Question #57739, Chemistry

One system of radio communication uses an extremely low frequency (ELF) of 76 Hz (76 s^{-1}). What is the wavelength (λ) of this electromagnetic radiation?

Solution:

$$\lambda = \frac{C}{\nu}$$

$\lambda - wavelength$

$C\ -\ speed\ of\ light, C = const, C = 3 \cdot 10^8$ м/с

$\nu - frequency, \qquad \nu = 76Hz\ (76\ c^{-1})$

$\lambda = \frac{3 \cdot 10^8\ м/с}{76\ c^{-1}} = 3{,}9 \cdot 10^6$ м