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What is the Electron

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Abstract

Much of nuclear theory, testing and examination have to do with electrons. Are they particles, probably not, having no mass. The nucleus and other major particles such as the proton and the neutron have mass. So what are electrons?

1. EM waves

To understand electrons one needs to picture their activity. To do so we start with beams/rays of EM along with the radiation waves that denote any up and down motion during the forward flow of the beam. Consider that we are drawing a light beam or possibly a beam of higher wave frequency. Rounded waves pictured for sin waves. We will draw in our mind narrower waves. The flow of wave motion is assumed to pass up and down while providing the lateral speed c motion by which the beam transfers across space.

Assume waves that flow from left to right on a paper. Our picture starts by drawing 3 waves (1,2,3) up and down next to each other, all narrow and nearly touching each other. Consider the flow on seismograph detecting earth tremors. Pretend you are drawing the outlines of toothpicks for the waves. They are rounded at the top and open and continuously attached to the neighbor waves at the bottom. This standard picture of waves and would continue forever if there is no interference with the beam. What can interfere with radiation?

2 Gravity

The gravity of spatial masses such as the earth and the sun affect orbitals around them. Gravity bends/curves beam flow as suggested by Einstein. So the flow direction of the beam will vary under the influence of masses due to the local ‘net’ gravity force. Gravity adds the attraction concept that lets moving matter follow curved paths near the mass body. We can imagine a light beam also bends toward the mass, although its velocity prohibits orbiting as the light beam

essentially escapes the gravity quickly. Since the mass gravity is greatest at the surface, the bending of light would be maximum at the surface.

3 Bending the beam

Assume that our toothpick wave altitude extends toward the interfering mass. The curving of the central beam would cause the top of a toothpick wave to lean backward toward an adjacent wave. The mass position causes the bend of a wave to be is toward the wave that precedes it. Waves have altitudes perpendicular to the beam flow and somewhat parallel to other waves. If the beam curves a beam altitude will not be exactly parallel to its prior wave. Draw another wave - #4 bent backward and causing beam 4 to overlap the prior beam 3

The original waves extended to their altitude perpendicular or by 90 degrees. If a bend occurs when a next wave (4) we draw arrives, that beam might bend back by 1x degree so the wave might appear to angle upward by less than 90 degrees. Perhaps that bend is sufficient to cause wave 4 to touch wave 3. The flow is going up the newest wave (4) and down the prior wave (3) at point of contact. What we have is a spin due to two opposite flows intersecting. It suggests some electrical existence.

4 Electrons

We can assume a more extensive bend will cause overlap which goes beyond contact. Perhaps bent wave 4 actually intersected prior wave 3 and crossed its flow rather than just meeting it. The cross over line ultimately must cross back somewhere above the first intersection with wave 3 to complete wave 4. The two crossings include the upward flow of wave 4 completed by the second crossing by the downward flow of wave 4. The two crossings are electrons with opposite spins due to the flow direction of our wave. Physics calls the spins the electron phase and designates them as ½ spin and – 1/2 spin to designate spin direction. In our first example our contact point also suggests a single electron with unknown spin. Also we learn here why electrons are connected by quantum numbers. Being simply crossings, they either exist or don't.

Electrons are crossings/intersections of wave flow!

5 Matter creation

Neils Bohr assigned orbits and distances to electrons within matter leading to the periodic table. The placement of electrons was batched within shell groupings. If we are to find shell groupings, this work leads to the idea of creating matter from EM radiation. We have already supposed that wave flow and gravitational bending creates electrons. If you have electrons you have matter. Gravitational bending is most likely to occur near a mass surface and will be lesser when the radiation flow is higher in the atmosphere for example.

The gravity action on EM beams in Earth's atmosphere causes mass creation there to be constantly recreated. This idea extends to the mass surface where more complex matter is involved.

6 Shells

So far we have formed 2 electrons by interacting 2 adjacent waves. The Bohr electrons orbit the nucleus within increasingly distant shells. There are shells and subshells. The first Bohr sub-shell is to contain up to 2 electrons which we have identified. Now what happens if the bending backward by wave 4 extends to the next back wave 2 and thus wave 4 intersects wave 3 and wave 2. The upward flow (outline) of our bent wave 4 must cross both sides of wave 3 and being so close will probably cross the down flow of wave 2. The downward flow of wave 4 must re-cross the same flows to return to complete its wave. That is 6 crossings, 3 of each spin.

The second subshell –p-is defined as having 6 electrons. If we bend ever further into wave #1, that adds 4 more crossings giving the 10 crossings of subshell -d. We have counted correctly to the third subshell. Reality is the number of shells which are 2,8,18 etc. These are sums of the electrons identified by wave #4 crossing #3,#2, and #1. Focusing on the 8 electrons of 6+2, we realize that assigning shells to a nucleus we must ask where is the nucleus and which shell belongs to which nucleus? Does each wave become an atom, or are the waves a collection which makes up the atom of matter? How is one atom distinguished from the next one? Crossings of multiple waves become assigned to one central region - the nucleus. We arrived at the shell with 8 electrons by adding the 6 crossings which wave#4 made and we realize that wave #3 must also cross into #2 which gives us 2 more yielding 8 total crossings. The bending can be extended to give the further shells in more complex series of crossings. Wave #4 crossing wave #3,#2, and #1 gives 10 crossings along with the 6 crossings by wave #3 bending back and 2 by wave #2 bending back.

7 Protons and Neutrons

All crossings/electrons are equal in size, ie. some portion of the loop flow. Electrons weigh the fixed value of 1/1800 of a proton. Then the loop itself may provide sections which represent protons. Loops without a crossing would then be the neutron. Highly bent beams can produce multiply crossed and uncrossed loops

8 Spectrum of existence

I have written about the spectrum of existence in various other papers. It is my idea of extending the spectrum of EM radiation in both directions. The very long wave beams as they arrive at matter are able to penetrate like an arrow. During their passage thru the mass they become diminished and exit the opposite side. The interaction of these diminished beams with the undiminished beams coming down from outer space causes a 'net' of unbalanced radiation pressure which results in a downward force and creates our attraction gravity.

Here we have been interested in the short waves as the closer the waves to each other, the less the bending that is needed to cause overlapping and thus crossings. It is said that x-rays would be harmful to us but we are protected by our atmosphere which defeats the radiation. This paper reveals that the way we are protected is by the radiation being converted to mass as gasses in the atmosphere and into solids nearer to the surface.

The bending that I assigned to gravity beams seems insufficient to fully handle the radiation. It suggests that the curvature of the beams must be extended by colliding with existing matter. That could cause extreme bending and wrap around by the beam so its electrons remain in place. Remaining in place is the difference between radiation and matter. It is the crossings/electrons that remain while the radiation continues flowing thru space.

9 Open issues

Is EM radiation a requisite or does the theory and bending apply to other radiation? Does newly created mass remain in the atmosphere and ultimately gets pulled down by gravity or does it continue flowing onward? As we have bending as the source for creation of matter, the way to remove electrons from matter is to lessen the bend/curl of the matter form. This suggests why there is nuclear decay and the potential to decay every element in stages.

My models are based on motions and I prefer to replace the concept of charge with the direction of motion. This model displays the need for motion in any gravity theory rather than focusing on electrostatics.

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References

[1A] Paul Schroeder 'Infinity and Reality' (The Universe is otherwise Part 2a), (2018) *Proceedings of the CNPS (*2016), and Global Journal 2018

[1B] Paul Schroeder 'Structure and Gravity' (The Universe is otherwise Part 2b), (2018) *Proceedings of the CNPS (*2016) Global Journal 2018

[1C] Paul Schroeder 'Infinity and Pushing Gravity Lead to Revelations' (The Universe is otherwise Part 2c), (2018) *Proceedings of the CNPS (*2016) and Global Journal 2018

[2] Paul Schroeder, **The Universe is Otherwise** (Booksurge/Createa- space, 2006).

[3] Paul Schroeder, "Paeps: External Gravity Particles (The Universe is Otherwise: Part 1)", (2008), http://www.worldsci.org/php/index. php?tab0=Abstracts&tab1=Display&id=3224&tab=2.

[4] Paul Schroeder, "The Spectrum of Existence (The Universe is Otherwise: Part 2)", (2008), http://www.worldsci.org/php/index.php ?tab0=Abstracts&tab1=Display&id=4152&tab=2.

[5] Paul Schroeder, "Motions, Rotations and Revolutions (The Universe is Otherwise: Part 3)", (2008), http://www.worldsci.org/ php/index.php?tab0=Abstracts&tab1=Display&id=3229&tab=2.

[6] Paul Schroeder, "Gravity from the Ground Up", *Proceedings of the NPA* **7**: 498-503 (2010).

(7) Paul Schroeder, "Get 'Real' About Gravity" ", *Proceedings of the NPA* 8: 521-529 (2011).

(8) Paul Schroeder, "Ignoring Newton's Hints Brought Scientific Chaos" ", *Proceedings of the NPA* 8: 521-529 (2011).

[12] Xin-She Yang and Qian-Shen Wang, " Gravity Anomaly During the Mohe Total Solar Eclipse .." Astrophysics and Space Science 282: p245-253 2002.

[13] Paul Schroeder, "Gravity and Revolution Rates Within Galaxies" ", *Proceedings of the NPA* 9 (2012).

[14] Paul Schroeder, "Creating Matter From EM Radiation" ", *Proceedings of the NPA* 9 (2012). *pp. 510-513*

[15] Paul Schroeder, "Mass Rotation Controls Orbiting" ", *Proceedings of the NPA*10 (2013).

[16] Paul Schroeder, "Creating Matter From EM Radiation" ", *Proceedings of the NPA* 10 (2013).

[17] Paul Schroeder, Arthur Ramthum, Robert De Hilster, "Gravity is a Pushing Force.", *Proceedings CNPS* (2016).

[21] Paul Schroeder "External Gravity Theory and Gravity 'Bumps' During Eclipses." Paul's cabinetl [2016

[22] Paul Schroeder "The Physical Nature of the Electron" Paul's cabinet [2019]