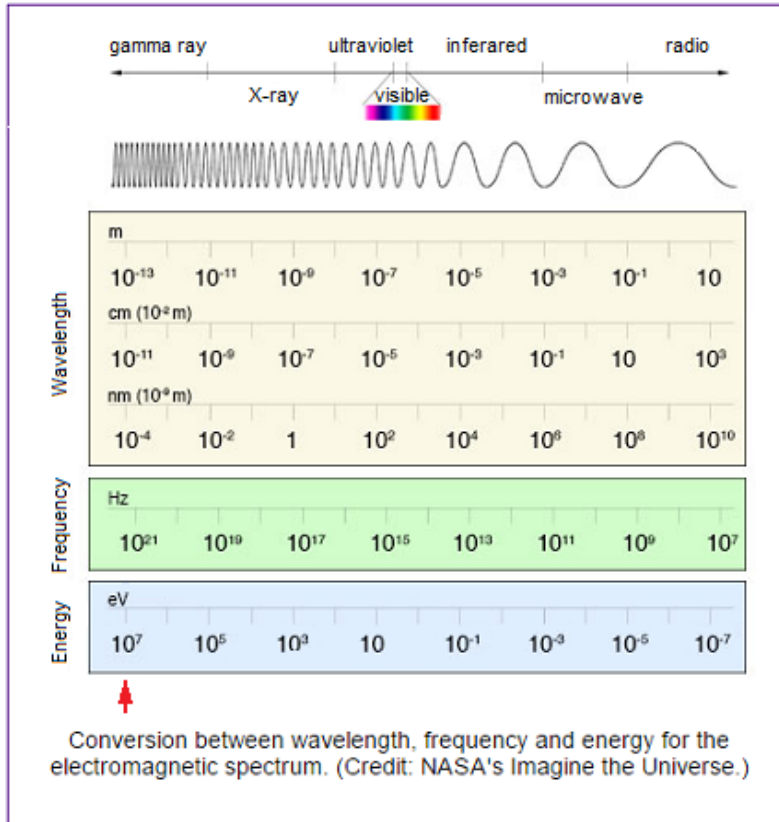


# The existing Electromagnetic Waves Spectrum (released by NASA)

written by Hamid – December 2016



<http://imagine.gsfc.nasa.gov/science/toolbox/emspectrum2.html>

It is generally described that **the full range of wavelengths (and photon energies) is called the "electromagnetic spectrum"**. Let us check the validity of the above spectrum, released by NASA on February 2013, by using the above mentioned description. To do this evaluation, two of the derived Planck units should be reminded here, **Planck energy** ( $E_p$ ) and **Planck angular frequency** ( $\omega_p$ ):

- 1)  $E_p = 1.22 \times 10^{28}$  [eV].....Planck energy
- 2)  $\omega_p = 1.85487 \times 10^{43}$  [1/s].....Planck angular frequency  
 $\nu_p = \omega_p / 2\pi = 2.95212 \times 10^{42}$  [1/s].....Planck frequency

Now we can extract from above spectrum the maximum energy of one photon and also the maximum frequency of the so-called electromagnetic waves:

- 1)  $E_{\max} \approx 10^7$  [eV]
- 2)  $\nu_{\max} \approx 2.4 \times 10^{21}$  [1/s] (it is also calculable:  $\nu_{\max} = E_{\max} / h$ )

Compare  $E_{\max}$  and  $\nu_{\max}$  with  $E_p$  and  $\nu_p$  respectively. These data show very clearly that  $E_p$  and  $\nu_p$  are very far beyond the existing Electromagnetic Waves Spectrum! It means that the units of these physical properties are very much greater than the properties estimated on the basis of calculations or determined by measurement!!

What is wrong here, the description or the spectrum which has been released by NASA??

Apart from sophisticated subjects, such as *Quantum Mechanics*, *Quantum Gravity*, *Vacuum Energy*, *Free Energy*, *Aether*, *Theory of Everything* and so on, this question has a very simple logical basis and therefore it can be raised even by any curious physics or engineering student!

**Note:** This writing has also been published in [Toquest.com](http://Toquest.com) on December 13, 2016.