The new relativistic Doppler effect.

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After defining the new theory of relativity, where the space does not bend, we are in a position to consider the relativistic Doppler effect.

Determination of the Doppler effect.

In this relativity, in that space does not bend, we find a different Doppler effect, considered by the relativity of Einstein.

As the space does not bend, we find a Doppler effect of the same type as found for the sound.

For V> 0, the source away from the observer:

For the frequency:

$$\surd = \surd_o \frac{C+V}{C}$$

For the wavelength:

$$\lambda = \lambda_o \frac{C}{C+V}$$

For V <0, the source is close to the observer:

For the frequency:

$$\surd = \surd_o \frac{C-V}{C}$$

For the wavelength:

$$\lambda = \lambda_o \frac{C}{C-V}$$

By quantum mechanics.

Analyzing the process of annihilation of pairs.

Of photons generated:

$$2\, \boldsymbol{m_v C_v}^{\mathbf{2}} = \boldsymbol{P_1 C_v} + \boldsymbol{P_2 C_v} \quad 1)$$

Canceling the momentum of the pairs:

$$2\, \boldsymbol{m_v V_v} = \boldsymbol{P_1} - \boldsymbol{P_2}$$

Multiplying both terms by $\boldsymbol{C_v}$:

$$2\, \boldsymbol{m_v V_v}\ \boldsymbol{C_v} = \boldsymbol{P_1}\ \boldsymbol{C_v} - \boldsymbol{P_2 C_v} \quad 2)$$

Adding 1) e 2):

$$2\, \boldsymbol{m_v C_v}\ (\boldsymbol{C_v} + \boldsymbol{V_v}) = \mathbf{2}\ \boldsymbol{P_1}\ \boldsymbol{C_v}$$

$$\boldsymbol{P_1} = \boldsymbol{m_v}\ (\boldsymbol{C_v} + \boldsymbol{V_v})$$

$$\boldsymbol{P_1} = \boldsymbol{m_o}\sqrt{\mathbf{1} - \frac{\boldsymbol{V^2}}{\boldsymbol{C_o}^{\mathbf{2}}}}\ \frac{\boldsymbol{C_o} + \boldsymbol{V_o}}{\sqrt{\mathbf{1} - \frac{\boldsymbol{V^2}}{\boldsymbol{C_o}^{\mathbf{2}}}}}$$

$$\boldsymbol{P_1} = \boldsymbol{m_o}\ (\boldsymbol{C_o} + \boldsymbol{V_o})$$

$$\boldsymbol{P_1} = \boldsymbol{m_o}\, \boldsymbol{C_o}\ \frac{\boldsymbol{C_o} + \boldsymbol{V_o}}{\boldsymbol{C_o}}$$

$$\boldsymbol{\lambda} = \frac{\boldsymbol{h}}{\boldsymbol{P_1}}$$

$$\boldsymbol{\lambda} = \frac{\boldsymbol{h}}{\boldsymbol{m_o}\, \boldsymbol{C_o}\, \frac{\boldsymbol{C_o} + \boldsymbol{V_o}}{\boldsymbol{C_o}}}$$

$$\boldsymbol{\lambda} = \boldsymbol{\lambda_o}\ \frac{\boldsymbol{C_o}}{\boldsymbol{C_o} + \boldsymbol{V_o}}$$

What confirms the expected for a source, approaching the observer.

Subtracting $\mathbf{2}$) $\boldsymbol{de}$ $\mathbf{1}$):

Get:

$$\boldsymbol{\lambda} = \boldsymbol{\lambda_o}\ \frac{\boldsymbol{C_o}}{\boldsymbol{C_o - V_o}}$$

What confirms the expected for a source, the move away from the observer.

The impact on universal analysis.

If we take into account for example the building was considered for the Ursa Major, this would keep away from us at a speed of 15,000 km / s, from the perspective of this new theory, we would have:

$$\boldsymbol{\lambda} = \boldsymbol{\lambda_o}\ \frac{\boldsymbol{C_o}}{\boldsymbol{C_o - V_o}}$$

$$431{,}05409 = 410\ \frac{\boldsymbol{C_o}}{\boldsymbol{C_o - V_o}}$$

$$\boldsymbol{V_o} = 14.643 \text{ Km/s}$$

Different from what was considered:

This new concept of the Doppler effect, will force me to review the impacts of varying gravitational and magnetic permeability variable of the vacuum in the analysis of the cosmos.

What is the Doppler effect of a source that in our benchmark issues with frequency $\sqrt{}_{\boldsymbol{o}}$ The and this source is then to leave the our reference to the speed V.

A source that emits radiation $\sqrt{}_{o}$ when stopped, will deliver at a speed V, the velocity V is the velocity of expulsion compared to our benchmark, with a frequency given by:

$$\sqrt{} = \frac{\sqrt{}_{\boldsymbol{o}}}{\sqrt{1 - \frac{V^2}{C^2}}}$$

The frequency that we received from a source in the previous condition will be given by**:**

$$\sqrt{} = \frac{\sqrt{}_{\boldsymbol{o}}}{\sqrt{1 - \frac{V^2}{C^2}}}\ \frac{\boldsymbol{C - V}}{\boldsymbol{C}}$$

$$\sqrt{} = \sqrt{}_{\boldsymbol{o}} \sqrt{\frac{C^2}{(\boldsymbol{C+V})(\boldsymbol{C-V})}}\ \sqrt{\frac{(\boldsymbol{C-V})(\boldsymbol{C-V})}{C^2}}$$

$$\surd = \surd_{\boldsymbol{o}}\sqrt{\frac{\boldsymbol{C-V}}{\boldsymbol{C+V}}}$$

What is according to Einstein's relativistic Doppler effect.

This condition is only valid for a source with frequency $\surd_o$ in our benchmark, which is then put into motion.

When the source approaches, then V =-V, we will have a Doppler effect given by:

$$\surd = \surd_{\boldsymbol{o}}\sqrt{\frac{\boldsymbol{C+V}}{\boldsymbol{C-V}}}$$

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Porto, 29/01/2009