

Dark Matter, Dark Energy, Gravity, and the Expansion of the Universe

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Abstract: The N Particle Model¹ leads directly to a simple theory of dark matter and dark energy. Dark matter and dark energy are made of the same particle, that I have named the omicron particle, the plural is omicra, as in omicra foam. In **The N Particle Model** paper (viXra:0907.0009) I referred to this critically important particle thirty-three times named only as the foam, and in that paper I purposely left out my theory of gravity, leaving that as a challenge for the readers (hint: there is a 5th Maxwell Equation for the Gravity Field, and it looks like Gauss's Law for the Electric Field), as I will also do here. One needs to read that paper for this paper to make sense.

Omicron particles are tiny, thin shell, spherical N particles, and are the particles of which the dark matter and dark energy that makes up 95% of the mass of the universe are made. Dark matter are close packed gravitationally bound omicron particles, an omicra foam, that surround the 5% regular matter and reflect N particle gravitons back to planets, suns, and black holes, making gravity fields capacitive, finite, in a steady state. Dark energy are close packed non-gravitationally bound omicron particles, an omicra foam, that occupies the space between the galaxies and their surrounding dark matter. The mass of the N particle is 2.97931×10^{-71} kg. Using a mass density of dark matter and dark energy "empty" space of 2.2×10^{-27} kg/m³, and a close packing efficiency of 74%, the radius of an omicron particle would be 1.337×10^{-15} m. The radius of omicron particles is constant throughout the universe and over time—the omicra foam is incompressible.

The speed of light is the speed of photons relative to the dark matter and dark energy omicra foam. The distance between galaxies is on average increasing, the expansion of the universe, that leads to the red shift of photons, although for some galaxies the distance between galaxies is decreasing, that leads to the blue shift of photons. Then the dark matter that surrounds galaxies is in motion relative to the dark energy between galaxies and photons must change velocity as they leave the dark matter and enter the dark energy or enter the dark matter and leave the dark energy. The red shifts, that occur at the interface of dark matter with dark energy, generate omicron particles, increasing the wavelength and decreasing the energy of photons, some of the point N particles of which photons are made of transitioning to omicron particles, conserving mass plus energy, increasing the number of dark energy omicron particles over time that gives rise to the expansion of the universe—the dark energy is increasing in volume and pushes on the dark matter surrounding galaxies.

In blue shifts, that like red shifts occur at the interface of dark matter with dark energy, and that analogous to red shifts, only in reverse, we might think omicron to point N particle transitions take place to increase the energy of the blue shifted photons, conserving mass plus energy, but I think instead what we will find is that the blue shifted photons have a decrease in wavelength but have no increase in energy, implying that omicron to point N particle transitions are not possible.

The gravitationally bound dark matter omicra foam around planets, suns, black holes, and galaxies, has spherical symmetry, has curvature, giving rise to what is called gravitational lensing. The idea that gravitational lensing is due to curved space is absurd. The massive black holes found at the center of galaxies are the vestigial remnants from the formation of galaxies, probably mostly iron, and are at the temperature of empty space, about 3 degrees Kelvin, ergo "black". The idea that black holes are "black" because their gravity field is so strong that light cannot escape is absurd.

¹ [The N Particle Model \(vixra.org\)](http://vixra.org)