THEORY OF LIGHT DOMINANCE

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I. INTRODUCTION

Dominance:
In the nature maximum functions or the parameters will exist in more than one form that is said to be dominance. The one which is having higher dominance is having higher strength, the one which is lesser dominant is having lesser strength. Some functions are actually having constant values during the parametric measurements but they behave as if they are infinite.

Light dominance:
In the universe the light is everything, nothing can beat the light, it is like a king in the universe due to it's dominance. The whole universe is built on the properties of light, but this highly dominant light behaves abnormally in some of the cases
Velocity of light:
The velocity of light in free space is 3×10^8 m/s this value seems to be infinite under the following observations:

☐ Nothing in the universe can travel with a velocity equal to the velocity of light in vacuum that means the velocity of light in vacuum is nothing but infinite Velocity
☐ The velocity of light remains the same irrespective of the source motion. That is the velocity of light remains velocity of light forever.

It gives the relationship between constant and infinity as

Infinity + constant = infinity

Infinity – constant = infinity

Infinity × constant = infinity

Infinity ÷ constant = infinity

Like wise

The velocity of light also obey the above rules.

Therefore the velocity of light is seems to be infinite but it is not possible practically because light can not travel instantaneously throughout the universe.

Therefore the velocity dominance of light is infinity but the velocity of light is constant

But we know that

Velocity is propertional to energy

Energy is propertional to frequency

Therefore velocity is propertional to frequency

Therefore frequency dominance of light is also infinity, but the frequency is constant

The light which is free from disturbance is white light. White light is the light is entering from the sun. Due to the reason that white light does not require any material for its existence here the white light is considered.
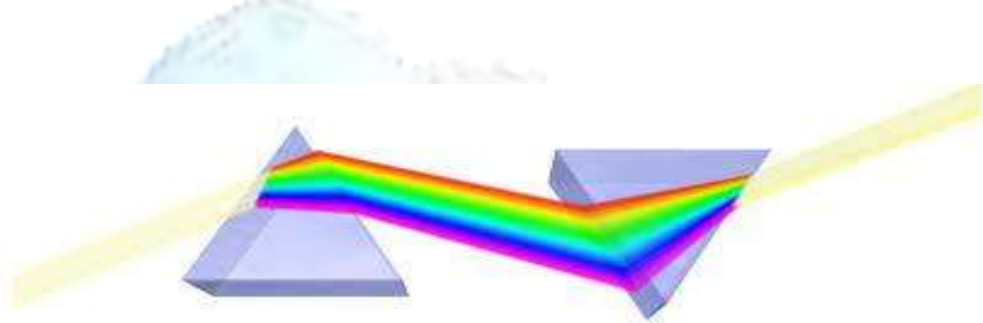
When white light falls on the material then they will the absorb the light partially and reflect it back partially, the reflected light if it falls into the visible spectrum then it gives the colour for the corresponding frequency.

Therefore the frequency dominance of white light is infinity but the frequency of white light is constant.

Note:

- ✓ The light can never travel instantaneously throughout the universe.
- ✓ The light does not obey the traditional rules of mathematics like addition, subtraction, multiplication, division.

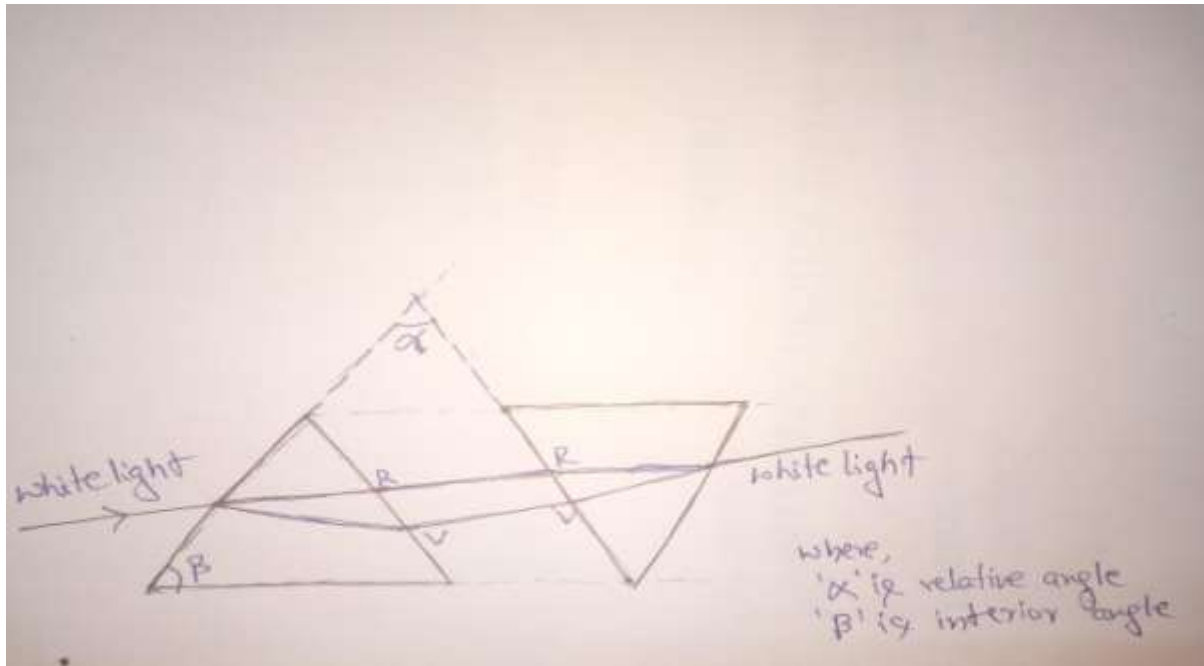Analysis of frequency of white light:

Statement: The white light is the domination of 7 colours (VIBGYOR).

Case analysis:

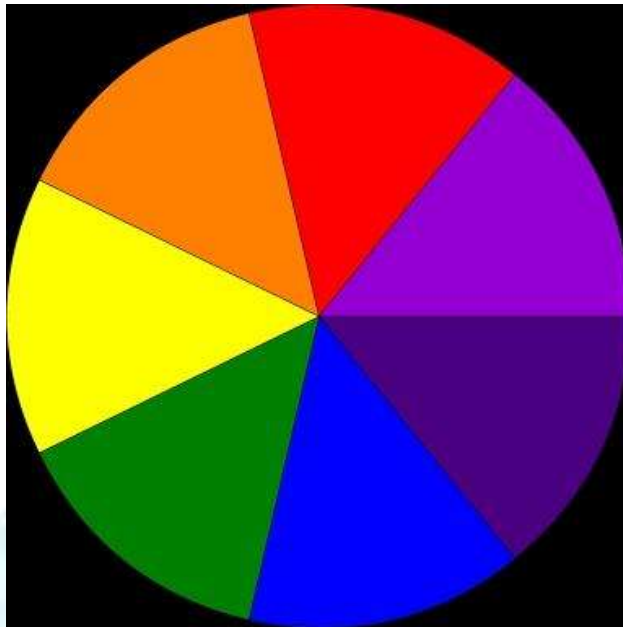Case 1: when interior angle equal to the relative angle:-

The white light enters the prism undergoes dispersion and then dispersed light is incident on the another prism to get the white light back with original intensity.

When the relative angle equal to interior angle white light is got back with original intensity.

- ✓ More closer the relative angle and interior angle the More intense the colour of white light is.
- ✓ If the refractive index of prism is more then more bending takes place.
- ✓ This is in accordance with law of conservation of energy.

Explanation to VIBGYOR transition to white in VIBGYOR plate in dynamic condition.

When the colours at rest there will be constant wavelength, frequency and dominance, when it is in the dynamic state it attains instantaneous equilibrium by attaining infinite dominance which ultimately produces white colour.

The dynamic nature of VIBGYOR plate is the only reason for the conversion of VIBGYOR to white.

When VIBGYOR plate is rotated with constant angular velocity white light is produced, but vice versa is not possible because of the reason that white is the colour of Infinite frequency dominance

When initially white colour is taken, motion can produce transition and produce VIBGYOR this is due to infinite dominance of white colour.

Dominations:

When static becomes dynamic state , the colours of constant dominance converts itself to the infinite dominance to produce white colour.

That is the dynamic dominance is equal to the infinite times of the constant dominance or static dominance.

That is constant dominance $\times$ infinity = Infinite dominance.

Note:

The frequency of VIBGYOR is independent of state(dynamic/static). But the effect of dominance only alters.

Counterpart: Newton's theory of dispersion was just view based, if not frequency of white light was Possibly known.

Determination of frequency of white light:

Determination by thermoelectronic transition:

When the large amount of temperature is applied on to the materials like metals, it undergoes thermoelectronic transition to produce different colours in them.

The thermoelectronic transition table is as below:

According to wein's displacement law as:

Temperature (K)	Colour	
900	Red	
1100	Orange	
1200	Yellow	
1600	White	

Therefore it can be analysed as,

Colour variations with respect to temperature(K)

900K-1100K; 200 difference (red – orange)

1100K-1200K; 100 difference (orange – yellow)

1200K-1250K ; 50 difference (yellow – green)

1250K – 1275K; 25 difference (green – blue)

1275K - 1287.5K ; 12.5 difference (blue – indigo)

1287.5K – 1293.75K ; 6.25 difference (indigo – violet)

But after these transitions, the next transitions are also possible but they do not give any give any colour, only the colours of specific frequency Will give colours remaining will not give any colour.

Due to the reason that violet dominates in VIBGYOR spectrum, the violet is considered to compare with white.

Frequency of white light = (temperature of white transition ÷ temperature of violet transition) × frequency of violet light

Frequency of white light = $1600.00/1293.75 \times 7.100 \times 10^{14}$ Hz

Frequency of white light = 8.7806×10^{14} Hz

Note:

We can not arrive at 1600K from 1293.75K by (addition of 50%) method. After infinite times that we will arrive at 1600K. Hence the dominance produced by white colour is infinity always.

Wavelength of white light = velocity of light in vacuum/frequency of white light.

Wavelength of white light = $3 \times 10^8/8.7806 \times 10^{14}$

Therefore wavelength of white light = 3416.6×10^{-10} M

Applications:

- ✓ When white light source is present, a VIBGYOR circular plane is formed inward to outward from point source of white light. This is due to the reason that violet has lesser radius and more energy, but red has more radius and lesser energy. But for viewing the white colour we should consider the front view of circular plane. We already know that the thickness of plane is zero, the thickness gives white colour. Therefore the frequency dominance of white light is infinite always.
- ✓ If the white plate is rotated with infinite angular velocity, then the white colour gives VIBGYOR. This is in accordance with Doppler effect of light.
- ✓ That is constant angular velocity is for constant frequency dominance and infinite angular velocity is for infinite frequency dominance.
- ✓ In circular plane of white light source, the VIBGYOR circles starts from where the white light intensity is very much low.

Conclusions:

- ✓ When the white light enters the prism, the infinite Velocity of white light will convert to the constant velocity, it means that infinite dominance, infinite Velocity white colour converts to the constant velocity, constant dominance VIBGYOR.
- ✓ When the dispersed light is made to fall on another prism where relative angle equal to interior angle, then the condition acts as infinite condition and the VIBGYOR colour converts back to white colour with original intensity.
- ✓ White light is the colour of constant frequency and wavelength but of infinite dominance.

Results:

- ✓ The frequency of white light is found to be 8.7806×10^{14} Hz
- ✓ The wavelength of white light is found to be 3416.6×10^{-10} M
- ✓ The dominance of white light is always infinity.
  That is frequency dominance is infinity.