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Resonance and the Cosmos

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ABSTRACT

The cosmos is made up of string like objects or waves hence every particle must have its frequency. Here comes the concept of resonance whose effects we know can be devastating. So resonance is a way by which we can control many natural phenomena of the cosmos. This paper is concentrated on those capabilities of resonance.

KEYWORDS: Resonance, Cosmos, Implications Of Resonance

1. INTRODUCTION

Resonance has the capacity to amplify the waves on which it takes place. The results of resonance can be massive destructions. First let's understand how sound and light waves can be generated. For example if we collide two objects with little energy then sound waves will be generated if not the molecular structure of the object breaks up before that. This is because the energy of the objects is absorbed by the objects and due to state change they become unstable. So they release back the energy in the form of low frequency sound waves. Next if we collide them with a bit larger energy then it will emit infra red waves that are having greater frequency than sound waves in a similar manner. This is why heat is produced. Colliding with even larger energies will emit light waves as light wave has even higher frequencies. But why a fire emits light. In fact when we heat an object its molecular structure breaks and it forms a gaseous substance which burns or else the whole object will get burnt due to the heat. Whatever be the case a controlled or an uncontrolled combustion takes place. In either cases the heat energy is absorbed as infra red waves which are in multiple number and as a result sums up and emitted back as light waves. In fact from those substances both sort of infra red as well visible light spectrum comes out due to which heat and light is generated. Also now if we collide two objects with even more energy then ultra violet rays, x rays and gamma rays will be emitted subsequently. This is one of the and most common ways how different types of waves can be generated.

Now we shall come to the point and understand the effect of resonance in the cosmos. Resonance occurs when the frequency of a wave matches the resonant frequency of the object. But how should we know what is the resonant frequency of an object? Well resonant frequency is the natural frequency of an object. This is nothing but the frequency at which the wave or particle vibrates in the medium. So for resonance to take place only completely constructive interference is required. Two waves similar in wavelength if interferes constructively in phase then a constructive interference takes place and amplitude will increase. But if the same wave interferes destructively then destructive interference will take place and amplitude will decrease. If for a considerate amount of time

constructive interference is made to happen at a place then the amplitude of the waves can rise considerably. So for making in phase waves interact its frequency too should be same. This is because wavelength = speed / frequency and hence can be easily understood. This is why if a similar frequency can be applied to a vibrating object or wave it can reach resonance condition which can see considerably high amplitude of the vibrations. Now how this is so important for the cosmos.

As it's written in my previously article **Evolution Of The Cosmos And Concept Of Time** cosmos is built of particles which are nothing but formed of waves or vibrating strings. Hence every particle has a frequency. Now there are vibrations in molecular structure as well as in between two or more molecules in a substance. In the later it is due to heat. If there would have been no infrared waves in the cosmos most probably every substance would be probably solid and while there are infrared waves it is absorbed by the substances as a result turbulence increases in the substance due to its conversion into kinetic energy and so each and every molecule tries to push its nearby molecule and so as a result the whole structure becomes less compact and gets converted to liquid or gas. This is why different forms of substance gets converted. In the quanta level if we try to understand what happens is the particles gather the energy as a gradient in the perpendicular direction to the particles spin. So the spinning particles start to move in that direction which is linear in general terms and hence is a type of kinetic energy. The molecular structures also has a frequency and that because of the bonding is not stable and electrons are changing states as they revolve around one atomic nuclei.

In fact what happens is that in a molecular structure is that the covalent electrons revolve around the heavier atomic nuclei while the lighter atomic nuclei and its electrons dragged with it and with itself rotating. This makes the electrons to revolve around both the nuclei. Thus molecular bonding is formed. But as the overall atomic structure is changing its place around it can also said to be vibrating. Here the gravitational and electrostatic forces are negligible and somewhat cancel each other. All these have a frequency. Though the frequency of the sub atomic particles and molecular structure can be said to be fixed but the frequency of the inter-molecular structure varies and so is less significant here. As a whole if we see in case of molecules the energy of the whole atom that too rotates can be thought as a single energy wave which is travelling in a circular orbit. So we shall now consider the case of normal waves, sub atomic particles and molecular structures to see what resonance can do.

Lets first think of a infrared wave. Immense heat can be produced if a series of infra red waves can be resonated. Now in the upper layers of the atmosphere temperature is cold with lots of water vapour present. Now if it can be further cooled with water vapour getting converted to rain droplets it can start raining. This can be done by increasing the heat absorbing capability of its surrounding which can be obtained by resonance. It is observed that the heat absorbing capability of an atom or a molecule is a function of its frequency which are studied as phonons. It has been seen that if the amplitude of the vibrating atoms in a molecule is low or has been decreased it can absorb more heat energy until it releases back the energy, but to keep in mind that while decreasing the amplitude of the energy of the rotating atom we should not decrease it so much that its bonds are broken. This can be achieved by destructive interference. In this way the surrounding can work as a heat absorber and the main region can convert the water vapour to water droplets and it could rain out. This is how heat and rain can be made to happen artificially.

Now we know the earth's crust has very low amplitude seismic waves. If we can resonate them then earthquakes and volcanoes can be made to happen artificially. This will happen as the amplitude of earth's vibration will increase significantly ultimately resulting in vibration of the ground or creation of earthquakes and even volcanoes. Winds can also be created in a similar way as rain. Wind occurs if the density of a portion of air is low (which can be due to heat) as compared to some other portion (which has less heat). So a wind flows from high density of air region to that with low density of air. Even tsunamis can be created as earthquakes can be made. This is how some of the natural disasters can be made artificially.

Now the biggest thing that can be obtained from resonance are destruction of the earth or the universes. As every object is made up of vibrating waves so if they can be resonated then the whole atomic structure can be destroyed and hence the earth or even the universe can

be. But to achieve it is a very difficult task and almost unrealistic. So this is why resonance can be so deadly and its smallest examples we can see by watching that a wine glass can be broken by sound waves or a loud music makes the ground vibrate. Hope this little discussion will be helpful for you in understanding the nature and consequences of resonance. Nikola Tesla once said we all including the universe have a frequency and we just require to know it to unleash its potential. This is what are the real consequences of resonance.

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3. CONCLUSION

From this article it can be concluded that the law of resonance has its own implications and proper implementation can provide suitable gain in progress of humanity.

Conflict of interest statement

Authors declare that they do not have any conflict of interest.

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