

ANOTHER BALL LIGHTNING MYSTERY SOLVED

I guess that every educated person in the world knows about famous Archimedes' Principle of Buoyancy? This principle states that: "Any material body wholly or partially immersed in a fluid experiences an up-thrust force equal to, but opposite in sense to, the weight of the fluid displaced". See Figure 1.

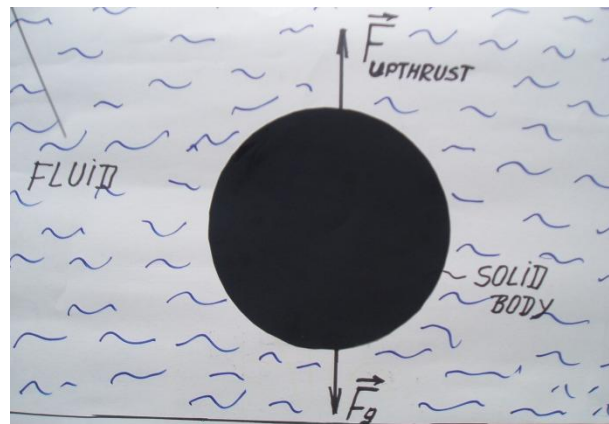


Fig. 1

As I explained in my publications (posted in my web-site), and as I demonstrated on ANGEL I, ball lightning's nucleus represents 2-D closed surface – manifold: something like balloon without 3-D space inside and zero thickness of its walls. Every 'normal' 3-D material solid body has surface which separates this body from the surrounding world. Beneath this 2-D surface there is 3-D space-volume which is filled by some material substance. When immersed in a reservoir with fluid (or in air), this body either falls to the bottom of the reservoir, either climbs up, either stays on its initial place. That depends of the weight of the body, on the value of its 3-D volume, and on density of the fluid. The formula for this process is simple:

$$F_{upthrust} = V \times \gamma_f ,$$

Where,

V - immersed volume of the solid body

γ_f - volume density of the fluid

$$F_{upthrust} = F_g , \text{ equilibrium!}$$

This formula works ONLY for 3-D material body. What will happen to 2-D quantum material body (like ball lightning) if immersed in 'normal' 3-D fluid? Natural ball lightning appears and exists for short time (from few seconds to few minutes) in the air-atmosphere surrounding our planet. Ball lightning is bright-shining object, looks like stable plasma formation, and most likely represents autonomous material body (not physical/chemical process as some scientists claim). So, we could expect ball lightning to be much lighter than the volume of air which is replaced by the ball lightning body, and, by consequence, to climb up as balloon filled with hot air or with light gas (as helium or hydrogen). However, nothing similar happens with ball lightning. During all the time of its existence ball lightning is 'unreasonably' floating around in horizontal plan, not climbing up and not falling down to the earth's surface. Only factors influencing the ball lightning motion are the motion of the air in contact with ball lightning surface and close electrical charges (ball lightning represents spherical capacitor with separated electrical charges). Ball lightning can be swept away also by some material object – broom, for example. All these factors are 'outside' factors having nothing to do with the 'inside' of ball lightning body. Ball lightning researchers cannot explain this unusual phenomenon with known physical laws. From their side, conventional scientists are not happy also with the existence of such 'abnormal' material object with so crazy behavior. And they prefer not to touch this problem at all. They suggest: ball lightning represents some unknown chemistry, or some stable plasma formation. There is nothing special, nothing to worry about ball lightning 'crazy' behavior.

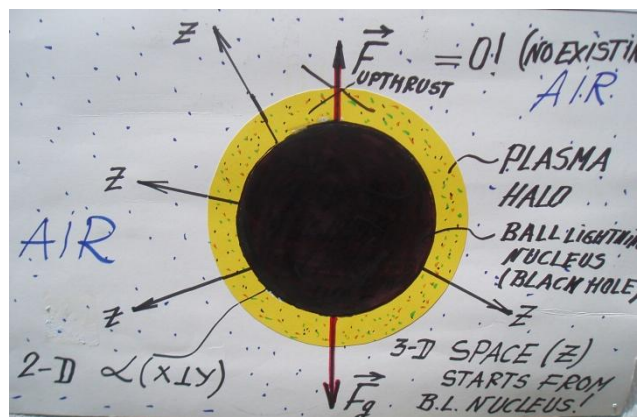


Fig. 2

But, but, it's not so simple as it looks at first glance. Ball lightning is unknown form of matter – 2-D material object with no volume/space beneath its 2-D boundary-surface. People know that every new discovered physical phenomenon becomes basis of new breakthrough practical applications. Ball lightning's unusual quantum features and behavior will become (no doubt) a front-line for the future major technological achievements of our civilization.

Such great technological achievement will be the use of quantum phenomenon of 'creation or destruction' of the space by ball lightning. In a video posted in my web-site I demonstrated the creation of space at the moment when ball lightning disappears. In some my experiments conducted in Canada I demonstrated the destruction of the space when ball lightning appears. These two opposite quantum events can be used as powerful fuel less source of generation of free quantum energy!

What about ball lightning existing in fluid (in air, for example)? Ball lightning has nothing under its 2-D quantum shirt: no space, no material substance. Hence, the Archimedes' Principle of Buoyancy doesn't work for this unusual macro-quantum material object. There is no space inside ball lightning's nucleus, there is no material substance that occupies this non-existing volume, there is no up-thrust force that lifts the body of ball lightning up in the atmosphere! Ball lightning's nucleus destroys the 3-D space inside its non-existing 3-D body. Ball lightning is not balloon filled with hot air or with helium. Ball lightning is filled with nothing material (space including; space is material substance too – material continuum). 'Nothing' means no reality at all. 'Nothing' is equal to 'non-existing'. The 'inside' cause of the phenomenon 'buoyancy' is the existing of real 3-D volume (space) in the body of floating material body which is receptacle of material substance. No such receptacle – no inside cause for existing of this phenomenon!!!

Ball lightning nucleus represents physical point (with mass, but with no 3-D space inside). The mass of ball lightning nucleus is very negligible; up thrust force doesn't exist because there is no 3-D space inside ball lightning nucleus. At the same time, its 2-D surface (which is in contact with surrounding fluid) is big. This very, very light material physical point-body could fall down, anyway, due to its negligible weight (small fraction of gram), but this event doesn't happen because the big surface of ball lightning nucleus is attacked continuously by the moving in all directions air molecules (Brown Motion). Hence, ball lightning is in equilibrium with the air (no climbing up, no climbing down, no motion to the left, no motion to the right in horizontal plan). Only close electrical charges or internal motion in the fluid can influence the motion of ball lightning!

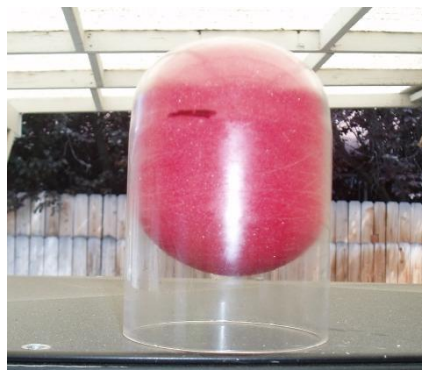


Fig. 3

Ball lightning confined in quartz bell jar is climbing up to the top of the bell jar. This happens because ball lightning heats the air inside of the bell jar, and as everybody knows, hot air always goes up exercising pressure over ball lightning's 2-D body. This 'hot wind' from below elevates ball lightning to the top of the bell jar-chamber. See Figure 3.

Beside its very interesting scientific importance, this unusual quantum phenomenon may find some very useful practical application! Can you help?

July, 2012, Salt Lake City, Utah, U.S.A.

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