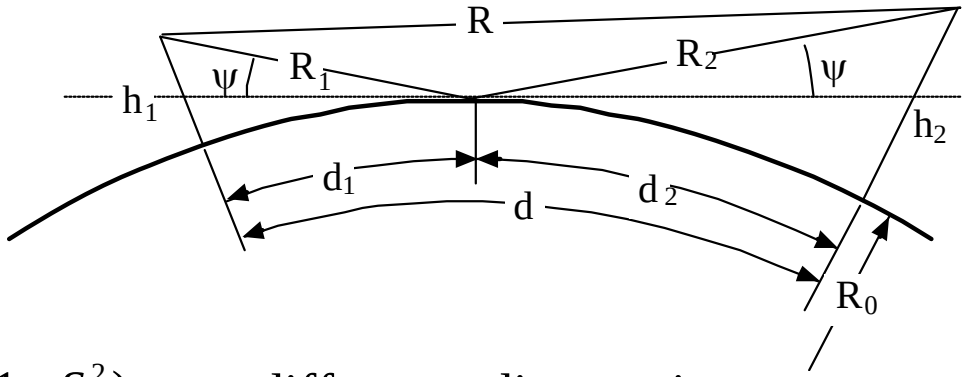
Onda riflessa su terra sferica



$$\Delta R = R_1 + R_2 - R = \frac{2 h_1 h_2}{d}(1 - S_1^2)(1 - S_2^2)$$ differenza di cammino

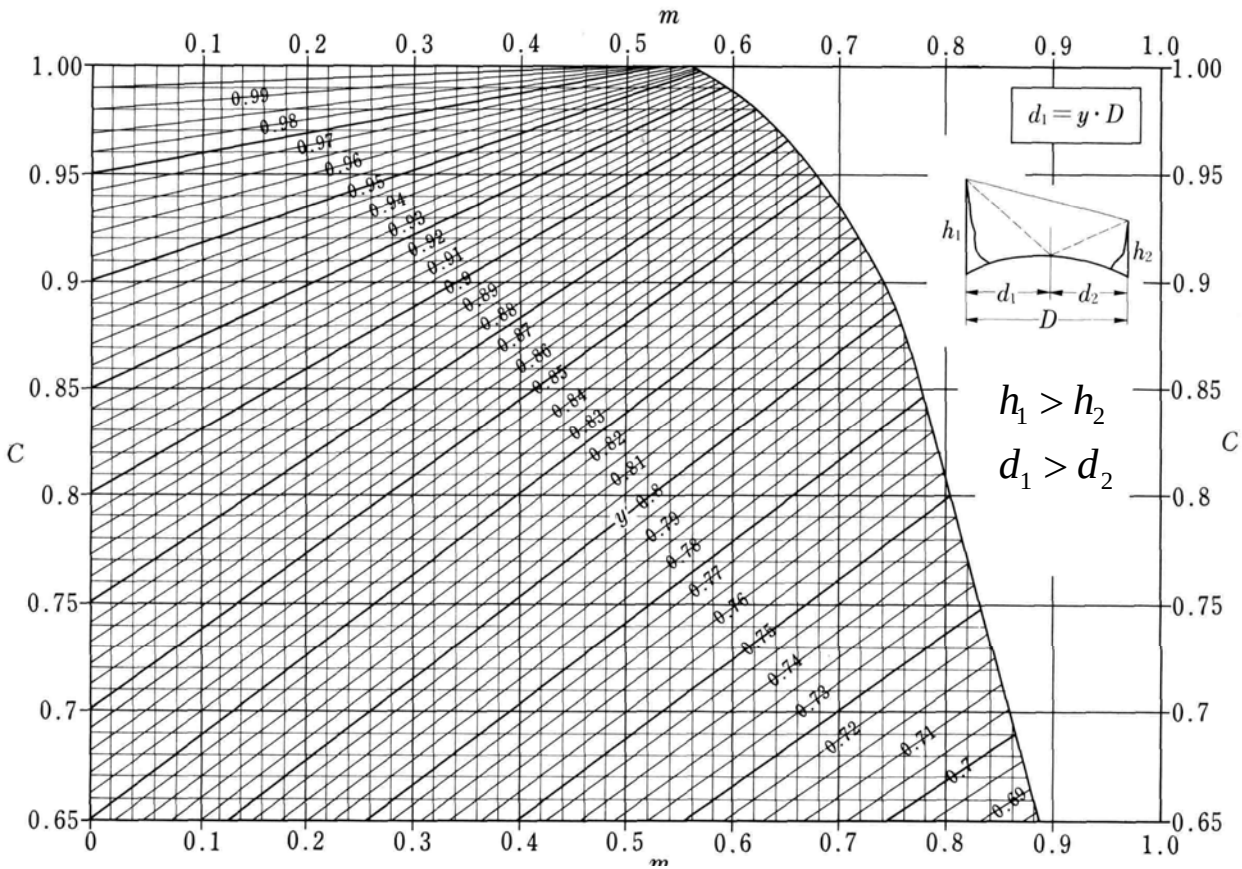
$$\tan\psi = \frac{h_1(1 - S_1^2) + h_2(1 - S_2^2)}{d}$$ angolo di radenza

$$D = \left(1 + \frac{2 d_1 d_2}{R_0 d \tan\psi}\right)^{-\frac{1}{2}}$$ fattore di divergenza

$$S_1 = \frac{d_1}{\sqrt{2 R_0 h_1}} \qquad d_1 = \frac{d}{2} + p \cos\frac{\Phi + \pi}{3} \qquad p = \frac{2}{\sqrt{3}}\sqrt{R_0(h_1 + h_2) + \frac{d^2}{4}}$$

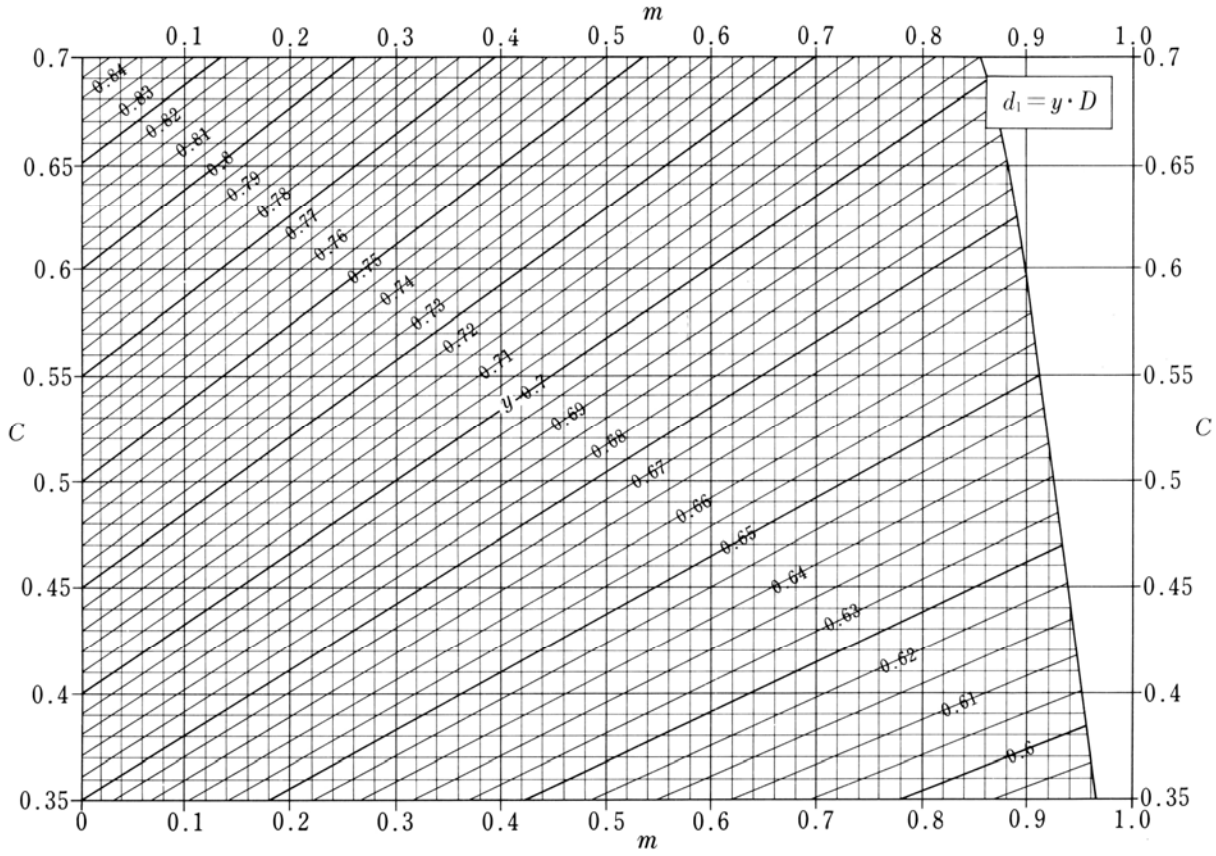
$$S_2 = \frac{d_2}{\sqrt{2 R_0 h_2}} \qquad d_2 = \frac{d}{2} - p \cos\frac{\Phi + \pi}{3} \qquad \Phi = \arccos\frac{2 R_0 (h_1 - h_2) d}{p^3}$$

diagramma per la determinazione del punto di riflessione (1)



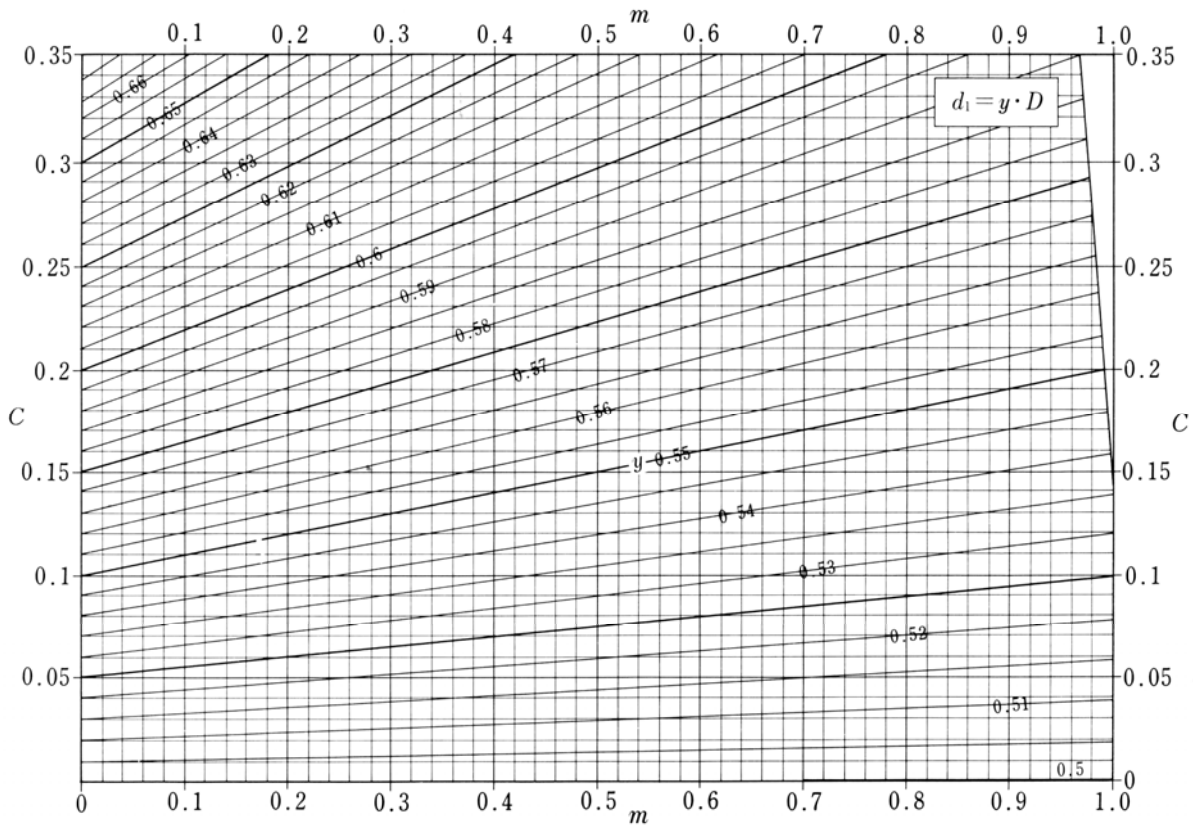
$$C = \frac{h_1 - h_2}{h_1 + h_2} \qquad m = \frac{D^2}{4\,k\,R_0(h_1 + h_2)} \qquad (h_1 > h_2)$$

diagramma per la determinazione del punto di riflessione (2)



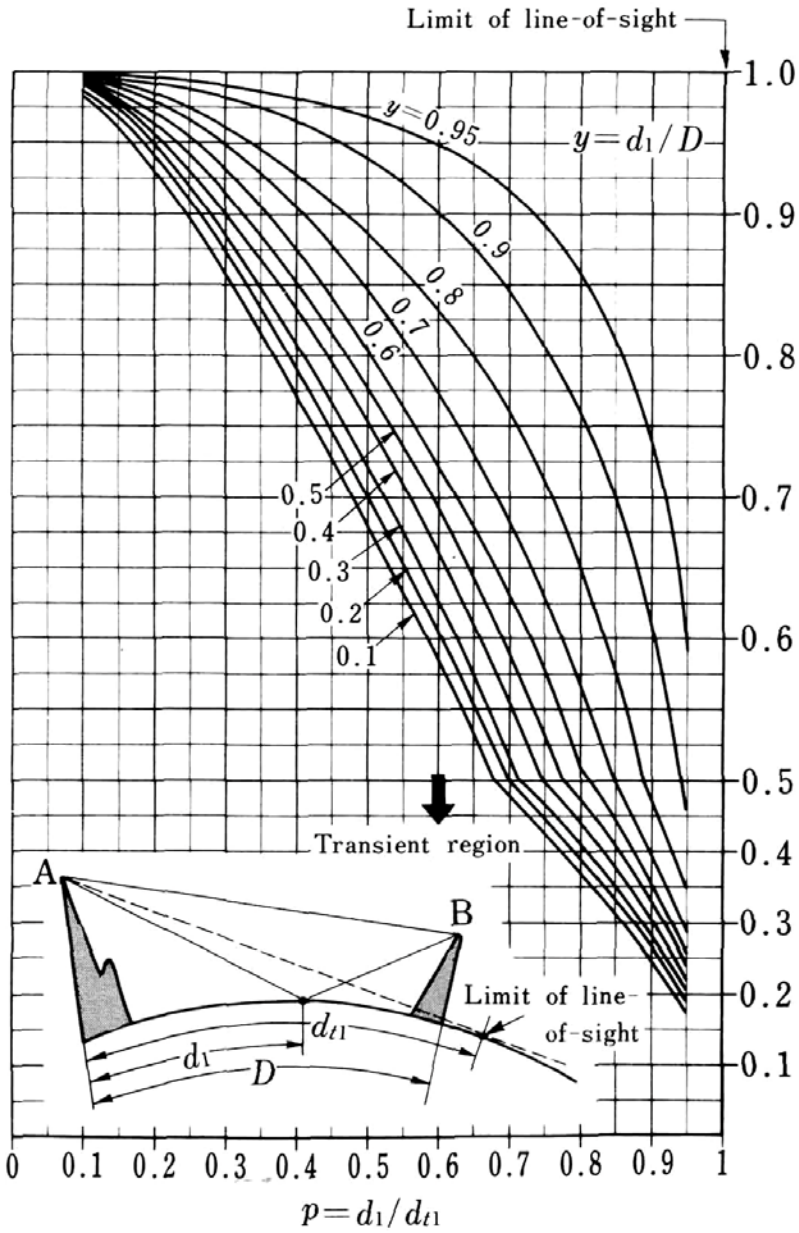
$$C = \frac{h_1 - h_2}{h_1 + h_2} \qquad m = \frac{D^2}{4\,k\,R_0(h_1 + h_2)} \qquad (h_1 > h_2)$$

diagramma per la determinazione del punto di riflessione (3)

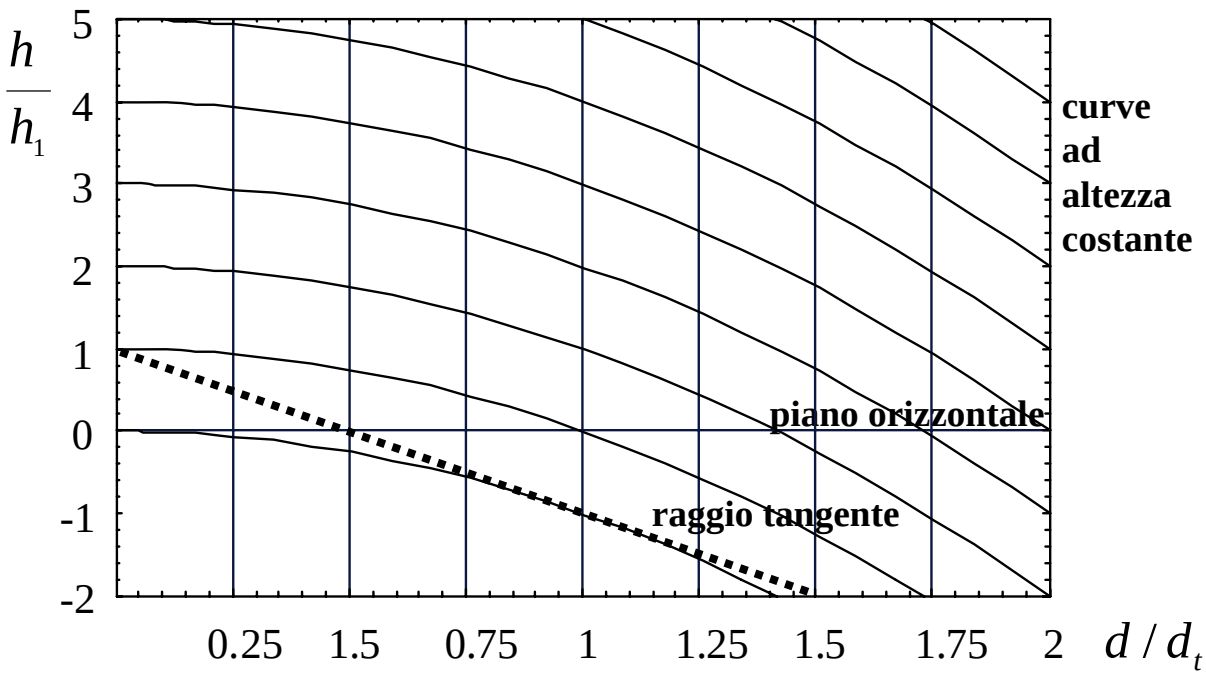


$$C = \frac{h_1 - h_2}{h_1 + h_2} \qquad m = \frac{D^2}{4\,k\,R_0(h_1 + h_2)} \qquad (h_1 > h_2)$$

Fattore di divergenza per riflessione



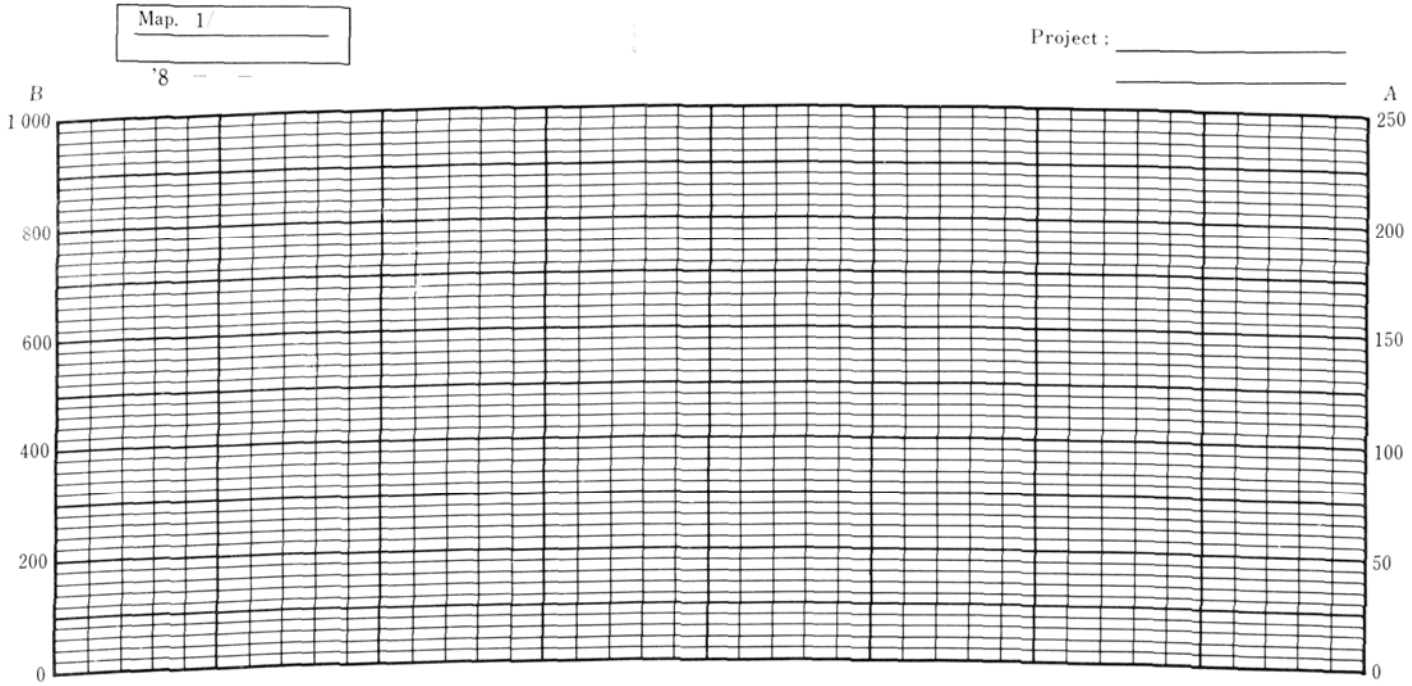
Abbassamenti rispetto al piano orizzontale



$$y = h\left(1 - \frac{x^2}{d_t^2}\right)$$ altezza efficace

$$d_t = \sqrt{2\,h\,R_{eq}}$$ distanza dell'orizzonte radio

Profilo di tratta (1)



H— H—

Station No.	( )	( )	( )
Station name			
Latitude N	° ′ ″	° ′ ″	° ′ ″
Longitude E	° ′ ″	° ′ ″	° ′ ″
Elevation (m)			
Ant. height (m)			
Distance (km)		.	.
Γ_0 (dB)		.	.
E_0 (dBμV/m)		.	.

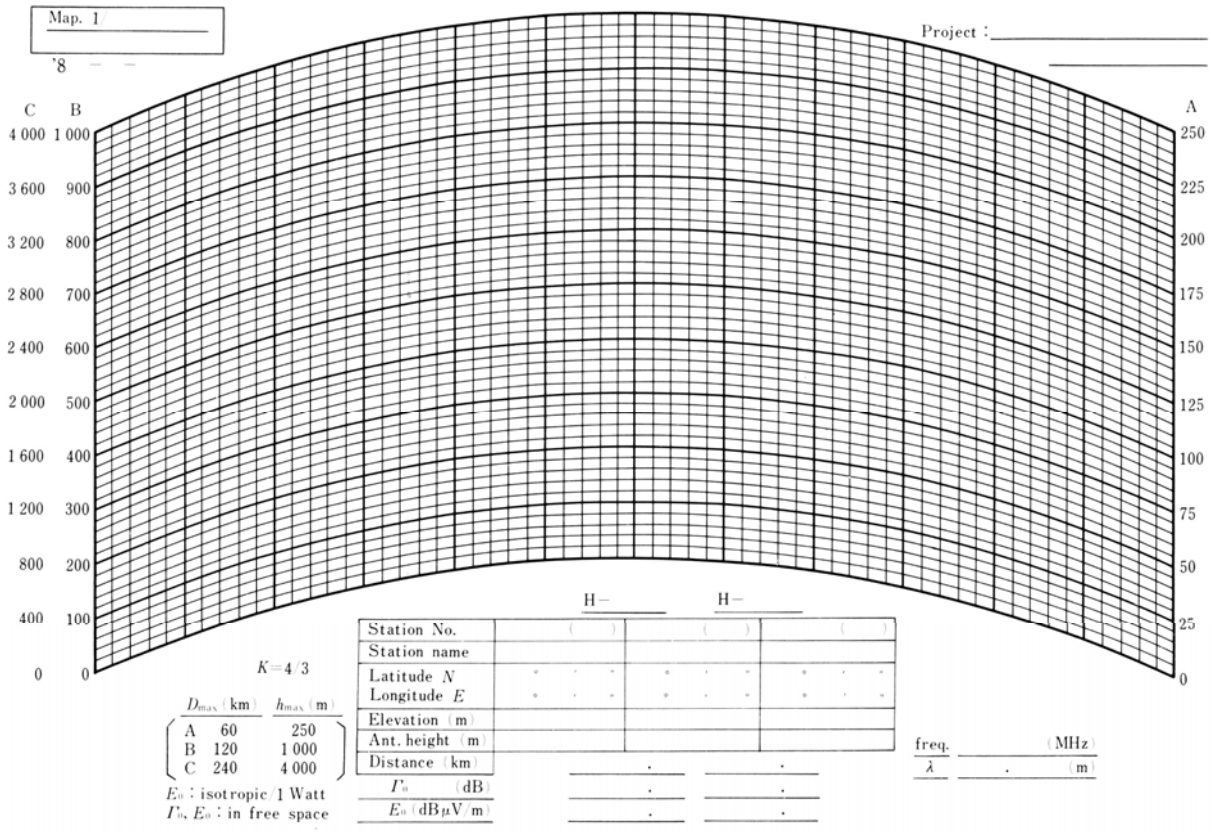
$K = 4/3$

	D_{max} (km)	h_{max} (m)
A	20	250
B	40	1 000
C	80	4 000

E_0 : isotropic 1 Watt
Γ_0, E_0 : in free space

freq. (MHz)
λ . (m)

Profilo di tratta (2)



Profilo di tratta (3)