

Relativistic Mechanisms for Entropy Reversal

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ABSTRACT

This paper argues for a Relativistic light speed limit to escape velocity and a process that will transform higher elements into H1. It proposes a Relativistic process that will free energy to decay all Periodic Table Elements into single a Proton and Electron – Hydrogen-1. The relativistic slowdown will mean that Structural energies that maintain the stability of Atoms and Molecules will slow and lose mass. That energy would be absorbed by the matter particles. So, both the mass of matter particles and their Kinetic energy would increase. This process would show how Matter and Energy could reunite and reverse an aspect of entropy.

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Introduction

Current theory is that all atoms lower than Iron-56 fuse, increase their Atomic Number, lose both atomic mass and produce energy. Elements above Fe56 would decay through all the isotopes and again produce energy. This paper shows how free energy transforms the Fe56 atoms back into H1. The slowed atomic structure forces would make all elements less stable. It would mean that Entropy was not as absolute as it is currently thought to be. So, there are objects that force the decay of all elements. The lower their atomic mass is, the faster any free atoms move. This would mean that Entropy does decrease order in a system by transforming matter mass into energy. Though 56 H1 atoms are surely more disordered than one Fe56 atom. Higher Elements would decay into Iron56. The energy needed for the farther decay could come from high-distortion objects that also capture free energy. The energy would be absorbed by matter and would then need energy to transform into any other elements. Schwarzschild Objects||“Black” holes would both capture free energy and free decayed matter.

Reasoning for Entropy Reversal

The theoretical Singularity was a dimensionless object that blew apart because of Space expansion. Where the singularity came from – and why reality wasn't expanding then - is never asked. A great many Scientists maintain there was nothing before the Singularity. Some are more absolutist in their denials and say we will never know what preceded the Singularity. Neither is at all scientific.

An alternate supposition: our complete reality is an Infinite Cosmos. Its normal state is nothing but energy and quantum

particles. It is currently a question in science whether there is such a thing as an antimatter quantum particle. I believe there are none. Antimatter particles are just a different combination of the six quantum particles with cute names, but because of the infinity issue, how those matter quantum particles came about just by chance only changes the time it took for the universe around us to form.

The normal state of the Cosmos might be nothing but energy. If that state can exist, then there must be antimatter quantum particles too. That is a detail that my theory can take both sides. That elegant idea is that it has aspects of all the theoretical models: Steady State||Continuous Creation, Big Bang Theory, and Cyclic Cosmos.

An Infinite Cosmos means probabilities do not need to be considered. Entirely by chance, enough energy or quantum particles form into an object (when defined by Classic Newtonian Gravity equations) that has an escape velocity higher than light speed. In Relativistic thinking, it is a little more complicated. The paper that argues that is called A Relativistic Escape Velocity Maximum of Light Speed. It is the professional Journal of High Energy Physics, Gravitation and Cosmology. The mathematical reasoning for it is fundamental.

The gravitational escape velocity equation is $|v_{esc}=(2GM/r)^{0.5}|$. It is from science very much before Einstein - it is Newtonian. Square both sides, and it becomes $|v_{esc}^2=2GM/r|$. So, the General Relativity Time distortion equation

$$\text{Time}' = \text{Time}/(1 - 2GM/rc^2)^{0.5}$$

can also be written

$$\text{Time}' = \text{Time}/(1 - (2GM/r)*1/c^2)^{0.5}$$

$$\text{Time}' = \text{Time}/(1 - (v_{esc}^2)*1/c^2)^{0.5}$$

$$\text{Time}' = \text{Time}/(1 - v_{esc}^2/c^2)^{0.5}$$

The fundamental of the distortion equation is the slowdown of energy particles - Bosons. If the escape velocity - calculated by a Newtonian equation - ever exceeds light speed, the Time distortion becomes infinite. A simplistic interpretation of Relativity Equations using Newtonian gravity logic, is an inappropriate way to interpret Relativistic equations. The Time distortion equation for Special Relativity is

$$\text{Time}' = \text{Time}/(1 - v^2/c^2)^{0.5}$$

The logic for the above is simple. If $|v|$ is equal to light speed - c - then v^2 equals c^2 . So v^2/c^2 is equal to 1.0. So $(1-v^2/c^2)$ is equal to zero, and $1/(1-v^2/c^2)$ is infinite. So, v can never be as high as c .

The reasoning is that the most fundamental thing about Relativistic distortion is the slowdown of Bosons - energy particles. Because they slow, their energy reduces<ref>. It cannot disappear. It adds to the Kinetic Energy and Mass of matter particles. That is an alternate way of expressing Einstein's $|Time|$ and $|Matter|$ distortion equations. You can reason directly from Einstein's equations that the energy of the Gravity Bosons never gets high enough to impose an escape velocity greater than light speed.

Under Relativistic distortion, Quantum||Boson particles move more slowly. Because none of them move faster than light speed, they cannot keep matter from escaping. Initially, the gravity is high. That is even though escape velocity is never higher than c . The Gravity gets high enough to compress the energy and the Quantum particles into the matter particles we know and love. Antimatter particles need a very high amount of both Kinetic and Radiant energy to form<ref> but there is no direct evidence they are less likely to form. They are so universal an aspect of our limited Local Universe, that there must be a mechanism for them to reach their unanimity. So, presume that under close to full entropy conditions, they normally recombine and transform back into Quantum||Energy particles.

That begins the argument for infinite reality. Entirely by chance, enough of one or the other forms to produce atomic||nuclear catalytic force to encourage more of the same. That is not part of the current theory. However, what is the better supposition? That the matter (or antimatter, whichever got the majority first) forms into a body big enough to catalyze the production of more. Or all the energy Quantum particles separate at hyper-relativistic velocities and can't have any catalytic effects on one another.

The probability for that is, in some ways, limitless - at least with my "no-limit" calculation software. Trying to reason that probability, I found it did have a limit. It couldn't work with values higher than $1.00E1797279844195429938$. That is the probability for all the atoms in a Hydrogen body mass $1.0E-5$ kilograms - approximate

Since that is considerably higher than Googol ($1.0E100$), I do forgive the developer of that package. But it can still be calculated. The number of $1.0E-5$ -kilogram body masses in an object of a Universe scale ($1.00E54\text{kg}$) is $1.00E59$. So, the probability for a body that size to come about is $(1.00E1797279844195429938)^{1.00E59}$. It is not quite a Googolplex value (10 to the Googol power) but starting to get close to it - in a Googol-ly kind of way.

Given the probability above, it can be reasoned that there is a mechanism for a matter (or antimatter) body, to form in a single body that acts as a catalyst to produce more. It would be a very

high improbability if there is a light-speed limit to escape velocity, it likely wouldn't need to get to the size of a Singularity to explode. Quasars are Schwarzschild Objects, that expel almost entirely Hydrogen<ref>. Since they are Relativistic bodies, they absorb higher elements. The higher an Element is, the slower it goes at any temperature<ref?>. It slows down the Gluons holding higher elements together. The farther down the table they go, the faster they go. They would not stop breaking down until they are just Hydrogen atoms. The Hydrogen atom moves the fastest, so they escape in the most significant numbers.

That is the EM signature of Quasars. We have a "mini-Quasar" at the centre of this Galaxy called the Sagittarius A* that does the same.

So, the Bang did not need to be nearly as Big. It also has a very fundamental reasoning theory. The usual age given for the Universe is about 13.8 billion years. Currently, the farthest object we have detected is the MoMz-14. It is 13.53 billion light-years away. It would have taken 13.53 billion years for that light signal to the Earth. If the Universe is 13.8 billion years old, our Galaxy and the MoMz-14 object separated 13.53 billion light-years in 207 million years - that works out to about 36.57 times the speed of light. That is not reasonable. Even if things started at a hyper-relativistic velocity. It also presumes that we will never observe an object more than 13.8 billion light years distant. MoMz-14 is theorized now to be 33.8 billion light years away. To travel that distance in 207 million years would mean a velocity of 91.35 times the speed of light.

There is an alternate explanation for the Hubble Constant: it is moving through a very dispersed celestial body of gas that is pure hydrogen. That red-shifts the signal the same way the Sun going through more atmosphere at Sunset reddens the light from the Sun. However, the Hubble shift signals do have to go through Billions of light-years of very thin Hydrogen to get the same effect. We do have additional evidence. The Cosmic Microwave Background radiation [CMB] is the same that Hydrogen would give off if it were at 2.725 degrees above absolute zero. The CMB could be leftover radiation from the Big Bang. But it could also be Hydrogen at 2.725K throughout the Universe. Postulating a glowing homogenous group of Hydrogen-1 would eliminate the need for atheoretical Dark Matter.

An alternative would be that an unknowable long time ago Energy||Quantum Matter||Real Matter [EQMRM] formed into a Singularity. It started from nothing but the free EQMRM, but it does grow. There is an observed phenomenon that gives appropriate data for that reasoning. We KNOW the Sagittarius A* object at the centre of the Galaxy expels Matter.

An unknowably long time ago an object formed that is parallel of Sagittarius A*. That parallel object absorbs the ingredients needed for the Matter to form. It starts finally attracts enough EQMRM and gets big enough in its neighbourhood that it captures just as much EQMRM as it expels. Then more of what it expels is pure matter. The slowed energy can't escape. More Matter builds up in that area. Eventually, another Galactic scale singularity forms. The new Universe keeps growing until into it is the Local Universe we now observe.

A beginning SO||stellar object would form in a location with nothing but energy||quantum particles. Eventually, it grows big

enough that it develops into the matter. Alternately there are two kinds of matter Antimatter and Pro-matter. Because Pro-matter gains the majority first, it makes a Pro-matter stellar object we know nothing about the size of, except that it didn't need to be the size of the Singularity establishment science knows now. It is also an unknowably older than current thinking. We cannot say if the **MoM-z14** object is the farthest one in our Local Universe, it is just the maximum distance current technology can observe right now. Hypothesize our Universe is 100 billion years old. The very first smaller Bang that started our Universe happened a **Trillion** years ago. No proclamations on any of it should be made right now. Our data is too limited. There are Galactic Scale Singularities in our reality now.

So, propose the Local Universe around us came to be from the gradual accumulation of Quantum Level Particles. That does have parallels to the Steady State|Continuous Creation theory. But the Pro-matter does not form from zero content space. It forms from Quantum particles. Inevitably, in some time and place in an Infinite Cosmos, enough forms to create a Schwarzschild Object. After compressing those Quantum particles into Hydrogen atoms, it absorbs enough energy to explode. So, it does so, and a very Singular Big Bang - though not nearly as big as Scientific Research currently postulates. That leads to an environment where more (and more) of those Singularities come about until we have the Local Finite Universe we know. It would also be another factor in increasing entropy. 235 Hydrogen-1 atoms are a greater degree of disorder than 1 Uranium-235 atom.

Then the above idea has elements of Steady State, Big Bang and Cyclic Cosmology, for how our reality came to be, but does not surrender absolutely to any of them.

I start all the arguments I made in [Frequency Decay through Electromagnetic Radiation Absorption and Re-Emission by Inter-Galactic Dark Matter as an Alternate Explanation for the Hubble Constant](#). <ref>It is also in the open-access professional **Journal of High Energy Physics, Gravitation and Cosmology**.

Conclusion

This paper espouses a unification of matter and energy at a Quantum|Nuclear scale. That reasoning is developed from two principles:

- a) Relativistic Distortions slows Bosons. That would lead to the breakdown of the atoms and then moving faster.
- b) It argues a light speed limit escape velocity. Higher elements fall into Schwarzschild Objects, energy and matter are reunited to break down atoms into Hydrogen. Atomic Hydrogen goes the fastest, so it would be most likely to escape. So, what had existed as a Schwarzschild Object with a huge variety of Elements both slows down the Gluons and provides the energy for them to go back to where they were as Elements. It is a re-unification of matter|energy. It would also be a reversal of Entropy – using the classic definition. It would be a Relativistic Entropy – increasing disorder.

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