/francesco myles sciotto
//generative scripting
///inst | nick pisca
////3.2.08
/////phenomenon

//////question

{What is the portion of matter to antimatter in the cosmos, and how is it separated and positioned throughout the universe:::::}

///////description

Are there aspects and / or orders to the universe as seen from the vantage of matter compared to antimatter. As you chart the stars and planets and asteroids with in areas of the cosmos can there be some rhythm and reason to the layout of space and how does this change relative to time…within certain parameters can we use computational generative scripting to begin to diagram the matter and antimatter massing using the cp-violation as a fundamental starting point::}

////////Thoughts:

[CP violation]-

{In particle physics, CP violation is a violation of the postulated CP symmetry of the laws of physics. It plays an important role in theories of cosmology that attempt to explain the dominance of matter over antimatter in the present Universe. The discovery of CP violation in 1964 in the decays of neutral kaons resulted in the Nobel Prize in Physics in 1980 for its discoverers James Cronin and Val Fitch. The study of CP violation remains a vibrant area of theoretical and experimental work today. {source: Wikipedia}:::}

[[What is the dark or `anti` matter]]-

{When astronomers add up the masses and luminosities of the stars near the Sun, they find that there are about 3 solar masses for every 1 solar luminosity. When they measure the total mass of clusters of galaxies and compare that to the total luminosity of the clusters, they find about 300 solar masses for every solar luminosity. Evidently most of the mass in the Universe is dark. If the Universe has the critical density then there are about 1000 solar masses for every solar luminosity, so an even greater fraction of the Universe is dark matter. But the theory of Big Bang nucleosynthesis says that the density of ordinary matter (anything made from atoms) can be at most 10% of the critical density, so the majority of the Universe does not emit light, does not scatter light, does not absorb light, and is not even made out of atoms. It can only be "seen" by its gravitational effects. This "non-baryonic" dark matter can be neutrinos, if they have small masses instead of being massless, or it can be WIMPs (Weakly Interacting Massive Particles), or it could be primordial black holes. My nominee for the "least likely to be caught" award goes to hypothetical stable Planck mass remnants of primordial black holes that have evaporated due to Hawking radiation. The Hawking radiation from the not-yet evaporated primordial black holes may be detectable by future gamma ray telescopes, but the 20 microgram remnants would be very hard to detect. {source: Wikipedia}}:::}

[[[Particle physics]]]-

{In particle physics and quantum chemistry, antimatter is the extension of the concept of the antiparticle to matter, whereby antimatter is composed of antiparticles in the same way that normal matter is composed of particles. For example an antielectron (a positron, an electron with a positive charge) and an antiproton (a proton with a negative charge) could form an antihydrogen atom in the same way that an electron and a proton form a normal matter hydrogen atom. Furthermore, mixing of matter and antimatter would lead to the annihilation of both in the same way that mixing of antiparticles and particles does, thus giving rise to high-energy photons (gamma rays) or other particle–antiparticle pairs. The particles resulting from matter-antimatter annihilation are endowed with energy equal to the difference between the rest mass of the products of the annihilation and the rest mass of the original matter-antimatter pair, which is often quite large.

There is considerable speculation both in science and science fiction as to why the observable universe is apparently almost entirely matter, whether other places are almost entirely antimatter instead, and what might be possible if antimatter could be harnessed, but at this time the apparent asymmetry of matter and antimatter in the visible universe is one of the greatest unsolved problems in physics. Possible processes by which it came about are explored in more detail in the article discussing baryogenesis.

In physics, quantum mechanics is the study of the relationship between energy quanta (radiation) and matter, in particular that between valence shell electrons and photons. Quantum mechanics is a fundamental branch of physics with wide applications in both experimental and theoretical physics. Quantum theory generalizes all classical theories, including mechanics, electromagnetism (except general relativity), and provides accurate descriptions for many previously unexplained phenomena such as black body radiation and stable electron orbits.The effects of quantum mechanics are typically not observable on macroscopic scales, but become evident at the atomic and subatomic level. All of the fundamental interactions except gravity are significant in the realm of quantum mechanics. {source: Wikipedia}}:::}