

The Great Cosmic Ray Energy Paradoxes are Solved in a Living Cosmos

My latest calculations of the impossibly extreme energies of Cosmic Rays have revealed something very interesting about the continuing evolution of the (*electron/proton mass ratio $e/p = 1/1836$*) in a Living Cosmos. When we apply the *Five Laws of Circlon Momentum* to the enormous and mysterious *Cosmic Ray Energy Paradoxes*, they are most easily solved using the *Cosmic Conservation of Angular Momentum*. Cosmic Rays are the most mysterious of the three almost equal forms of Linear Momentum we measure in a Living Cosmos. We measure these three quantities of momentum as energy and each has a temperature here on Earth of about **3 Kelvin**.

The 2.726K Cosmic Blackbody Photons

The first of these are the *2.7K Cosmic Blackbody Photons* with a temperature of **2.726 K**. These photons come from the cosmos at large are thousands of times more plentiful than all of the photons we receive from the Milky Way and the rest of the galaxies combined. Individual sources of these photons cannot be established because they come to us homogeneously from all directions of the Cosmos.

Random Spectral and Thermal Photons from the Milky Way

The second form of Linear Momentum that we measure here on Earth also has a local temperature of about **3K**. These are the rest of the random Spectral and Thermal Photons that come to us from the stars in the Milky Way as well as the rest of the Cosmos. We are able to identify the sources most of these photons to be stars in the Milky Way. Almost all of these photons come from the Milky Way with only a few coming from the rest of the Cosmos.

Cosmic Rays from Unimaginable Sources

The third form of cosmic energy is the mysterious Cosmic rays that also produce a local temperature of about **3K**. Whereas the first two sources of local temperatures were just two completely different groups of photons, the Cosmic Rays are made up entirely of atomic nuclei in which some have unbelievably enormous kinetic energies (Linear Momentum).

Perhaps the most peculiar fact about these nuclei is that the abundances of the different chemical elements in Cosmic Ray nuclei are very similar to the abundances of the elements found in Earth's crust. It seems very strange that a random mixture of high energy atomic nuclei from unknown sources in the cosmos would be the same mixture of chemical elements found in Earth's crust. An explanation is needed as to why a random mixture of chemical elements from the cosmos at large would be the same random mixture of atomic isotopes measured here in Earth's crust.

The main problem Einstein Energy theorists have in calculating the true nature of Cosmic Rays is in their inability to imagine any Quantum Mechanical Uncertainty mechanisms that would be able create or absorb the tremendous individual Energies of Cosmic Ray particles both individually and collectively.

The first two sources of local cosmic temperatures, are composed completely of photons. The first is a precise mixture of photons from *Planck's Blackbody Distribution Curve* for a temperature of exactly (**2.726K**). The second cosmic temperature of approximately (**3K**) is calculated from all the rest of the photons in a Living Cosmos from the enormous Cosmic Whistler Photons to the smallest Gamma Photons with the Greatest energies.

In contrast, the third cosmic temperature produced by Cosmic rays, also about (**3K**), is made up exclusively of Neutrons and Protons that are combined together in the form the Stable Nuclear Isotopes of all the elements. Most of the isotopes detected in Cosmic Rays are Hydrogen-1 & 2 and Helium-3 & 4. However, about 1% to 2% of Cosmic Rays are made up from a mixture of the other 278 known stable atomic nuclei.

The outstanding thing about cosmic rays is not the variety of elements contained within them but the tremendous amount of Kinetic Energy that individual particles can contain. For example, the most energetic of Cosmic Ray particles have Energies many millions of times greater than the most energetic individual particles accelerated by the Large Hadron Collider at CERN.

At its maximum capacity, CERN's Large Hadron Collider can give individual protons and atomic nuclei a linear Energy/Mass of 6.8 Tev (6,800,000,000,000 eV), or about (10^{-6} Joules). In contrast, the highest energy of an individual Cosmic Ray yet to be measured is over 50 Joules (3.12×10^8 Tev). This may not seem like a lot of energy in human standards as it is only the energy of a well thrown baseball but for an atomic nucleus it is gigantic. This means that the highest energy cosmic ray particles can have 46,000,000 times more Energy/Mass than the highest energies of particles accelerated at CERN.

This amount of energy is particularly amazing when we consider that after a three year overhaul to increase its energy that was completed in April of 2022, the CERN collider was only able to increase its maximum energy output from 6.5 TEV to 6.8 TEV or less than 5%.

Next to Their Energy, Great Unexplained Mystery of Cosmic Rays is Their Source

Where could they possibly come from? Either they come from a Living Cosmos at large like the 2.7K CBR photons or they all come from within the Milky Way. There are serious physical problems with both of these ideas. If they come from the galaxies with the same local temperature as the 2.7K Cosmic Blackbody Radiation then it means that the total energy of Cosmic Rays within the cosmos is about the same as the total energy of the 2.7K Cosmic Blackbody Radiation and this is a tremendous amount of energy that cannot be accounted for in any Big Bang Astronomical theories. If cosmic rays were coming to us from the galaxies, then we would expect to see galaxies producing hundreds of times more energy in Cosmic Ray Nuclei than they produce in starlight photons. We would expect large numbers of them to be coming directly from the Andromeda galaxy but we don't see any. On the other hand, if they all come from within the Milky Way, then their 3K temperature gives them the same average energy as the photon output of all the stars in the Milky Way. This means that if the Cosmic Rays are coming to us from the Milky Way Galaxy they could not be coming from the stars themselves. If every star had the same energy output in Cosmic Rays that it has in photons, we would be able to easily observe Cosmic Rays coming from each star. We don't see this.

This means the atomic nuclei making up Cosmic Rays must be coming to us, not from stars, but from the vast empty spaces between the stars in the Milky Way. If this is true, then the next problem to solve with Cosmic Rays is what is the source of their tremendous individual energies if they do not get it from interactions within stars.

Einstein's Source of Cosmic Ray Energy

It has long been considered by Einstein and the other Energy Theory Physicists that Cosmic Rays had to get their enormous individual energies by moving at velocities very close to the speed of light. Using the Lorenz transformation, theorists calculate that an atomic nucleus will develop an unlimited increase in mass and energy from its increasing Linear Momentum as it is accelerated towards the speed of light. These Energy Theorists calculated that to get their enormous energy, the most energetic of the cosmic rays would have to have velocities of more than .999999999% of the speed of light.

The problem here is that if all Cosmic Rays were traveling at very near the speed of light, then they would all have left the Milky Way after about 100,000 years or so. Also, atomic nuclei traveling at such high speed through intergalactic space would quickly lose much of the kinetic energy of their Linear Momentum from their constant Doppler shifting of the 2.7K Cosmic Blackbody Photons into Gamma Ray photons.

This means that Cosmic Ray nuclei must be moving at relatively slow velocities similar to random velocities among stars and planets within the Milky Way. The conclusion that Cosmic Rays must come from within the Milky Way, means that they must get their enormous energies internally from Angular Momentum ($\mathbf{I}\omega = \mathbf{E}/M = \mathbf{CC}$) rather than externally from Linear Momentum ($\mathbf{p} = \mathbf{MC}$).

Cosmic Rays Get their Energy from Electrons Slowly Transforming Mass into Energy

Cosmic Rays particles are groups of ordinary completely ionized stable nuclear isotopes that have been slowly traveling through space without any Electrons for billions of years. As soon as these stable nuclei come into contact with the electrons in Earth's atmosphere, they explode with an atomic decay energy that is many orders of magnitude greater than the decay energy produced by any other radioactive isotopes. This means that cosmic rays are not single nuclei but rather groups of many nuclear isotopes. Kind of like Gold nuggets.

To understand where cosmic rays get their tremendous amounts of energy, we must look to the gradual transformation of Electron Mass into Kinetic Energy ($e = mc^2$) during the eternal evolution of a *Living Cosmos*. All energy in the cosmos ultimately comes from the transformation of the Electron's internal Angular Momentum energy into external Linear Momentum energy.

The nuclei of all atoms very slowly gain energy as the Electrons within their Neutrons convert their Angular Momentum into Linear Momentum. This creates vibrational energy (waves) within the neutron's structure. If left to itself, this energy causes the neutron to decay but when it is locked within an atomic nucleus, it remains stable by passing its vibrational energy on to the rest of the atom's nuclear structure. Eventually this vibrational energy within the atom reaches the point to where there is enough kinetic energy to cause the atom to emit a photon. However, if a nucleus is completely ionized and has no electrons with which to emit photons, then the increasing vibrational energy of electron transformation continually builds up within the structure of the nucleus.

Thus, the Momentum Physics Principles of a Living Cosmos can easily explain the extreme energy of the Cosmic Rays by considering that they are ancient ionized nuclear isotopes dating back to the time when the 2.7K Cosmic Blackbody Radiation was produced. The atomic nuclei of the cosmos were formed in the rapid nuclear synthesis that preceded the emission of the 2.7K Cosmic Blackbody Photons. For some reason, large and small groups of these atomic nuclei got separated from the rest of the nuclear synthesis process before acquiring any electrons.

These random groups of nuclei from the various elements clustered together without electrons to form groups nuclei ionized atoms. As time passed, these isolated groups atomic nuclei continued to gain more and more vibrational energy from the continual linear momentum being produced by the electrons within their neutrons. Soon these large isolated collections of nuclei gained so much internal energy that when they finally did come in contact with a random electron, a high energy photon was emitted along with the new electron and the nucleus remains ionized. After billions of years, the continual energy buildup within these nuclei became enormous and they became virtual nuclear bombs just waiting to be set off by a significant contact with electrons.

The *Circlon Synchronicity Interpretation of Quantum Mechanics* is the only possible way to explain the origin and tremendous energies of the Cosmic Rays. All other explanations are fraught with impossible contradictions from one end of them to the other.

The *Electron's Evolutionary Transformation of Mass to Energy* easily explains Cosmic Rays as well as the many paradoxes that have always plagued Big Bang Cosmologists. First of all, it explains how the primordial Anti-Hydrogen Atom transformed into a single bifurcating Antineutron during the evolutionary beginning of a Living Cosmos.

It then details the process that created the Galaxies, then the Stars and planets, and finally the ²²⁵⁶ Antineutrons that simultaneously decayed to form the eternal Electrons and Protons existing in today's cosmos. Electron transformations also predict the exact temperature of the 2.7K Cosmic Blackbody Radiation. They also predict the physical characteristics of the most distance supernovae that Big Bang theorists have assumed to be caused by their assumptions of non-existent "Dark Energy". Most importantly, the gradual evolutionary decreases in Electron Angular Momentum is also the measured effect that causes the Cosmological Red Shift.

The Hubble Constant results from the Evolution of Angular Momentum in a Living Cosmos and not from the Evolution of Pure Energy in a Big Bang Universe.

To learn more about Cosmic Rays see page 113 of ***THE GREAT EINSTEIN ENERGY HOAX***