

G24 IS THE UNIVERSE, THE PERIODIC TABLE, AND THE BIOCHEMISTRY OF LIVING MATTER BASED ON A HIGHER SUPER NATURAL DESIGN?

0) SUMMARY:

Based on the analysis detailed in **document G24**, the author concludes:

- a)** Assuming an all-universe, equal start from a single point, *center C*, now this universe must have the macro shape of a thin perfectly round cosmic universe-spherical-shell/ USS. A thin balloon wall of many billions of galaxies with between these galaxies a thin spherical shell-shaped layer with an extremely low concentration of hydrogen in between these galaxies. This USS currently has a radius of approximately 10 - 12 billion light-years *relative center C*. Inside and outside this thin universe-spherical-shell/ USS an 100% absolute vacuum is present. That absolute vacuum is *inaccessible* to all forms of radiation based on: a) particles and b) waves because atoms and a conductive medium for those forms of radiation are 100% absent in those immense large 100% vacuum areas inside & outside this thin USS. That universe/ universe-spherical-shell, due to gravity and the hydrogen present only in the USS, forms a *100% closed system* for atoms as well for all forms of radiation based on particles and with mass, matter, charge, spin, and kinetic energy! This matter and radiation form a balloon-shaped space relative to and around *center C*. Everywhere in that universe-balloon-shell, the exact same linearly advancing time/ universe-clock-time/ UCT applies. These absolute vacuum spaces of that universe are only 100% open to *radiation without particles and without waves*. *Physical gravity* is the only form of 'radiation' that is *neither based on particles nor waves*. *Physical gravity* therefore moves in all directions at infinitely great speed ($\gg c$) and also leaves the universe at the very same instant. **Document E3, E3-1.**
- b)** Within that one galaxy-thick, perfectly round USS the universe endlessly repeats the very same energy-neutral cycle of **29 steps**. **Step 29** is exactly the same as **Step 1**. **Steps 1 – 4** describe the start/ **Little Bang**. The **Little Bang black hole/ LBZG** decays at 0 Kelvin into an equivalent number of protons and electrons, **Document G6 & figures 1- 30 G8**.
- c)** Only about *10 to 15 billion years* later do protons and electrons combine to form hydrogen. With H atoms/ H₂ molecules, gravity, gravitational energy, temperature and atom related physically and chemically forces/ bindings return. Through nuclear fusion of hydrogen, many billions of years later, the same periodic table of elements is formed throughout the universe and during the superhot **Big Bangs** and the start of galaxies in every cycle of the universe.
- d)** From these elements periodic table, only *one biochemical system* can be formed throughout the universe for the biochemistry of living matter. This is depicted in **Biochemical Pathways by Gerhard Michal et al**. For these biochemical diagrams of **BP**, see the internet. All living matter in the universe and during every cycle is based on exactly the same biochemistry.
- e)** At the heart of **BP** are *three interconnected biochips* for the synthesis and breakdown of carbohydrates, fatty acids, and amino acids. *Water* is the only reaction medium where gases, ions, and non-gaseous and uncharged atoms/ molecules can dissolve side by side. Water is also energetic, the only suitable reaction medium for biochemical reactions.
- f)** The uniqueness of **Biochemical Pathways** as the sole basis for the biochemistry of all living matter in the universe also indicates living matter isn't based on a set or series of coincidences. The design of **BP** requires a well-considered physical & chemical concept for the elements *C, H, O, N, S, P*, and reaction *medium water* as a higher-order design.

***1) INTRODUCTION TO THE MACRO STRUCTURE OF THE UNIVERSE:**

1.1 THE UNIVERSE IS A 100% CLOSED SYSTEM FOR ATOMS AND ALL PARTICLE- AND WAVE-BASED FORMS OF RADIATION:

-) The current universe as a thin balloon wall of billions of galaxies surrounded by an absolutely 100% vacuum of inner and outer space:

Looking back in time, we find ourselves in a seemingly ever-expanding and also literally infinitely large universe that, according to the **Big Bang theory**, began uniformly on all sides from a single point, the *center C* of the universe.

Probably start out of a super **Little Bang blackhole/ LBBH** in which *gravity* concentrated all mass, matter and kinetic energy of the foregoing cycle of the universe. In its end phase of formation that *Little Bang black hole* lost all speed and thus lost all of its *physically gravity*. The inside present blackhole atoms became instable falling apart into an equal number of protons and electrons expanding all sided as mono-layers of protons/ electrons at about 0.7 the speed of light *c*. **Document G6 & figures 1 – 30 G8** www.uitewijkwinkel.eu .

Uniform on all sides and three-dimensional in space, starting at 0.7*c* from a single point *C* (0, 0, 0), for a period of at least 10 – 15 billion years this universe can currently have no other shape than that of a perfectly round, thin, now one galaxy thick, walled balloon/ universe/ universe-spherical-shell/ USS with a radius of at least approximately 10 - 12 billion light-years.

That current relatively thin *balloon wall universe* currently consists of many billions of galaxies. Between those galaxies, the universe-spherical-shell/ USS consists of hydrogen gas, present in extremely low concentrations of only a few dozen atoms/ molecules per cubic meter. Almost an absolute 100% vacuum! The protons and electrons of that hydrogen gas are surrounded by their own micro fields of *electric charge* and *magnetic spin*, which enables the conduction of all particle and wave-based forms of radiation as ‘ether’.

This conduction via hydrogen atoms/ molecules is possible because the particles of these forms of radiation themselves are surrounded by their own micro fields of electric charge and magnetic spin, which allows for the conduction of that radiation along the hydrogen atoms/ , exclusively via particles & wave motions.

-) Inside and outside that thin, perfectly round, balloon-like shell of galaxies and almost 100% hydrogen USS, an absolute 100% vacuum is present:

Inside and outside that thin, perfectly round balloon-like shell of galaxies and almost 100% vacuum layer of pure hydrogen, there is an absolute 100% vacuum present in which not a single atom, proton, nor electron is present. In these absolute 100% vacuum regions, the surrounding electric and magnetic micro-fields of hydrogen atoms/ molecules are completely absent as well.

In these gigantic, *100% vacuum spaces* of the universe, there isn't any possibility nor form of conduction possible for all forms of electromagnetic radiation and for the conduction of all forms of particle & waves based radiation, such as subatomic radiation from protons, electrons, neutrons, α , β , and γ particles, photons, neutrinos, and muons.

Thus all forms of electromagnetic radiation, both particle-based and wave-based, and particle radiation, cannot penetrate these immense, absolutely 100% vacuum regions of the universe surrounding the USS.

All forms of electromagnetic and particle radiation can therefore only propagate through the universe via that thin, spherical-shell, and only via the thin, spherical shell-shaped layer/ USS with extremely low hydrogen concentrations and their surrounding electric and magnetic micro fields/'ether'.

1.2 GRAVITATION CONTINUOUSLY SLOWS DOWN THE EXPANSION OF THE USS TO A STANDSTILL AND ULTIMATELY BRING BACK ALL MASS, MATTER AND KINETIC ENERGY TOWARDS THE CENTER C OF THE UNIVERSE:

=) Due to physical gravity, which began with the formation of the hydrogen H atoms/ molecules about 70 - 76 billion years ago, the *expansion* of the universe's-spherical-shell/ USS, containing many billions of galaxies, is slowed down further over the next 350 - 450 billion years, ultimately reaching zero.

The energy released from breaking the *expansion velocity* of the USS is primarily converted into about 15 – 17 forms of rotational velocity/ energy, all of which are present exclusively within that relative thin USS.

Gravitation then simultaneously and coordinately returns all matter and kinetic energy of the universe to the starting point, the *center C* of the universe.

Gravitation generated by (H) atoms/ molecules creates a universe /universe-spherical-shell/ USS as a 100% closed system for all ordinary atoms and all black hole atoms, and for all mass, matter, charge, spin, and kinetic energy associated with those atoms. The origin and structure of this *physical gravity* were already derived in 2007 by **A.P.B. Uiterwijk Winkel** and presented in **documents E3, E3-1, and E3-2** www.uiterwijkwinkel.eu .

1.2.1 EINSTEIN ONLY DERIVED A MATHEMATICAL FORM OF GRAVITATION & GRAVITATION FORMULAS:

-) **Einstein did not derive and describe this physical form of gravity or formulas:**

In the theory of relativity, **Einstein** only anticipated a *purely mathematical form* of *gravitational radiation* and derived the formulas for it. His mathematically derived form of gravity is based on the curvature of time and space. This curvature of space and time is indeed present within that perfectly curved universe-sphere shell/ USS. However, the gravity derived by **Einstein** is based on both particles and a wave-based form of displacement. This also means that for the conduction of this mathematically derived gravity, an 'ether' of atoms/ molecules of hydrogen, is necessary and are required. This wave-based and via atomic/ molecules based displacement also means that **Einstein's mathematical gravity & gravitation energy** occurs at a maximum speed of light c !

1.2.2 EINSTEIN DIDN'T DERIVED A PHYSICALLY BASED FORM OF GRAVITATION & GRAVITATION FORMULAS:

The *physically gravity* as derived by **A.P.B. Uiterwijk Winkel's** isn't based on transmission of gravity via *particles*, nor is based on the displacement of that physical form of gravity via *waves*.

Unlike **Einstein's** mathematical gravity, **Uiterwijk Winkel's** *physical gravity* is not limited to the curved time and space of the USS. *Atoms/ molecules as 'ether' aren't required as a necessary transport medium.*

This *physical gravity* travels precisely without particles and without waves, completely unhindered, and as the only form of 'radiation' which spreads without any form of particles and without and without waves. This physically gravity isn't limited by the speed of light c . This physically gravity spreads and travels all sided at *infinitely great speed* ($\gg c$) through the entire universe and also directly through and spreads via both the absolutely 100% vacuum interior and exterior spaces present on either side of the USS as well.

Einstein's *mathematically gravity* differs fundamentally this *physically gravity* by **A.P.B. Uiterwijk Winkel**.

1.2.3 PHYSICAL GRAVITATION AND PHYSICAL GRAVITATIONAL ENERGY ARE MISSING IN THEORY OF RELATIVITY:

This physically gravity by **Uiterwijk Winkel** spreads all sided at infinite speed ($\gg c$) while **Einstein's** mathematically derived gravity spreads with particles and thus is limited by the speed of light c ! Anno 2025 this *physically gravity* by **Uiterwijk Winkel** is missing in the *theory of relativity* filling in this theory the now missing *trajectory speed of light $c \leftrightarrow$ infinite speed* ($\gg c$). Thus completing the theory of relativity!

-) Need to adjust the principles of theory of relativity:

The theory of relativity therefore needs to be drastically modified and expanded to include *physical gravity*, as a phenomenon that moves in all directions without particles, without waves, and at an infinitely great speed ($\gg c$)!

After over a century, the trajectory from the speed of light $c \leftrightarrow$ infinite speed ($\gg c$) is finally physically defined in this theory!

1.2.4 LACK OF PHYSICAL GRAVITATION IN BASIC SCIENCE 2025 RESULTS AND SOLVES THE PROBLEMS OF 'DARK' MATTER AND 'DARK' ENERGY:

The absence of *physical gravity* in **Einstein's** theory of relativity results in a huge shortage of *physical gravity* in the cores/ central black holes of galaxies due their enormous fast rotation speed. This shortage of physically gravity is equivalent to 'dark' matter in the centers of galaxies. This missing of physical gravity is resulting as well in enormous shortages of *physical rotational gravitational energy* of the USS relative 1) to *center C* and 2) of the galaxies relative to each other within the USS. This shortage of physically gravitational energy is equivalent to the now missing 'dark energy' in the universe.

Within **Science 2025**, this missing of **physical gravity** and **physical gravitational energy** are not yet recognized.

(The universe/the USS itself due gravity expands increasingly slowly over time instead of expanding increasingly quickly as thought and widely assumed within Science to 2025. According to the author, this *increasingly slowly expanding* USS does not involve any 'dark' energy.)

1.2.5 EXTREMELY LOW HYDROGEN CONCENTRATION IN USS PROVIDES A 100% CLOSED UNIVERSE SHELL FOR ALL RADIATION BASED ON PARTICLES AND WAVE TRANSPORT:

=> The extremely low hydrogen concentration in the thin, perfectly curved layer of the USS between the galaxies creates a 100% closed system as well for all forms of electromagnetic and all forms of subatomic particle radiation. These forms of radiation are all based on particles with mass, electric charge, and magnetic spin, as well a wave-based form of transport of these particles.

(On the outside of these particles, the measurable mass, charge, and spin can be zero, while inside these particles, mass/ anti-mass, positive/ negative charge, and parallel/ antiparallel spin are indeed always present! **Document F1b & figures.**)

The conduction of these forms of EM and particle radiation occurs exclusively via and along the electric and magnetic micro fields that normally surround the protons and electrons of the hydrogen atoms/ molecules present in the USS.

These micro fields, which surround all the atoms, are absolutely necessary for the transport of these EM particle radiation/waves in space and within the hydrogen atoms. For this, the presence of such an 'ether' with an extremely low concentration of hydrogen atoms/ molecules in the USS is absolutely essential.

These subatomic particle radiations (protons, electrons, neutrinos, photons, quarks, protons, electrons, neutrons, α , β , γ radiation & muons) are themselves surrounded by such electric and magnetic micro fields starting from the *lowest Higgs level* onward, but despite the presence of mass/ anti-mass, they do not generate any form of *physical gravity*. Only atoms generate physically gravity due speed of the atoms in the universe.

Due to the 100% absence of atoms in those absolute, 100% vacuum interiors and exteriors USS all forms of EM radiation and particle radiation cannot travel through those immense, 100% vacuum spaces present in the universe, and therefore cannot escape beyond the thin USS of galaxies interspersed with a thin, curved, spherical shell with an extremely low hydrogen concentration.

1.3 THE UNIVERSE/ USS IS A 100% CLOSED SYSTEM FOR ALL MASS, MATTER, AND KINETIC ENERGY; 1ST LAW OF THERMODYNAMICS:

-) Interim conclusions:

1) *Physical gravity* generated by the 'shell'-electrons of atoms combined with the 'ether' of hydrogen in the USS results in a 100% closed universe/ USS for both all forms of atoms and for all forms of subatomic radiation based on both particles and waves.

2) This 100% closed universe/ USS for mass, matter, and kinetic energy essentially articulates the **1st Law of Thermodynamics**. The *other Laws of the Universe* are listed in **document G4**.

1.3.1 THE UNIVERSE IS AN 100% OPEN SYSTEM FOR ‘RADIATION’ NOT BASED ON PARTICLES & WAVES:

- 3) The universe/ USS is only 100% open to all forms of radiation that:
- aren't based on particles with mass, matter, and kinetic energy, nor
 - are based on motion and displacement via wave motions.

This 100% openness of the universe/ USS currently applies to only two physical phenomena:
1) *physical gravity* and 2) *time/ universe-clock-time/UCT*.

Unlike gravity, time/ universe-clock-time/ UCT is fundamentally not a form of ‘radiation’
Time/ UCT will be discussed in **Chapter 2**.

Via both *physical gravity* and *time/ UCT* no/ any form of mass, matter, charge, spin, nor kinetic energy can escape from the universe/ USS.

1.4 WITHIN THAT 100% CLOSED SYSTEM, THE UNIVERSE/ USS ENDLESSLY PERFORMS THE VERY SAME CYCLE OF CURRENTLY 29 STEPS:

Within that 100% closed system for mass, matter and kinetic energy, the universe endlessly performs the very same, overall entirely energy-neutral cycle of currently 29 single-step processes. Each step of this cycle of the universe is essentially based on only *one* predictable *physical, chemical, nuclear, or energetic change*. This universe cycle follows a fixed, predictable trajectory of currently 29 steps, in which **step 29** being identical to **step 1**. The endlessly repeating, overall energy-neutral, cycle of the universe is detailed in **documents G7, G8, and G12**.

What is exceptional, however, is that the now final step, **step 29**, of this cycle within that closed system is exactly identical to **step 1** of the cycle and start of each cycle of the universe. Every cycle of the universe begins and ends with exactly the same number of protons and electrons, and with exactly the same amount of kinetic energy! This endless repetition within the closed system of the very same cycle of the universe is possible because each step of the universe cycle consists of a single change and therefore unfolds predictably.

This is curious in itself. This is due to the fact that each step is characterized by, in principle, only one physical, chemical, and nuclear change, which is defined in the **Min/ Max 1 principle; document F1f** www.uitewijkwinkel.eu

1.4.1 NUCLEAR FUSION FROM HYDROGEN RESULTS UNIVERSE WIDE IN THE SAME ELEMENTS/ ISOTOPES OF THE PERIODIC TABLE:

Further remarkable is that nuclear fusion of hydrogen, in every cycle and across the universe, consistently results in the *exact same periodic table* of 92 stable elements and their isotopes.
Document F1d & figures.

1.4.2 THIS EVERY CYCLE SAME ELEMENTS PERIODIC TABLE OF ELEMENTS RESULTS IN ONLY ONE BIOCHEMICAL FORM FOR ALL LIVING MATTER:

Really particularly remarkable is that this *periodic table of 92 elements* just allows one *biochemical system* for the biochemistry of living matter! That only one biochemical system for the biochemistry of living matter universe wide is based primarily on **the elements C, H, O, N, S, P**, and **only water** (H and O) as main reaction-medium.

This unique biochemistry of living matter is depicted and elaborated in great detail in the biochemical diagrams of **Biochemical Pathways (BP)** by **Gerhard Michal et al since 1972**. See internet online.

***2) TIME/ UNIVERSE-CLOCK-TIME/ UCT:**

Time/ universe-clock-time/ UCT is a *physical phenomenon without particles and without waves as well*. But this *time/ UCT* is fundamentally different in origin and design relative *physical gravity*.

Time/ UCT is linked to the mass, charge, and spin of the two most elementary *SUSY Higgs particles* of the proton and to the corresponding two *SUSY Higgs particles* of the electron. **Document F1a 2014 & figures.**

At this most elementary level of these just 4 (2x2) SUSY (super symmetrically) Higgs particles, time/ UCT arises from the three rotations of these 2 SUSY Higgs particles of the proton and 2 SUSY Higgs particles of the electron around their three perpendicular rotational axes.

This elementary origin and *development of time/ UCT* is at the Higgs level and cannot be separated from the mass, electric charge, magnetic spin, and space generated by these Higgs particles as well. Just like mass, charge, spin, and space, time/ UCT cannot develop as a separate phenomenon or quantity anywhere during the cycle of the universe.

Time/ UCT begins in *center C* with the supercold unfolding **Little Bang** and $t_{UCT} = 0.0000$ sec, and ends at the end of each cycle in the same *center C* of the universe, approximately 35 - 50 trillion (10^{12}) years later.

At the immediately following cold **Little Bang**, the next cycle of the universe begins. In fact time/ UCT for all Higgs particles essentially continues as normal! But in *practical terms*, this essentially means that time/ UCT starts all over again at $t_{UCT} = 0.0000$ sec.

A maximum value is then associated with both time/UCT and space, and the maximum radius of the universe-spherical-shell/USS, as well as with the maximum duration of one complete universe cycle. Both time/ UCT and space are associated with both a minimum and a maximum value.

2.1 TIME IS LINKED TO THE THREE ROTATIONS OF HIGGS PARTICLES ABOUT THEIR THREE AXES:

Fundamentally, time/ UCT is the consequence of the number of rotations to which *all Higgs particles* present in protons and electrons are subjected. The Higgs particles of protons and electrons rotate by default about their three axes, resulting in three deviations in all the most elementary Higgs particles. **Document F1a 2014 & Figures 1 – 6.**

These elementary Higgs particles continuously resist/ protest these three deviations by generating: a) *mass and anti-mass*, b) *positive or negative electric charge*, c) parallel or antiparallel magnetic spin, d) *space*, and e) *volume*. Secondly, *time/ UCT which is linked to the number of rotations of these Higgs particles around their three axes per unit of time*.

In a state of rest, the combination of rotational speeds is the same everywhere throughout the whole universe and during each cycle of the universe. Time/ UCT therefore is always and everywhere exactly the same. Within the universe/ USS and between those cycles, differences in time/UCT aren't possible!

Time/ UCT is secondary and consists of the number of rotations of all Higgs particles around their three axes. Time/ UCT therefore isn't a single component but is the result of and composed of three basic components of time/ UCT. Time/ UCT is 100% linked to all Higgs

particles, but at the same time/ UCT itself is without any own form of particles nor own form of waves.

Time/ UCT cannot move independently and separately from *Higgs particles* and matter. Therefore, time/ UCT cannot move through the 100% vacuum spaces of the universe, as is the case with *physical gravity*. In essential respects, *physical gravity* and time/ UCT therefore differ fundamentally!

2.2 TIME/ UCT IS EXCLUSIVELY FORWARD-RUNNING:

Everywhere, the same forward-directed velocity of time/ UCT exists relative to the moment of the start of the universe/ the cycle of the universe. The time/ UCT of the current universe cycle practically began with a supercold, unwound **Little Bang** that occurred approximately 75 - 85 billion years ago at the universe-clock-time/ UCT equivalent to $t_{UCT} = 0.00000 \text{ sec.}$

Document G6 & Figures 1 – G8.

Through the rotations of all Higgs particles around their 3 axes time/ UCT is indirectly linked to the mass, matter, charge, spin, and space of all Higgs particles, and thus linked to matter. Time/ UCT is uniform throughout the universe/ USS at its origin and moves everywhere in all directions with a constant forward linear velocity from the **Little Bang** and from *center C* during the expansion of the USS. Energetically, time/ UCT can only be unwound forwards and only within the USS!

After reaching the maximum expansion of the USS, in approximately the next 350 – 450 billion years, the uniform contraction of the universe/ USS towards center C will begin due the influence of gravity. Then, time/ UCT is also processed forwards at the same constant linear velocity during the contraction of the USS towards *center C*. Everywhere in the USS, time/ UCT is *always only directed forwards* and energetically cannot go back in time/ UCT. Resulting everywhere in the USS in exactly the same universe-clock-time/ UCT.

2.2.1 TIME/ UCT ENDS AGAIN AT THE END OF THE CYCLE OF THE UNIVERSE AND ACTUALLY STARTS AGAIN AT THE NEXT LITTLE BANG/ CYCLE:

Due to the *infinitely great speed* of *physical gravity* and its associated infinitely fast coordination, all matter and kinetic energy arrive at *center C* of the universe exactly simultaneously.

In energetic terms the contraction of the universe is contraire the expansion. During this retreat towards center C, all 4 - 20 million **central super cluster black holes/ CSCBH's** have completely lost their rotational velocity and thus their rotational gravity and merge non rotating as balloon near and around *center C* via the formation of the **Little Bang black hole/ LBBH**. The contraction speed related physical gravity keep these **CSCBH's** stabile!

Document G6 & figures 1 - 30 G8.

In this final phase of formation, the perfectly round non rotating **LBBH** loses increasing contraction-velocity and, with it, more and more of its last remaining *physical gravity*. Only at the very end of the contraction is the standard minimum required **Critical Black Hole Gravity/ Cribhgra** of approximately 6 - 8 *solar gravitational equivalents/ SGE's* is exceeded and crossed.

This, at the end of each universe cycle, results in the **instability of LBBH and in the Little Bang. At the point of crossing Cribhgra** the inside the **LBBH** present collapsed *black hole atoms* fall apart into an *equivalent number of protons and electrons*.

These freed equal number of protons and electrons arrange themselves into mono-layers of protons/ electrons that expand layer by layer from the outside of the **ex-LBBH** at 0.7 c. To complete this peeling of the **LBBH** in mono-layers of protons/ electrons takes about a thousand – fifteen hundreds of years.

2.2.2 END AND PRACTICAL START OF TIME/ UCT:

At the Little Bang, the UCT of the forgoing cosmic cycle of the universe ends, and the **Little Bang black hole/ LBBH**, containing all the mass, matter and kinetic energy of the universe gravitationally collected within it. In the end of the contraction this LBBH disintegrates into an equivalent number of protons and electrons due to the total loss of velocity and thus the total loss of gravity.

These liberated protons and electrons then arrange themselves via charge and spin into mono-layers of protons and electrons. During the **Little Bang**, exactly the same number of protons and electrons are liberated as with which the cosmic cycle began, and with which each cycle will end. **Documents G6 & figures 1 – 30 G8.**

At the **Little Bang**, time/ UCT continuous but essentially time/ UCT begins again with a blank slate at $t_{UCT} = 0.00000 \text{ sec.}$

2.3 TIME/ UNIVERSE-CLOCK-TIME/ UCT REQUIRES AN ADJUSTMENT TO THE THEORY OF RELATIVITY AS WELL:

From the start of each cycle, the exact same time/ UCT, which advances and moves only forwards in all directions with linear velocity and only within the USS, applies everywhere in the universe/ USS. Within the universe/ universe-spherical-shell, differences in this absolute form of time/ UCT by definition are impossible.

The origin of absolute time/ universe-clock-time/ UCT and maximum values of time and space during the universe cycle also require major adjustments to the theory of relativity.

*3) QUESTION:

The following questions arise:

Can:

- 1) such a 100% for mass, matter and kinetic energy closed universe,
- 2) such an endlessly repeating, overall energy-neutral cycle of the universe,
- 3) nuclear fusion of hydrogen just resulting in the same periodic table of elements, and
- 4) **Biochemical Pathways**, as the only possible biochemical system based on those elements of the periodic table forming the basis for the biochemistry of all living matter in the universe and with every cycle of the universe, be the result of:
 - a) a *mere coincidence* that is then strictly logical and scientifically explainable,
 - b) or the result of a pre-thought-out and purposeful concept and development from a higher, *supernatural level and design*?

Ad a) In the first case, a *strictly logical scientific* analysis and explanation must and can be given for all phenomena in the universe.

Ad b) In the second case, there would be a *preconceived plan and design* underlying the universe, the cosmic cycle of the universe, the fundamental elements periodic table, and the structure and composition of **Biochemical Pathways/ BP**, and thus the same biochemistry of living matter in the universe during all past cycles of the universe as well all coming cycles of the universe!

***4) PURPOSE OF DOCUMENT G24:**

In **document G24** www.uiterwijkwinkel.eu, the author attempts to provide a rational, factual, and scientifically accepted analysis and answer to the question of whether there are reasons to indicate that there is a preconceived 'design' of the universe, the cosmic cycle of the universe, the periodic table of elements, and **Biochemical Pathways/ BP** throughout the whole universe resulting in living matter based on the very same biochemical basis of living matter as outlined in **BP** and present on **planet Earth**.

***5) CONSEQUENCES OF THE ELEMENTS PERIODIC TABLE:**

5.1 CONSEQUENCES OF THE 'ETHER' FOR THE TRANSPORT VELOCITY OF RADIATION BASED ON PARTICLES & WAVES:

The need for an 'ether' of electric and magnetic micro-fields generated by the protons/ electrons of atoms for the transport of all subatomic radiation means the transport velocity of all forms of EM and particle radiation is based on an atom → atom transmission.

Within the universe/ USS, this transport of radiation based on particles & waves therefore is limited by default to the hydrogen only present in extremely low concentrations in that thin universe-spherical-shell/ USS of the universe. Limited to the hydrogen in the USS, the speeds of this atom → atom transfer, for all forms of particle radiation & waves, is limited by default to a maximum of the speed of light c .

5.1.1 ANNO 2025 THE SPEED OF LIGHT c IS THE MAXIMUM SPEED LIMIT WITHIN THE THEORY OF RELATIVITY:

This speed of light of nearly three hundred thousand km/s is also the current (2025) maximum speed limit within the theory of relativity! **Einstein's** theory of relativity anno 2025 does not anticipate *physical phenomena* that can travel at infinite speed ($\gg c$) and thus faster the speed of light c !

5.2 THE UNIVERSE IS ONLY VISIBLE THROUGH THE EXTREMELY LOW CONCENTRATION OF 100% HYDROGEN ONLY PRESENT IN THE USS:

From Earth and surrounding space, we can therefore only observe this universe/ this universe-spherical-shell through that *thin layer of super cold hydrogen*, which is only present within this spherical shell/ USS and only between the present galaxies. This hydrogen functions as an indispensable 'ether' for conducting and transporting all forms of electromagnetic radiation based on both particle and wave motions.

The universe cannot be visually observed through those immense, 100% absolute vacuum areas within and outside of space of the USS, in which photons and other forms of 'particle' radiation cannot penetrate. **Figures 36p, 36q, and 36r, documents G8/ G12**
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5.3 REFORMATION WITHIN THE USS OF ALL EM RADIATION & ALL PARTICULATE RADIATION INTO NEW MATTER; PROTONS & ELECTRONS:

We can just look *13.8 billion (light) years back in time* and back into the history of the universe! How does this happen? Within the context of the cycle of the universe all forms of particle & wave-based EM radiation and radiation with particles disappear over time.

Within that 13.8 billion-year period, all forms of electromagnetic (EM) radiation and all subatomic particle radiation are reformed and transformed into new matter, and this occurs exclusively in the form of new *protons and new electrons*. **Document F1b & figures and document F1c & figures.**

These protons and electrons combined just form the simplest hydrogen atom/ molecule and not any of the hydrogen isotopes (deuterium, tritium, nor neutrons). This simplest hydrogen, after cooling to liquid hydrogen, gravitationally forms extremely large hydrogen spheres that, with a delay, culminate in the **Big Bangs** as start of the galaxies. **Document G7 phase 16 & figures 42 – 54 document G8.**

After the *Big Bangs of galaxies*, this results in the formation of the spiral arms, stars, and small parallel galaxies **Document G7 phases 17 – 20 and G18.** During these **Big Bangs**, all the elements of the periodic table are formed, as well as in one strike the central black hole of the galaxy present in the centers of all galaxies. A large portion of the hydrogen does not fuse, resulting in the much later in the formation of stars.

Through nuclear fusion in stars, this in turn results in the secondary formation of helium and further in the formation of higher elements, such as iron/ Fe. Via supernovae, all the very same elements of the periodic table are ultimately formed again. **Document F1d & figures.**

5.4 DEPTH OF VISION VIA THE UNIVERSE SPHERE IS LIMITED TO ONLY 13.8 BILLION (LIGHT) YEARS:

Due to this transformation of all subatomic radiation into matter in the form of *protons/ electrons* and the addition of $E = mc^2$ to the rotational velocity/ energy, one can only look back in time for a **maximum of 13.8 billion years/ light years** into that universe/ universe-spherical-shell and only via the hydrogen present within that thin USS. This reconstruction limits the period we are able looking back in time/ and the observable history of the universe/ USS. Therefore, maximum observations of just 13.8 billion (light) years into the past of the universe are possible. Just 13.8 billion of years of the approximately present 70 billion (light) years with free photons. (During the first 10 - 15 billion years after the **start/ Little Bang**, only 'super cold' protons/ electrons are present. That very first period by definition isn't observable anyhow! Only by mathematical modelling the cycle of the universe; **G14, G15**)

During that visible period, the universe/ USS appears to be expanding faster and faster with distance. Looking back in time, the universe appears to be expanding faster and faster in all directions, at speeds that could then even 'exceed' the speed of light c

In reality, beyond our 'observation' horizon, this expansion rate cannot ultimately exceed 0.7 of the speed of light c ! This is equivalent to the maximum expansion rate after the start of the universe/ USS after the start of the universe/ **Little Bang. Steps 1 - 4 of the universe cycle document G6 / G7.**

5.5 THE UNIVERSE STARTED MUCH EARLIER, AND THE CURRENT CYCLE IS MUCH OLDER THAN 13.8 BILLION YEARS:

-) The current cycle of the universe began already some 75 - 85 billion years ago with a super-cold **Little Bang** that occurred at an equivalent of 0 Kelvin:

At the **Little Bang**, the previous cycle of the universe ended, and the current cycle of the universe began with only protons and electrons, without atoms, and thus the start of the cycle of the universe began super cold equivalent at 0 Kelvin!

This super-cold **Little Bang** was accompanied by the complete loss of velocity and loss of physical gravity, causing the **Little Bang black hole/ LBBH** to become unstable, and the black hole atoms within it disintegrated into an equivalent number of protons and electrons.

Document G6 & Figures 1 – 30 G8 describe this super-cold (0 Kelvin) start of the universe with a **Little Bang** and in the form of mono-layers of protons and electrons. The universe begins its first 10 – 15 billion years without atoms and thus without temperature, and without physical gravity, with an expansion rate of no more than 0.7c.

The current **29-step** cycle of the universe is already at the beginning of **step 23** and began approximately 75 – 85 billion years ago. **Documents G7, G8, and G12.** Of that potentially observable period of approximately 70 – 75 billion years, only 13.8 billion (light)-years are currently observable and visible via **Hubble** and **Webb!**

5.5.1 THE CYCLE OF THE UNIVERSE CAN ONLY BE MADE QUALITATIVELY & QUALITATIVELY ‘VISIBLE’ BY MATHEMATICALLY MODELLING THE WHOLE CYCLE OF THE UNIVERSE:

The remainder of the entire cosmic cycle of the universe as 100% closed system for mass, matter and kinetic energy can only be qualitatively and quantitatively visualized and made visible through mathematical modeling of this entire infinitely repeating cosmic cycle! This modeling is generally described in **documents G14 & G15.**

5.5.2 AT THE START OF THE CYCLE OF THE UNIVERSE, NO FORMATION OF ATOMS AND THEREFORE NO FORMATION OF PHYSICAL GRAVITATION AND TEMPERATURE:

During this **Little Bang**, no hydrogen nor its isotopes (like deuterium and tritium atoms) nor any other atom/ isotope is formed. Exclusively single protons/ electrons out of instable blackhole atoms. **Document F1e & figures.**

Because during and after this Little Bang **atoms** are totally absent this Little Bang also does not involve the formation of *physical gravity*, *physical gravitational energy*, *temperature*, nor any other physical, chemical, or mechanical forces related to the atom. This Little Bang occurs supercold at a temperature equivalent to 0 K!

5.6 ONLY 10 - 15 BILLION YEARS AFTER THE LITTLE BANG DO PROTONS AND ELECTRONS FORM HYDROGEN ATOMS/ MOLECULES:

Only after 10 - 15 billion years of expansion into mono-spherical layers of individual protons and electrons, expanding at 0.7c in an absolute vacuum, thus expanding this whole period without any resistance or gravitational slowing down, so much space has been created both:

- a) between these mono-layers of protons/ electrons and**
- b) within each of these mono-layers of protons and electrons**

each proton can capture its own ‘shell’ electron. Then, throughout the whole universe / USS wide simultaneously the very same moment/ UCT, only the simplest hydrogen atom is formed. Not even any forming of H isotopes like deuterium, tritium, nor neutrons!

With the simplest *hydrogen molecule*, formed immediately afterward, physical gravity, gravitational energy, temperature, and the physical, chemical, and mechanical forces related

to the H atom/ H₂ molecule only returned to the universe approximately 10 – 15 billion years after the start of the current cosmic cycle, and only within that then-thin USS. **Document F1d.** By then, the universe/ USS had already achieved most of its maximum expansion.

With this physical gravity from hydrogen, the expansion rate of the USS which at that time contained only hot hydrogen gas/ plasma, also began to slow down approximately 70 – 75 billion years ago ‘visible’ due to the heat released during the formation of H₂!

5.7 ONLY AFTER HYDROGEN COOLS TO ITS CONDENSATION POINT DO CELESTIAL BODIES OF PURE 100% HYDROGEN FORM:

Only another 13.8 billion years later the infrared photons (of the proton) and the photons of light (the electron) are so completely converted back into true protons and electrons that the hot, 100% pure hydrogen has been cooled down to approximately 20 kelvin and the hydrogen gas condensates and transforms into liquid hydrogen.

That moment the entropy of the hydrogen becomes subordinate to physical gravity of hydrogen. The previously dominant role of entropy ‘disappears’. Only then during the next billions of years due gravity enormous spheres of 100% pure liquid hydrogen can be formed. These H₂ spheres becoming increasingly hotter through collisions and ultimately becoming supercritical pure hydrogen plasma spheres again. These single spheres or one central sphere accompanied by **2 – 10 smaller H₂ spheres/ Roemers** be formed through physical gravity. All spheres are held together and maintained by their physically gravity.

The *100% absence of, tritium and neutrons* delays and prevents the initiation of nuclear fusion in these pure, due collisions, increasingly hotter and hotter becoming hydrogen spheres for many billions of years. Nuclear physics-wise, these central hydrogen spheres have already become supercritical for more than billions of years.

5.7.1 THE FORMATION OR NOT OF SUCH SIDE-SPHERES/ ROEMERS:

These large central H₂ spheres are often, but not always, surrounded by two or more smaller side-spheres/ **Roemers** consisting of also 100% pure hydrogen.

In case such secondary spheres/ **Roemers** are absent, this will eventually result in the Big Bangs and the start of galaxies without spiral arms. These galaxies without spiral arms result in extremely heavy **Big Bangs**, and in the formation of small, compact, elliptical EM galaxies without spiral arms, containing an enormous central supermassive black hole that generate an amount of rotational gravity equivalent to **several billions solar gravitational equivalents/ SGE’s**. May be 30 – 50 % of the present hydrogen is fused to higher atoms and transferred into blackhole atoms resulting in a super large blackhole & small elliptically galaxy.

In most cases, these large, but smaller, 100% pure hydrogen central spheres are surrounded by a series of 2 - 10 smaller and cooler secondary spheres/ **Roemers**, consisting of 100% pure hydrogen as well. During the **Big Bangs** and the start of these galaxies, approximately 20 - 30% or more of the ‘shell’ electrons disappear being bound to the atom core. Thus removing a large portion of the physical gravity in these central spheres. **Figures document F1d.**

These **Roemers** without nuclear fusion, however, retain their original rotation speed/ gravity and are ejected from these central spheres during the **Big Bangs at a speed about 0.1 – 0.2 the speed of light c**. Eventually, after the **Big Bangs** and start of the galaxies, each sub spheres/ **Roemer** results in the formation of one spiral arm of the galaxy. (These central globules surrounded by 0, 2, up to 10 Roemers all start with the same amount of hydrogen and kinetic energy.)

As the galaxy acquires more spiral arms, the **central black hole** of the galaxy formed during the **Big Bangs** becomes increasingly smaller. Decreasing from a few billion SGE's in elliptically galaxies without spiral arms → hundreds of millions of SGE's in galaxies with just two spiral arms → tens of millions of SGE's (such as **galaxy M87**) → to just a few million SGE's in the case of the **Milky Way/ Sagittarius A*** and more spiral arms). In general the more spiral arms or sub arms, the smaller the size, matter, kinetic energy, and gravity emanating from the galaxy's central black hole. **Document G18**.

5.8 DURING BIG BANGS, ALL THE ELEMENTS OF THE PERIODIC SYSTEM ARE FORMED AS WELL THE CENTRAL BLACK HOLE OF THE GALAXY:

Only 40 - 45 billion years after the **Little Bang/ start of the universe cycle, 75 – 85 billion years ago**, and **Big Bangs / starts of the galaxies** approximately **30 - 40 billion years ago**. During these Big Bangs of the galaxies nuclear fusion did finally started in those gigantic, ultimately superhot, central, largest hydrogen spheres.

These billions of **superhot Big Bangs** occurred almost simultaneously and resulted in the birth of all the billions of galaxies. All galaxies began with their own **superhot Big Bang** and the immediately subsequent, almost simultaneous formation of their **own central black hole** in just *one strike!*

These *central black holes in the cores of galaxies* are formed all at once and are present in the cores of all primary galaxies. **Step 16** of the universe cycle, **document G7 & figures 42 - 54 G8**, describe these Big Bangs. They are the first and oldest black holes in the universe/ USS.

5.9 DUE TO GRAVITATION, THE UNIVERSE/ USS IS EXPANDING MORE AND MORE SLOWLY TOWARDS THE FUTURE; THE EXPANSION USS WILL END:

This correct observation of a universe expanding increasingly rapidly towards the past (by a maximum of 0.7 c!) also means that the gravitational force within the universe/ USS will cause the expansion of the universe-spherical-shell/ USS to slow down towards the future! Over the next approximately 350 – 450 billion years, *physical gravity* will eventually reduce the expansion of the universe-spherical-shell/ USS towards zero.

5.10 SLOWING DOWN EXPANSION SPEED INVOLVES CONVERTING EXPANSION SPEED INTO DIFFERENT FORMS OF ROTATIONAL VELOCITY:

Slowing down the expansion speed of the universe/ USS as 100% closed system means converting the expansion velocity into about 15 - 17 forms of rotational velocity: a) within all superclusters each containing thousands of galaxies, b) within all individual galaxies, and c) within all solar systems present in these galaxies.

Since the universe is a 100% closed system for mass, matter, and kinetic energy, the kinetic energy of this expansion velocity can only be converted into potential/ gravitational energy and forms of rotational velocity/ kinetic rotational energy. In the universe/ USS, this slowing down of the expansion velocity is first increasingly converted into no fewer than 15 - 17 possible forms of rotational velocity/energy. This multitude of universe-wide corresponding rotation velocities within the USS are present at three levels:

a) 4 - 6 corresponding rotation velocities within each of the many (4 – 20) millions of *super clusters*, each of which contains several (approximately 4 – 6 or more) thousands of galaxies. These super clusters currently divide the universe-spherical-shell/ USS into a ‘giraffe-skin’ shaped matrix like network with orbits and paths of galaxies and stars surrounding relatively empty spaces within the USS,

b) 4 – 6 corresponding rotation velocities *within each of those many billions of galaxies* themselves,

c) 4 – 6 corresponding rotation velocities *within all the stars* present within those many billions of galaxies, with their planets, moons, and satellites orbiting around these stars.

Now each of those 15 – 17 forms of velocity in the universe results in its own deviation in all present ‘**shell**’-**electrons of atoms/ molecules** and in a separately distinguishable component of *physical gravity* that is specifically linked to each velocity.

The very same 15 - 17 component structure also applies to the *physical and chemical forces and their bonds of atoms*, and thus to the molecules they form. **Document F1d & figures.**

5.10.1 THESE 15 - 17 VELOCITIES/ AND FORMS OF KINETIC ENERGY OF ATOMS FORM THE COMMON BASIS OF QUANTUM GRAVITATION & QUANTUM MECHANICS:

The currently present 15 - 17 velocities of atoms in the universe within the USS and their force and bond components form the **common basis** of **quantum gravity** (gravitational components are proportional to v_1 - v_{17}) and that of quantum mechanics (physical and chemical components of forces and bonds are proportional to energy and v_1^2 - v_{17}^2).

5.10.2 IN THE NEXT 350 - 450 BILLION YEARS, ALL MATTER AND ENERGY WILL BE 100% LOCKED UP IN THE CENTRAL BLACK HOLES OF THE SUPER CLUSTERS, LEAVING ONLY ONE ROTATIONAL SPEED (ANTI) CLOCK WISE.

Within each of the about 4 - 20 million superclusters, gravity continuously drives collisions between the thousands of galaxies within them and inside present central black holes. These collisions between galaxies will continue for the next 350 - 450 billion years of the current **step 23** cycle of the universe, until each of those 4 - 20 million superclusters, each containing 4 - 6 or more thousands of galaxies, will ultimately result and remain in just **one central supercluster black hole/ CSCBH** containing all the mass, matter, and kinetic energy of that entire supercluster and all the kinetic energy within it!

This marks the end of the current **step 23** cycle of the universe and the end and maximum expansion of the USS, which will then have reached a radius of approximately 10 - 12 billion or more light-years relative to **center C**. All expansion velocity of the universe/ USS then will be completely converted into only *one form of rotation/ angular velocity* located within the USS. This rotation/ angular velocity will be $0.7c$ and will be clockwise or counter clockwise and located within the local plane of the USS. This rotation speed equals the maximum expansion velocity at the beginning of each universe. Thus 100% conversion expansion speed / energy \rightarrow rotation speed/ energy. The universe/ USS then will be absolutely dark and 100% free of EM and particle radiation.

These final collisions within the superclusters will occur almost simultaneously everywhere and also mark the end of the expansion of the universe's spherical shell/ USS, because with these final collisions, all expansion velocity will have been converted into rotation/ angular velocity.

-) Position of rotation axes of CSCBH's relative to USS:

The rotation axes of all remaining central supercluster black holes/CSCBH's are precisely oriented toward the center C of the universe/ USS and are everywhere exactly perpendicular to the local USS. Their rotation/ angular velocity is uniform and amounts to 0.7 the speed of light c , and is quantitatively equal in energy terms to the expansion rate at the start of the universe cycle. This rotation can be clockwise or counterclockwise. That does not matter.

5.11 AFTER THE MAXIMUM EXPANSION GRAVITATION CAUSES A SPHERE-SHRINKAGE OF THE USS TOWARDS CENTER C UNIVERSE:

This uniform, all-round shrinkage of the USS towards **center C** occurs at a maximum speed of approximately 100 – 150 km/s. At 10 – 12 billion light-years distance towards center C therefore will take many trillions (10^{12}) of years. Now estimated about 35 – 50 trillion (10^{12}) years:

The rotational velocity of these *CSCBH's* is energetically opposite to the shrinkage velocity of the USS. This shrinkage of the USS therefore comes at the expense of its rotational velocity of these *CSCBH's*.

During the return journey to *center C*, this rotation-linked velocity and kinetic energy, starting at $0.7c$, is fully utilized and used for deceleration during the return journey to *center C*. This energy is used to slow down the acceleration of the shrinkage velocity of the USS and the CSCBH's present within it. This slowing down to a constant speed comes at the expense of their clockwise/ counterclockwise rotation, resulting in a constant contraction velocity of approximately just 100 – 150 km/s throughout the entire contraction period (approximately 35 – 50 trillion years). This slow, constant contraction of the universe/ USS by 4 – 20 million CSCBH's therefore takes approximately 35 – 50 trillion (10^{12}) years.

5.11.1 PHYSICAL GRAVITATION, WITH ITS INFINITELY GREAT SPEED, ENSURES THE COORDINATION AND THE EVEN CONTRACTING OF THE UNIVERSE/ USS TOWARDS THE CENTER C UNIVERSE:

The infinite speed of physical gravity ensures that the universe/ USS/ that matrix network of millions of central super cluster black holes/ CSCBH's after reaching its maximum expansion,

will again contract uniformly on all sides, like a perfectly round balloon, towards the center C of the universe. The mutual coordination via this infinite spreading physical gravity of these 4 – 20 million CSCBH's in the USS ensures the mutual instantly coordination of movements and also ensures that all CSCBH's in the USS arrive simultaneously at the center C of the universe the same moment/ UCT. Along the way, their rotation/ angular speed decreases, and thus their rotational gravity decreases quantitatively as well. The mutual attraction between these CSCBH's therefore remains the same and constant in principle.

***6) IS THIS 100% CLOSED UNIVERSE/ BALLOON-SHAPED UNIVERSE ARISING BY CHANCE OR BY PURPOSEFUL DESIGN?**

The universe is a 100% closed system for both:

- a) all types of ordinary atoms and those collapsed blackhole atoms present inside black holes, which generate the same kind of physically gravity due to their motion/ speed and kinetic energy, and
- b) as well 100% closed to all types of electromagnetic radiation based on particles and waves that depend on an 'ether' of hydrogen for their movement only possible within the thin, one galaxy thick, USS, and due that 'ether' limited to a maximum the speed of light c .

Within that 100% closed system the universe repeats itself endlessly as an overall energy-neutral cycle of now *29 steps*. Always following in each cycle the very same pattern/ scheme of basically single steps and the same cycle time, second precise.

This endless repetition of the universe would be impossible if the universe/USS, during each cycle could lose or would result in more:

-) mass, charge, spin, matter, and kinetic energy, or
-) completing such cycle net overall would require or yield any kinetic energy.

Everything must be precisely and accurately tuned, both qualitatively as well quantitatively.

According to the author, this universe is *deliberately designed* qualitatively and quantitatively in such a way that it can repeat itself endlessly within that 100% closed system by repeatedly completing the same cycle of currently 29 steps (and perhaps even more steps). **Documents G7 & G8.**

The driving force of each cycle consists of *physical gravitational energy* relative to the center C, which is added completely free of charge to each cycle of the universe simultaneously with the formation of hydrogen atoms/ molecules and physical gravity.

To be able to endlessly complete the same cycle, all parameters of that universe (**document G4**) must be precisely and accurately tuned, both qualitatively and quantitatively. These parameters of the universe/ USS can be derived quantitatively through the mathematical derivation of this universe cycle. **Documents G14 & G15.**

It is already clear to the author that the macro universe exhibits a highly purposeful design and a predetermined set of quantitatively determined universe parameters. Within this 100% closed system, the universe repeats its cycle endlessly, always in the same way and at exactly the same time/ UCT. Overall, each cycle of the universe is completed completely energy-neutral. **Documents G6, G7, G8, and G12.**

Such a cycle is furthermore only possible through mutual communication between matter/ atoms that occurs at **an infinitely high speed**. This infinitely fast communication is based solely on physical gravity.

This form of physical gravity and gravitational energy, which moves at an infinitely high speed, ($>c$) is currently absent in the theory of relativity.

6.1 FOR THE FIRST 10 - 15 BILLION YEARS, ATOMS AND THEREBY PHYSICAL GRAVITATION AND GRAVITATIONAL ENERGY MUST BE ABSENT:

Making it possible for the universe/ USS to develop, a strict precondition is that for the first approximately 10 - 15 billion years, both *atoms* and, consequently, *physical gravity* and its associated *gravitational energy* must be **absolutely absent**. During this first long period of each cycle, physically gravitational energy, in addition to physical gravity, is absent as well.

During this entire initial long period, the universe/ USS can expand completely unhindered in an absolutely vacuum space. Only after this exceptionally long initial period of 10 - 15 billion years of expansion $0.7c$ without atoms/ physical gravity this combination of single protons and electrons results in the forming of H atoms/ H_2 molecules. Only then physical gravity and the associated physical gravitational energy will return to the universe / in the USS, along with other physical and chemical forces/ bonds of atoms/ molecules. **F1d & figures.**

6.2 THE CYCLE OF THE UNIVERSE WOULD END THE VERY SAME MOMENT IN CASE ATOMS AND THUS PHYSICALLY GRAVITATION WERE FORMED DIRECTLY AT THE START/ LITTLE BANG:

In case **atoms** had been formed directly from the start/ Little Bang of the universe/the universe cycle, and with them *physical gravity* and gravitational energy had been generated, the entire gravity of the universe would have been concentrated on and just directly around the center **C**.

This gravity of the entire universe, concentrated directly around **C**, would have prevented and blocked any further expansion/ development of the universe. The universe cycle would then end prematurely right at the start, like a gigantic black hole from which no atom could escape.

Such a premature end to the universe/universe cycle can only be prevented if, during the first 10 – 15 billion years of expansion, atoms are completely absent, and thus physical gravity and physical gravitational energy are completely absent as well. That case, the universe/ USS can expand completely unhindered and uniformly in an absolute vacuum area/universe. Like a balloon, for that entire initial period of 10 - 15 billion years, at a constant velocity of approximately $0.7c$.

6.3 UNIVERSE AND NOW ONGOING CYCLE OF THE UNIVERSE IS MUCH OLDER THAN 13.8 BILLION YEARS; THE USS REACHES MUCH FURTHER 13.8 BILLION LIGHT-YEARS:

In the cycle of the universe cycle, we now arrived at the beginning of **step 23 of 29 (document G7 & figures)**, and this universe/ USS has already been underway for approximately 75 – 85 billion years! With an initial expansion velocity of $0.7c$ and the absence of atoms and gravity during the first 10 – 15 billion years, there is enough time to reach the universe's gigantic radius of approximately 10 – 12 billion light-years; may be even more. (Now the remaining expansion speed is about 450 km/s !)

Then the enormous size of the universe can be explained without the use of inflation ($v \gg c$)! The consequence of the cosmic cycle is that the current universe is/ must be much older than the currently in widely accepted 13.8 billion years/ observable depth/ observation horizon within the USS!

6.4 THE UNIVERSE VIEWED AS A WHOLE AND MACRO IS BASED ON A PRIMARY AND PURPOSE-ORIENTED DESIGN:

According to the author, this 100% closed universe and the endlessly repeating overall energy-neutral cosmic cycle are based on a macro-design of the universe. This endlessly repeating cycle of 29 steps can only be seen as the result of an extremely purposeful, supernatural design.

All steps in that cycle and all cosmic parameters on which that design of the universe is based are precisely and qualitatively and quantitatively coordinated to such an extent that this results in a single, balanced, energy-neutral cycle of steps and the design of that universe.

The assertion that the universe and cosmic cycle are based on chance must be emphatically rejected.

***7) THE UNIVERSE STRUCTURE FROM THE LOWEST HIGGS LEVEL TO THE LEVEL OF ATOMS AND MATTER/ BLACKHOLE ATOMS AND ANTI-MATTER:**

-) Only two basic building blocks of matter/ atoms: the proton and the electron:

Matter in the universe is based on only two basic building blocks of matter. This basis is based on protons and electrons, with 1 neutron = 1 proton + 1 electron.

(Anti-matter/ anti-atoms are based on anti-protons and positrons/ anti-electrons.)

7.1 HIGH-ENERGETIC STANDARD MODEL (SM) BY SCIENCE ↔ LOW-ENERGETIC STANDARD HIGGS MODEL (SHM) UITERWIJK WINKEL:

The current **Standard Model (SM)** used in **Science** is based on collisions in particle accelerators, which, due to particles/ fragments, disintegrate after the collisions and then all temporarily remain in a state of high-energy. This **Standard Model** (see Wikipedia) is primarily based on **proton quarks** present in **three energy levels**, which were discovered and identified after the devastating collisions in particle accelerators and subsequently separated into various *high-energy particles* in *mass spectrometers*.

All the resulting fragments/ particles are still in a *high-energy state* immediately after these collisions in the mass spectrometers and thus aren't in their *normal energetic resting state*, which they were just prior to the collision!

Inside these fragments of protons, atomic nuclei, and ions, all present *Higgs particles* within them, are in an excited, high-energy state and are therefore subjected to much higher rotational/ angular velocities than those Higgs normally found in their *normal resting state*.

These Higgs particles therefore generate and temporarily possess/ exhibit a much higher energy level, generating significantly **more mass, electric charge, magnetic spin, larger dimensions/ more space/ volume** than the same Higgs particles would have in their *normal resting state!*

7.2 STANDARD HIGGS MODEL (SHM) BY A.P.B. UITERWIJK WINKEL:

Uiterwijk Winkel's Standard Higgs Model (SHM) does not assume high-energy collisions! The SHM assumes fragments composed of Higgs particles as they exist in their *normally constant resting state*.

Therefore, the SHM fundamentally differs energetically and in terms of mass, charge, spin, and volume/ space from the widely accepted Standard Model (SM) used in **Science**. At its very lowest and most basic level, the SHM, in *its resting state*, is based on just **4 (2 x 2) SUSY Higgs particles:**

-) only two super symmetric (SUSY) proton Higgs particles and

-) only two SUSY electron Higgs particles.

Due the 3 rotations around 3 axes these 4 (2 x 2) SUSY Higgs particles generate not only:
a) mass/ anti mass, but as well b) electric positive/ negative charge, c) parallel/ anti-parallel magnetic spin, d) a 3D volume/ space, e) kinetic rotation speed/ energy and f) time/ UCT.

Through their opposing, mutually attractive forces, larger structures can be constructed, such as *neutrinos, double neutrinos, half-photons, photons, double-photons, quarks*, and ultimately, *only protons and electrons*. **Chapter 8.**

***8) FURTHER STRUCTURE OF THESE 4 HIGGS PARTICLES AND OF MATTER VIA 12 LEVELS:**

Uiterwijk Winkel's SHM comprises no fewer than *12 levels of construction*, from the smallest Higgs particles to matter in the form of (anti) protons and electrons/ positrons, further resulting in hydrogen, the elements of the periodic table, and the level of black hole matter/ atoms and anti-atoms. Of these 12 distinct levels, 8 levels can be considered super-symmetric (SUSY). **Document G23 text and G23 figures.**

These protons and electrons constitute the *8th level* and are based on structures that, at their very lowest level and in their resting state, are based on only 4 of the most elementary Higgs particles, which are (2 x 2) super-symmetric (SUSY). The four most elementary Higgs particles in their resting state are:

-) 2 supersymmetric SUSY proton Higgs particles, strings, and
-) 2 supersymmetric SUSY electron Higgs particles, strings, and strings.

Document F1a 2014 & figures 1 – 6 www.uiterwijkwinkel.eu

Based on these 4 Higgs particles in the universe, the following levels are possible:

- 1) 4 (2 x 2) most elementary Higgs particles, snares, strings with their electric and magnetic bonds & repulsions, which results in the following levels of:
- 2) 4 (2 x 2) neutrinos,
- 3) 4 (2 x 2) double-neutrinos,
- 4) 4 (2 x 2) half-photons,
- 5) 4 (2 x 2) photons; (2) – 5) are described in document F1b & figures,
- 6) 4 (2 x 2) double-photons,
- 7) 4 (2 x 2) quarks, and ultimately only
- 8) the proton/ antiproton & electron/ positron; (6) – 8) described in document F1c & figures and the neutron/ anti-neutron.

In the universe the proton and the electron (level 8 of 12) are the maximum possible stabile structures which can be built from those 4 (2 x 2) most elementary Higgs particles of SHM! **Document G23 text and G23 figures.**

Then the following levels:

- 9) with the formation of hydrogen/ anti-hydrogen atoms/ molecules,
- 10) via nuclear fusion of hydrogen, the elements of the periodic table from H up to a maximum of no. 120 can be constructed, Document F1d & figures,
- 11) under extremely high pressure, the formation of imploded black hole elements from Be; (H, H₂, He, Li cannot transfer into super small and massive blackhole atoms!) Document F1e & figures.
- 12) the formation of anti-atoms from anti-H, document F1e.

8.1 UNIVERSE IS BASED ON EQUIVALENT NUMBER OF PROTONS AND ELECTRONS AS BOTH MATTER AND ANTI MATTER:

In case the proton is considered being matter, the electron should be considered as anti-matter, and vice versa. Protons and electrons are made up of two fundamentally different building blocks: 2 SUSY proton Higgs and 2 SUSY electron Higgs. **Document F1a 2014 & figures.**

Protons and electrons are matter and anti-matter to each other, but they cannot annihilate each other!

Annihilation is only possible between equivalent protons/ anti-protons and between electrons/ positrons, and these are converted into proton/ electron related photons during annihilation!

Figures F1c. These photons aren't 100% pure energy but particles with energy and without measurable mass!

Matter and antimatter can therefore indeed coexist! *All matter in the universe, in the form of atoms, can therefore be considered to be composed of half matter/ half anti-matter!*

8.2 START OF UNIVERSE CYCLE WITH SUPER COLD *LITTLE BANG* (0 K):

-) Within that 100% closed system, the universe each cycle of the universe starts with exactly the same number of protons and electrons:

At the **Little Bang**, all velocity disappears, and with it all physical gravity. The **Little Bang black hole/ LBBH** disintegrates into an exactly equal number of protons (matter) and electrons (anti-matter). All black hole atoms present within it were also composed of an exactly equal number of protons and electrons. **Document F1e & figures**. That super cold start/ **Little Bang** already occurred approximately 75 - 85 billion years ago.

The **Little Bang** resulted in the release of the *exact same* number of protons/ electrons from the **Little Bang black hole** as were present during all previous cycles of the universe.

Document G6 & Figures 1–30 G8. This number of protons, electrons, and the amount of kinetic and gravitational energy required for the universe cycle can only be determined through mathematical modeling of the universe cycle. **Documents G6, G7, G8, G12, and G14 & G15** www.uitewijkwinkel.eu

The **Little Bang** was incredibly cold, occurring at an equivalent temperature of 0 Kelvin!

Through charge and spin, these equivalent numbers of released protons and electrons arrange themselves into spherical layers, alternating between one proton and one electron thick, that expand from the outside by $0.7c$.

For the first thousand to fifteen hundred years, it initially appeared as a perfectly round sphere expanding layer by layer from the outside at a constant speed of $0.7c$. The expansion of the universe begins supercold, at a constant speed of approximately 0.7 times the speed of light c . This initial expansion occurs without atoms, without temperature, without gravity/ gravitational energy, and without atomic forces, and lasts for approximately the first about 10 - 15 billion years of each cycle of the universe.

After the **Little Bang black hole** has been completely peeled away layer by layer, it becomes a perfectly round, expanding spherical-shell which wall becomes increasingly thinner, resembling a balloon. The universe continues to expand in an absolutely vacuum outer space with an equally absolute 100% vacuum interior.

During this entire initial period of approximately 10 - 15 billion years, atoms are absent in the USS, and thus also absent are: a) temperature, b) gravity and gravitational energy, and c) all atomic and velocity-related physical and chemical forces of atoms with their bonds.

During that period, the distances between and within these monolayers of protons and electrons gradually increase until, across the entire universe, every proton can simultaneously capture its own 'shell' electron. Only the simplest hydrogen atom/isotope can be formed. No deuterium, tritium, or neutrons are formed!

8.3 ONLY AFTER 10 - 15 BILLION YEARS OF EXPANSION DO PROTONS AND ELECTRONS FORM HYDROGEN ATOMS/ MOLECULES:

Only after 10 - 15 billion years of expansion by $0.7 c$ at the start/ **Little Bang** so much space become available for each proton to capture its own 'shell'-electron. Initially, only 100% pure hydrogen atoms are formed. No forming of hydrogen isotopes such as deuterium and tritium!

8.3.1 VIA HYDROGEN FORMATION, THE FREE ADDITION OF PHYSICAL GRAVITATIONAL ENERGY TO EVERY UNIVERSE CYCLE:

With this pure hydrogen, not only temperature but also physical gravity returns, and relative center C and the objects within the USS, a huge amount of physical gravitational energy is added to the universe/ USS and to the universe cycle completely free of charge and free of charge to every cycle of the universe. This is the driving force behind every cycle of the universe. This gravitational energy is used entirely to slow down the acceleration during the contraction of the USS

8.3.2 FORMATION OF ATOMIC PHYSICAL AND CHEMICAL FORCES & BONDS:

This hydrogen also generates the first generation of atomic physical, chemical, and mechanical forces/ bonds. Almost simultaneously with H, H₂ is formed with the second generation of physical, chemical, and mechanical atomic forces coupled to the *electron pair*. **Document F1d & Table 1 and figures.**

The gravity emitted by the hydrogen in the USS slows the expansion speed of the universe's spherical shell evenly on all sides and converts this energy into rotational velocity/energy within the universe's-spherical-shell/ USS.

Looking through the universe-spherical-shell/ USS and looking back in time/ UCT, we observe an increasingly rapidly expanding universe! This is correct, but in reality, it means that the universe/ USS now is expanding more slowly on all sides instead of more rapidly! (Thus 'dark energy' is based on an extremely annoying optical misunderstanding illusion & trick!)

8.3.3 DIRECTLY CONSEQUENTLY FORMING H₂ PLASMA AND THE SLOW COOLING OF THAT HYDROGEN:

Directly subsequently, as a separate step in the universe's cycle, hydrogen is formed, releasing a great deal of heat from infrared and light photons. This hydrogen molecule generates its own form of physical gravity & gravitational energy and its own set of physical and chemical forces and bonds. Because of its 100% radiation-enclosed USS, the cooling of that hot plasma can only occur within the USS and only through the reconstitution of infrared photons (the proton) and light photons (the electron) into new protons, new electrons, and new cold hydrogen.

This reconstitution takes place within the USS and takes 13.8 billion years each time. Much longer than currently assumed.

8.3.4 AFTER HYDROGEN IS REFORMED AND COOLED TO A LIQUID, ENTROPY DISAPPEARS; NOW PHYSICAL GRAVITATION CAN FORM SUPER-LARGE/ HOT FAST ROTATING SPHERES OF PURE HYDROGEN:

The cooling process inside the USS occurs via the transformation of radiation of photons into matter, protons, electrons and hydrogen. The time reaching the point of condensation that way takes at least 13.8 billion years.

Only approximately 20 – 30 billion years after the formation of hydrogen did physical gravity transform the super-cold hydrogen, through collisions, into many billions of super-large, now increasingly hotter, and rotating ever faster on their axes, central spheres of 100% pure hydrogen. These central pure hydrogen spheres may or may not be surrounded by 0, 2 to a maximum of approximately 10 much smaller, cooler, and slower-rotating 100% pure hydrogen spheres/ **Roemers**.

8.3.5 DEUTERIUM, TRITIUM, AND NEUTRONS HAVE BEEN ABSOLUTELY ABSENT AFTER THIS FIRST PERIOD OF 10 – 15 BILLION YEARS:

In case after those first 10 – 15 billion years besides pure hydrogen the H isotopes deuterium, tritium, or neutrons had been formed alongside hydrogen, this would have resulted in the gentle start of nuclear fusion, similar to that in stars. Then those **super-explosive Big Bangs**, with the violent explosive start of galaxies and the simultaneous formation of their central black holes, would not have been possible and would have been avoided.

-) Because of the 100% pure hydrogen and the 100% absence of deuterium, tritium, and neutrons, nuclear fusion is held up and prevented for many billions of years:

In those 100% pure central hydrogen spheres, superheated by mutual collisions, nuclear fusion is held up for billions of years due to the 100% absence of deuterium, tritium, and neutrons. These central pure hydrogen spheres, with or without their companion spheres/ **Roemers**, have the size of one entire galaxy in terms of matter and kinetic energy, becoming both super-large and super-hot, and in the process becoming supercritical in nuclear physics terms.

8.4 ALL GALAXIES START WITH THEIR OWN BIG BANG AND CENTRAL BLACK HOLE, THE SAME ELEMENT PERIODIC SYSTEM, AND OFTEN WITH THE FORMATION OF SPIRAL ARMS:

These central H₂ spheres, which have become supercritical, ultimately all culminate in their own super-hot, fully developed **Big Bang** of millions of kelvins. Across the universe, all central hydrogen spheres culminate in such a Big Bang, the start of the galaxies. Nuclear fusion from H₂ results in the same elements periodic system everywhere and initially results in the formation of the hydrogen isotopes *deuterium and tritium*, which, once initiated in these supercritical central spheres, causes nuclear fusion to spiral completely out of control. In a fraction of a second, all the elements of the periodic table are formed layer by layer in the center of these H₂ spheres, up to approximately atoms about number 120, thus far beyond nr 92 uranium.

Towards the outer edges, this nuclear fusion decreases from 120 to He, even leaving a thick layer of hydrogen without any nuclear fusion at the very outer edges of these central H₂ spheres. **Document F1d & figures describes the stepwise, proton and electron added forming atoms periodic table.**

These **Big Bangs** of the **galaxies** occurred approximately 30 – 40 billion years after the formation of hydrogen and approximately 30 – 40 billion years ago. **Step 16 cycle of the Universe; document G7 and figures 42 – 54 G8.**

8.5 NEARLY SIMULTANEOUS FORMATION OF THE CENTRAL BLACK HOLES PRESENT IN THE CENTERS OF ALL GALAXIES:

Almost simultaneously with these **Big Bangs** themselves, the central part of the nuclear fusion zone, containing newly formed elements from **numbers 92 to 120** via nuclear fusion, collapses into one **gigantic central black hole** at these billions of galaxies to come. These central black holes of galaxies are the first and therefore oldest black holes in the universe, each containing, depending on the galaxy type, several millions to several billions of *solar gravitational equivalents/ SGE's*.

The transformation of ordinary atoms into ultra-compact and super massive black hole atoms is described in **document F1e & figures**. This imploding of the electron shells of normal atoms is only possible starting from Be onwards.

The electron shells of atoms of H, H₂, He, and Li cannot implode close to their nucleus, and therefore these elements cannot be absorbed by or enter into black holes. Due their gravity they stay in a fixed layer outside the black hole!

8.6 EXPELLENCE OF SUB-ATOMARY WASTE FUSION AND TRANSFORMATION OF BLACK HOLE ATOMS TAKES PLACE VIA VORTEXES & THE FORMATION OF NEW PROTONS, ELECTRONS, AND HYDROGEN:

-) Nuclear fusion waste is expelled via the jets/ vortexes:

During this transformation of ordinary atoms → black hole atoms, a huge amount of subatomic waste is created as well forms particle radiation. This subatomic waste as well, specifically the atoms of the elements H, H₂, He, and Li, aren't accepted by the black hole. Due their gravity the atoms of H, H₂, He, and Li remain firmly bound in a compact layer around the black hole.

This subatomic debris from nuclear fusion is devoid of atoms and gravity, but it does possess mass, charge, spin, kinetic energy and space. This gravity-free debris of EM radiation and subatomic particles radiation is diverted via the layer containing H, H₂, He, and Li to the rapidly rotating vortices/jets and is expelled via these jets outside the newly formed central black hole.

These Big Bangs of the galaxies are described in step 16 of the Universe Cycle, document G7, and figures 42 – 54 document G8 document G18.

8.7 DURING THE BIG BANGS, THE LAYERS CONTAINING ELEMENTS < NUMBER 92 (U) ARE EXPELLED AWAY EXPLOSIVELY:

The remainder of the fusion region containing elements from number 92 U → helium (He) onward is explosively expelled due to the enormous rotational speed, along with a thick layer of 100% pure but not yet fused hydrogen. Due to the enormous angular velocity, this ejection takes place within the plane of the local universe sphere shell/ USS and with velocities of approximately 0.1 – 0.2 speed of light c.

8.8 NO NUCLEAR FUSION/ BIG BANGS IN THESE SIDE-SPHERES/ ROEMERS:

These **Big Bangs** in the central hydrogen spheres are not accompanied by nuclear fusion in the around the central sphere rotating side-spheres/ **Roemers**. Due the *loss of gravity* in these central spheres due nuclear fusion these **Roemers** are only thrown away at approximately 0.1 - 0.2 the speed of light c and remain composed of 100% pure hydrogen.

8.9 NUCLEAR FUSION CAUSES LOSS OF ‘SHELL’ ELECTRONS AND LOSS OF GRAVITATION IN CENTRAL SPHERES BUT NOT IN THE ROEMERS:

These **Big Bangs** and nuclear fusion in the central sphere are accompanied by the loss of a huge number of ‘shell’ electrons and thus also by a huge loss of *physical gravity* and associated *physical gravitational energy*. Due to this loss of physical gravity in these central spheres these smaller and cooler side-spheres/ **Roemers** are thrown away within the plane of the local USS.

Due to the infinitely great speed of physical gravity, these smaller and cooler hydrogen spheres/ **Roemers** are flung away within the plane of the local universe shell at the same moment of these **Big Bangs**. This flung away occurs at an estimated speed of approximately 0.1 - 0.2 times the speed of light c, may be more.

8.9.1 HEAT AND THESE EXTRUDE ATOMS REACH THESE EXTRUDE ROEMERS VIA THE USS ONLY WITH MILLIONS OF YEARS OF DELAYS:

Only via the hydrogen in the USS and limited by the speed of light c, the released heat and these extremities in plasma state from the **Big Bangs** reach these secondary hydrogen spheres/ **Roemers** only thousands of years later.

Due to the extremely low hydrogen concentration in the USS and therefore the extremely small and quantitatively limited heat transport/ capacity present in the USS, the evaporation of these **Roemers** begins both with a delay of thousands of years as well extremely slowly. Meanwhile, the hydrogen from these slowly evaporating **Roemers** is further mixed with the plasma/ hot gas mixture blown away during the **Big Bangs**, consisting of elements from number 92, uranium, ↔ hydrogen, which was flung away from the central black hole during the Big Bangs and thus escaped the black hole.

8.9.2 EXTREMELY SLOW FORMATION OF THE SPIRAL ARMS OF GALAXIES:

Over a period of hundreds of thousands of years, these slowly evaporating **Roemers** each transform into a single, elongated and curved spiral arm of the galaxy, with a length ranging from tens of thousands to hundreds of thousands of light-years, before the evaporation of

these **Roemers** and the mixing with **Big Bang dust** is fully completed. The formation of these spiral arms and the mixing with higher elements therefore takes a very long time of hundreds of thousands of years.

8.10 ALL MATTER AND ALL ATOMS IN THE UNIVERSE ARE ULTIMATELY COMPOSED OF AN EQUAL NUMBER OF PROTONS AND ELECTRONS:

After the **Big Bangs** of the galaxies, all matter and atoms in the universe rest on structures/atoms constructed with only two basic building blocks: protons and electrons. ($1n = 1p + 1e$). This periodic table applies throughout the universe as a uniform system of atoms/elements, starting with only the hydrogen atom.

8.11 NUCLEAR FUSION OF HYDROGEN UNIVERSE WIDE RESULTS IN THE SAME PERIODIC SYSTEM OF ELEMENTS:

The formation of deuterium and tritium during the **Big Bangs** results in the same periodic system of stable 92 stable elements/ isotopes throughout the universe starting fusion of hydrogen. This also results in the same set of corresponding atomic forces throughout the universe, originating from: a) the single 'shell' electrons, b) the 'shell' electron pairs, c) the electron shells, and d) same mechanical forces from the atomic nucleus, resulting in the same structure of: 1) physical gravity, 2) physical forces and their bonds/ bindings, 3) chemical forces and their bonds/ bindings and 4) the same set of mechanical forces.

Alternative systems of elements aren't possible. **Document F1d & figures & Table 1.**

8.12 THESE UNIVERSE WIDE SAME ELEMENTS PERIODIC TABLE OFFER THE POSSIBILITY FOR THE BIOCHEMISTRY LIVING MATTER:

On planet Earth the elements periodic table resulted in the biochemistry of a great variety of living matter all central based on carbon as central element and water as reaction medium for biochemical reactions. **On Earth all biochemistry in living matter is based on Biochemical Pathways (BP) as derived by Gerhard Michal c.s.. Starting BP by Boehringer Mannheim in 1972.** BP shows the complex system of the carbon chemistry of living matter planet Earth mainly based on molecules of elements C, H, O, N, S, P and water as main reaction medium.

8.13 JUST ONE BP AND JUST ONE REACTION MEDIUM POSSIBLE OR MORE?

The question remains in the universe / USS based on these 92 elements periodic table real alternative and fundamental *only one BP is possible* or theoretically two or even more different BP's and alternative fluids for water as reaction medium are possible?

***9) THIS UNIVERSE-WIDE SAME PERIODIC TABLE OF ELEMENTS JUST ALLOWS ONLY ONE BIOCHEMICAL SYSTEM FOR THE BIOCHEMISTRY OF LIVING MATTER:**

What is really exceptional and curious is that, based on a very limited selection of just 6 elements:

- **a) C, H, O, N, S, and P**—of the 92 stable elements of the periodic table, *only one* biochemical system of biochemical reactions can be constructed and is possible, and
- **b) that water (H, O)** is the only absolutely suitable and necessary reaction medium for these biochemical reactions.

This only possible biochemical system has been identified and formalized in the last century in the **Biochemical Pathways (BP)** diagrams by **Gerhard Michal et al.** See the **internet for BP. BP started around 1972.**

9.1 THE 6 LAWS OF BIOCHEMISTRY OF LIFE AND LIVING MATTER IN THE UNIVERSE/ USS BY A.P.B. UITERWIJK WINKEL:

Based *top-down deduction & analysis* of the biochemical diagrams of **BP** and *bottom-up deduction* of all about 1 – 5 million molecules possible and based on the elements of the periodic table **A.P.B. Uiterwijk Winkel** derived the *6 Laws of Biochemistry of Living Matter in the Universe* and the necessity of *water* as only fundamental suitable reaction medium for biochemical reactions.

These *6 Laws Biochemistry living matter* are derived in **document B1 (> 200 p).** Documents **B2 – B4** being shorter and shorter summaries of **B1.** www.uitervijkwinkel.eu

Due to the uniqueness of **BP** within these approximately 1 – 5 million mono-molecules possible based on the elements of the periodic table and the necessity of water, all forms of life/ living matter on Earth and elsewhere in the universe are compellingly based on the same diagrams as presented in **Biochemical Pathways.**

9.1.1 LIVING MATTER WOULD NOT HAVE BEEN POSSIBLE IF THE PERIODIC TABLE HAD ALLOWED TWO OR MORE EQUIVALENT BIOCHEMICAL SYSTEMS AS BP, OR MORE LIQUIDS THAN WATER HAD BEEN SUITABLE:

In case the periodic table had allowed for *two or more comparable biochemical types as BPs*, and if *more than two liquids had been suitable* as basic reaction media, these systems would have continuously counteracted and thwarted each other at the mono-molecular level during the tens of millions of years of developmental trajectory from inert matter to the biochemistry of living matter.

Then, based on the periodic table of elements, alternative cycles for the synthesis and breakdown of carbohydrates, fatty acids, and amino acids would have been possible, unlike the current cycle of **Biochemical Pathways/ BP.**

These alternative schemes would have overlapped and mutually completely blocked the development of just *one single biochemical system* for the development of the biochemistry of living matter.

In case the elements periodic table would have allowed *two or more BP's* living matter would then not have been possible at all!

9.1.2 LIVING MATTER IS ONLY POSSIBLE WITH JUST ONE BP AND JUST ONE SUITABLE REACTION MEDIUM WATER:

This fundamental problem of living matter was avoided by the designer, by designing only **one possible Biochemical Pathways based on the elements periodic table**, with its associated three mono molecular cycles, with the formation and breakdown of:

1) carbohydrates, 2) fatty acids, 3) amino acids and their polymers, such as poly carbohydrates, poly fatty acid, poly amino acids/ proteins, $ADP \rightarrow ATP$, and the associated formation and assembly of chromosomes. That would have been absolutely impossible with two or more biochemical systems comparable to **BP** and with multiple liquids than water would have been suitable for biochemical reactions!

Living matter is only possible in the universe because the periodic table and its 92 stable elements, based on the elements **C, H, N, O, S, and P**, and **only water**, provide the space and opportunity for just one biochemical system, as detailed in **Biochemical Pathways/ BP** by **Gerhard Michal et al.**

9.2 MICHAL'S BIOCHEMICAL PATHWAYS (BP) IS BASED AT ITS CORE ON 3 BIOCHEMICAL CHIPS AND A SPECIFIC ENZYME FOR EACH STEP:

The basic structure of **Biochemical Pathways** is exceptional. The core of **BP** is based on 3 **biochemical chips** that regulate both the synthesis and breakdown of mono-molecules of: a) carbohydrates, b) fatty acids, and c) amino acids. Each individual step within these three double-sided biochips is characterized by a series of completely predictable single reaction steps, all of which take place in **water** and are regulated by the use of a single enzyme specific to each step inside biochemical reactions.

9.2.1 MAIN FUNCTIONS OF ENZYMES:

By bonding to that for each step in the reaction specified enzyme, the mono-molecule (carbohydrate, fatty acid, amino acid) temporarily enters a *non-dissolved state* and thus becomes so tightly bound that way only the desired and appropriate biochemical reaction step can occur within the series, while simultaneously all other components of the mono molecule in question are completely spatially and energetically shielded from all other possible, incompatible biochemical reactions.

After each reaction step, the bond between the mono-molecule and the enzyme is broken again, and both become dissolved again in the reaction medium, (**water**). By bonding to a subsequent enzyme, the next appropriate biochemical step in the series can be completed accordingly. In this way, the synthesis and breakdown of carbohydrates, fatty acids, and amino acids are completed step by step in these *three cycles/ biochemical chips* are completed as a whole.

Each step requires its own enzyme, ensuring that biochemical reactions are fully structured and that this series of single steps unfolds completely predictably. (In active living cells thousands of enzymes are present)

9.2.1 BIOCHEMICAL PATHWAYS/ BP IS BASED ON THE MIN/ MAX 1 PRINCIPLE:

Every reaction step in **BP**, and in general, is based on the **Min/ Max 1 principle** identified by the author; **document F1f** www.uiterwijkwinkel.eu . This principle means that each step is completed in a fully structured manner via enzymes and can be broken down into a series of single chemical and physical steps and series of single physical and chemical changes/ steps.

These series of single steps are performed in such way that the reaction as a whole remains completely on track, path, and route at each step. Along the way, biochemically, due these enzymes this path cannot be deviated from, derailed, or sidetracked during this series of single reaction steps involving mono molecules of carbohydrates, fatty acids, and amino acids.

9.2.2 BP IS BASED AT ITS CORE ON 3 BIOCHEMICAL CHIPS:

Special as well is the heart of **BP** consists of these three completely: ring-shaped biochemical chips for: a) carbohydrates, b) fatty acids, and c) amino acids for both the construction as well the breakdown of these three types of mono molecules. These three ring-shaped chips result in three, two-way biochemical cycles and three biochemical chips with single steps:

a) the citric acid cycle for the stepwise construction and breakdown of carbohydrates (mono-molecules composed of C, H, O);

b) the fatty acid cycle for the stepwise construction and breakdown of mono-molecules of fatty acids (C, H, O);

c) the amino acid cycle for the stepwise construction and breakdown of amino acids. (mono molecules of C, H, O, N, and S),

d) ATP adenosine triphosphate (C, H, O, P) and the transition $ATP \rightarrow ADP + P +$ energy regulates energy storage and energy release. ATP acts as a driving force.

All individual steps within these three biochemical chips are controlled by an specified enzyme and a driving force or release of energy specific to each step. These enzymes ensure that each physical and chemical step within these three biochemical chips is completed completely predictably, neatly step by step, and in the correct order.

9.3 BASIC CHARACTERISTICS OF MOLECULES WITHIN THE 3 BIOCHEMICAL CHIPS OF BP:

The most distinctive feature of these three biochemical chips is that the mono-molecules involved can exist in three physical states of a:

a) dissolved gas,

b) dissolved charged particle/ ion, and

c) as a non-gaseous and non-charged noproression particle/ atom/ molecule.

During their passage and processing within these three biochemical chips of BP, these mono-molecules involved continuously switch between these three physical states of the molecules involved: 1) dissolved gas, 2) dissolved charged particle/ ion, and 3) dissolved non-gaseous and non-charged (noproression) particle/ molecule.

9.4 ACROSS THE UNIVERSE, ONLY WATER IS SUITABLE AS A REACTION MEDIUM FOR BIOCHEMICAL REACTIONS:

Within BP, biochemical reactions can only occur as mono-molecules dissolved in a liquid that also serves as the *reaction medium*. Of all conceivable 100% pure liquids, only water appears to be capable of dissociating itself into charged components: H_3O^+ and OH^- ions. **Water therefore is the only 100% pure liquid in which charged particles/ ions can dissolve.**

Universe wide water therefore is the only liquid based on the elements of the periodic table in which these three physical states of molecules: a) dissolved gas, b) charged particles/ ions, and c) nonpression molecules can dissolve and coexist each other! **Therefore water is the only base liquid suitable, in terms of space and solubility, for biochemical reactions.**

9.4.1 SPECIFIC ENERGETIC REQUIREMENTS OF THE REACTION MEDIUM WATER:

In addition to its unique characteristics regarding the ability to dissolve gases, ions, and nonpression molecules, water also meets the unique and specific requirement that the reaction medium, water, with its O - H binding, must possess the lowest energy level of all conceivable molecular bonds within the elements of the periodic table!

Through the O - H bond, water unequivocally represents the lowest energetic limit within the periodic table of all possible and conceivable molecular bonds/ bindings. No other molecular bond within the periodic table can energetically fall below the level of the O - H bond. Water represents the absolute lowest limit in terms of physically and chemically binding energy!

9.4.2 WATER (O - H BOND) IS THE ONLY LIQUID SUITABLE AS A BASIC REACTION MEDIUM FOR BIOCHEMICAL REACTIONS THROUGHOUT THE UNIVERSE/ USS:

These biochemical steps can therefore only occur when dissolved within a true liquid; namely, a condensed gas. Of all liquids, these biochemical reaction steps within **the three BP biochemical chips** can only occur when physically dissolved in the reaction medium water.

Liquid water is the only fluid that meets three pre-conditions:

I) In this liquid/ reaction medium, a) gases, b) charged particles/ions, and c) atoms without the physical characteristics of a gas and charge (the nonpression particles) must be able to dissolve side by side.

II) Water is the only 100% pure liquid that can dissociate into H_3O^+ and OH^- ions, making water the only liquid suitable for dissolving other charged particles/ ions.

III) The molecular base/ O - H bonds in this liquid/ reaction medium/ water must also have the lowest conceivable energy content of all conceivable molecular bonds based on the elements of the *periodic table*.

Only the O - H bond and the liquid water meet these three requirements/ boundary conditions.

The combination of the solubility of a) gases, b) ions, and c) nonpolar molecules, and d) the O-H bond as the lowest possible energy level of all molecular bonds, means as well water is the result of a *predetermined set of properties, clearly coordinated in advance*, to serve as the only suitable reaction medium for all biochemical reactions, both in terms of solubility and energy.

9.5 SPECIFIC REQUIREMENTS FOR THE REACTION MEDIUM WATER INDICATE A PRE-DETERMINED DESIGN:

When designing water as part of C,H, O, N, S and P, an exclusive reaction medium for biochemical reactions, these requirements are clearly coordinated in advance. Water isn't a matter of chance/ coincidences but the result of a purposeful *super natural design!*

9.5.1 THE ONLY POSSIBLE BP, BASED ON THE PERIODIC TABLE, IN COMBINATION WITH WATER AS THE ONLY SUITABLE REACTION MEDIUM, INDICATES A PRE-DEFINED AND DESIGNED DESIGN:

The almost complete structural shielding and control of biochemical reactions via enzymes within **BP**, in conjunction with water as the uniquely suitable reaction medium, is also highly specific. The combination of mono-carbohydrates, -fatty acids, -amino acids, enzymes, and 3 *precisely matched cycles* and reaction steps is so unique that it can no longer be considered a coincidence.

The structure of biochemical reactions and the use of specifier enzymes in BP are pre-coordinated in such a way that the design of **Biochemical Pathways, enzymes, and water** as the only reaction medium requires a highly targeted and **specific design**.

***10) CELESTIAL BODIES IN THE USS SUITABLE FOR THE DEVELOPMENT OF LIVING MATTER:**

10.1 THE UNIVERSE/ USS IS BASED ON MANY BILLIONS OF GALAXIES EACH CONTAINING TRILLIONS OF STARS & TRILLIONS OF CELESTIAL BODIES:

All now observable billions of galaxies contain at least tens of billions of stars, and each of these stars is surrounded by at least 1 to approximately 10 planets. These planets, in turn, are surrounded by zero to sometimes dozens of smaller moons. In short, the universe/ USS contains a system of many trillions to quadrillions of stars, often of different types, and orbiting planets and their moons.

10.1.1 THE PERIODIC SYSTEM IS UNIFORM THROUGHOUT THE WHOLE UNIVERSE AND PROVIDES SPACE FOR ONLY ONE BIOCHEMICAL SYSTEM FOR LIVING MATTER: BIOCHEMICAL PATHWAYS/ BP:

Living matter can arise anywhere in the universe as soon as stars and orbiting planets and moons possess favorable boundary conditions that meet the relatively strict requirements for the development of the biochemistry of living matter.

10.2 GENERAL CONDITIONS FOR GALAXIES:

Only *galaxies with spiral arms* are likely suitable for the development of living matter. Galaxies without spiral arms, the so-called elliptical galaxies, are relatively small and rely on a gigantic central black hole with a gravitational force of several billions of *solar gravitational equivalent's/ SGE's*. Because of their enormous gravity and enormous rotational speeds, such small elliptical galaxies are most likely unsuitable for the development of planets suitable for the spontaneous development of living matter. **This spontaneous development of living matter would then be only reserved for the majority of galaxies with spiral arms!**

The majority of all billions of galaxies indeed are based on central black holes with a gravity of several million to tens of millions of SGE's. These central black holes of spiral galaxies are surrounded by 2 - 10 curved spiral arms as remains of their former **Roemers**. Generally, the greater the gravity of their central black hole, the smaller and more compact the remaining galaxy.

The best opportunities for the presence of living matter are offered by *small galaxies* with many spiral arms (sub spiral arms) and by relatively small central black holes with only a few million solar-gravity equivalents/ SGE's more than 2 spiral arms, such as those found in the center of the Milky Way galaxy itself.

10.3 CONDITIONS TO BE SET WITHIN SMALLER GALAXIES WITH RELATIVELY SMALL CENTRAL BLACK HOLES FOR YELLOW STARS WITH PLANETS SUITABLE FOR THE DEVELOPMENT OF LIVING MATTER

For the development and maintenance of living matter and its biochemistry on the present planets and moons, photosynthesis and the formation of left-turned L-glucose are required. **Such photosynthesis requires chlorophyll and photons of light with a wavelength of approximately 5,700 Å/ Angstrom and a period of hundred – hundred fifty million of years.**

This means that the biochemistry of living matter can only develop properly on celestial bodies/ planets around so-called **yellow stars**. These yellow stars primarily emit light/ photons in yellow *visible light* with a wavelength of approximately 5,700 Å.

However, these yellow stars, suitable for photosynthesis, comprise only about 4% of the stars around galaxies with spiral arms. The remainder consists primarily of already-burned-out stars in the form of red dwarfs and white dwarfs. These remains of stars emit little to no visible light at the for photosynthesis required wavelength of 5,700 Å, making them less suitable, if not unsuitable, for the photosynthesis and chlorophyll processes considered essential for life, and the formation of left-spinning L-glucose. **The majority of these (red) stars therefore are unsuitable as possible habitats for the development of living matter.**

10.4 POSITION FOR PHOTOSYNTHESIS & DEVELOPMENT OF LIVING MATTER: PLANETS AND MOONS SUITABLE FOR PHOTOSYNTHESIS RELATIVE TO YELLOW STARS:

For both light intensity and temperature, such planets suitable for life and photosynthesis should be in nearly circular orbits around this yellow star and at a distance of approximately 7 - 9 light-minutes distance from such *yellow stars* with an optimum emission of approximately 5,600 Å - 5,800 Å.

The nuclear combustion and ‘lifespan’ of such *yellow stars* from hydrogen to helium takes tens of billions of years! Such ‘yellow’ stars often have the shape, size, and characteristics of our sun and possess broadly the same properties, such as gravity. Due to their history, they also have a similar structure, with a series of multiple planets orbiting the star as a string of planets.

10.4.1 GENERAL CHARACTERISTICS OF YELLOW STARS WITH A SURROUNDING STRING OF PLANETS:

-) The inner planets of the string of planets surrounding *yellow stars* are small and consist primarily of solid matter blown away during the Big Bangs of the galaxies with a thin atmosphere blown away by collisions and the stellar wind.

-) The outer planets also have a solid, planet-like core surrounded by a thick layer of gas, primarily hydrogen and helium, originating from the outer layers ejected during the **Big Bang** of the galaxy. This outer layer of planets is broadly similar in structure and composition to ‘gas’- planets such as *Jupiter, Saturn, Neptune, and Pluto*. Such gas planets are formed around small cold solid originally relative small planets and the deposition by gravity of cold ad fluid hydrogen/ helium emitted by the **Big Bang** of the galaxy.

-) Among these, some Earth-like planets are possible, similar to Venus, Earth, and Mars, where water/ ice, combined with a much lower atmospheric pressure, is also potentially possible, consisting primarily of atomic nitrogen/ N₂.

10.5 REQUIREMENTS FOR PLANETS AROUND YELLOW STARS THAT ARE SUITABLE FOR THE DEVELOPMENT OF LIVING MATTER:

Planets suitable for the development of living matter must meet a number of specific requirements:

1) Rotation in a nearly circular orbit (not a clearly elliptical orbit!) around so-called *yellow stars* (wavelength approximately 5,700 Å) and orbiting at a distance of approximately 20 – 30 thousand lightyears around the central black hole of the galaxy. And just about 7 – 9 light-minutes from and around such yellow stars.

Imported is the orbiting of such planets in almost circular orbits around this yellow star and not orbiting in elliptically orbits! ,

2) One complete circular rotation of such for living matter suitable planets around these *yellow stars*: must take between approximately 200 – 400 Earth days.

3) One complete revolution of the planet around its own north-south axis should take between approximately 15 and 30 hours, otherwise the unlit part of the planet will cool down too much and the illuminated part will become too hot.

4) The tilt of the rotation axis relative to the planet's rotational plane relative to the yellow star should be between 20 and 40 degrees, which results in seasons on such for living matter suitable planets. The presence of a surrounding large moon is required keeping the rotation axis of the planet stabile.

5) The planet's dimensions & moon should be similar to those of *planet Earth* with gravity: between 10 and 12 m/sec²; Just enough gravity to hold an atmosphere around such a viable planet.

6) The total atmospheric gas pressure at the planet's surface after its final formation should be between 0.9 and 1.1 bar and may not be much higher nor lower.

7) The atmosphere must consist primarily of atomic nitrogen (N₂), starting at approximately 0.8 bar. Probably between 0.75 – 0.85 bar N₂ (O₂ as result of photosynthesis finally should be below about 0.25 bar)

8) After the planet's formation, the amount of CO₂ in the atmosphere may not exceed <0.1% due to the limitation of the greenhouse effect.

9) The *planet's core* must consist of a hot mixture of primarily liquid iron and nickel, which due the rotation of the planet generates a *magnetic field* necessary for capturing high-energy cosmic radiation that is harmful to living matter.

10) This metallic core is surrounded by a hot liquid outer zone of less heavier metals and nuclear fission keeping the inner core of the planet hot and fluid like planet Earth,

11) The lighter surface of the planet then effectively floats on a hot liquid core and a hot surrounding liquid layer. This results in tectonics of floating solid plates with the formation of mountains, valleys, and disappearance and creation of new land/ continents.

12) The surface of planets suitable for life must consist of approximately 20 - 80% of solid land and be covered by approximately 80 - 20% of water/ lakes/ seas/ oceans. The depths of these oceans may be reaching a maximum of about 10 – 15 km.

13) At the planet's equator, the maximum temperature must not exceed 50 degrees Celsius or 330 degrees Kelvin/ K and minimum temperature of about 5 - 10 degrees Celsius.

14) Both poles of such suitable planets must, in principle, be covered by an ice cap.

Planets around *yellow stars* suitable for the development of living matter must therefore meet a whole series of rather stringent requirements. These physical requirements significantly limit the number of planets suitable for the development of living matter enormously.

In fact such planets suitable for the development of 'living' matter are extremely rare. For the universe-spherical-shell/ USS, the author conservatively assumes only about one **hundred to one thousand planets** with living matter per galaxy are present in *all 5 - 10 billion galaxies with spiral arms* present in the USS.

Of these about hundred – thousand 'life'-suitable planets per spiral galaxy, only **one to five planets are truly comparable to planet Earth**. Only such planets, which are very Earth-like, offer possibilities for the development of intelligent '*aliens*'!

Such planets *with aliens* are possible and can be expected in all galaxies with spiral arms and therefore in the majority of all galaxies within the USS. Throughout the whole universe/ USS, the biochemistry of living matter/ life is based on the very same biochemistry and biological principles as those present in living matter on Earth!

***11) INTERIM CONCLUSIONS AND PROVISIONAL FINAL CONCLUSION:**

11.1 THE BIOCHEMISTRY OF LIVING MATTER IS NOT BASED ON CHANCE:

The preconditions imposed on the construction of the elements periodic table and its restriction to the elements **C, H, O, N, S, and P** for the development of the biochemistry of living matter, combined with the specific requirements imposed on the **reaction medium water** as a combination of only H and O atoms, cannot be dismissed and are explained as the result of chance or coincidences.

11.2 THIS ALSO APPLIES TO:

1) the universe as a whole, 2) the periodic table of elements itself, 3) the reaction medium water, 4) Biochemical Pathways, 5) the structures of chromosomes / the specific construction of DNA and 6) 3D structures of poly amino-acids/ proteins, poly sugars, and poly fatty acids.

11.3 THE UNIVERSE AND LIVING MATTER DISPLAY PURPOSEFUL CREATION:

The universe exhibits a seamless structure that extends from the Higgs level through protons, electrons, and hydrogen, and via nuclear fusion, results in the elements of the periodic table and the unique, once-only construction of **Biochemical Pathways**.

The unique, single possible construction of **Biochemical Pathways** around three separate elementary biochemical chips for the construction and breakdown of:

a) carbohydrates, b) fatty acids, c) amino acids, d) the use of specific enzymes for each reaction step, e) the specific properties of the reaction medium water, proteins, and chromosomes, f) the use of ATP, g) RNA/ DNA are so specific in structure and properties, and also seamlessly coordinated, **that there must be a purposeful form of super natural creation and coordination.**

11.4 THE DESIGN STARTING WITH 4 ELEMENTARY HIGGS PARTICLES, THE PROTON/ ELECTRON, AND THE ELEMENTAL PERIODIC TABLE:

-) The Standard Higgs Model is based on only four (2 x 2) SUSY Higgs particles, which, eight levels higher, result in the construction of exclusively protons, electrons, hydrogen, and neutrons,
-) Nuclear fusion from hydrogen results throughout the universe in the 92 stable elements of the periodic table, and
-) The elements C, H, O, N, S, and P result in the construction of only one Biochemical Pathway (BP), centrally located around the three biochemical chips, and water as the only suitable reaction medium for living matter in the universe.

Considering Higgs particles, protons/ electrons, the elements of the periodic table, and the structure of BP, there must be a clearly purposeful creation of that periodic table in such a setting that, based on that periodic table of elements, only results in one **Biochemical**

Pathway and **water** as the only suitable reaction medium is possible that way *any other biochemical system comparable to BP* and *water* are absolutely excluded and impossible.

Based on the elements periodic table:

I) Only one liquid can be identified that simultaneously satisfies both the mutual solubility of gases, ions, and non-ionic molecules and generates the lowest energetic level. This is the reaction medium: water with the O - H bond/ binding.

II) Only six elements, **C, H, O, N, S, and P**, result in **three Biochemical chips**, with a specific enzyme used for each step. Together, these three biochips result in just one integrated biochemical pathway. Other elements periodic system play roles but only secondary roles.

III) These three biochips ensure the step-by-step, precisely regulated buildup/ breakdown of a) carbohydrates, b) fatty acids, and c) amino acids within the three biochips.

IV) Based on these three biochips of *C, H, O, N, S, and P*, only one **Biochemical Pathway** (BP) can be constructed throughout the universe, and only one form of BP can be formed.

V) The biochemistry of all forms of living matter in the universe is therefore based exclusively on **Biochemical Pathways**, just like the biochemistry of all living matter on Earth.

VI) DNA based on double helixes of adenine ↔ thymine and guanine ↔ cytosine in a bonds/ bindings of deoxyribose and a phosphate group making the double helix RNA/ DNA possible as extraordinary super natural design starting already at the Higgs level ending in DNA!

VII) Throughout the universe, the spontaneous development of living matter is possible on all suitable celestial bodies/ planets/ moons orbiting around **yellow stars** with nuclear fusion of hydrogen (helium), which, like the sun, radiate light/ energy with a wavelength of approximately 5,700 Å, driving photosynthesis and the formation, through the use of chlorophyll, of left-turning (L) glucose from CO₂ and H₂O, and the energy supply via ADP + P ↔ ATP. This energy supply is sign of an super natural design as well.

VIII) This L-glucose also applies to the formation of L based fatty acids, amino acids, proteins, and chromosomes starting this L-glucose.

11.5 SPECIFIC REQUIREMENTS THAT C, H, O, N, S, P, AND WATER MUST MEET:

In particular, the requirements imposed on a limited area of the periodic table (C, H, O, N, S, and P) to arrive at just one single biochemical form of living matter (BP) are so specific that **BP** cannot be dismissed as a result of chance, but rather as the result of a predetermined biochemical design and concept.

11.6 BIOCHEMICAL PATHWAYS, CHROMOSOMES, AND LIVING MATTER INDICATE A PURPOSE-ORIENTED CONCEPT AND CREATION:

The combination of the universe, the cosmic cycle, the elements in the periodic table, the uniqueness of **Biochemical Pathways**, and **water** as the only suitable basic reaction medium, along with the formation of proteins and chromosomes, constitutes a pre-planned formation and thus a purposeful form of physical, chemical, and biochemical creation, by *a super natural designer*.

11.7 PRELIMINARY FINAL CONCLUSION:

Document G24 shows that the universe, the elementary structure of matter with only 4 (2 x 2) SUSY Higgs particles and the subsequent 12 levels of protons, electrons, and the periodic table, and the resulting universally uniform biochemistry of living matter in the universe, cannot be based on chance or by coincidences.

The structure starting from the Higgs level to the end-level of the universe itself should be considered, for the time being, the result of an abstract, deliberate, and purposeful design.

***12) CONTINUATION WITH FURTHER QUESTION FOR SCIENCE:**

The question the author now poses to *Science* is whether, within the exceptional creations of a) the universe, b) the periodic table, c) biochemical pathways, d) the structures of ADP/ ATP, RNA/ DNA, and e) the rare presence of living matter throughout the universe, how many degrees of freedom are still present or have remained that allow for a *direct or indirect contact/ communication* between the 'designer'/ 'creator' of the universe and living matter as one of the 'creations'?

This question is too complex for the author to be answered. He therefore submits this question to *Science* in the hope this question can be addressed further and possibly answered there.

The author expresses his great respect and admiration for the genius of the designer/ creator in designing the 4 (2 x 2) *SUSY Higgs proton particles* and *electron Higgs particles*, which ultimately result in the construction of protons/ electrons, hydrogen, and, via nuclear fusion, the creation of the elements of the periodic table.

Within the elements C, H, O, N, S, and P of that periodic table, the complex structure of Biochemical Pathways (BP) with three biochips is uniquely possible as well structures of proteins, RNA/ DNA and ADP/ ATP. As well the specific physical and energetic structure of water as only suitable reaction medium for the biochemistry of living matter!

These biochemical schemes of **BP** are considered the *only possible biochemical system* for the biochemistry of living matter throughout the whole universe; as well within every new cycle of the endlessly ongoing cycle of the universe!

21th of November 2025,
A.P.B. Uiterwijk Winkel.

APPENDIX 1:

All thinkers in the human cultures on *Earth* have always been immensely interested in the origin/ creation of the universe, in stars, the solar system, and not only Earth/ the moon, but also in its planets, and also in the afterlife or heaven as the ultimate abode for the souls of the deceased.

All cultures are fascinated by this (possible) supernatural creation and its influence on life and daily existence. On Earth, this has resulted in a great diversity of religious views and insights, resulting in a multitude and great diversity of religions and faiths, which unfortunately also resulted in all kinds of religious conflicts.

Document G24 attempts to answer the difficult question of whether there are arguments for a deliberate origin, design, and formation, with the imposition of purposeful boundary conditions that marks:

- 1) the universe macro as a whole,
- 2) protons and electrons as the *only two basic building blocks of atoms*, starting with hydrogen,
- 3) the formation of different atoms throughout the universe via nuclear fusion of hydrogen, conforming to the same atoms/ elements of the same *periodic table* as those found on Earth, and
- 4) on the foundation of that periodic table of 92 elements, only one biochemical system is possible (**Biochemical Pathways (BP)** is considered the sole basis for the biochemistry of all living matter in the universe).
- 5) and that all living matter in the universe would then rest on an exactly identical biochemistry to that present in living **matter on Earth**.

-) Is it a matter of chance or deliberate design?

The big question then is whether there is:

I: a pre-conceived, deliberate design of the universe, the periodic table, and **Biochemical Pathways (BP)** around *three central biochemical chips*:

a) the citric acid cycle, b) the fatty acid cycle, and the amino acid cycle, or

II: a universe, the periodic table, and BP are the result of pure chance. In that case, that chance must be well and strictly logically explainable. The universe, the periodic table with its system of forces and bonds, and the biochemistry of living matter/ BP must then be based on a strictly logically explainable spontaneity and chance, without any supernatural intervention, control, or purposeful, pre-conceived design.

In the latter case, the entire universe, containing billions of galaxies, the arrangement of atoms/ elements in the periodic table, and **Biochemical Pathways** as the only biochemical basis throughout the universe, with **water** as only suitable reaction medium, would be purely coincidental and strictly logically explainable. This coincidence would then have resulted in the universally uniform biochemistry of all living matter present.

Answering this question requires a highly structured approach.

The following are addressed and distinguished:

a) The general boundary conditions of the universe cannot be viewed as a one-time phenomenon. That would degrade the universe to a meaningless event.

- b) For this preventing to happen, the universe must be a 100% closed system for all mass, matter, electric charge, magnetic spin, and kinetic energy from which nothing with mass, charge, spin and kinetic energy can escape!
- c) The 100% closed universe only becomes meaningful if that universe can continue to exist indefinitely by completing a fixed, energy-neutral, cycle of single steps of which the first 10 - 15 billion years of expansion occur without atoms, temperature, gravitation/ gravitational energy, and deceleration!
- d) That universe forms a 100% closed system for atoms via gravity and, via an 'ether' of atoms, also a 100% closed system for all forms of particle- and for all wave-based electromagnetic forms of radiation.
- e) The smallest possible basic building blocks/ particles of protons and electrons are the 4 (2 x 2) SUSY Higgs particles; 2 SUSY particles of the proton and 2 SUSY particles the electron.
- f) From these 4 (2 x 2) Higgs particles, only protons and electrons can be built up as the basic building blocks of atoms in the periodic table, with the first formation of hydrogen.
- g) Nuclear fusion from hydrogen, deuterium, and tritium results in the same structure of the elements of the periodic table as found on Earth throughout the whole universe as well. results in the very same system of physical and chemical forces and bonds, as well same mechanical forces throughout the universe.
- h) That periodic table of 92 stable elements results in the formation of only one biochemical system for living matter throughout the universe, and with those 92 elements of that periodic table, the universe may only accommodate one *biochemical basic form of life/ living matter*.
- i) Furthermore, that *periodic table of elements* may only results in one liquid that can function as the basic reaction medium for these biochemical reactions.
- j) This system must be organized around mono molecules of 1) carbohydrates, 2) fatty acids, and 3) amino acids, which can be used to form various polymers.
- k) As a base medium for biochemical reactions, this base liquid/ reaction medium must be able to dissolve side by side: 1) gases, 2) charged particles/ions, and 3) atoms/ molecules without the physical characteristics of a gas or those of an electrical charge (the so-called noproression particles).
- l) In addition, the *liquid/ reaction medium* itself must have the lowest conceivable energy level of all conceivable bonds that can be formed based on this elements of the periodic table. The only liquid on Earth that satisfies both 1) gases, 2) ions, and 3) non-gaseous and non-charged molecules, as well as the lowest energy level, is **water**.
- m) The boundary conditions imposed by the biochemistry of living matter on the periodic table and its structure further imply that all forms of living matter in the universe are based on exactly the same biochemistry as found in living matter on Earth. See the internet for the structure of **Biochemical Pathways (BP) by Gerhard Michal et al.**

APPENDIX 2:

GENERAL CONDITIONS OF A UNIVERSE NOT AS A ONE-TIME PHENOMENON BUT AS A SYSTEM THAT REPETITION AND CONTINUES TO EXIST ENDLESSLY:

For the designer of the universe, such a basic design only makes sense if that universe is not a one-time phenomenon. Such a design of the universe and everything within it only acquires any usefulness and meaning if such a universe forms a *100% closed system* and if that universe can continue to exist indefinitely *within that closed system*.

I) Therefore the universe has to be a 100% closed system for: a) mass, b) matter, c) electric charge, d) magnetic spin, e) kinetic energy, and

II) Being a 100% closed system as well for all forms of electromagnetic radiation and radiation based on particles with mass, matter, charge, spin, kinetic energy, and waves.

III) Acceptable as well is a universe that, within that closed system, is based on an endlessly repeating fixed cycle that is completed in an overall energy-neutrally way.

IV) Such a 100% closed system may only be open to forms of radiation that aren't based on particles with mass, matter, charge, spin, kinetic energy, and are also not based on any wave motion.

V) Only two physical phenomena meet this requirement: a) **physical gravity** and b) **time/ universe clock time/ UCT**.

Such an infinitely perpetually existing and continuous universe must, in terms of realization, meet the following requirements:

- 1a) a 100% closed system for matter with mass, charge, spin, and kinetic energy, and also
- 1b) a 100% closed system for all forms of radiation based on particles with mass, charge, spin, and kinetic energy, and based on waves.

Phenomena of radiation without particles with mass, matter, charge, spin, kinetic energy, and waves such as gravity and time/ UCT, are the only ones that may escape this otherwise 100% closed system.

Such an otherwise 100% closed universe must only be open to radiation without particles with mass, matter, charge, spin, kinetic energy, as well without waves.

Then the premise of a 100% closed universe for mass, matter, and kinetic energy remains unchanged and valid throughout every cycle.

-2) Only under these general conditions can any physical phenomenon with mass, charge, spin, or kinetic energy can escape via waves from that designed closed/ partially fully open universe. All physical phenomena with physical properties of: a) mass, b) matter, c) electric charge, d) magnetic spin, e) kinetic energy, and f) wave motion remain 100% within that relative on galaxy thin/ thick spherical-shell of the universe/ USS.

-3) Within that 100% closed system, the universe can endlessly repeat the very same cycle. However, this can only happen if that cycle overall is completed entirely energy-neutrally.

Therefore, during the first part of each cycle, energy must be accumulated and formed free of charge, which energy acts as the driving force behind the entire cycle of the universe. This seems to contradict the nowadays present **Laws of thermodynamics**. This free of charge added energy cannot be *kinetic energy*, but it can only be *gravitational energy*, which is absent during the first 10 - 15 billion years without atoms! That first period only the protons, electrons and kinetic energy are present. This whole period atoms are absence and thus physical gravity, physically gravitational energy and temperature as well.

From the start of each cycle of the universe, atoms and thus *physically gravity/ gravitational energy* must be completely absent for the first approximately 10 - 15 billion years. This means billions of years of equal expansion on all sides at approximately 0.7 times the speed of light, expansion of the universe/ USS without any form of resistance of any deceleration.

Therefore, the universe begins without inflation and begins in an absolute vacuum without any form of deceleration. This boundary condition is met if, during the **Little Bang** and the start of each new cycle of the universe, *only protons and electrons are released* and any *atoms are formed*. In that case, temperature, physically gravity/ gravitational energy, and other atomic forces/ bonds are absent as well that whole period.

-4) During this **Little Bang/ start of the universe**, therefore, only an equivalent number of ordinary protons and electrons may be released, and **no atoms** may be formed. At the moment hydrogen is formed, after about 10 – 15 billion years expansion 0.7 c physically gravity returns to the universe, adding the same moment a gigantic amount of *gravitational energy* to the universe and the cosmic cycle of the universe.

This added physically gravitationally energy is completely free of charge. This is real creation of energy! Forbidden by the nowadays accepted Laws of thermodynamics!

-5) This closed universe then rests from the start on just two of the most elementary building blocks of matter: protons and electrons, which can be used to form atoms during the cosmic cycle, starting with the simplest hydrogen atom/ molecule.

-6) These protons/ electrons must be simple in structure at their most elementary level. At that lowest level, they must be composed of only two elementary supersymmetric (SUSY) proton Higgs atoms, strings, or two (SUSY) electron Higgs atoms, snares, strings.

APPENDIX 3:

CHARACTERISTICS OF THE 4 SMALLEST (2 x 2) SUSY HIGGS PARTICLES:

At the **first very lowest level**, there must be only two supersymmetric (SUSY) Higgs particles from the proton and only two SUSY Higgs particles from the electron. These four (2 x 2) SUSY Higgs particles rotate around their three possible perpendicular rotation axes.

These three clockwise and counterclockwise rotations create three distortions on these *four Higgs particles*. These three continuous distortions continuously attempt to directly counteract and combat these four elementary Higgs particles by generating physical phenomena such as:

- 1) equivalent mass or anti-mass,
- 2) equivalent positive or negative electric charge,
- 3) equivalent parallel or anti-parallel magnetic spin, and indirectly
- 4) time in terms of the number of rotations per unit of time/ universe clock time/UCT.
- 5) volume/3D space.

Further elaborated in document F1a 2014 & figures 1 - 6.

-) The trajectory of the 4 smallest elementary Higgs particles to matter in the form of the proton, electron, and hydrogen:

In the trajectory from the 4 (2 x 2) SUSY Higg particles to the proton, electron, and hydrogen, 6 successive SUSY levels can be distinguished:

- The 2nd level with 2 SUSY proton neutrinos & 2 SUSY electron neutrinos, Document F1b & figures.

- The 3rd level with 2 SUSY double-neutrinos (proton) & 2 SUSY double-neutrinos (electron), Document F1b & figures,

- The 4th level with 2 SUSY half-photons (proton) & 2 SUSY half-photons (electron), Document F1b & figures,

- The 5th level with 2 SUSY photons (proton) & 2 SUSY photons (electron), Document F1b & figures,

- The 6th level with 2 SUSY quarks (proton) & 2 SUSY quarks (electron), Document F1c & figures,

- The 7th level with 2 SUSY protons & 2 SUSY electrons. In the universe, only ordinary protons and electrons are formed, and no anti-forms thereof. Document F1c & figures.

- At the 8th level, only hydrogen atoms/ molecules are formed from ordinary protons and electrons. Document F1d & figures.

- At the 9th level, nuclear fusion can subsequently form deuterium and tritium from hydrogen, which, through nuclear fusion, exclusively result in the 92 stable elements of the periodic table throughout the universe.

- Gravitation, physical forces, and chemical forces are first generated from the shell electrons as a result of the atom's velocity in space/ kinetic energy. Each form of velocity generates its own force and bond components linked to the 15 - 17 different velocities of atoms.

- The mechanical forces originate from the atomic nucleus in relation to their electron shells.
- This periodic table of 92 elements and the associated set of components of these physical and chemical forces and their bonds is identical throughout the universe. Only the number of force and bond components can differ due to differences in the number of atoms in the universe, which can amount to a maximum of approximately 15 – 17 components.

Only same force components with the same velocity attract each other and can form physical and chemical bonds/ bindings..

APPENDIX 4:

LIVING MATTER IS BIOCHEMICALLY ONLY POSSIBLE IF THE PERIODIC TABLE OF ELEMENTS RESULTS IN ONLY ONE BIOCHEMICAL SYSTEM AND ONE SUITABLE REACTION MEDIUM:

The 92 stable elements of the universally valid periodic table may result in only one biochemical basis for living matter, organized around: carbohydrates, fatty acids, amino acids, and their polymers.

If two or more biochemical systems like **BP** had been possible, then those systems interfere at the molecular level. That case living matter is not possible. The same with just one suitable fluid for biochemically reactions: **water**.

The consequence is that all forms of living matter are necessarily based on exactly the same biochemistry as that present in living matter on Earth. Because of this similar biochemical basis, life forms throughout the universe are recognizably similar.

See Biochemical Pathways (BP) by Gerhard Michal et al. The internet for the structure of BP.

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Netherlands; November 21th 2025