Discovery on 4/8/2022 5:06 AM, Gene Preston wrote:

For some time I've suspected the neutron may be a tiny black hole. However the conventional gravity equations do not work at all at that scale. What seemed to be missing to me is that at that tiny scale we need a very large number to cancel the very small size so that the overall physics works at the tiny scale and the galactic scale. While watching TV I hit pay dirt. I thought of the mass as a distributed source of flux that goes outward from a point or central region. The mass has to go through a boundary whose surface area is proportional to r^2. If we took the gradient at that r distance, that is proportional to another 1/r factor. So the flux is mass m/r^2 divided by r. The formula m/r^3 should be the same ratio for the neutron as a small black hole. But we are not to think of the r^3 as volume but as a surface flux times a gradient. Here are the numbers: neutron mass = 1.675x10^-27 kgm and r = 0.8x10^-15 m. m/r^3 = **3.3x10^18**.

Searching for smallest black hole I find this:
https://www.nasa.gov/topics/universe/features/smallest_blackhole.html

The mass is 3.8 suns or 3.8 times 2x10^30 kgm and diameter of 15 miles or 24 km so the radius is 12 km. 3.8*2x10^30/(1.2x10^4)^3 **= 4.4x10^18**. Whammo this is it! Here we have a physics that makes sense and the concept works at the atomic level as well as the massive black hole level. Here is what is happening. The mass enclosed at an r is a source of flux through the surface and has a force associated with it that is inversely proportional to the size also. The energy density of matter is probably nearly maxed out for both the black hole and the neutron. There is a surface boundary with rapid change in the space so that inside the space there is a maximum energy density and outside the radius of collapse there is energy in that field also. Outside the surface the amount of mass inside a radius r divided by the flux through a surface times the gradient at that internal radius r is likely to be a constant so that the product of surface flux times gradient is a constant. If we imagined the speed of light is variable and creates the gravity field then the amount of mass inside a volume times the speed of light times the gradient in the speed of light would be a differential equation that is the correct gravity equation. It's not going to be Newton's equation. We need to find that equation because it is the correct solution to the gravity equation which will be calculated as a gradient in the speed of light

Gene Preston 4/8/2022

On 5/28/2022 posted the following:

I have the derivation almost finished. The mass would be 2G/c^2 = 1.48e-27 kgm but it's actually 1.675e-27 kgm. There is a slight nonlinearity in the integration of shells that I need to account for. One neutron does not emit radiation any more than one stationary electron. Quark-gluon is just a bookkeeping method which doesn't explain the energy in the gravity fields. I now think the entire mass of the universe is most likely tied up in the form of gravity field energy inside and outside particles.

The observer that travels to different locations always sees the same speed of light because the person's clock and ruler measurement devices change in proportion to the speed of light always giving the same speed of light number. This is a trick nature is playing on us. If you could travel inside the black hole you would not see a change in the speed of light. Except when you hit an event horizon it might take you an infinite amount of time from an external observer's viewpoint. From an external observer the event horizon has the rate of time flow = 0. In the neutron this needs to be at r=0 and not a shell. In order to shrink the singular point to r=0 it becomes necessary to change the gravity potential from a -1/r function to a e^(-1/r) function so the r=0 and r=infinity boundary conditions are met. Most likely Newton's gravity potential is just the first approximation of an exponential function. This e^(-1/r) format gives the 2G/c^2 value. But an assumption in the integral is that only enclosed mass affects the value of c. Clearly this cannot be true because gravity mass outside any value of r when integrating also affects the value of c.

I need to modify the integral to include all the gravity field energy for all r at every intermediate shell of energy as we integrate over the total space from r = 0 to infinity. This looks a bit like a convolution formulation. I should have the new integral soon. If it works it should hit the mass right on the nail without assuming the mass in advance but using other knows constants like G and c(inf) and E=mc^2 where these are all functions of r but looking inside the neutron form afar. Inside are the derivatives and integration of the inner workings of the neutron derived from variations of E=mc^2.

Math if you talk a kid out of investigating something he never will discover more details. We have to keep moving forward. So far I'm seeing a lot of things falling in place as they should. I'll stay on the current path.

Gene Preston 5/28/2022 Power Globers