
The ball of lightning structure and creation

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To cite this article:

Abdalla A. Jaber. The Ball of Lightning Structure and Creation. *American Journal of Physics and Applications*.

Vol. 2, No. 6, 2014, pp. 118-120. doi: 10.11648/j.ajpa.20140206.12

Abstract: By studying a drop of water reaction and behavior on a hot surface while gradually increasing the surface temperature, and by making more experiments on the Leidenfrost Effect, the author explained the ball lightning structure and its dynamic release of energy through one single system of physics. The dynamic action starts when a drop of water is entered in an environment of 10000 °C temperature. The high temperature causes the water drop to form a rotating sphere which has a constant temperature of 99 °C. The sphere of water transforms all extra thermal energy affecting its constant temperature to gravity (experimental discovery), and while water sphere is rotating its center, its radius crosses the gravity field. So according to Fleming's left hand rule, an electrical current in the water mass will be created. This electrical current will split the water molecule to oxygen and hydrogen which will burn outside the water sphere to create the needed thermo energy to continue the rotation of the water sphere and so on the production of gravity, thermal energy, electromagnetic field and light. Jaber's law gives a new understanding of gravity and compares between stars and ball of lightning, and solves ambiguous matters in our understanding of stars, planets and moons behavior. The second step of understanding ball lightning structure led the author to build his theories, which explained the relation between gravity and temperature of objects, tying his theories with experimental discovery of repulsion between gravity and heat.

Keywords: Experiment, Observing and Results, Conclusions, References

1. Experiment

If we drip some drops of water on a hot surface while increasing its temperature, we will observe that these drops will evaporate in a short time. However when the surface reaches the temperature of 220 °C the water drop will act in a different way. It will form a sphere which rotates around its center without touching the hot surface and it will take a much longer time to evaporate (2-3 min.). This is known in physics as Leidenfrost Effect" *Phys. Rev. Lett.* 96, 154502".

After Leidenfrost Effect occurs, we will use a flame as another heat factor at 2000 °C to surround the water sphere from all sides. During the experiment we will continuously increase the temperature of both heat factors. At the same time we will be searching for any abilities that the sphere of water has, like gravity or electromagnetic field. So we will approach other objects with different weights and sizes near to the formed sphere of water.

As a second part of the experiment we will approach a metallic spoon (or any other metallic object) forward the formed sphere of water, and we will continue in repeating this part of experiment but every time with a different

temperature of the spoon, starting from the room temperature ending with 500 °C. While doing this part of the experiment we will keep observing the behavior of the formed sphere of water to the metallic spoon.

2. Observations and Results

From the experiment we will see that the water sphere has a temperature of 99 °C. This temperature remains constant while the environment temperature surrounding it increases from 220 °C to 3000 °C (which was the maximum temperature that could be reached in the used laboratory).

Secondly, we can also observe that the water sphere has the ability to attract all kinds of materials (gravity), and this ability increases as the temperature increase (the temperature of the surface where the sphere of water is formed). Furthermore, it also has electromagnetic field which again increases its attraction area when affecting temperature increases. At an environment temperature of 3000 °C we will observe cases of flame coming out of the water sphere surface.

From the second part of our experiment we will observe an

attraction between the sphere of water and the metallic spoon, which is inversely proportional with the temperature of the metallic spoon. When the temperature of metallic spoon reaches 220 °C, the behavior of the attraction between the formed sphere of water and the metallic spoon turns to repulsion, which is directly proportional with the temperature of the metallic spoon.

3. Conclusions on the First Part of the Experiment

- 1 The known explanation of Leidenfrost Effect (a liquid in proximity to a surface much hotter than the liquid's boiling point will produce a layer of vapor that insulates the liquid and physically separates it from the surface) fails, because during our experiment we heated the drop of water from all directions with a direct flame giving no chance for a layer of vapor to be held from the upper or lateral sides.
- 2 The water sphere has the ability to transform thermal energy into gravity. This is the reason why it keeps a constant temperature, where the sphere of water transforms all extra thermal energy affecting its constant temperature to gravity towards its center.
- 3 Gravity is not as we know from Isaac Newton and his law of gravitation (any two objects in the Universe exert a force of attraction on each other, and this relationship is based on the mass of the two objects and the distance between them, the greater the mass of the two objects and the shorter the distance between them, the stronger the pull of the gravitational forces they exert on each other), but it is an energy transformed from thermo energy.
- 4 Jaber's law of gravity (If the movement of an object is accompanied with a loss of thermal energy (in calculation), then the quantity of lost thermal energy is equal to a central gravitation energy gained by the moving object).
- 5 Ball of lightning phenomenon happened when a drop of water (at Leidenfrost Effect behavior) enters an environment of 10000 °C temperature. The high temperature causes the water drop to form a rotating sphere which has a constant temperature of 99 °C. The sphere of water transforms all extra thermal energy affecting its constant temperature to gravity, while water sphere is rotating its center, its radius crosses the gravity field. So according to Fleming's left hand rule, an electrical current in the water mass will be created. This electrical current will split water molecule to oxygen and hydrogen which will burn outside the water sphere to create the needed thermo energy to continue the production of gravity, electromagnetic field, thermal energy and light.
- 6 Gravity cannot be found without finding the other three bases heat, electromagnetic field and rotating water sphere.
- 7 We can produce clear and very cheap energy by creating a chain of ball lightning to produce thermo energy. Even in space we can use this method for energy supply where there is no oxygen.
- 8 Ball of lightning is just a small star, and this is why I gave my whole study and discovery the title of the ball lightning structure and creation, because I believe that a laboratory ball lightning is going to change our future in understanding physics and astronomy, as much as saving our planet from CO₂ and global warming.
- 9 Stars have gravity, and electromagnetic fields and they are releasing thermal energy. So there should be a sphere of water which is rotating around its center and this is the center of each star.
- 10 Jaber's law explains the spectrum analysis of water steam coming out of the sun black spots". Press Release no. 115 -- July 17, 1997 University of Waterloo"
- 11 Jaber's law explains the water found on our moon and in solar winds.
- 12 Jaber's law explains the sun density.
- 13 Jaber's law explains the temperature difference between corona and the photosphere layer in the sun's atmosphere, where there is no hot core in the sun but just a sphere of water with a temperature lower than 99 degrees.
- 14 Jaber's law explains the solar neutrino problem, where there is no action of nuclear fusion inside the sun core.
- 15 Planets centers are spheres of water, which did not reach the needed temperature for producing enough atoms of hydrogen and oxygen to act like stars, but they produce enough atoms to keep the inner layer of planet mild and so on keeping the sphere of water rotating itself to produce gravity, electromagnetic fields, heat and water (from burning H and O₂ in the inner layers of planet).
- 16 Each planet behavior depends on the mass of the water sphere in its centre, and the speed of rotating of that sphere.
- 17 Jaber's law explains the source of water and oceans on our planet (the result of condensation of water steam carried by volcano action during and after the earth forming)
- 18 Jaber's law explains the very new discovery of much water in inner layers of earth by seismic researchers " DOI: 10.1126/science.1253358", where the studies proved that a reservoir of water as much as three times the volume of all the oceans exist in our planet inner layers .
- 19 Jaber's law explains the source of the inner thermo-energy in our planet (the split of water molecule to oxygen and hydrogen in the core will keep feeding the hot layer with the needed fuel, and so will keep burning outside the water sphere, and create the needed thermo energy to keep the sphere of water surrounded with enough thermo energy to create more gravity and more atoms of O₂ and H and so on) .
- 20 Jaber's law explains the core of earth as a cold water

(temperature less than 99 °C), which explains why the p-waves are faster in the core during seismic Tomography studies.

- 21 Jaber's law explains the reason of rotating of stars, planets and moons (the core is rotating around its center transforming thermo energy to gravity and pulling the upper layers to rotate around the same center).
- 22 Jaber's law explains the electromagnetic fields in stars, planets and moons (they are the result of electricity generating in the core).
- 23 Jaber's law explains the source of water steam in volcano (they are the result of burning O₂ and H outside of the inner core, but inside the hot layers of the earth, producing water and heat).
- 24 Planets and moon which do not rotate themselves are dead (they have no gravity, where they did not succeed in keeping the water spheres in their centers, so the water sphere evaporated and left centers of each planet empty).
- 25 Jaber's law explains why we observe volcano craters in dead moons and planets, (volcano craters had been formed when water spheres evaporated from these planets cores, the water steam pushed itself out of the solid sphere because of the pressure produced from vaporizing water).
- 26 Jaber's law explains dead planets and moons as empty core spheres, so they have lower density.

4. Conclusions on the Second Part of the Experiment

1. Jaber's discovery of a relation between gravity and thermal energy "gravity is affecting thermal energy with a repulsion force, which is directly proportional with the temperature of the affected object (the affected object by gravity) ".
2. Jaber's theory of orbits around stars "the repulsion of gravity to thermal energy causes planets to keep almost a constant distance between planets and their star, where

the affection of both forces (attraction of the gravity from both sides, and the repulsion between thermal energy and gravity) causes planets to orbit their star".

3. In the case of Lidenfrost Effect, the formed sphere of water not touching the hot surface because of the repulsion between the hot surface and the gravity produced by the sphere of water. This is why the sphere of water flies over the hot surface and not because of a lay of steam as used to be explained before.
4. Jaber's theory explains the change of the planet's orbit radius during the year (Aphelion and Perihelion), for example when the earth decreases the reception of thermal energy in winter (because of the axial tilt of our planet). Then the repulsion between the earth's gravity and the sun's thermal energy decreases too, and so the earth moves closer to the sun (Perihelion). In summer the reception of thermal energy increases, so the repulsion between our planet and the sun increases too, so the earth moves farther from the sun (Aphelion), and this is why in winter the earth registers the closest point to the sun and in summer registers the farthest point.
5. Jaber's discovery explains the behavior of the candle flame in the zero gravity, (The forms of flames on the earth are familiar to everyone. We all know that a burning candle flame looks like a teardrop-shaped, and carries soot to the flame's tip, making it yellow. However in zero gravity the burning candle has a very different shape and behavior. It has a blue spherical shape flame, and the soot is free). Also the zero gravity flame proves the repulsion between gravity and thermal energy.

References

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- [3] Journal reference: Science, DOI: 10.1126/science.1253358