Mass, energy and space-time

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INTRODUCTION

Einstein found mass is equivalent to large amount of energy, hence in this section we will evaluate how mass converts to energy and then how energy converts to mass over time. Einstein's formula ignores time and focuses on before and after the conversions. However, particles and their antiparticles pop in and out of existence, sometimes the energy producing them doesn't produce their full mass. This is apparent for Charm quarks temporarily entering into existence within a proton. Note that a Charm quark is much heavier than a proton. An explanation for this is that mass takes time to form and so must consider the time it takes for electromagnetic waves (energy) to convert into polar / spherical waves (mass) within an area of space.

POLAR WAVE MASS

ELECTROMAGNETIC WAVES TO POLAR WAVE MASS

- $E = mc^2$ - takes time for energy to convert to mass however at the classical physical scale this time is negligible. This is not the case for quantum physics where mass and energy are required to be wave functions of time. Note that mass is a spherical polar wave where the EM wave is enclosed within a spherical boundary whose surface area is equivalent to the EM wavelength.
- linear wave motion, exponential decay motion, elliptical motion, spherical motion in a polar wave

POLAR WAVE MASS TO ELECTROMAGNETIC WAVES

- takes time for mass to convert to energy
- when polar wave gains energy, balance of spherical motion stretches to elliptical motion and eventually exponential motion then to linear wave motion
- decay rate of mass to do with wavelength

ELECTROMAGNETIC WAVES TO SPACE-TIME

- energy diffuses becoming homogeneous across space over time - once a type of energy wave reaches complete uniform homogeneity across whole universe, that energy wave is then part of space-time affecting all mass and energy within the universe - I propose that these energy waves will have very long wavelengths
- Volumes of space with uniform homogeneity differing to the rest of the universe with a different type of energy wave covering space-time - Either will be denser of less dense - If denser then it will repel rest of space (Star?)
- If less dense it will attract rest of space (Black hole?)

SPACE-TIME TO POLAR WAVE MASS

- when space time contracts enough - becomes polar and mass comes together
- where space time expands - mass moves apart

CONCLUSION

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