

GPS

$$1) \lambda = \frac{c}{f}, c = 3 \cdot 10^8$$

$$\lambda_1 = \frac{3}{1,6} 10^{-1} m = 0,19$$

$$\lambda_2 = \frac{3}{1,2} 10^{-1} m = 0,25$$

$$2) t = \frac{d}{c} = \frac{20180 \cdot 10^3}{3 \cdot 10^3} = 6726 \cdot 10^{-5} s$$

$$3) \Delta t = \frac{20}{3 \cdot 10^8} = 67 \cdot 10^{-8} s$$

$$\Delta t \ll t$$

$$4) 20cm = \frac{20m}{\sqrt{N}} = \frac{10^2}{\sqrt{N}} = 1, N = 10^4$$

$$5) t = 10^4 * 1 \cdot 10^{-3} = 10s$$

6) frequence non.

Longueur d'onde oui.

$$(\lambda = \frac{c}{f})$$

7) phenomene de dispersion