The radius of the electron and why there are only left-handed neutrinos .

In the article about the big bang I have derived a formula in which the radius of a spherical object can be derived with a maximum density. No further contraction can take place.
This gives the possibility to calculate the radius of such an object when the mass is known.
I am talking about bodies such as a neutron star, a no longer active black hole and elementary particles.

The formula is: $r_0 = (2G/c^2).m_0$, m_0 is the measured mass of the body. $2G/c^2 = 1{,}48.10^{-27}$

For a neutron star, for example :

Measured mass: 1.5 * solar mass = $1{,}5.2.10^{30} = 3.10^{30}$
Measured radius: 9.5 km = 9.5 * 10^3 mtr

Check: $r_0 = 3*10^{30}.2.6{,}7.10^{-11}/(9.10^{16}) = 4{,}7 * 10^3$ mtr, this is awfully close to the measured value.

For a black hole in the centre of our galaxy:

Measured mass = about 4.1 * 10^6 solar masses = 4.1 * 2 * 10^{36} kg

Calculated radius: $r_0 = 3*10^{30}.2.6{,}7.10^{-11}/(9.10^{16}) = 4{,}7 * 10^3 = 12.2 * 10^6$ km. More than 24.4 million kilometres in diameter.

For an electron: $m_e = 9{,}1.10^{-31}$ kg.

Calculated radius: $r_e = m_e. (2G/c^2) = m_e. 1{,}48.10^{-27} = 9{,}1.1{,}48.10^{-27}.10^{-31} = 1{,}35.10^{-57}$ (m)
The resulting density of the electron is enormous:

$\rho_e = m_e/(r_e)^{-3}.(3/(4\pi) \approx 0{,}88*10^{140}$ kg/m^3

Remark: much larger than the Planck density of approximately $5{,}15*10^{96}$ kg/m^3 (but it is more of a vacuum-wave characteristic, the maximum energy of a vacuum wave).

The electron can thus indeed be regarded as a point mass. An electron neutrino would have an even smaller radius since the rest mass is even smaller.
It is interesting to think about this for a moment. A charged particle has a spin ½ . If you relativistically calculate on a sphere, no spin ½ will come out (solid sphere has spin 5/4) . That works for a hollow sphere, where the mass is then concentrated on the spherical surface. That form of a sphere gives a spin ½ (if you apply the conditions of current quantum mechanics, see also the website www.theorievanalles.nl) .
This also means that a rest mass particle can still be compressed into a more compact particle where the beam eventually becomes: $r_0 = (G/c^2).m_0$. (There is still some space left inside the ball). This then leads to a mini big bang of an electron-positron combination.
In this context it is then important to look at the annihilation of electron and a positron, each-other's anti-particles. Because they attract each other, they can merge at the interaction and annihilate each other as is shown by experiments.

The reaction mechanism may be as follows: the two particles melt together and contract together to a radius of $r_0 = (G/c^2).m_0$, where m_0 equal is to 2 times the mass of the participating 2 particles. As soon as r_0 is reached (contraction rate is equal to c), there is a mini Big Bang which then starts the vacuum expansion with a velocity of $\sqrt{3}.c$. When the radius of the mini Big Bang is $2,41.r_0$ (expansion rate is then c) there is formation out of the vacuum energy and through the Higgs mechanism 2 opposite directed photons.
This means that with the creation of a mini-Big Bang, information of the conservation laws prior to the mini-Big Bang is maintained within the vacuum energy sphere and passed on to the 2 created photons.

At the same time, can you wonder what happens when a neutrino and its anti-neutrino collide? Can that also yield a photon pair? I do not think so. Neutrinos are charge-free particles and that info is taken with them if they implode into a big bang. With neutrinos it is only about rest mass, kinetic energy, momentum and direction of rotation. It can at most yield a new neutrino anti-neutrino pair. With the enormously small radius of the neutrinos, the gravitational force is also enormous. However annihilation can only result in a new neutrino anti-neutrino pair.
This also solves the puzzle why no right-handed neutrinos are observed: they are there, but we call them anti-neutrinos. In terms of mass there is no difference, the only difference that remains is right-handedness and left-handedness. So one has called a left-hand neutrino matter, and a right-handed neutrino , antimatter . But there is no difference in terms of mass.
It will be different if you add charge to a rest mass particle. Then charge is the difference that distinguishes between matter and antimatter. Then one calls a negatively charged electron neutrino matter, but left or right turning does not matter (a negatively charged anti-electron neutrino is also an electron). The positively charged electron anti-neutrino (which is clockwise) is then called a positron (a positively charged left-rotating electron neutrino is therefore also a positron) and is then anti-matter.

Conclusion: matter is equal to anti-matter in terms of mass. The distinction is mainly made by charge (colour / electric). If there is no charge, the distinction is turning left or right.