

$$R_{\max} = \frac{1}{2} \sqrt{h \cdot d}$$

$\downarrow$  0,33       $\downarrow$  70 000 m

28,86 m

$$h = \frac{C}{F} = \frac{300\ 000\ 000}{900\ 000\ 000} = 0,33 \dots$$

d = 50 km  
F = 10 GHz

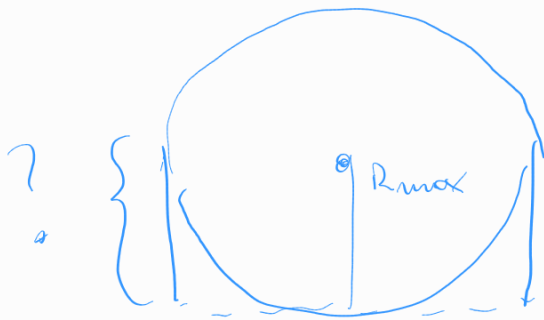
$$\frac{1}{2} \sqrt{h \cdot 50\ 000}$$

$$\frac{300\ 000\ 000}{10\ 000\ 000\ 000} = 0,03$$

Diamètre max

$$R_{\max} = 19,36\ \text{m} \cdot 2 = 38,72$$

min  $R_{\max}$   
 $\downarrow$



40% de 38,72 m

$$= 15,48\ \text{m}$$

⇒ on peut se contenter  
de placer les antennes à  $R_{\max}$

d = 65 km

F = 11 GHz

Visibilité = 100%

obstacle 18 m

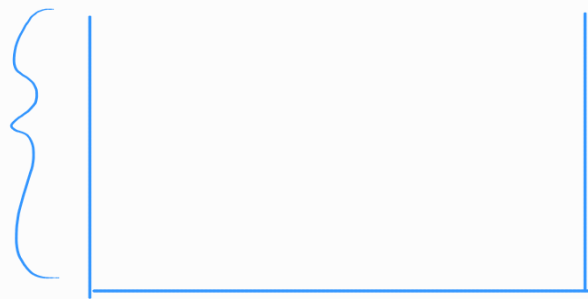
$$\frac{1}{2} \sqrt{0,02727 \cdot 65\ 000}$$

$$\downarrow$$

$$1772,7272$$

$$\frac{300\,000\,000}{47\,000\,000\,000} = 0,02727$$

$$R_{\max} = 21,05 \text{ m} + \text{taille d'arbre} (\pm 40 \text{ mm})$$



$$19 + 21,05 = \underline{\underline{40,05 \text{ m}}}$$

