

HOW "SPALLATION" PRODUCES LIFE IN THE UNIVERSE

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ABSTRACT

- This abstract introduces the by-products of cosmic "**spallation**" (high energy gamma rays and neutrinos) as the prime cause of living cell creation in the cosmos.
- And, via a slight alteration to the "**asteroid**" impact hypothesis this abstract describes how asteroids contributes to the process on hospitable planets.

INTRODUCTION

COSMIC COLLISIONS BETWEEN COALESCING MASSES IS AN INTEGRAL COMPONENT OF THE UNIVERS.

"**Gamma rays**" and "**neutrinos**" are amongst the multitude of particles and byproducts, metamorphosing black holes, neutron stars and high energy cosmic collisions generate and eject.

GAMMA RAYS

- As the most energetic components in existence their sole purpose is to "ionize" (sterilize) everything in their path.

NEUTRINOS

- Possess ghostly properties that renders them difficult to detect and contribute very little to the "mass" building process.

Neutrinos come in three "flavors"; Electron, muon and tau. Neutrinos are not bound to their states and often change flavors on the fly. Due to their "left handed" spin direction, neutrinos are able to elude interacting with the higgs boson which bestows mass upon other particles.

Despite their ghostly qualities, out of trillions of passes, under elevated energy states, neutrinos will interact with an atom causing it to release a particle according to the neutrino's flavor. This specific characteristic allows neutrinos to interact with proton and neutron constituents (quarks) within the nucleus of atoms, unhindered.

EXPLANATION

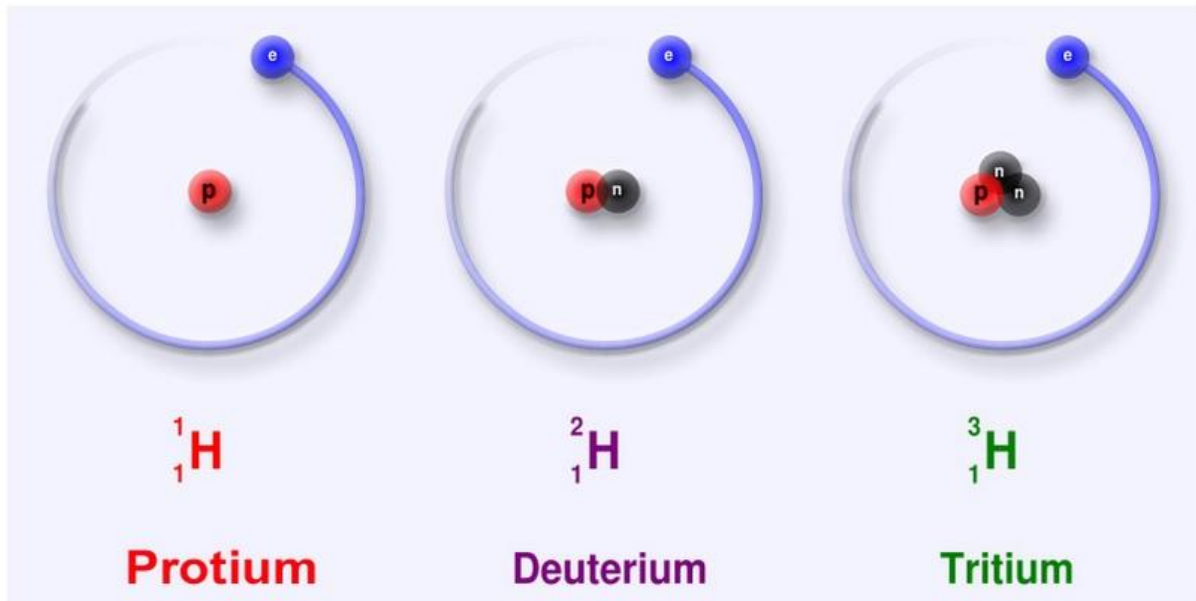
EVERYTHING OF IMPORTANCE IN THE COSMOS IS THE RESULT OF ENTROPIC DISRUPTIVE ACTIONS

Regardless of how matter came to exist (Big Bang, Black holes recycling, star cycles etc..), scientists are in agreement that everything in creation (planets, solar systems, stars etc..) is cooked out of one primordial element; Hydrogen.

THERE THREE MAIN TYPES OF HYDROGEN

Protium, Deuterium and Tritium.

With one proton and no neutron, protium is the most stable and most prevalent form of hydrogen.



BACKGROUND INFORMATION

The Standard Model places neutrinos (and electrons) in the "leptons" category. Leptons are also fermions and together with quarks make up matter. The difference between "full" leptons and quarks, is that leptons exist on their own (electrons), where quarks always combine to form baryons (nucleus of protons and neutrons within atoms).

A proton contains two up and one down quark.

The proton energy mass (up quark + up quark + down quark)
= $((+2/3) + (+2/3) + (-1/3)) = 1$ (positive)

A neutron contains two down and one up quark.

The neutron energy mass (down quark + down quark + up quark)
= $((-1/3) + (-1/3) + (+2/3)) = 0$ (neutral)

An electron has no constituents and an energy mass of -1 (negative)

Gluons also reside within the nucleus of atoms and act as mediators of force.

Two of the six main quark modes (**up/down**) possess the lowest mass and are the most common in the universe.

FACT:

Scientific proof places the eruption of life on earth around 3.6 billion years ago.

http://www.science20.com/news_articles/life_developed_36_billion_years_ago_then_evolution_got_stuck_slime-129972

FACT:

Earth's magnetic field is estimated to be 3.5 Billion years old.

<http://www.wired.com/2010/03/earths-magnetic-field-is-35-billion-years-old/>

FACT:

A large asteroid (50 Km across) impacted into earth 3.6 billion years ago.

<https://heasarc.gsfc.nasa.gov/docs/heasarc/headates/earlier.html>

DETAILS

AS OF THIS WRITING, SCIENTISTS HAVE NOT SUPPLIED A SPECIFIC, SCIENTIFIC EXPLANATION AS TO THE EXACT DYNAMICAL PROCESS THAT CONVERTS AMINO ACIDS INTO LIVING CELLS.

THIS ABSTRACT WILL DO THAT

- *** Since all mass is made of cooked hydrogen it means that asteroids do not necessarily have to be formed in the same solar systems or galaxies as the planet(s) they collide with (disrupt). Their makeup is in fact, irrelevant because in most cases, all needed ingredients exist within the makeup of the colliding bodies.
- *** This also means that asteroids merely serve as "catalysts/ would be ovens/spallation generators" that produce the needed forces locally (disruption/collision/interaction/temperatures) and components (gamma rays and neutrinos) to an already existing malleable mass. Without such disruption that initiates a specific phase transition, living cells cannot be generated nor sustained.
- *** This implies that nothing needs to move around or come from other alien worlds, a sufficient "disruptive" action via an asteroid collision (even a titanic volcano eruption) plus favorable planet conditions are all that is needed to produce living cells, anywhere in the universe. This implies further that planets are self sustained and fully sustainable so long as the conditions are favorable (goldilock zone).

HOW

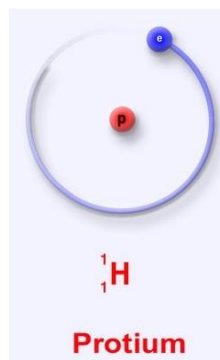
THE SECOND LAW OF THERMODYNAMICS STATES THAT "THE ENTROPY OF A CLOSED SYSTEM TENDS TO INCREASE UNTIL REACHING EQUILIBRIUM, THE MAXIMUM STATE OF DISORDER"

Due to the flow of time (forward only), the drive towards maximum entropy is an irreversible process. By default, this implies that the universe (and everything in it) is progressing from an ordered low-entropy state (hot, dense ball) to a disordered high-entropy one (equilibrium).

Due to entropy, universal equilibrium is not a final destination. Due to the creation of "closed systems" (such as the nucleus of atoms) the universe experiences pockets of equilibriums along its journey.

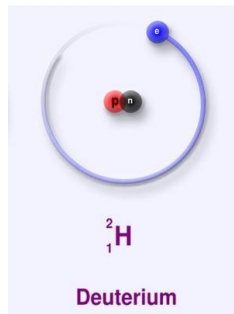
Lacking the protection of a magnetic field but possessing a stable, favorable orbit, earth endured a 50 Kilometer wide asteroid collision 3.6 billion years ago. The event caused wide spread devastation but most importantly introduced the "disruption" needed to initiate a metamorphose which yielded living cells.

- *** **Initially, via spallation, gamma rays swept through ionizing (sterilizing) all atoms (organisms) that may have evolved up to that point (mass extinction).**
- *** **Then the three types of neutrinos flushed with extreme high energy as they rode the gamma ray waves (carrier) bombarded any and all atoms in their paths. Newly formed Protium, Deuterium and Tritium absorbed most of the bombardments.**



As carriers, gamma rays catapult energy flushed, oscillating "electron" neutrinos through the proton in the nucleus of a protium isotope. The neutrino burrows in, transfers most of its energy to the up quark which uses it to break out of the proton allowing the neutrino to "temporarily" take its place.

Unable to sustain itself, the up quark cycles back into the proton and evicts the neutrino then take back its place. The up quark/neutrino eviction/re-occupation process form a **closed system equilibrium** as it repeats endlessly. This is ultimately imprinted as a substitute routine into the nucleus. The cycle of eviction and burrowing reflects as an "energy" beat; [Primordial living cell of a plant?!](#)



The nucleus of a deuterium isotope contains a proton, neutron and an orbiting here, a muon neutrino burrows in.

The muon neutrino knocks the up quark out of the neutron's nucleus, it cycles out, burrows into the proton, converts then knocks the down quark out of the proton's nucleus. The down quark cycles back into the neutron's nucleus, converts to an up quark then knocks the muon neutrino back out. The muon neutrino repeats the process of knocking up and down quarks and taking their places within the neutron and proton until the process is imprinted as a routine. The cycle of eviction and burrowing reflects as an "energy" beat; [Primordial living cell of an animal?!](#)



In this case, the "tau" neutrino burrows into the neutron, converts then knocks the up quark out. The up quark, cycles into the proton, converts then knocks the down quark out which cycles into the second neutron, converts then knocks the up quark out. The up quark returns to the first neutron and knocks the tau neutrino back out. The tau neutrino repeats the process.

This is clearly a more complex eviction, disruption and cycling process. When this is imprinted as a routine it reflects as an "energy" beat; [Primordial living cell of a human?!](#)

SUMMARY

The process of "Life" formation on earth (as in the cosmos) is the direct results of atomic routine "disruptions" and energetic cyclical exchanges brought on "spallated" particles interacting with the three types of hydrogen isotopes and neutrinos. The process utilizes high energy transfer imprints into the nucleus of such atoms existing within favorable environmental conditions.

As earth spin stabilized, its iron core initiated a protective magnetic shield which promoted the formation of an atmosphere. Both deflect and help protect against further sterilization and collisions which allowed evolution to take hold.

Living cells are therefore simple disruptive routine imprints in the standard patterns of primordial hydrogen isotopes.

At present time, the very act of probing living cells at the sub-atomic level to confirm this hypothesis will destroy the process.

Due to the inherent entropic processes that take place, this abstract posits that the process of "living cell" generation in the entire universe is unavoidable.

REFERENCES

Cosmic ray spallation

https://en.wikipedia.org/wiki/Cosmic_ray_spallation

Black holes and supernova galactic contributions

<http://en.wikipedia.org/wiki/Supernova>

<http://news.discovery.com/space/astronomy/supermassive-black-hole-jet-mystery-solved-140707.htm>

Hydrogen isotopes jpeg

https://commons.wikimedia.org/wiki/File:Protium_deuterium_tritium.jpg

Neutrino Cerenkov radiation

<http://hyperphysics.phy-astr.gsu.edu/hbase/particles/neutrino2.html>

Neutrino mass

<http://www.scientificamerican.com/article/nova-experiment-neutrino-mass-mystery/>

Bricks to build 'an Earth' found in every planetary system

http://www.sciencedaily.com/releases/2015/07/150708111441.htm?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+sciencedaily%2Fstrange+science+%28Strange+%26+Offbeat+News+--+ScienceDaily%29

Exotic mesons: The ins and outs of quantum chromodynamics

http://www.sciencedaily.com/releases/2015/07/150707134635.htm?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+sciencedaily%2Fmatter+energy%2Fphysics+%28Physics+News+--+ScienceDaily%29

Icy comets serve as storks for life on Earth

<http://phys.org/news/2015-07-icy-comets-storks-life-earth.html#nRlv>

The arrow of time

<https://www.sciencenews.org/article/arrow-time>