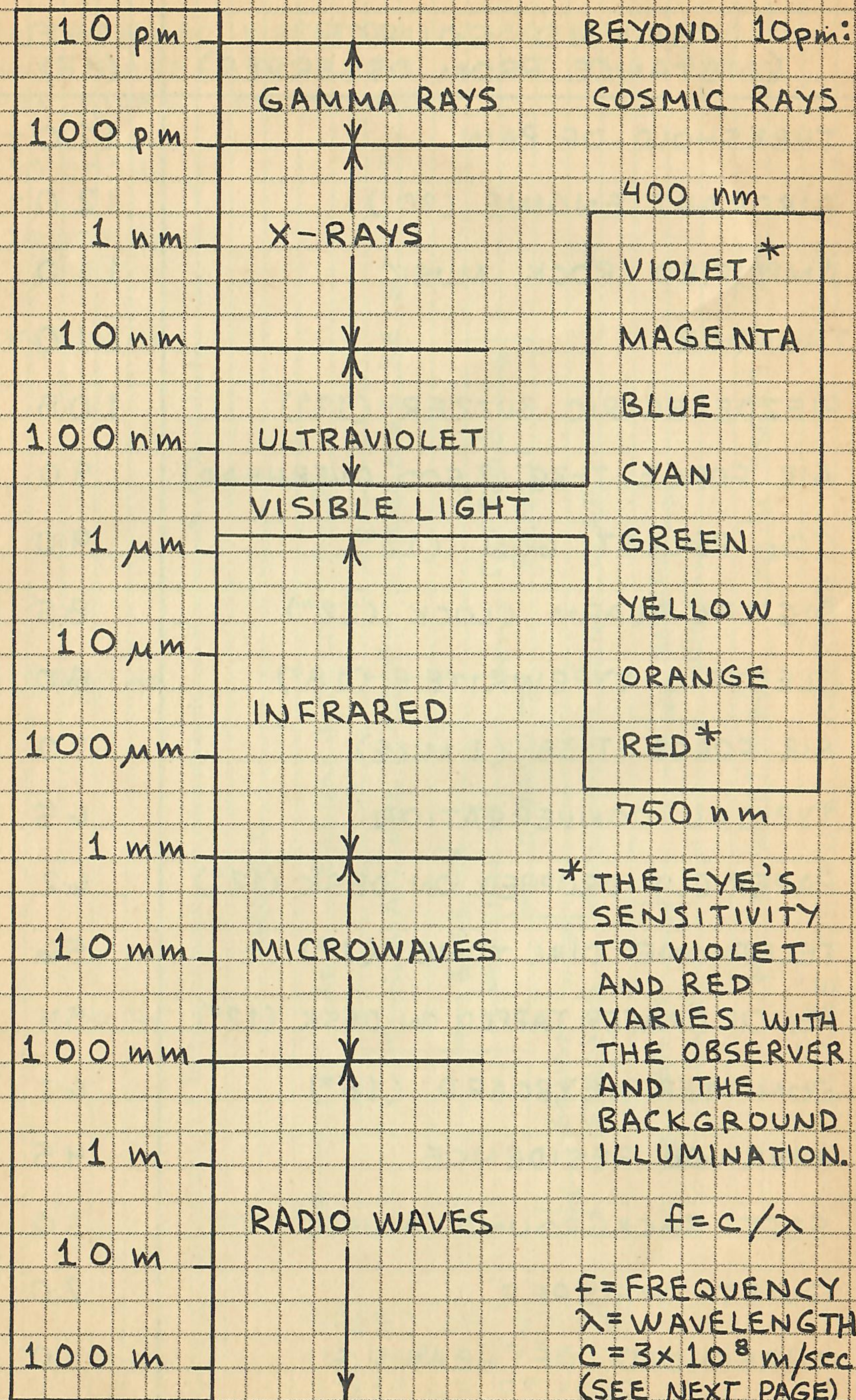


# ELECTROMAGNETIC SPECTRUM



# RADIO FREQUENCY SPECTRUM

FREQUENCY	CLASSIFICATION
3 - 30 KHz	VERY LOW FREQUENCIES (VLF)
30 - 300 KHz	LOW FREQUENCIES (LF)
300 - 3000 KHz	MEDIUM FREQUENCIES (MF)
3 - 30 MHz	HIGH FREQUENCIES (HF)
30 - 300 MHz	VERY HIGH FREQUENCIES (VHF)
300 - 3000 MHz	ULTRA HIGH FREQUENCIES (UHF)
3 - 30 GHz	SUPER HIGH FREQUENCIES (SHF)
30 - 300 GHz	EXTREMELY HIGH FREQUENCIES (EHF)
300 - 3000 GHz	MICROWAVE FREQUENCIES

## FREQUENCY VS. WAVELENGTH

$$\lambda = \frac{c}{f} \qquad f = \frac{c}{\lambda}$$

$\lambda$  - WAVELENGTH (METERS)  
 $c$  - SPEED OF LIGHT ( $3 \times 10^8$  METERS/SEC)  
 $f$  - FREQUENCY (HERTZ)

EXAMPLE: THE WAVELENGTH OF A 108 MHz SIGNAL IS  $3 \times 10^8 / 1.08 \times 10^6$  OR 2.78 METERS.