Origins of the Hyperspherical Expansion

The clues for the creation of this models lies on Relativity and Quantum Mechanics. Relativity states that the energy of a particle with rest mass m_0 and momentum p is given by:

$$E = mc^2 = c\sqrt{p^2 + {m_0}^2 c^2} \qquad \text{(A.1)}$$

where m is the mass in motion.

This equation has implicit assumptions which can be brought into light by considering it a momentum conservation equation instead:

$$P^2 = (mc)^2 = p^2 + {m_0}^2 c^2 \qquad \text{(A.2)}$$

Where P is the momentum of a particle in motion (at the speed of light) traveling such that its $\tau_{particle}$ makes angle α with the static reference frame $\tau_{Observer}$.

Implicit in equation (A.2) is that the particle is actually traveling along a four-dimensional space (timed by a fifth time dimension) and has two linear momentum components:

a) Three-dimensional momentum p

b) Perpendicular momentum m_0c in the direction of Radial Time.

In addition, the particle travels at the speed of light in along a hypotenuse with an inertial mass m.

Many people would repeat the mantra that mass cannot move at the speed of light otherwise their kinetic energy would go to infinite.

Let's think about a lightspeed traveling particle (photon) that may or may not have mass..:)

Its linear momentum is given by:

$$mc = h\frac{1}{\lambda}$$

That is how one calculates its equivalent mass…☺

The photon energy is

$E = h\nu = h\frac{c}{\lambda} = mc^2$ …….Surprise!!!!!…….☺

The infinite energy refers to moving in along the 3-D space and it is an artifact of the physics behind it, vis-à-vis, the hypergeometrical spacetime lightspeed propagating deformation that is the Universe.