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S . Palchoudhury
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Brownian Motion and Infrared Wave Force

Sankar Palchoudhury

101/673/A, College Para, P.O. Kharia, Ward No. 21, Dist.
Jalpaiguri, Pin Code -735101, West Bengal, India

sankarpalchoudhury@gmail.com

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ABSTRACT

The Brownian motion, thermodynamics performance and existence or non-existence of atmosphere in the earth and other celestial bodies depends on the effect of heat energy wave force i.e. Infra-red wave force on the outer surface of tiny particles like atoms, molecules, etc.

Keywords: Brownian Motion, Wave force, Outer surface, Exert

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INTRODUCTION

Palchoudhury gas theory is "Behaviour of gases depends on the exertion of heat energy wave force i.e. infra-red wave force on the outer surface of the tiny particles like atoms, molecules, etc." and Palchoudhury gas equation is $PS = CnAT$ (Palchoudhury, 2016). Both help to explain the various cause of gases behaviour such as Brownian motion, thermodynamics performance and existence or non-existence of atmosphere in the earth and other celestial bodies.

BROWNIAN MOTION

The Brownian motion or the Brownian movement is the confirmed phenomena in the community of scientists. Scottish Botanist Robert Brown (1773-1858) ascertained the Brownian motion by microscopic observation the flow of a pollen grain in a liquid in a random & haphazard manner in all direction in 1827 (Brown, 1827).

It is the random motion of particles suspended in a fluid (liquid or gas) resulting from their collision with the fast-moving atoms or molecules in the gas or liquid (Feynman, Leighton, & Sands, 1965). Brown did not determine any cause behind the movement of the pollen grain. It is general knowledge, later the discovery of Brownian motion, with the help of the conception molecular motion of gases explanation being on about the behaviour of gases as well as Brownian motion.

Palchoudhury in his paper shows the behaviour of gases depends on the exertion of the heat energy wave force i.e. infrared wave force on the outer surface of tiny particles atoms, molecules, etc. (Palchoudhury, 2016). At this moment, the cause of Brownian motion is shown about the dependent on the exertion of infrared wave power as follows. In Physics, it is general knowledge. There is greater free space between as well as among molecules in the liquid than solid. Again, there is also more significant free space between as well as among molecules in gases than the liquid. Infra-red waves exert a continuous force on covering some outer surface of tiny particles-atoms, molecules, etc. of gases and reserve gaps between as well as among small particles of gases. The tiny particles like atoms, molecules, and the Brownian particle feel directly infra-red wave force and move here and there through gases on the available open space. On the other hand, larger particles like a piece of stone, wood, etc. cannot move through gases for lack of adequate gap according to their size between as well as among molecules. These larger particles like a piece of stone, wood feel indirectly infra-red wave force on outer surface through surrounding tiny particle-atoms, molecules, Brownian particles, etc. (Palchoudhury, 2016).

During the effect of the infra-red wave force, tiny particles move from one end to other to adjust the strength with other molecules (Palchoudhury, 2016).

For example, perfume moves and spreads all over the room until full saturation and adjustment the force among other

various molecules and remains state of equilibrium. The particles of Sugar and Salt move and mix-up in water until full saturation and adjustment the strength among other various molecules and remains state of balance. But Brownian particles are uncommon to other molecules in shape and size. Therefore, it feels different infra-red wave force on outer surface than other molecules. Hence, extraordinary few Brownian particle cannot adjust forces with other molecules and move randomly. Above discussion is the actual explanation of Brownian motion.

IN QUESTION OF ATMOSPHERE

It is general knowledge in physics that the atmosphere of the earth is the mixture of different tiny particles such as nitrogen, oxygen, carbon dioxide, water vapour and others those exist surround our planet-the earth (Atmosphere,). The primary source of infra-red waves surrounding the earth is the sun. We feel sun heat i.e. infra-red waves every day surrounding the earth. A field of infra-red waves exist due to the continuous flow of infra-red waves from the sun surround the earth where atoms, molecules, Brownian particles and larger particles all sink. Infra-red wave plays up & down between as well as among particles in this field. All particles bear some energy for the effect of infra-red wave's force in this area. Infra-red waves and tiny particles co-exist together with each other that is called as the atmosphere of the earth (Palchoudhury, 2016). The atmosphere of the earth and other heavenly bodies is a large scale of gas as compare to gases in a container. Palchoudhury gas law is applicable for atmospheric gas as apply in the gas of a container. Co-existence of infra-red waves and elements of atmosphere maintain the shape and size of the air of the earth and heavenly bodies as the keep of a gases in a container. Existence and non-existence character of the atmosphere of the heavenly bodies depend on the availability and co-existence of gas molecules like nitrogen, oxygen, etc. and infra-red waves surrounding the celestial bodies. The boundary of gases maintains by the surface of a gas container. The edge of atmosphere retains by the gravitational pull of the heavenly bodies(Palchoudhury, 2016). With the variation of the temperature, the action of infrared wave force varies on the outer surface of among tiny particles of the atmosphere of the earth, and comparatively lighter matter evaporates than heavier one and winds flows.

THERMO-DYNAMICAL CONVERSION

A piston of a heat engine is a massive particle. Molecules of gases in the gas chamber of a heat engine bear some energy for the effect of the infra-red wave force on the outer surface of tiny particles. A piston of a heat engine, a massive particle feel some power by the infra-red wave force indirectly on the outer surface through surrounding molecules. And when the piston moves some direction it does some work. Palchoudhury gas equation is as follows (Palchoudhury, 2016),

$$PS = CnAT \quad (1)$$

where here P is the pressure of gases in a closed gas container, *S is* Inner surface area of a closed gas container, A is the portion of outer surface area of molecules covered by the heat energy wave i.e. infra-red wave, *n* is number of moles, T is the Temperature of the gases, C is Constant of proportionality. We can state

$$PS = F \quad (2)$$

In physics, it is common knowledge, the work is said to be done by force when the piston (point of application) moves a distance along with the direction of the force.

$$W = Fd \quad (3)$$

W is the work, F is a force, d is the distance covered. By putting the value of F from (2) into Eq (3). We can state (Palchoudhury, 2016),

$$W = PSd \quad (4)$$

This is the actual description of basic cause of thermodynamically conversion.

CONCLUSION

Palchoudhury gas theory and gas equation are applicable for actual explanation of various gas behaviour.

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