

6.2) $N_1 = 300$ $h = 50m$
 $N_2 = 250$ $\alpha = 1^\circ$
 $R = 6377km$

eq. 6.8

$$\frac{R+h_1}{R} \left(\frac{h_2}{h_1} \right) = \frac{\cos \alpha_1}{\cos \alpha_2}$$

$$\Rightarrow \alpha_2 = \arccos \left(\cos \alpha_1 \left(\frac{R+h_1}{R+h_2} \right) \right) \approx 1,0073^\circ$$

$N_i = (h_i - 1) 10^6$; $i = 1, 2$ $\alpha_2 < \alpha_1$
 $\alpha_2 = 0,85$

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$V = h \sqrt{\frac{2(d_1 + d_2)}{\lambda \cdot d_1 \cdot d_2}}$ $c = \lambda \cdot f$

$$V_L = 100m \cdot \sqrt{\frac{2(2km + 2km)}{\frac{c}{f} \cdot 2 \cdot 2km^2}}$$

$$= 2,58 > 1$$

$V'_1 = 0$
 $V'_2 = 0$

$$L_{f_{min}} = L_{f_{max}} + L_{diff} = 105,9dB + 6 + 6$$

$$L_{diff} = -20 \log \frac{0,225}{\sqrt{2}} \approx 21,4dB$$

$$L_{f_{min}} = 33,4 + 20 \log R + 20 \log f = 84,5dB$$

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$r_1 = \sqrt{\frac{\lambda d_1 d_2}{d_1 + d_2}}$

$\Delta h = r_e (\cos \beta - \cos \alpha)$

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$V = h \sqrt{\frac{2(d_1 + d_2)}{\lambda \cdot d_1 \cdot d_2}}$
 $= h \sqrt{\frac{2(d_1 + d_2)}{\lambda \cdot d_1 \cdot d_2}}$

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