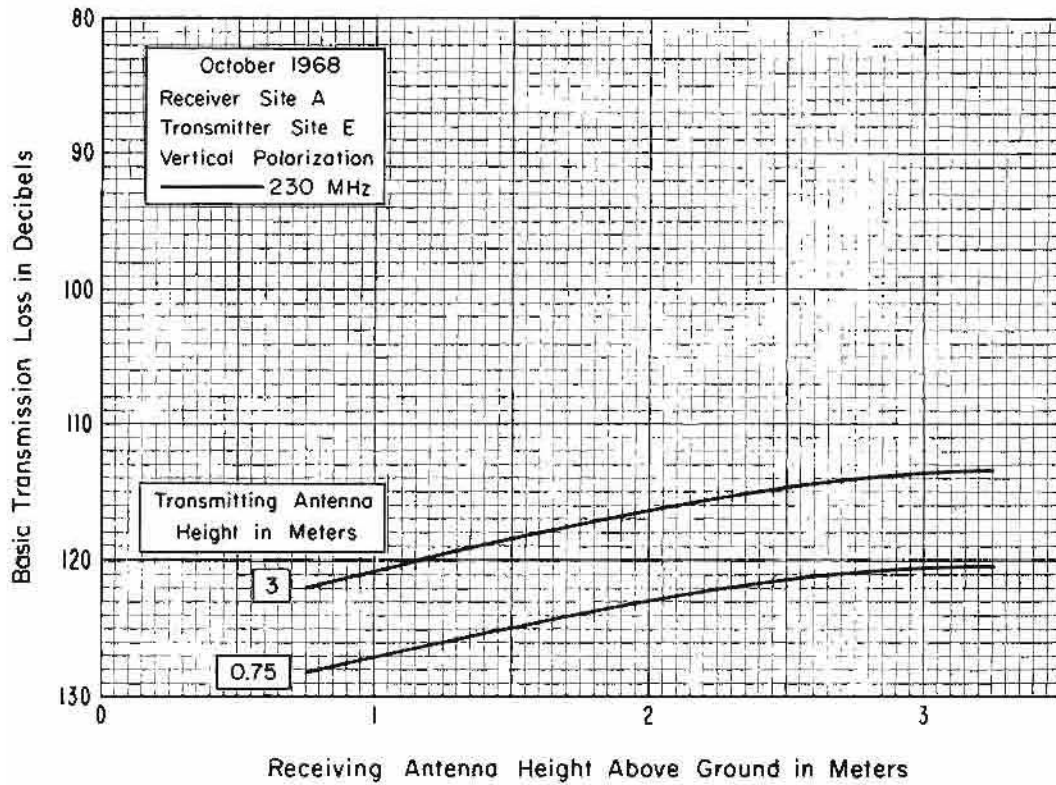
From site A toward site E



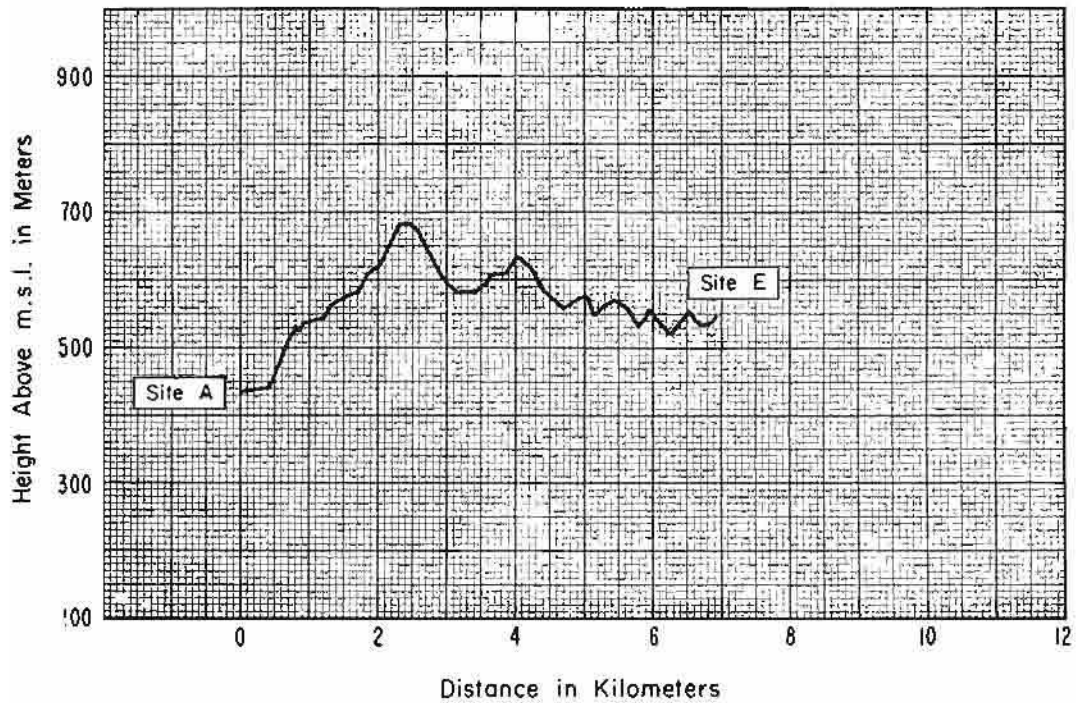
From site E toward site A

WASHINGTON PATH A-E

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington. PATH A - G



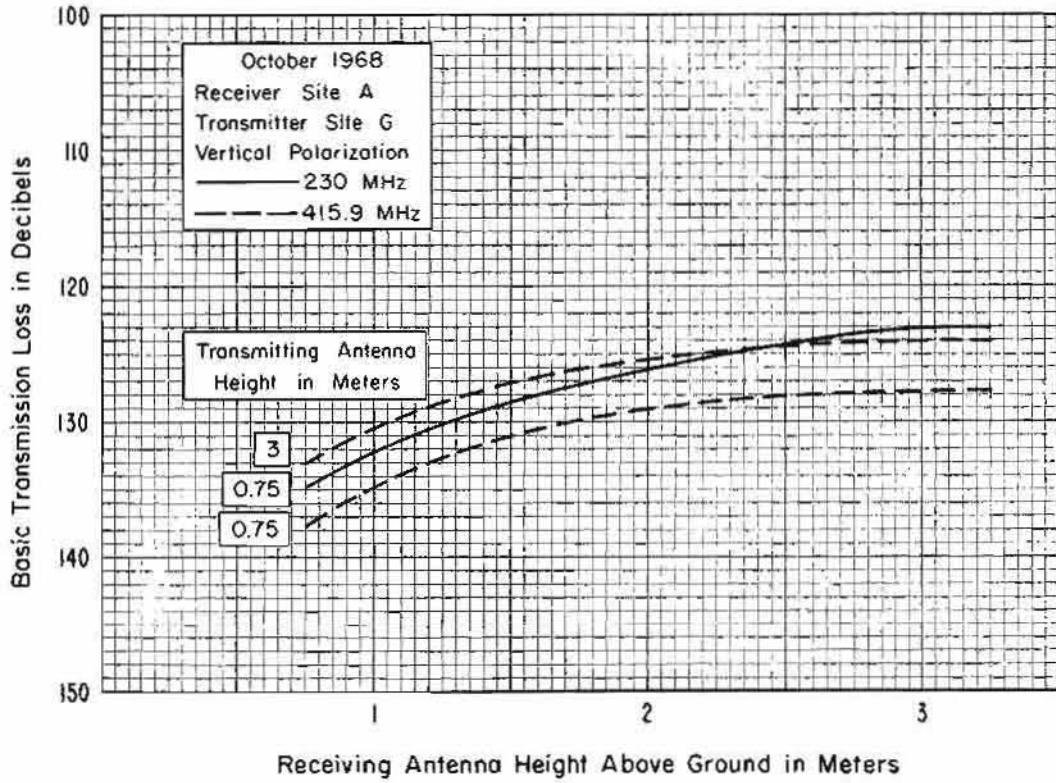
From site A toward site G



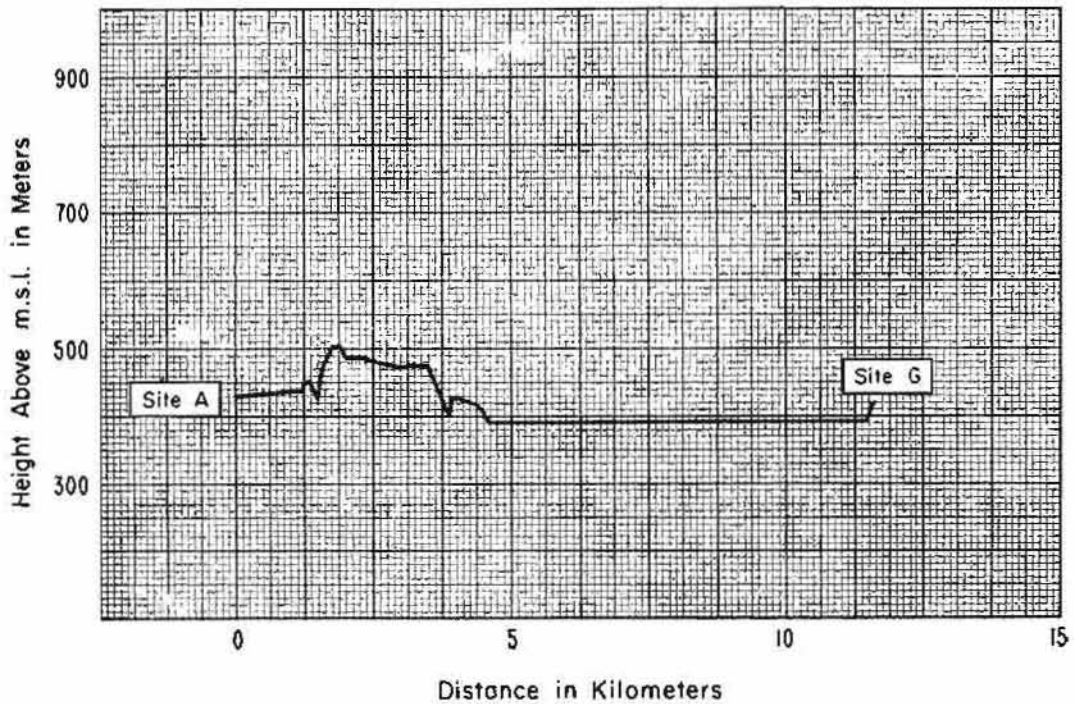
From site G toward site A

WASHINGTON PATH A-G

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - H



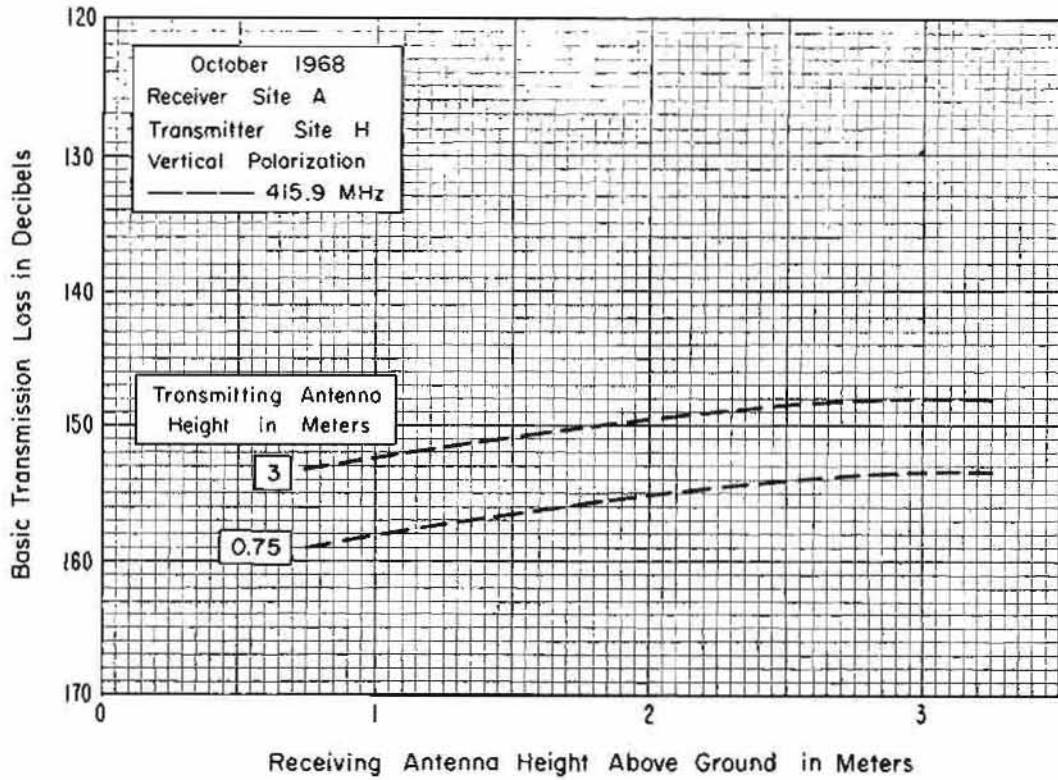
From site A toward site H



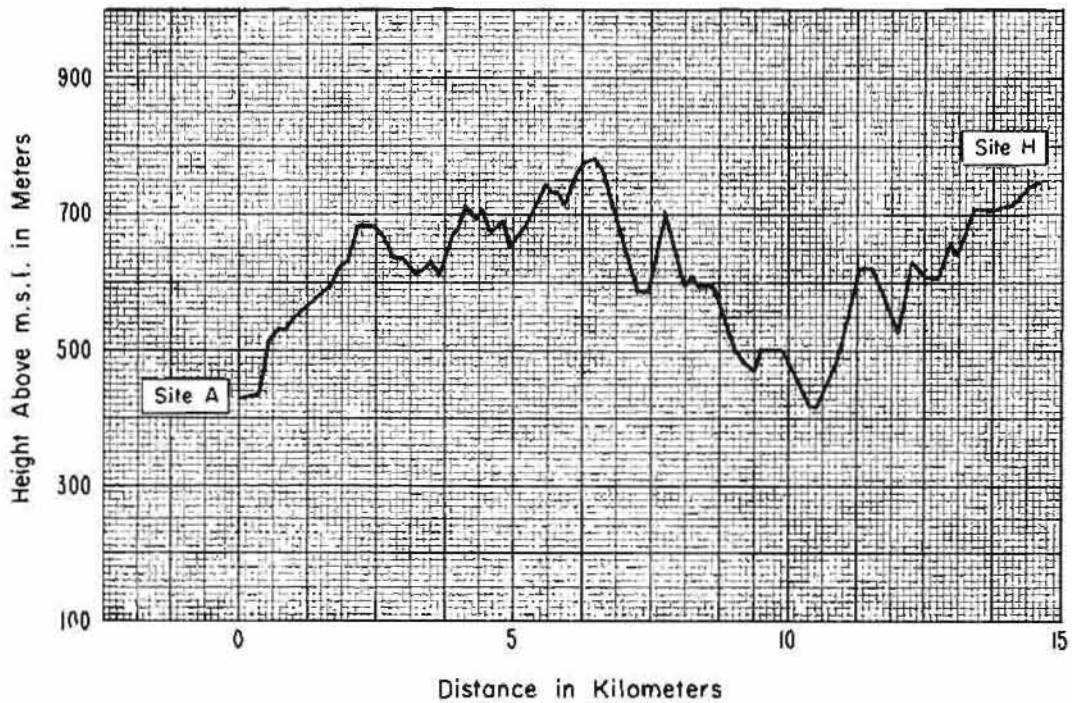
From site H toward site A

WASHINGTON PATH A-H

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - I



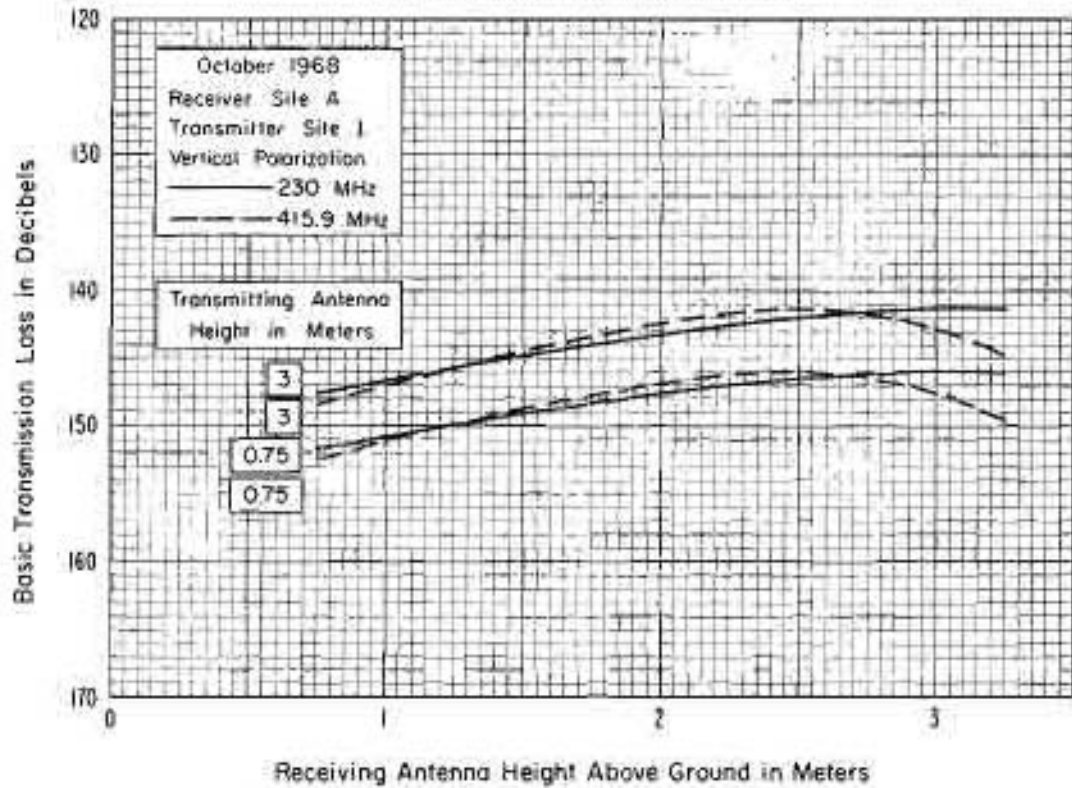
From site A toward site I



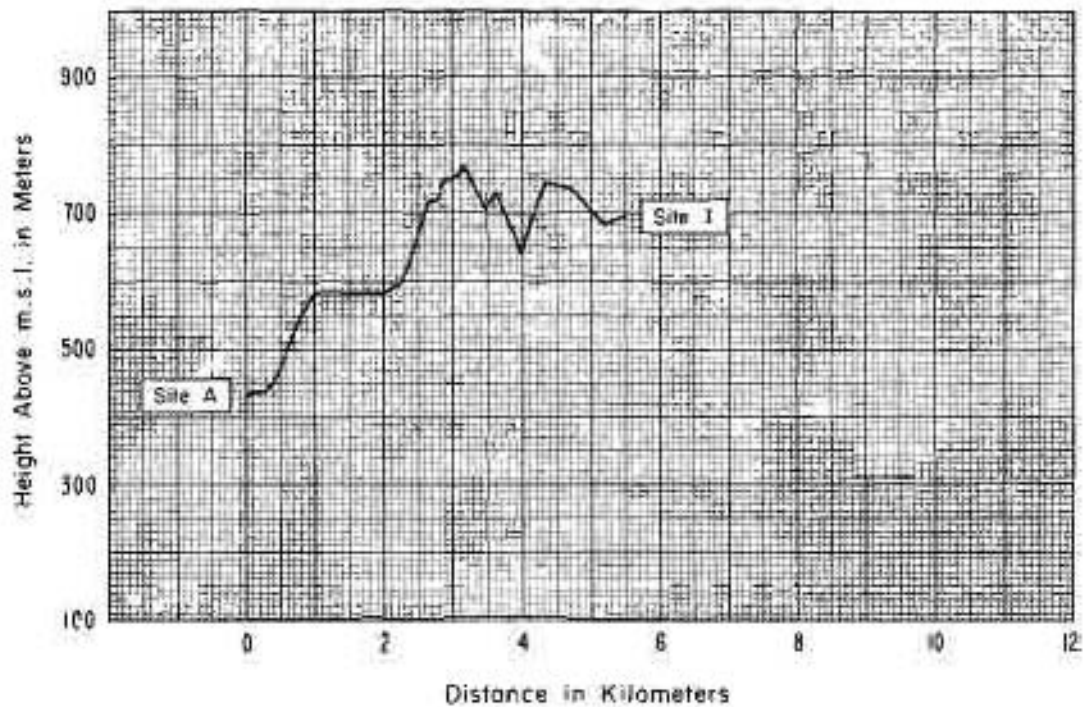
From site I toward site A

WASHINGTON PATH A - I

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - J



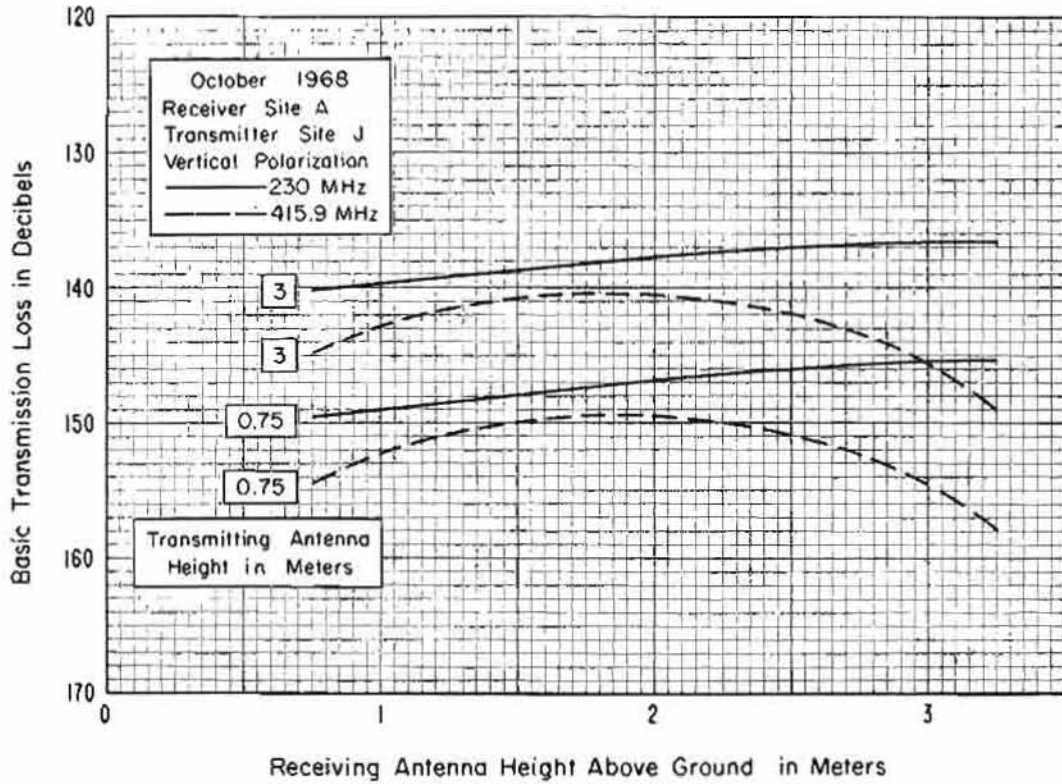
From site A toward site J



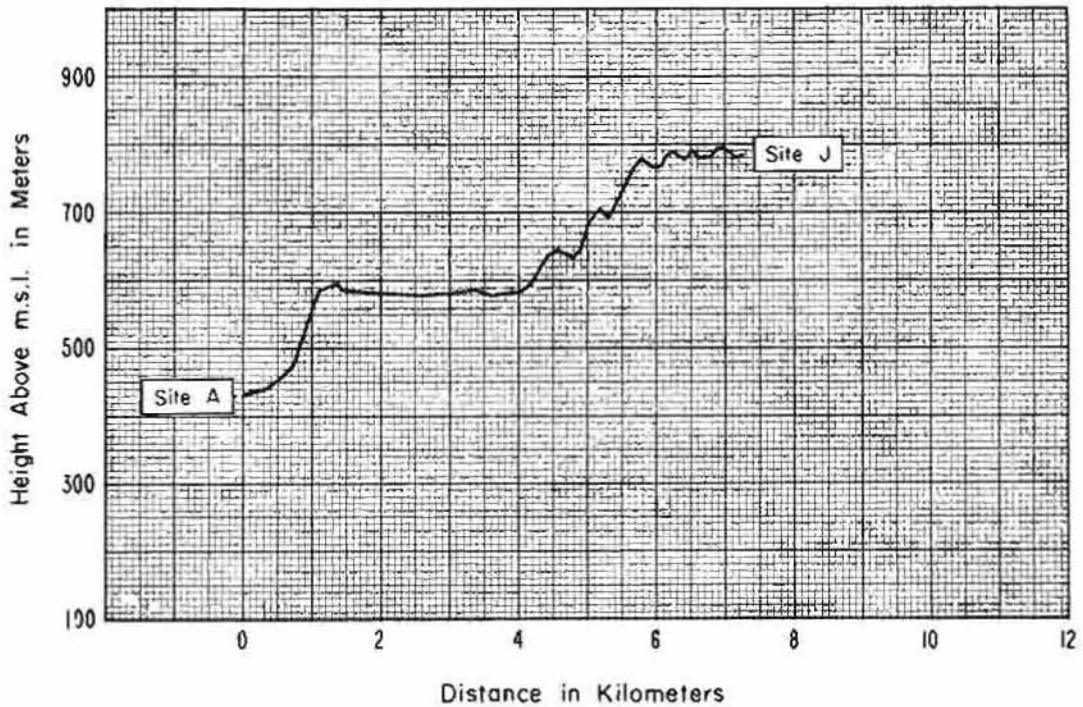
From site J toward site A

WASHINGTON PATH A—J

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - K



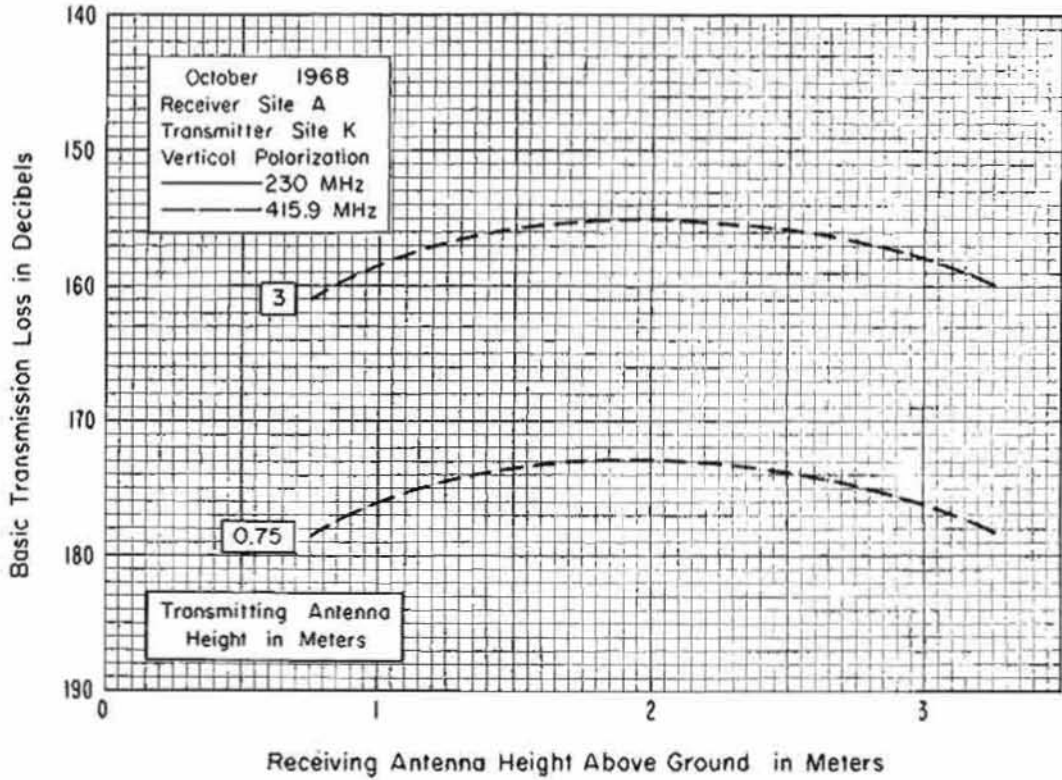
From site A toward site K



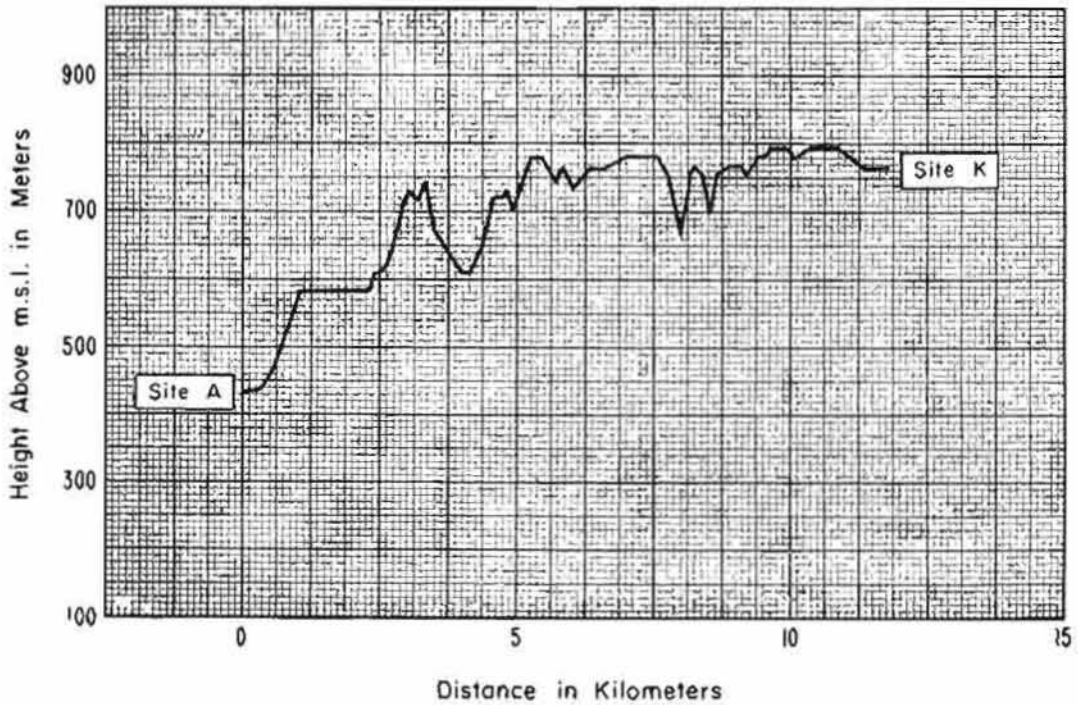
From site K toward site A

WASHINGTON PATH A - K

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - L



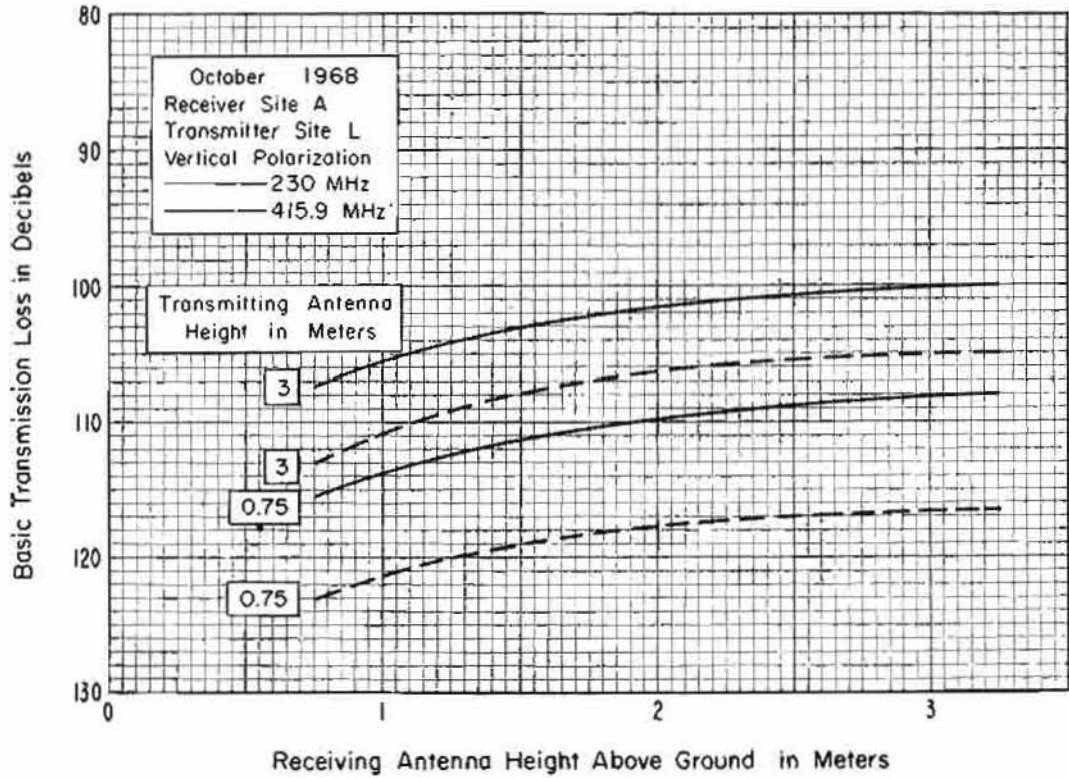
From site A toward site L



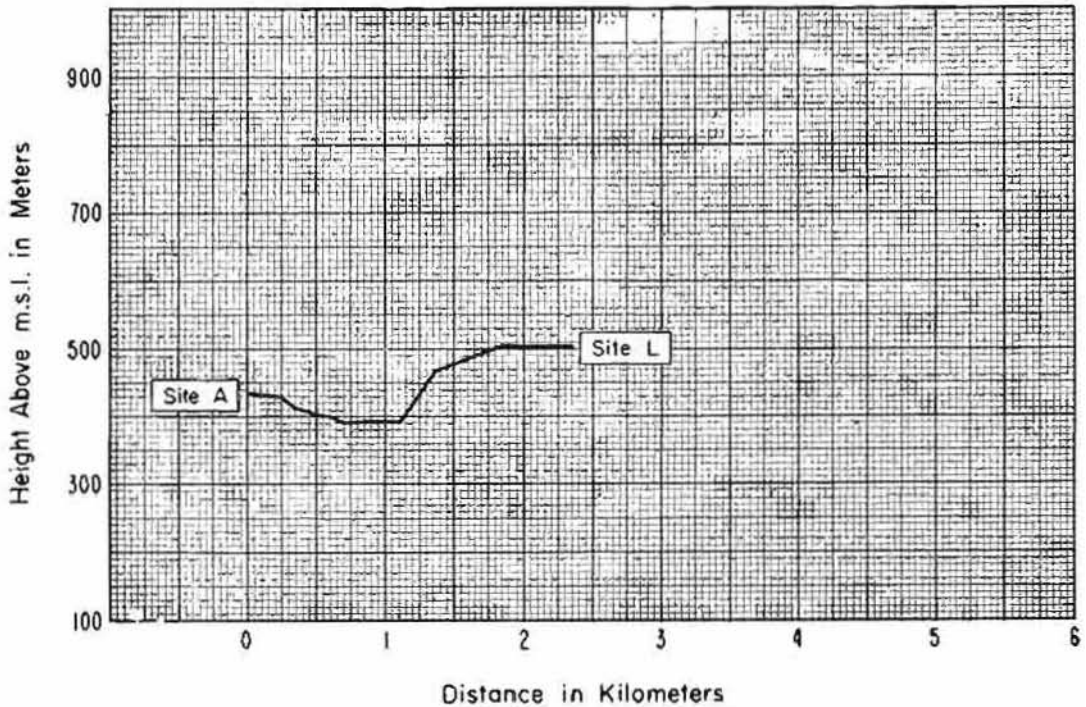
From site L toward site A

WASHINGTON PATH A-L

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - M



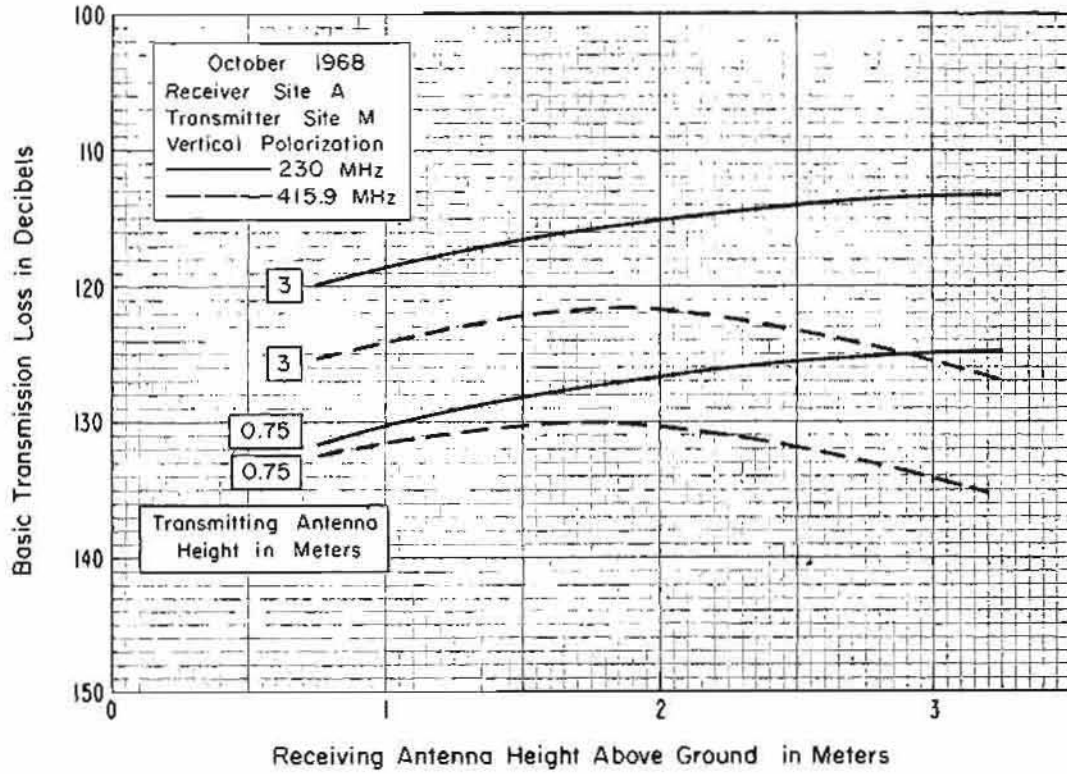
From site A toward site M



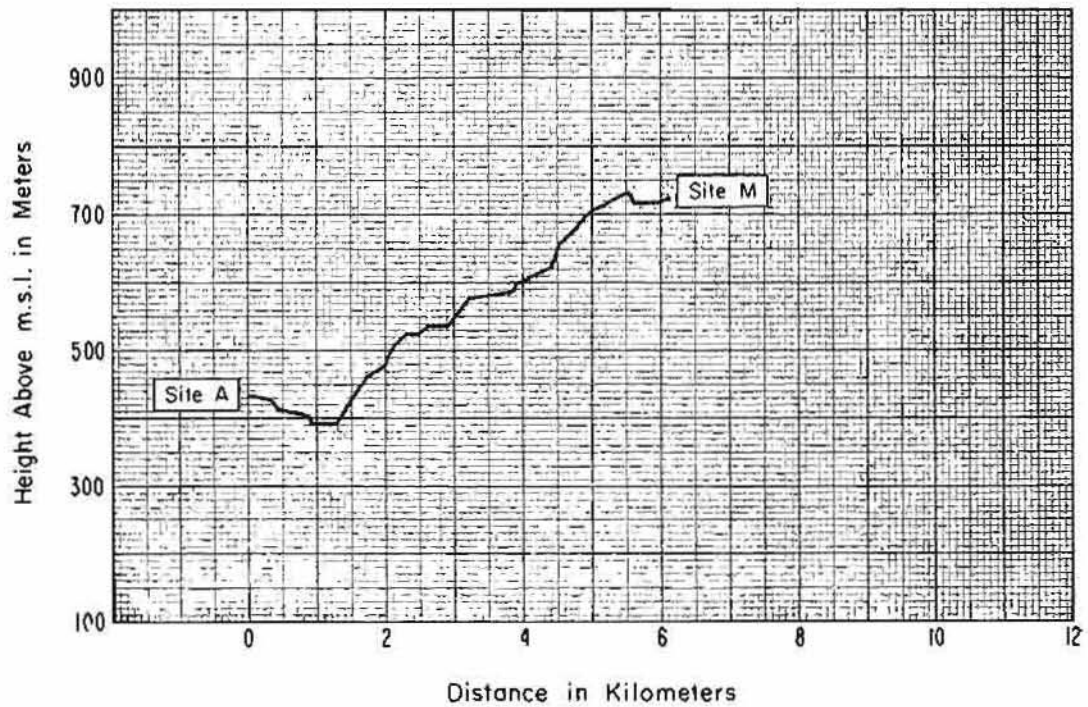
From site M toward site A

WASHINGTON PATH A-M

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - N



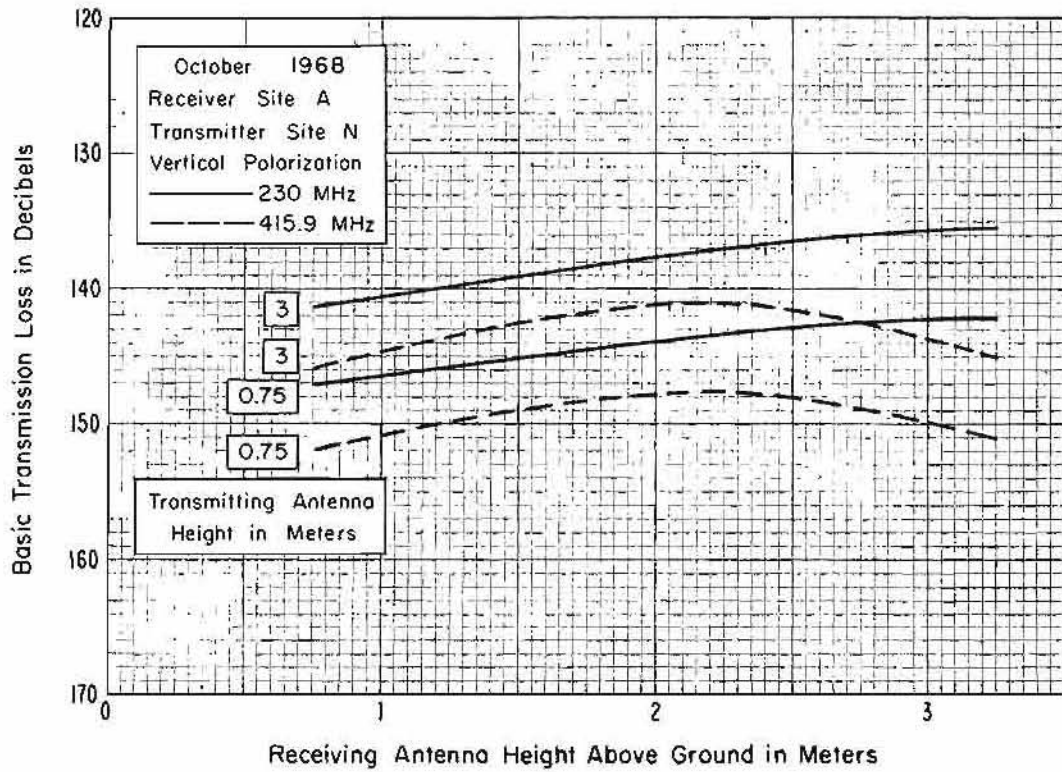
From site A toward site N



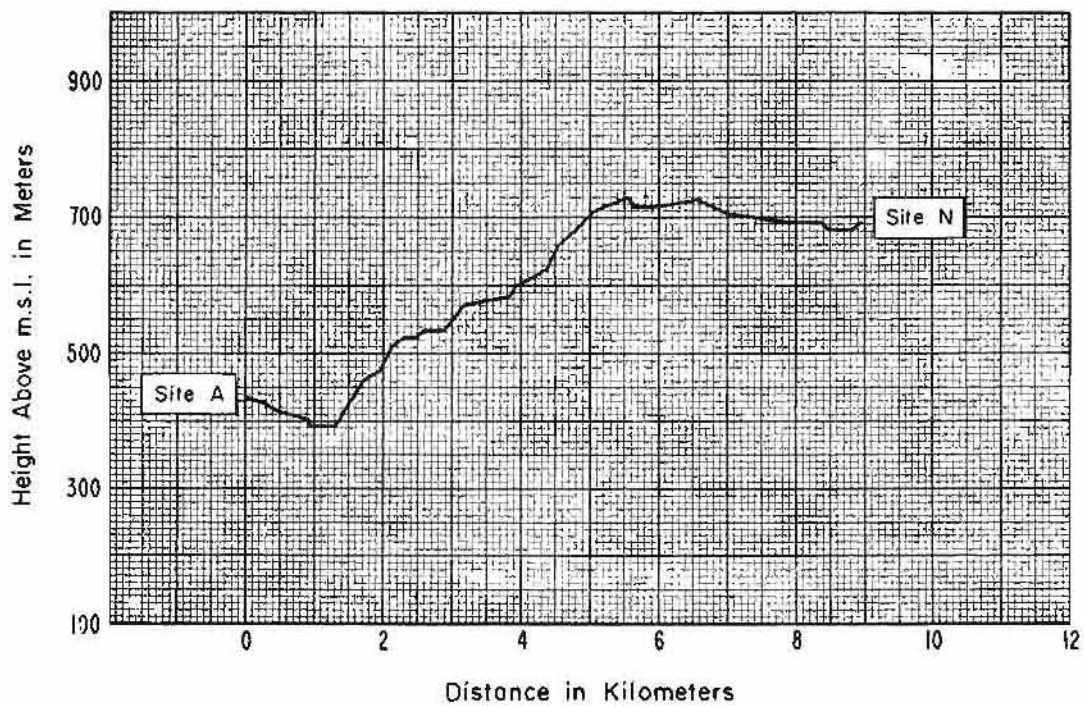
From site N toward site A

WASHINGTON PATH A-N

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - O



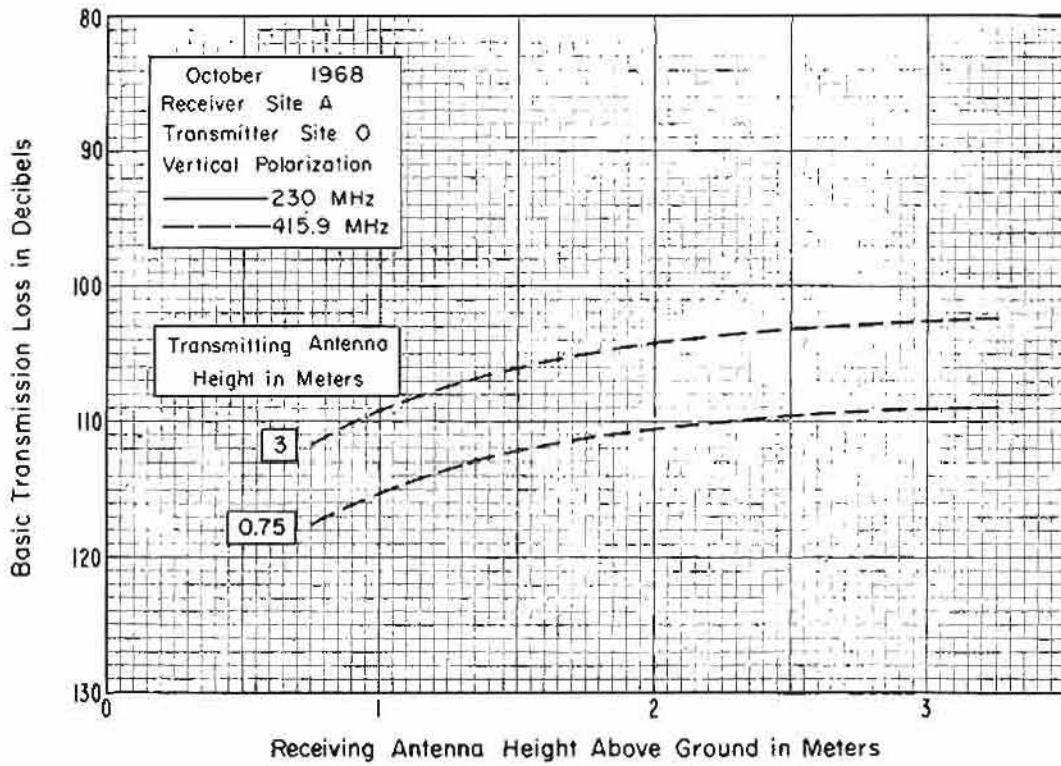
From site A toward site O



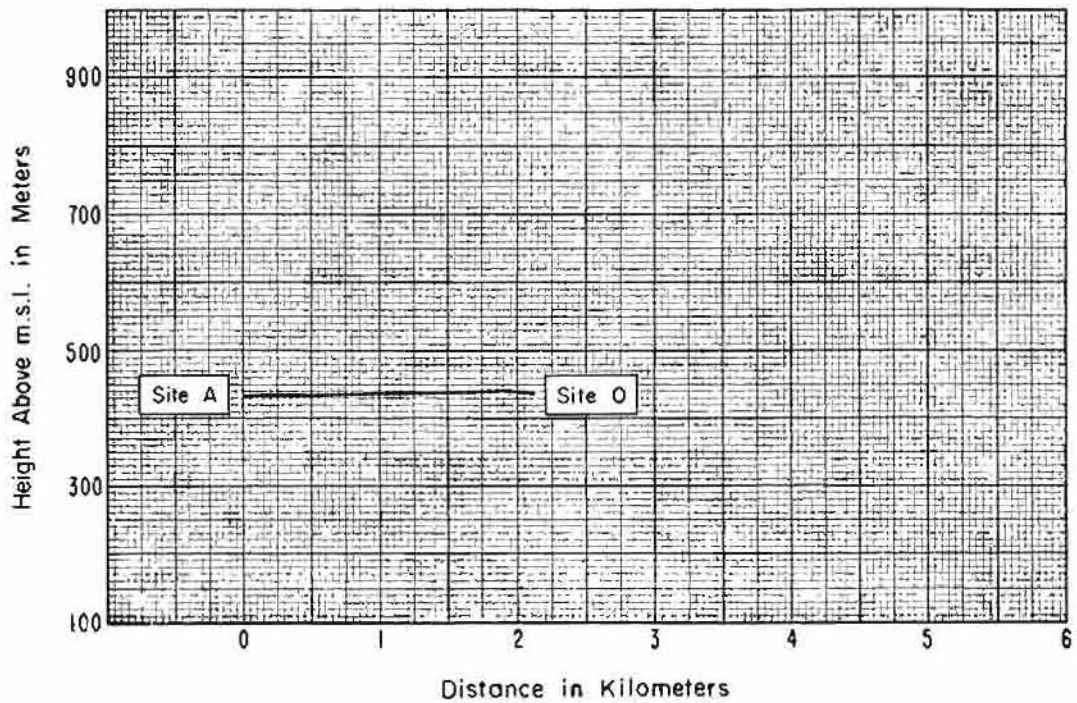
From site O toward site A

WASHINGTON PATH A-O

PATH LOSS MEASUREMENTS



TERRAIN PROFILE



Washington PATH A - P



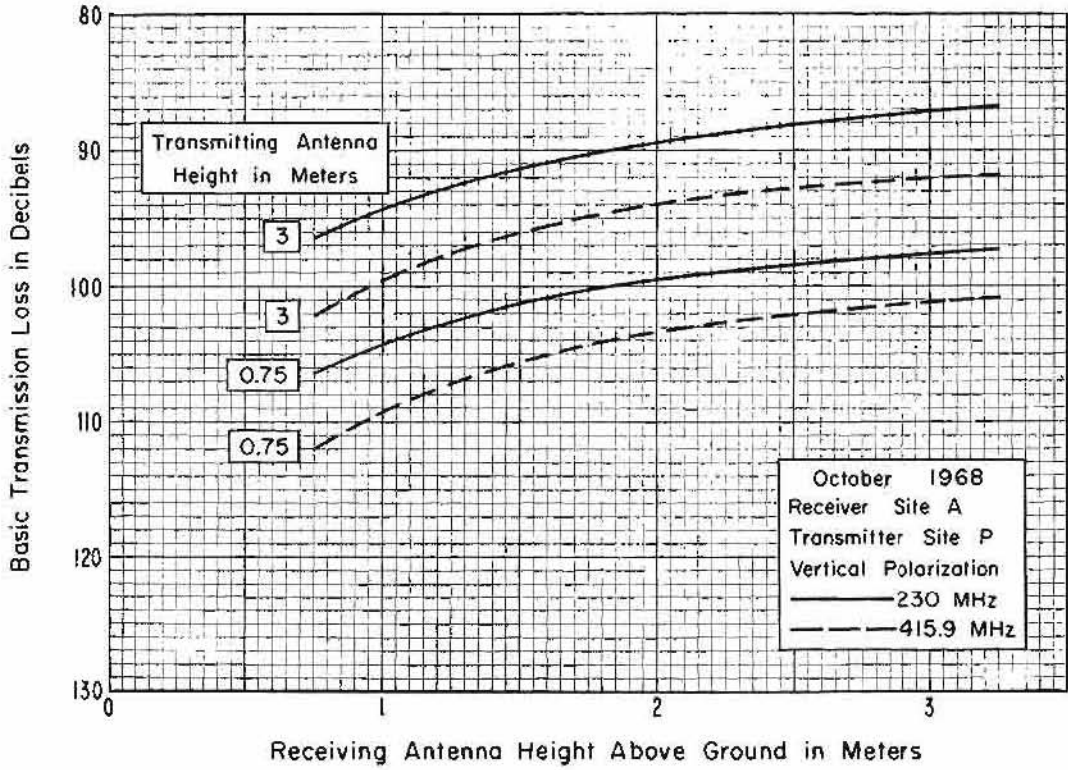
From site A toward site P



From site P toward site A

WASHINGTON PATH A—P

PATH LOSS MEASUREMENTS



TERRAIN PROFILE

