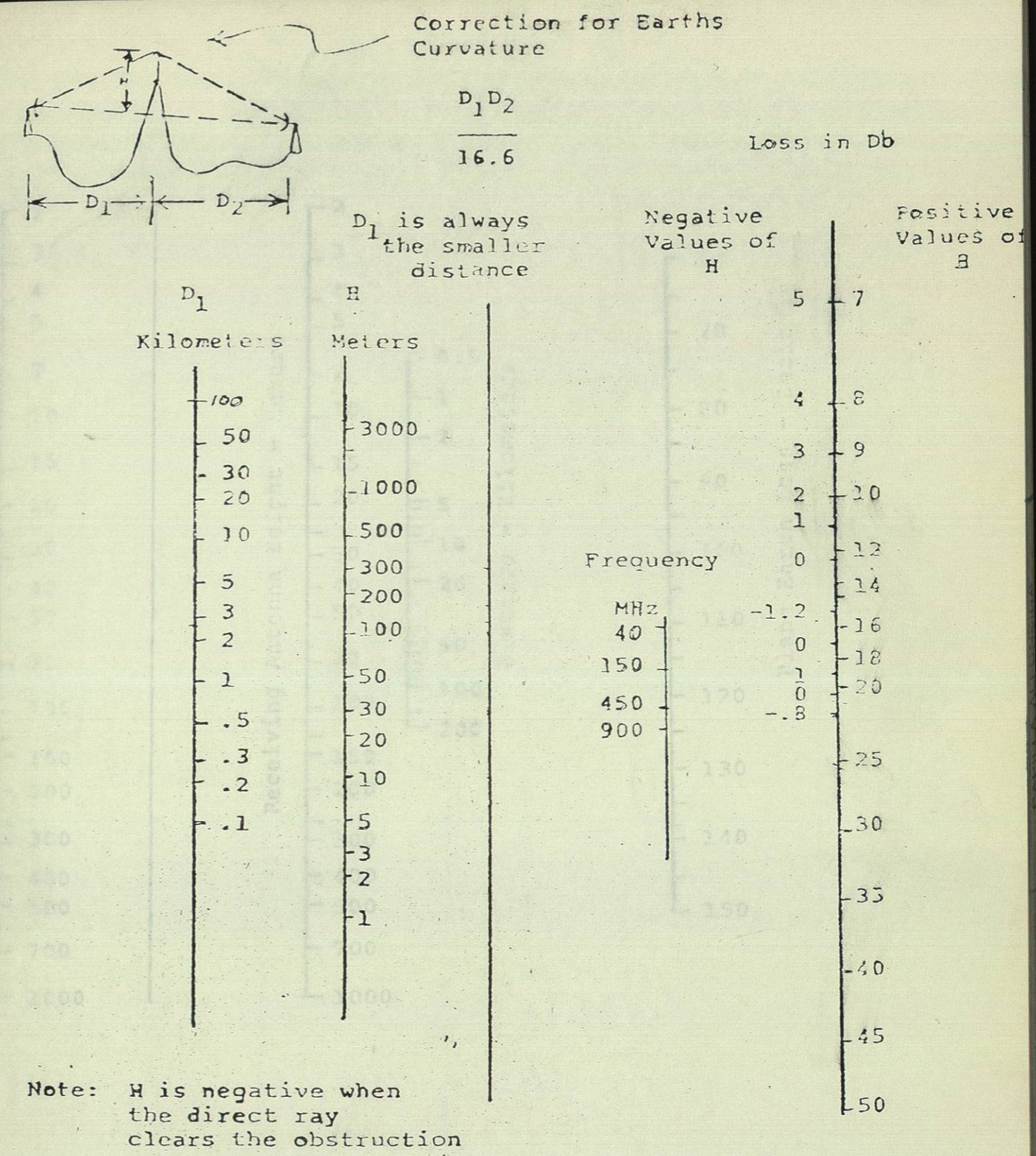


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HALF-WAVE DIPOLE ANTENNAS
FREE SPACE LOSS
BETWEEN

Figure 4



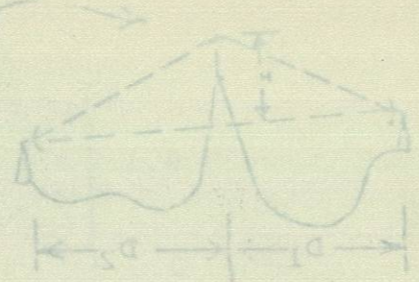
Note: H is negative when
the direct ray
clears the obstruction

rom Bullington

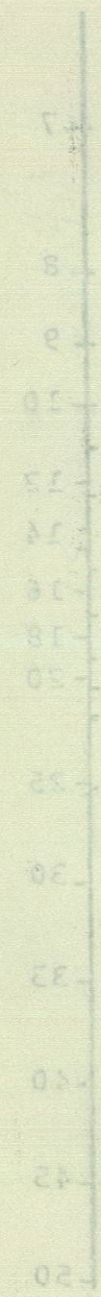
SHADOW LOSS RELATIVE TO
FREE SPACE

Figure # 5

Correction for Earth's Curvature



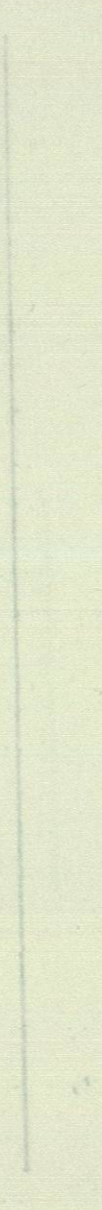
Positive Values of δ



Negative Values of δ



d_1 is always the smaller distance

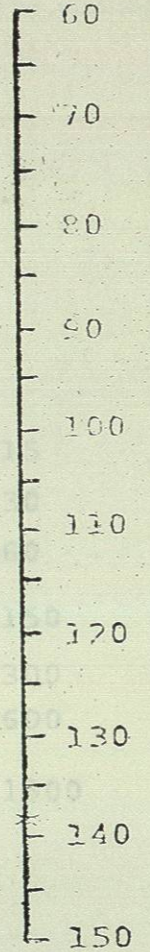
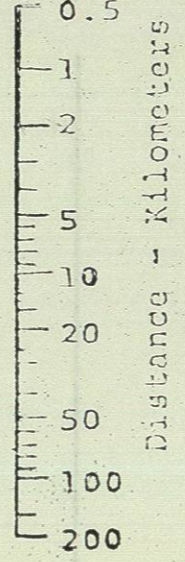
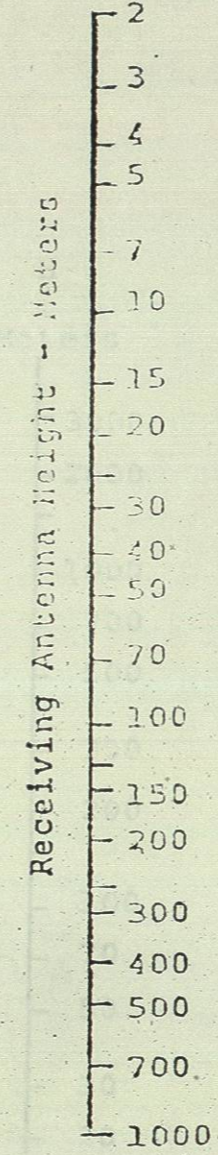
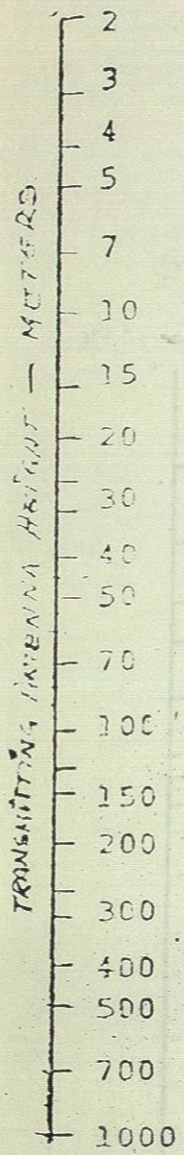


Note: δ is negative when the direct ray clears the obstruction

Figure 2

SHADOW LOSS RELATIVE TO FREE SPACE

From Bullington

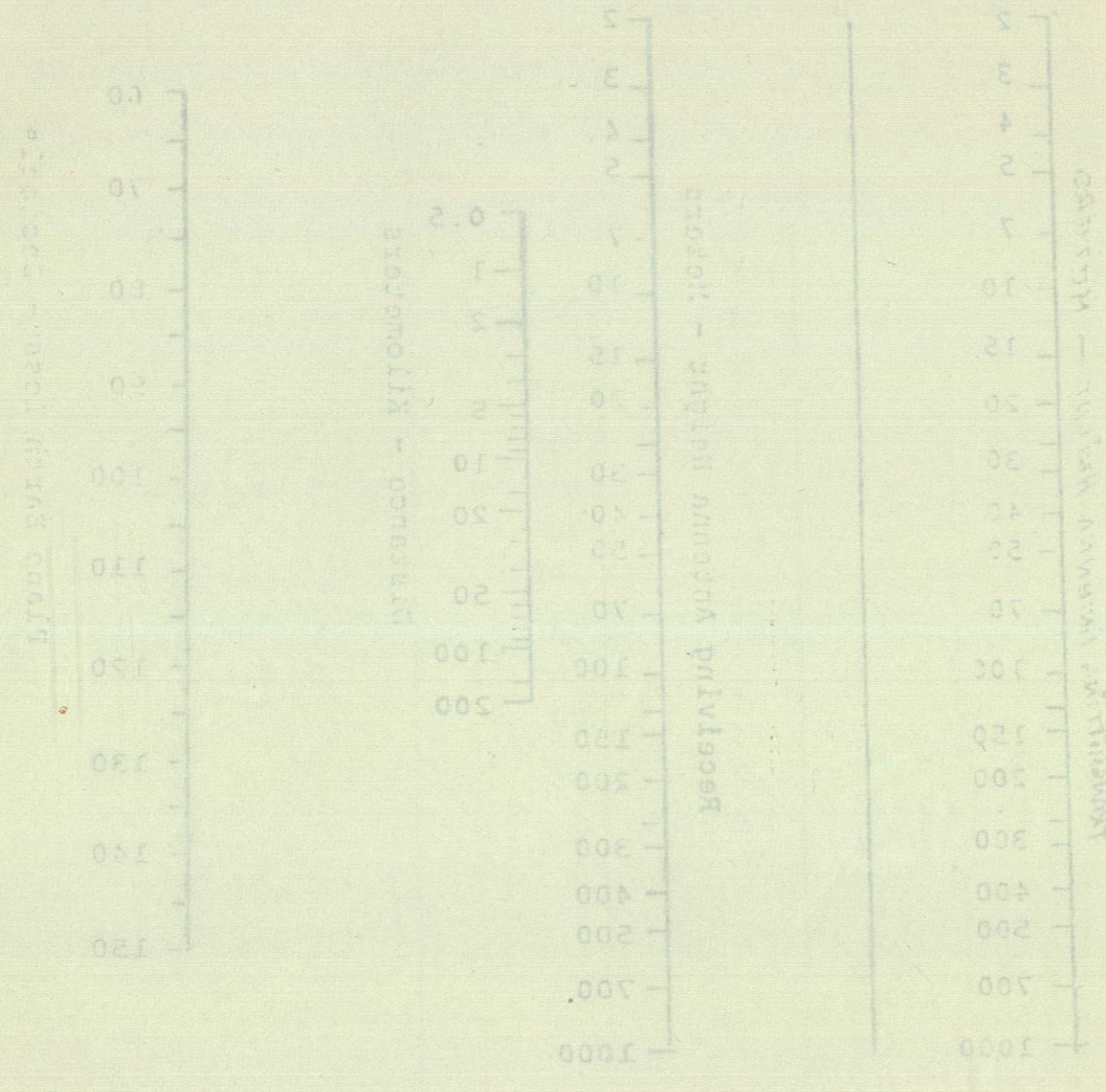


PLANE EARTH LOSS BETWEEN HALF-WAVE DIPOLES

From Bullington

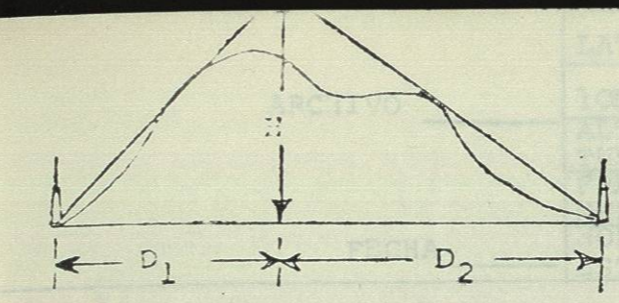
Metric

Fig. 8

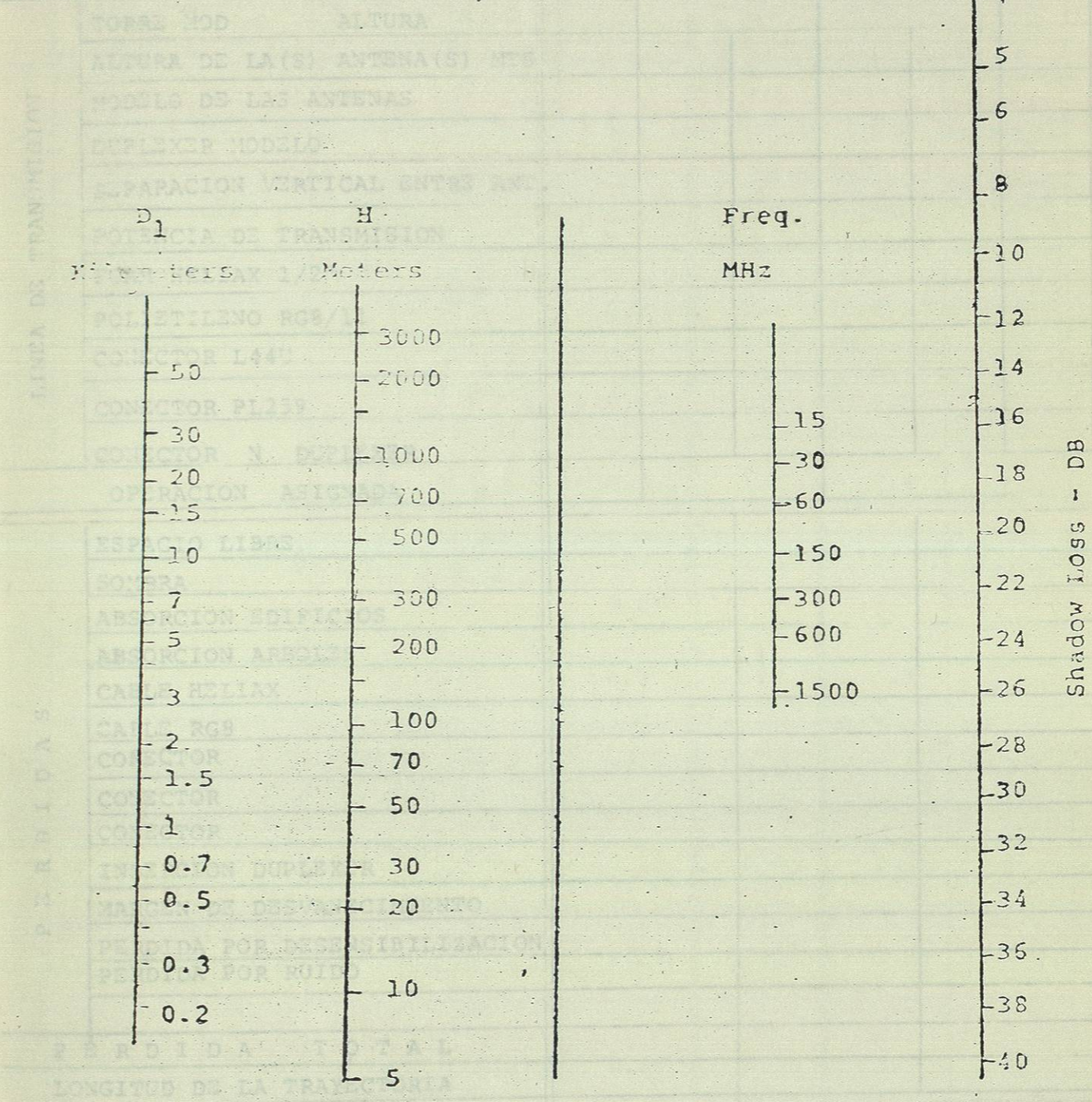


PLANE EARTH LOSS BETWEEN WIRE WAVE DIPOLES

From Bullington



D_1 is always the shorter distance

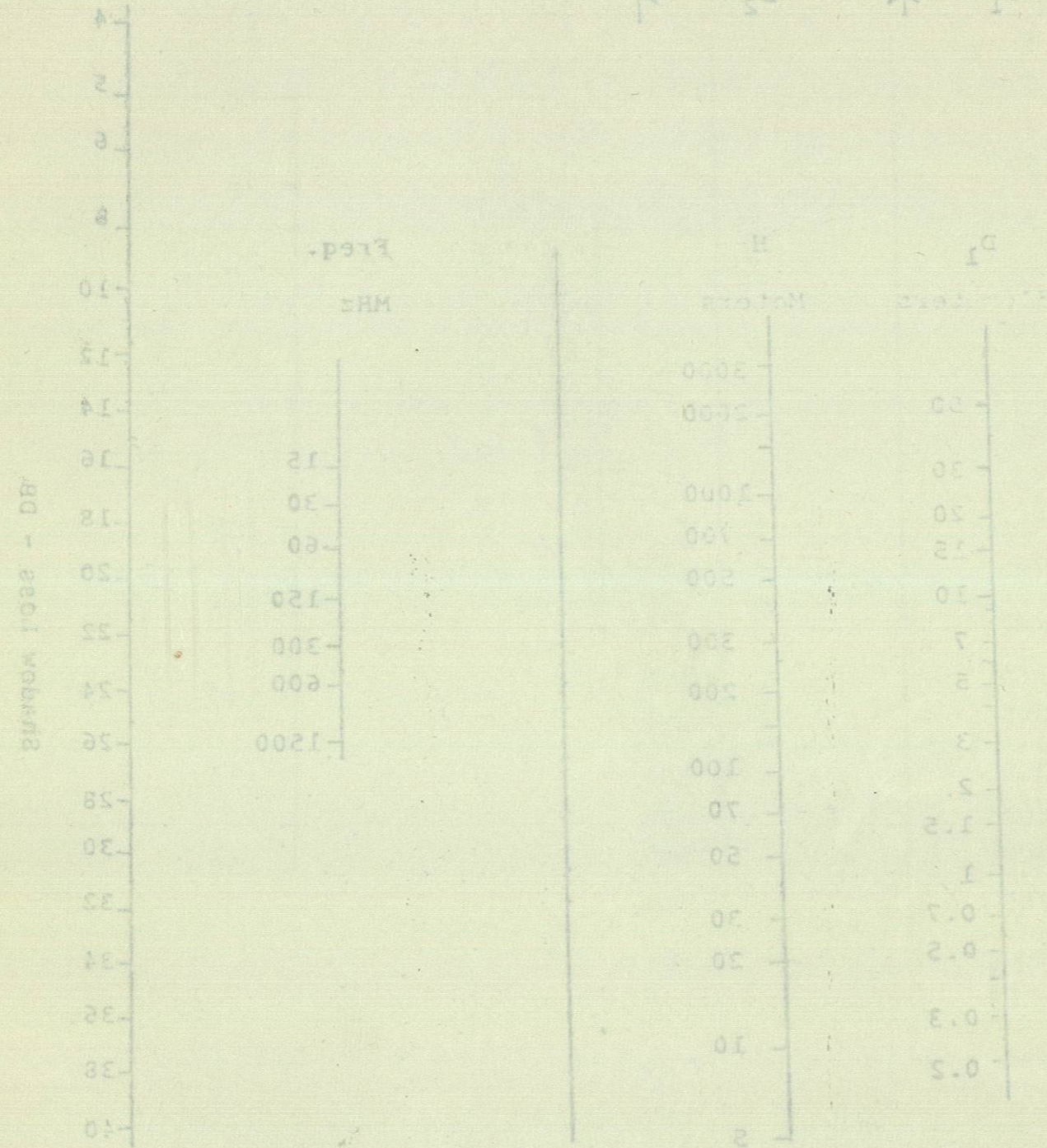


From Bullington

Figure # 9

SHADOW LOSS RELATIVE TO SMOOTH EARTH

D₁ is always the shorter distance



Antena 1000 - DB

Figure 2

SHAW LOSS RELATIVE TO SMOOTH EARTH

From Ballington

ARCHIVO _____		LAT _____							
FECHA _____		LONG _____							
		ALTI- _____							
		TUD _____							
		FREC. _____							
		MHZ _____							
		NOM _____							
		EST. _____							
LINEA DE TRANSMISION	TORRE MOD	ALTURA							
	ALTURA DE LA(S) ANTENA(S) MTS								
	MODELO DE LAS ANTENAS								
	DUPLER MODELO								
	SEPARACION VERTICAL ENTRE ANT.								
	POTENCIA DE TRANSMISION								
	FOAM HELIAX 1/2"								
	POLIETILENO RG8/11								
	CONECTOR L44U								
	CONECTOR PL259								
CONECTOR N DUPLER									
OPERACION ASIGNADA									
P E R D I D A S	ESPACIO LIBRE								
	SOMBRA								
	ABSORCION EDIFICIOS								
	ABSORCION ARBOLES								
	CABLE HELIAX								
	CABLE RG8								
	CONECTOR								
	CONECTOR								
	CONECTOR								
	INSERCIÓN DUPLER								
MARGEN DE DESVANECIMIENTO									
PERDIDA POR DESENSIBILIZACION									
PERDIDA POR RUIDO									
P E R D I D A T O T A L									
LONGITUD DE LA TRAYECTORIA									
GANANCIAS	GANANCIA DEL RECEPTOR								
	GANANCIA DEL SIST. RADIADOR								
	POTENCIA DEL TRANSMISOR								
G A N A N C I A T O T A L									
RESOLUCION DEL MARGEN DE DESVANECIMIENTO									
MARGEN DE DESVANECIMIENTO TOTAL									
% DE CONFIABILIDAD									
ESTIMACION PROM.DE LA SEÑAL A RECIBIR									

Tipo del Dieléctrico	Tipo del Cable	ATENUACION EN DB POR CADA 100'			
		40 MHz.	150 MHz.	450 MHz.	1000 MHz.
POLYETILENO	RG-58	2.5	6.0	12.0	No se recomienda
	RG-8	1.15	2.5	5.0	No se recomienda
	RG-17	0.5	1.3	2.5	No se recomienda
POLYETILENO	Foam Heliax 1/2"	0.48	1.0	1.95	No se recomienda
	Foam Flex 1/2"	0.5	1.3	2.4	No se recomienda
ESPUMADO	Foam Heliax 7/8"	0.28	0.6	1.2	No se recomienda
	Foam Flex 7/8"	0.3	0.7	1.3	No se recomienda
RELLENO DE AIRE O DE GAS.	Heliax H5 7/8"	0.25	0.5	0.88	1.3
	Styroflex 7/8"	0.25	0.6	1.1	1.5
	Spiro-Line 7/8"	0.25	0.51	0.91	1.43
	Airline 740	0.25	0.54	1.0	1.6
	Airline 738	0.15	0.46	0.8	1.28

FIGURA # 11