

SEVEN ERRORS IN THE BASIC PRINCIPLES OF THE THEORY OF RELATIVITY

- During 2016, almost all exact scientists have been convinced of the correctness of:
 - a) Einstein's theory of relativity,
 - b) the related Big Bang theory and
 - c) the current Standard Model.They are all based on the formula $E = mc^2$ for $m = \text{mass}$.
- However while deriving the universe cycle, **Uiterwijk Winkel** faced at least seven basic errors in the principles of **Einstein's** theory of relativity. These errors are stipulated in this **document G5** and they are elaborated there.
- The central problem is that the very basic higgs (particles) and their mass, charge and spin are indestructible. **Einstein's** equation $E = mc^2$ does not hold for $m = \text{mass}$. This formula deceived science violently for more than a century.
- The formula $E = mc^2$ only remains intact for $m = \text{matter or antimatter}$ and only applies quantitatively to annihilation. However during annihilation mass is not converted into energy. Matter and antimatter are transferred into photons and are set free and with these photons $E = mc^2$ rotation energy. Photons are majoranas (**F1b**) in which all the mass is still fully present, but no longer measurable.
- Those seven errors have such a serious impact that the special relativity and the general one are no longer tenable as cornerstones in the foundation of science. Then also the Big Bang theory and the current Standard Model are not tenable any longer. They too will have to disappear. However whole generations of scientists have been poisoned by these theories. Scientists will be very unwilling to abandon these theories.
- In 2016 relativity stands in a central position for the foundation of the exact sciences. Theory and derived theories have tremendous grip and impact. In fact, the theory of relativity constitutes a blockage in scientific thinking and research.
- The decades to come will be dominated by the theory of the mathematical model of universe cycle. That theoretical model is incompatible with the theory of relativity, the Big Bang theory and the Standard Model of 2016.
- Unfortunately the expiry of the theory of relativity will result into a reassessment of decades of research. A lot of work will have to be republished.

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*) **Thanks to the comments of Franklin Roos and translation.**

***) **The drawings are developed by Adarshi Yadava; see documents G8 and F1a - F1E.**

*****) **Copyright (document A6).**

*****) **The author has great respect for Einstein and Lorentz.**

***1) INTRODUCTION:**

In this document the author to focus himself specifically on the assumptions that **Einstein** wielded in the derivation of the theory of relativity. In relation to the universe cycle he traced seven errors in the assumptions of the theory of relativity. They will be explained in more detail now. Those errors are of such a serious nature that the theory of relativity and $E = mc^2$ are no longer tenable for $m =$ mass. That formula applies still partly for $m =$ matter, antimatter and annihilation but it gets another explanation.

-) Early 20th century little fundamental knowledge was available:

Already a century **Einstein's** special relativity and general one are ultimate cornerstones on which the current foundation of science to a great extent.

Einstein developed his views and theories at the beginning of the twentieth century. During those years the science offered him only a very limited theoretical vision. Miscellaneous fundamental insights were still missing.

At that time on the scale of the universe virtually nothing was to know about:

- 1) the start of the current universe, the structure of the universe and all the processes inside it,
- 2) how stars and galaxies are created,
- 3) existence and the creation of compact celestial objects such as black holes,
- 4) the mass, matter and energy of the universe,
- 5) the origin of gravity,

Also in the early 20th century on the scale of the atomic and subatomic level virtually nothing was known about:

- 6) the mass is *gradually* converted into energy and vice versa ($E = mc^2$),
- 7) the essential distinction between mass and matter,
- 8) the structure of the atom and of its nucleus and of subatomic particles,
- 9) the origin of physical forces and chemical ones of the atom,
- 10) the structure of black-hole atoms and of black holes,
- 11) the phenomenon of nuclear fission and fusion,
- 12) the reform of electromagnetic radiation and particle one to only protons, electrons and hydrogen.

From the then available scientific knowledge, it was impossible for **Einstein** to infer all-important processes that control the changes in the universe as a whole. Let alone he could overlook inside the underlying (nuclear) physical processes and chemical ones.

-) The theory of relativity was brought about too early:

It would have been extremely curious if, based on that former knowledge and on his theory of relativity, nevertheless **Einstein** could develop the right insights on:

- a) the basic concepts and mechanisms of the universe in terms of
 - 1) time, 2) space, 3) mass 4) matter, 5) energy and 6) gravity,
- b) without knowledge of:
 - the twelve basic parameters of the universe (**document G3**),
 - the nine laws of the universe (**document G4**)
 - the super cold *Little Bang* as start of this universe (**document G6**) and
 - the universe cycle that rules the universe (**document G7 + figures G8**).

See www.uiterwijkwinkel.eu

Unfortunately the derivation of the theory of relativity came a century too early.

-) Today, much more is known; however during 2016 the theory of relativity is still the ultimate cornerstone in the foundation of the science:

Thanks to the aerospace and nuclear research now much more of the universe is known and specified. Within the sciences in 2016 has still not yet been traced:

- what gravity generates,
- by what mass balance and energy one do not show equilibrium,
- how incrementally energy turns to mass and vice versa.
- How after a century of relativity $E = mc^2$ for $m =$ mass works step wisely. It is still quite Obscure process. This also applies to the crux of the Big Bang Theory!

-) The postulates of the theory of relativity are still the same:

Despite all the increased knowledge the principles of the theory of relativity and thus the theory of relativity itself are not substantially modified. **Einstein's** relativity theory and visions still apply in full as the ultimate cornerstones in the foundation of science.

-) The explanation for the phenomenon of gravity is essential:

How and why gravity is generated by the atom is indispensable to the universe and to understand the movements of celestial bodies inside and thus the role of gravitational energy in the universe and the universe cycle. Surprisingly gravity is exclusively generated from the shell electrons^{*)} of the atom in interaction with the velocity of the atom in the universe with respect to the center C of the universe^{**)}. Gravity does not come from the mass of the atomic nucleus!

Essentially the author derived gravity and elaborated in its **documents E3** and **E3-1 (figures)** www.uiterwijkwinkel.eu.

*) The 'shell' electrons move around the nucleus. In the nucleus are protons and 'nuclear electrons'.
See **document F1d** and **figures**.

***) The author supposes that the universe has a three-dimensional shape of a sphere shell.
See **document G6, G7** and **figures**.

In **document E3 Franklin Roos** derived (new) gravitational formula derived for the scale of the universe. Because the addition of a factor $\cos \alpha$ this formula shows a lot more gravity in the universe sphere-shell than **Newton's** fourth law. It implies the universe contains much more mass, matter and kinetic energy than thought until now. With these adjusted formulas the balances of matter and energy fit already much better than before!

-) Always doubts about the correctness of the theory of relativity were present:

Gradually in the last century the development of science doubts have arisen about the accuracy of this general relativity and special one. All kinds of tests have been devised and implemented. These tests, however, focused primarily on the *predictions* of both theories. The general relativity and specific one, these studies have been able to endure always.

However never doubts could be eliminated permanently and remained. It appears from this document that doubts are justified.

As long as this 'proof test' of the theory of relativity and $E = mc^2$ related to annihilation and $m = \text{matter} / \text{antimatter}$ which will confirm nicely the results of relativity. This is different to 'proof test' aimed at $m = \text{mass}$! Briefly stated:

- 1) Equal matter and antimatter can be transformed step-by-step only into energy as photons,
- 2) Photons are majoranas (**document F1b**). The photons of light (electron) and infrared (proton) do not show measurable mass, charge and spin on their outside;
- 3) Within these released photons all mass, charge and spin of the (anti-)matter still continue to be present but these quantities are not measurable on photons!

During annihilation *mass* is not converted into energy! That is contrarian with **Einstein's** theory. In **document F1a 2014 figure 15** the author shows how the phenomena of mass, charge and spin can be imagined and in principle they are indestructible!

-) This document specifically deals with the principles of the theory of relativity:

Insofar as the author knows about the research of the theory of relativity has never specifically been focused on the basic principles that **Einstein**, whether consciously or not, wielded in the derivation of his theories.

Einstein's assumptions which partly explicitly named as **Maxwell's** equations and the **Lorentz** transformation; sometimes only in part. **Einstein's** principles can be derived from its publications and texts.

* 2) PROBLEM:

2.1 EINSTEIN'S ASSUMPTIONS ABOUT RELATIVITY:

-) Einstein's appointed assumptions:

In this chapter, the author briefly the principles of the theory of relativity.

While deriving his theory of relativity, **Einstein** certainly based it on:

- 1) the speed of light in vacuum is the maximal possible speed in the universe,
- 2) the **Lorentz** transformation,
- 3) the **Maxwell** formulas who derived them to be able to explain electromagnetism quantitatively,
- 4) the premise that 100% pure energy exists in the form of photons and that photons have no mass,
- 5) gravity is directly linked to mass,
- 6) the interweaving of three-dimensional space and time into four dimensional space/time.
- 7) gravity affects both time and shape of the space; **Einstein** explains gravity as bending of space/time,
- 8) freedom to choose the location of the plot and the reference or
you yourself are allowed to choose the zero point of time and space,

-) Principles that Einstein did not appoint; they should be applied afterwards:

Principles of the theory of relativity being neglected in 2016:

- 1) a clear distinction to make between mass and matter; both are in 2016 more or less considered as one quantity,
- 2) to appoint the Big Bang point as the sole starting point of the universe and center C of the universe making that universe must manifest itself as a universe-sphere-shell that is by definition spherical and curved,
- 3) to appoint the time of the Big Bang, the center C of the universe, as a single simultaneous starting of time and space c.q. zero points and reference points of time and space in the universe,
- 4) to link time in the universe to the universe clock time in C,
- 5) to recognize the universe-sphere-shell as the space where all the matter and energy o of the universe is found,
- 6) to define that within this universe-sphere-shell everywhere exactly the same (universe clock) time rules,
- 7) an adequate explanation for the phenomenon of gravity other than a bending of space/time,

Throughout the 20th and early 21st century, the general relativity and specific one is considered to be super performance in scientific thinking. Both theories hold sciences early 21st century is still firmly in the grip. That is alright as long as theories are correct.

-) The universe cycle is not compatible with the theory of relativity;

Fundamental flaws in the principles of Einstein's theory:

Considered from the universe cycle derived by the author, some basic errors show themselves to be present in the premises wielded by **Einstein**:

- 1) the absence of the essential distinction between mass and matter;
- 2) 100% pure energy is not possible; energy is always linked to the mass of photons.
However, on the outside of photons mass and charge are not measurable, because photons are electrical dipoles and 'mass ones';
- 3) $E = mc^2$ does not apply to $m =$ mass but only to annihilating $m =$ matter / antimatter;
- 4) the *stepwise*^{*)} reform of matter from photons and from a particle radiation is missing;
- 5) of the **Maxwell** formulas apply for electrons and thus for $m =$ matter. **Einstein** has stretched the scope of such formulas and declared wrongly to apply them for $m =$ mass;
- 6) *Gravity* is not directly linked to mass but only indirectly to the 'shell' electrons of the atom and velocity of the atom in the universe; (shell-electrons move around the nucleus);
- 7) 'starting point and end' of time and space, are both in the center C of the universe;
- 7a) the origin of space is fixed in C;
- 7b) the zero point of the time of observation and the beginning of time is also fixed with respect to zero point C. That is the time since the start of the universe with the Little Bang.

*) Step by step: In practice, all (nuclear) physical processes and all bio ones should be split up into chemical partial reactions by definition a series of simple steps. These steps consist of at least one and not more than exactly one physical change or chemical change at the same time. Therefore, to follow the progress of all (nuclear) all physical and (bio)-chemical reactions gradually step-by-step. The **min1/max1-principle** is further elaborated in **document F1f**.

This stepwise decomposition fails at:

- a) $E = mc^2$ for $m = \text{mass}$, and
- b) atoms with neutrons in their nucleus!

So these descriptions do not match!

These seven errors in the assumptions of the theory of relativity are detailed in **chapter 4.1**. They turn out to be so serious that the theory of relativity and the related Big Bang theory, both fundamentally must be rejected. This applies indirectly to the current Standard Model of subatomic particles which is also based on $E = mc^2$ and $m = \text{mass}$!

2.2 PRINCIPLES OF ASTROPHYSICS AND PARTICLE PHYSICS UNCLEAR.

With the demise of the theory of relativity, the Big Bang theory also goes down. This theory is based on a singularity (a further collapsed of a king sized black hole due to its own gravity). Until now the direct cause of the Big Bang lacks fully.

The Big Bang theory assumes that all existing *mass* transforms into pure energy via $E = mc^2$. Those released energy (photons?) are immediately retransformed after the Big Bang to mass and matter in the form of quarks and eventually to neutrons. Moments later they are divided into an equivalent number of protons and electrons. According to **Newton** and **Einstein** these protons and electrons have mass and therefore gravity. Then the Big Bang and Big Bang Theory smothers in its own gravity!

Another problem arises. The neutron is to be regarded as a fused hydrogen atom! A hydrogen atom or any other kind of atom cannot be remade by those liberated protons and electrons from neutrons.

-) **Current models are not complete:**

Based on the Big Bang theory, today's scientists attempt to summarize all kinds of processes in the universe into systems of mathematical formulas and models without having a clear idea about:

- a) the cause of the formation of the gigantic Big Bang black hole and the Big Bang itself;
- b) then what caused the Big Bang black hole to collapsed into a singularity; gravity maybe;
- c) the physical properties of black holes and the functions performed by black holes in the universe;
- d) the physical forces and chemical ones of atoms in a black-hole state;
- e) how and why such a Big Bang settled on the basis of $E = mc^2$ for $m = \text{mass}$ stepwise;
- f) the stepwise formation of *mass from energy* and subsequently the emergence of matter from mass;
- g) the essential distinction between mass and matter (see **documents F1a 2014, F1b and F1c**);
- h) how the further formation of the neutron and thus protons with electrons occurs after the Big Bang;
- i) how after the disintegration of the neutron the electron came into an orbit around the proton in order to form the hydrogen atom;
- j) the origin of the forces on the hydrogen atom in order to be able to explain the hydrogen molecule;
- k) how the elements of the periodic system / table came to exist thanks to the path of: 1) the formation of the proton and electron, 2) the hydrogen atom, 3) the hydrogen molecule, and 4) nuclear fusion of hydrogen;
- l) why all the atoms are compelling structured in accordance with the elements of the periodic system;
- m) how and by what the entire system of physical forces and chemical ones and bonds occurs on the ordinary atoms and on black hole ones; see **documents F1d and F1e**;
- n) how to explain the phenomenon of gravity, essentially to be able to understand the developments in the universe. See **document E3** for the essence of gravity and **document E3-1** with the accompanying figures and drawings;
- o) the effect due to this explanation for gravity on the balances of mass, matter and energy in the universe;
- p) which steps the universe made after the Big Bang to establish to the current observable universe in a completely logical manner and how the present matter, stars, planets and galaxies and their central black hole arose;
- q) which developments can be expected in the further course of the universe?

Six decades after the introduction of the Big Bang theory, these basic uncertainties are still present. What preceded the Big Bang is not known nor an explanation for the Big Bang itself, and the first 380 thousands of years after the Big Bang. All big question marks. Anno 2016 the Big Bang theory generates doubts to virtually all principles in astrophysics.

-) The same goes for particle physics:

The current *Standard Model* is a consequence of the research in particle accelerators. In particle physics is freely used the formula $E = mc^2$ for $m = \text{mass}$. That rampant and *structurally incorrect* conversion of ‘measured energy’ to ‘mass’ results on document in the very complex Standard Model with three energy / mass levels.

In **document F1a 2014**, the author explains this complexity. In that document he has developed a clear and simple system:

a) only 2 elementary higgs for the buildup of the proton and antiproton and

b) only 2 elementary higgs for the buildup of the electron and anti-electron!

Those 2 higgs of the (anti)proton and the 2 higgs of the (anti-)electron are super symmetric!

See **figures 1-6** of **document F1a 2014**.

2.3 INSIDE SCIENCE EVERYONE LOST THE COMPREHENSIVE CONSPECTUS.

-) A lot of knowledge is present but split:

In today’s science a lot of research is done and a lot of precise knowledge is present in detail. This knowledge has been scattered across dozens of different disciplines and sub-ones including its own specialists.

Nobody can see any more the total field of sciences. This also applies to the investigations around subatomic particles and astrophysics of the universe. There the standard is the theory of relativity, $E = mc^2$ for $m = \text{mass}$ and structure in accordance with the current Standard Model. These theories obscure the horizon of today’s science.

-) Sagacity’s result in further confusion:

New theoretical perspectives are developed largely by mathematically gifted physicists and chemists. As soon as possible they put their findings and ideas into mathematical formulas and models to verify by computer simulations. For the universe those models are based on only some of the 12 basic parameters of the universe formulated in **document G3**. Therefore always these models are incomplete in terms of principles and intent.

To get complete the mathematical formulations and deficiencies in these (limited) mathematical models of the observable universe all sorts of extravagant and freaky solutions are devised. Many of these, in the past imagined ‘solutions’ begun a life of its own within the sciences.

Some examples:

- The curvature of space-time in relation to gravity,
- distortions of space and time and the concept of ‘event horizon’,
- light could not escape from black holes due to heavy gravity,
- concepts such as dark matter, dark energy, wormholes, singularities and vacuum energy.

The author describes the developments in the universe always integral over the universe cycle and the 12 parameters of the universe. That universe cycle is fundamentally inconsistent with the current views in astrophysics, relativity and Big Bang theory. The author elaborated a simple super-symmetric Elementary Particles Model that comprises only four higgs and is described in **document F1a 2014**.

(Collisions in particle accelerators temporarily increase the *energy level* of the vacant buildings of higgs changing their mass, charge and spin temporarily as well. This temporary change of mass, charge and spin are measured. These measurements result in the current Standard Model instead of model of the author with only four higgs. These four higgs cannot probably be determined experimentally in particle accelerators!)

2.4 AUTHOR CONSIDERS THE UNIVERSE FROM ONE TOTAL VISION:

This universe cycle consists of 29 separate phases that are described in detail in **document G7** associated with nearly a hundred **figures in document G8**.

All 29 phases in this universe cycle will gradually flow into each other and thus comply with the minimum one and maximum one principle or *min / max 1*. All phases follow each other completely logically, predictably and seamlessly. For that reason a mathematical model can be created of this universe cycle. With such a model for each of these 29 phases the 12 parameters can be filled quantitatively in detail and thus the conditions of the universe as a whole cycle; past and future!

This universe cycle is settled in a completely energy-neutral manner within an area with a radius of only 3.0 ± 0.5 billion (10^9) light-years around the center C of the universe and within a cycle time of approximately $(2.5 \pm 0.5) \times 10^{12}$ years.

-) Elaborated alternatives:

The author rejects the theory of relativity fundamentally. In the period from 2006 - 2016 he was forced to work out again several aspects:

- In the **documents under F1a, F1b, F1c, F1d and F1e** systematically all forces on higgs, neutrinos, photons, protons / electrons, the elements periodic table and that of the black hole elements. The non-elementary forces are spelled out the interaction of the atom and velocity of the atom in the universe.
- These documents (with figures) demonstrated that all matter in a universe is based solely on an equivalent number of ordinary protons and electrons.
- The **document D1** examine the structure of physical and chemical bonds including repulsions in relation to the velocities of the Earth in the universe-sphere-shell compared to the center C of the universe,
- The **documents under E3 and E3-1** specifically consider the origin of gravity.
- **Document G6** describes the super cold Little Bang as an alternative to the superhot Big Bang theory. (All galaxies started 20 – 25 billion year after this cold Little Bang (0 kelvin) with their own superhot Big Bang and without any transformation of mass ↔ energy! The universe is about 40 – 45 billion years old and much older than 13.8 billion years!).
- **Document G7** describes the 29 phases of the energy-neutral settled universe cycle.
- In **document G8** the accompanying approximately one hundred figures of the universe cycle are presented.
- **Document G9** treats deflecting photons and particle radiation in the universe-sphere-shell. The structure of the universe is therefore completely different from what we perceive through telescopes and the Hubble!
- **Document G10** shows that virtually all the physical constants, except those of electric charge and magnetic spin, quantitatively change during the universe cycle to be variable with the universe clock time!
- In **documents B1, B2, B3 and B4** is inferred that in the universe biochemistry of all forms of life mandatory are based on exactly the same biochemistry that is present in living matter on earth. Universe wide the biochemistry of life forms on earth shall be standard for all present life forms out there.

For a complete list of documents, see the website www.uitervijkwinkel.eu .

From autumn 2016, the author strives to model the universe cycle in collaboration with science institutes.

*** 3) PURPOSE OF THIS DOCUMENT:**

In this document, the author aims to launch the debate on the principles of the theory of relativity and thanks to those discussions to convince the science that the principles and thus large parts of the theory of relativity, the Big Bang theory and current Standard Model are incorrect.

The author has developed alternatives describing the organization of the universe from:

- 1) subatomic level: a) higgs level, b) neutrino / photon and c) proton / electron,
- 2) atomic level and molecular one: d) the elements of the periodic table and their compounds, e) black hole atoms,
- 3) to the universe itself: f) the super cold Little Bang, g) the universe cycle to be modeled mathematically and then quantified completely.

Also the phenomenon gravity is explained and with that the origin of gravity energy or ‘dark energy’.

* 4) ERRORS IN THE BASIC PRINCIPLES IN THE THEORY OF RELATIVITY:

During the derivation of the universe cycle this cycle was found to be contrary at various points to the special relativity and general one, among others in terms of time, space, gravity and the plot. The pain dwells in the principles that **Einstein** applied early 20th century. In 2016 they still have not yet adapted by science.

In **Chapter 2.1** the following errors are listed in the principles of the theory of relativity.

- 1) The lack of the essential distinction between mass and matter.
- 2) Kinetic energy is always linked to the mass of photons; 100% pure energy is not possible.
- 3) $E = mc^2$ does not apply to $m =$ mass but only for $m =$ matter and annihilation of matter with antimatter,
- 4) The step by step reforms of mass of photons and matter from particle radiation,
- 5) The **Maxwell's** formulas apply to all the electrons and thus, only for $m =$ matter.
Einstein was not allowed to expand **Maxwell** formulas for $m =$ mass.
- 6) Gravity is not directly linked to mass but only indirectly via the shell-electron of atoms and speed of atoms in the universe.
- 7) 'Starting point and end' of time and space, are both at the center C of the universe.
- 8) The zero point of space and time
 - a) is fixed in C and with respect to
 - b) the timing of the Little Bang.

With this Little Bang the start of the universe clock time and the start of the expansion of space are fixed.

Therefore the time of follow-up observations is fixed

- a) with respect to C and
- b) the timing of the Little Bang.

This applies to all theoretical considerations.

Recently these errors are being elaborated by the author.

4.1 WHAT IS MASS AND ITS ELEMENTAL CHARACTERISTICS:

-) **The definition of physical concepts of mass and matter:**

Mass is the most elementary physical understanding of matter. Mass can be presented as a standing wave, rotating clockwise or anticlockwise causing this mass-vibration getting a string form with multiple windings. The equatorial speed of those strings and mass particles is much less than the speed of light.

Due to kinetic energy and thus created rotations the windings of such polymeric structures affect intertwining so that this polymeric higgs structures of **Figure 1a and 1b** break up in mono higgs windings; **figure 1c document F1a 2014** and **figures 1 – 6** for super symmetry. on higgs level.

The then formed higgs and antihiggs of the proton and those of the electron are super symmetric. These higgs have opposite: a) spatial form, b) mass c) electric charge, d) magnetic spin and e) kinetic energy!

At this most elementary higgs level those rotations cannot cancel each other. Mass and anti-mass cannot annihilate! So mass and energy are not equivalent! Annihilation is only possible if there are equivalent amounts of matter and antimatter! See **document F1c + figures 15**.

-) **The smallest ordinary mass particle: higgs being somewhat flexible:**

The author distinguishes only two types of smallest higgs being super symmetric:

- a) both proton-higgs (anticlockwise or clockwise around their length rotation axis) and
- b) both electron-higgs (also anticlockwise or clockwise around their length rotation axis).

The entire universe is based on these four (two by two) supersymmetric higgs forming the complete standard model of **Uiterwijk Winkel**.

-) **Always rotation energy (clockwise or counterclockwise) is associated with mass, charge and magnetic spin:**

Each of the four higgs rotates around their three perpendicular axes.

- a) The rotation around the length-axis causes mass.

Depending on anticlockwise or clockwise there are mass or anti-mass.

The (anti-) mass is concentrated on the center of the standing wave.

- b) The rotation around a width-axis generates electrical charge.
Depending on anticlockwise or clockwise there is positive charge or negative one.
The charge is concentrated on the center of the standing wave.
- c) The rotation around the third axis makes spin.
Depending on anticlockwise or clockwise there are magnetic spin \uparrow or \downarrow .
The spin is oriented along its rotation axis.

All three quantities are an effect of distortion due to rotation.

Rotation energy on higgs level have been connected to *mass, charge and spin*.

Always they form a four-unit on higgs level!

The four kinds of higgs are not yet matter!

-) In the relative calm situation at higgs a constant quantity of kinetic energy applies causing constant angular velocities and constant mass, charge and spin.

Thanks to tuning of those three rotations on higgs level there is a constant quantity of rotation energy and fixed angular speeds. These quantities (anticlockwise and clockwise) including elemental mass, charge and magnetic spin cannot change outside a particle accelerator. This is *the state of constant 'low energy'*.

That relative calm situation applies for $> 99.99\%$ of the higgs in the universe.

(The remaining $<0.01\%$ applies for higgs in extreme conditions-existing like in particle accelerators. After collisions in accelerators particles are always in *different levels of 'high energy' which results in much higher rotation along their axes and results in (much) higher measured mass, electric charge and magnetic spin;*

document F1a 2014)

-) Eliminating the angular velocities on higgs level is not possible:

Normal mass particles of the proton (clockwise) and anti higgs (anticlockwise) attract each other but they cannot cancel each other's rotations. Mass, vibrational energy and rotation one cannot annihilate nor separated! The same applies for the much smaller electron-higgs.

Proton higgs and electron-ones can attract each other but they cannot harm and annihilate themselves.

Technically these small higgs are pretty elusive. Their mass, charge, magnetic spin and kinetic energy is not directly measure.

-) Mass of higgs cannot be destroyed nor transferred into energy:

The basic rotation (anticlockwise or clockwise) of this higgs mass and their elementary forces cannot be destroyed or eliminated. In principle mass cannot be converted into energy. From that point of view the formula $E = mc^2$ from the theory of relativity is nonsensical for

$m =$ mass. Fundamentally the mass of higgs is not to destroy and not to turn into pure energy. Kinetic energy is always coupled to mass.

-) Relative idle:

In the relative calm situation and 'low energy' for $> 99.99\%$ of higgs in the universe applies that their mass, charge and spin are constant quantities. Energetic changes and changes in measured mass, electrical charge and spin do happen during collisions in particle accelerators and during nuclear reactions as fusion.

The general theory of relativity proclaims that mass of atoms increases with speed. Unfortunately it is a false thought. With speed gravity from the 'shell' electrons of atoms increases. Ostensibly then it seems as their mass increases which is not the case! The author recurs to this in **chapter 4.6**.

-) The mass of higgs does not generate gravity or any other force:

Higgs generate only and exclusively their elementary mass, charge and magnetic spin.

Explicitly mass does not generate gravity. See **documents F1a 2014 and E3 & E3-1**.

Gravity occurs only while atoms have speed in the universe relative to the center C of the universe. See **documents F1d and F1e** where genesis of all other physical forces and chemical forces is derived and the forces present on normal matter and black-hole matter / atoms.

-) The mass of the proton-higgs equals 1843 times the mass of an electron-higgs:

In **document F1c** the author has developed a vision in which the proton and electron each are made up of exactly 81 higgs. The proton-higgs generates $1843 \times$ as much mass as the electron-higgs. Correspondingly its dimensions the electron higgs are much smaller.

The electron has a tiny and compact construction. Even in particle accelerators it cannot be destroyed. Therefore it seems the electron is a standalone point-like particle without any underlying structure. The electron can annihilate with the anti-electron into gamma photons and for that reason it has to possess an internal structure as the proton. The author gives the (anti) electron exactly the same spatial three-dimensional structure as the (anti-) proton. Refer to **figures 12 t / m 15 of 2014 F1a F1b and document F1c**.

-) All greater structures consist of proton-higgs and electron-ones:

The proton-higgs and the electron-ones differ in terms of dimensions and mass. Their charges are opposite. Those differences are so large that mutual greater structures cannot be built. Larger structures are possible only with proton-higgs and only with electron higgs. Type in kind! Ultimately this four higgs results only in the (anti) proton and the (anti) electron.

-) Higgs attract each other and make pairs but they are not yet matter:

The rotations anticlockwise and clockwise cause the proton-higgs and its equivalent anti-proton-higgs. They have opposing mass, charge and magnetic spin and attract each other. They make pairs and form dipole majoranas without the involvement of annihilation. The basic rotation of higgs is not eliminated. This also applies for the electron-higgs and its antihiggs.

Such complementary pairs of higgs do not display electrical charge and magnetic spin. They are majorana dipoles and as neutrinos they move with the speed of light across all detectors without leaving any trace. Unlike photons (also majoranas) these 'neutrinos' or frankinos are to detect very difficultly and only occasionally.

4.1 FORMATION OF PHOTONS FROM HIGGS:

In **documents F1a 2014 and F1b** including **figures 1-12** the author shows how the (anti-) photons of light and infrared are built. From the four smallest mass higgs in total only four are stable.

(Anti) photons can be formed and nothing else!

The only difference between light photons (connected with the electron) and infrared photons (connected with the proton) seems to be their frequency, energy and wavelength according to $E = h\nu$ and $c = \nu\lambda$. Within the vision of the author as well there are two completely different photon particles.

All spectra are composed by two separate components: one spectrum originating from the 'shell' electrons and one spectrum originating from the protons in the atomic nucleus. Both together forms one spectrum with gamma, x-rays, UV, radio etcetera!

-) Speed of photons:

Due to the mass of the higgs all photons can move only by the maximum speed of light and only as electromagnetic radiation of the photon together with its anti-photon (interferential).

(Only the massless gravity and massless universe clock time move faster than light. They presumably even move with infinite speed across the universe. Time and gravity disappear both directly to the outside of the universe-sphere-shell!)

-) Photons do not move in exact straight lines in our three dimensional world:

Photons and anti-photons are electrical dipoles (- +) and magnetic quadrupoles ($\uparrow \downarrow$). That is the reason eviation is only visible after thousands of years. The author assumes an average deviation of photons in universe of only 1 degree every 10 to 40 thousand years (**document G9**). So photons do not move in exactly straight lines across the universe-sphere-shell but they 'spiral' and sway within the universe-sphere-shell. Photons still possess all the mass of the 6 higgs of (three regular higgs with mass and three antihiggs with anti-mass) by which they have been constructed. It is impossible that photons would be pure energy! **See document F1b figures 6 – 12.**

-) Photons and anti-photons attract each other and form larger structures:

In **document F1c** it is shown how in the universe the basic structures can be built from photons to protons and electron including their anti-particles.

In the perspective of the author such structures of the proto-proton and proto-electron and their anti-forms they consist all with 13.5 photons and considered in other ways they are made up of three quarks of 27 higgs or 81 higgs in total.

That construction of higgs shows the net mass, charge and spin of only one higgs, but all the mentioned particles are not yet matter or anti-matter. For that step towards matter / anti matter $E = 1/2mc^2$ kinetic energy should be added! **See document F1c; figures 13 and 14.**

4.1.2 THE DISTINCTION OF MASS AND MATTER:

Like **Einstein** the exact science failed to make a clear distinction between the physical concepts of mass and matter until the present day (2016). A disturbing omission because matter is a derivative and specific status of mass and of the structures of photons!

-) **Mass cannot be destroyed in contrast to matter/ antimatter:**

Massa cannot be destroyed and converted into energy. Conversely energy cannot be reformed into mass. However in contrast equivalent amounts of matter and antimatter can annihilate to photons. During that annihilation mass is not converted into energy. How about this phenomenon?

-) **Matter is a construction of photons which rotate with an equatorial speed of light:**

In **document F1c** at www.uitewijkwinkel.eu the author developed the structure of protons and electrons from these four elementary higgs model 2014. There a clear distinction is made between the concepts 'mass' and 'matter'.

Matter and antimatter are created as a construction of photons rotating around its own longitudinal axis with equatorial speed of light (anticlockwise) or (clockwise). That adding of rotation energy ($E = \frac{1}{2} mc^2$) is done incrementally. Step by step conform the *min/max 1 principle* (**F1f**).

Eventually the proto-proton and proto-electron can get maximal $E = \frac{1}{2} mc^2$ as rotation energy. Only then there is matter or antimatter containing protons and electrons. The visualization of the (anti) proton and (anti-) electron is displayed in **document F1c** and **figures 12-15**.

Unlike with mass and anti-mass, at equivalent amounts of matter and antimatter annihilation does occur. The final result consists of photons with rotation energy. Only matter and antimatter equivalent are partly equivalent to kinetic energy. Only applies to annihilation: $E = 2 \times \frac{1}{2} mc^2 = mc^2$ only for $m = \text{matter and antimatter!}$ The failure to recognize the essential difference between 'mass' and 'matter' results in basic misunderstandings within science.

The transformation of mass via photons to matter and further build up to protons and electrons only happens in the universe in orbits between galaxies within galaxies and around black holes. These reforms of photons to ordinary matter of the proton and the electron and antimatter from ordinary lasts to complete 14 to 18 billion years. The build-up cycles of the proton and the electron are shown in **figures 15d and 15e of document F1c**.

4.1.3 MASS AND ENERGY ARE NOT EQUIVALENT:

In the special theory of relativity, **Einstein** let know that the two most fundamental properties of matter, mass and energy, are entirely equivalent to each other until the year 2016. Mass and energy are considered as one dualistic basic parameter with two different facets that can merge into one another completely. According to the author that is not the case as explained before!

Never mass can fully be equivalent to energy! When stretching the formulas of **Maxwell** and **Lorentz** from matter to mass, **Einstein** and **Lorentz** went fundamentally wrong. This has extremely unpleasant consequences for virtually the whole of science.

4.2 ENERGY IS ALWAYS LINKED TO MASS; 100% PURE ENERGY IS NOT POSSIBLE:

-) **Photons are no pure energy:**

The photons released during annihilation did not lose anything of their mass, charge and magnetic spin. Unlike Einstein thought and science think in 2016: 100% pure energy does not exist. (Kinetic) energy is always inextricably linked to higgs and mass! (Kinetic) energy cannot occur independently and separately from higgs as an isolated phenomenon!

Mass itself is absolutely indestructible as the elementary rotation energy on higgs generating elementary charge, magnetic spin and mass.

-) **Photons have no measurable rotation energy, mass, charge and magnetic spin; they have a measurable vibrational energy and frequency:**

As particles photons do not generate gravity. Gravity emerges only when there is material in the form of atoms. As electrical dipoles they generate electrical force. As magnetically quadrupoles they generate magnetically force.

In collisions with matter particles photons are absorbed and lower their momentum and energy which decreases the vibration frequency.

-) Mass of photon is present but cannot be measured essentially:

All scientific measuring equipment consists entirely of matter (atoms / molecules). Photons are *majorana's* (F1b) lack the appearance of matter. Mass, thereby charge and spin of photons including their anti-quantities fall outside the range of scientific equipment.

Because of the 100% coupling of kinetic energy in higgs, 100% pure energy apparently exist, but only it seems to be the case. Such 100% pure energy exists in accordance with the theory of relativity. In the foundation of the theory of relativity and the sciences is a basic fallacy, according to the author!

4.3 ANNIHILATION OF MATTER AND ANTIMATTER.

-) Mass ↔ matter / antimatter:

In **document F1c** it is shown that matter and antimatter are derivatives of mass. (Anti) matter is a construction of 13.5 photons rotating at its equator with the speed of light, anticlockwise or clockwise, around their longitudinal axis as (anti) protons and (anti) electrons.

That transformation of photons into matter in the form of protons (ordinary matter) and electrons happens on a large scale the universe:

- a) by transforming from frankinos (neutrinos) and photons to the proto-proton and the proto-electron,
- b) forming of structures of 13.5 photons of proto-protons and of proto-electrons,
- c) increasing the speed of rotation of which constructions of photons and ultimately increasing the rotation speed up to the speed of light. Then $E = \frac{1}{2} mc^2$ is added to rotation energy. Only then mass became matter (protons) and antimatter (electrons) This happens in orbits in the universe-sphere-shell between galaxies, and within galaxies themselves and around black holes. This whole process of reconstructing protons and electrons from infrared and light photons takes about 14 – 18 billion (10^9) years, (That's our ultimate horizon in the universe)
- d) When the step up of the rotational speed in the universe only protons, electrons are formed which together results in the formation of only hydrogen.

-) Only for annihilation $E = mc^2$ applies and only if $m = \text{matter and antimatter}$:

In matter and antimatter the angular speed of light ((anti-)clockwise) can be removed. This only happens during annihilation: the rotation of the constructions of photons with the speed of light of the matter and antimatter will be transferred into photons. During annihilation 27 photons come free with $E = 2 \times \frac{1}{2} mc^2 = mc^2$ being rotation energy!

Only matter can be destroyed and only during annihilation with an equal amount of antimatter. During annihilation the present mass remains completely unchanged in these photons!

This author's vision touches the theoretical physics in the foundation because in the past science failed to recognize the essential difference between mass and matter! Because of the implications for the literature one will not quickly take seriously author's views!

-) Can science cope without $E = mc^2$ for $m = \text{mass}$:

The current natural sciences are so much intertwined with **Einstein** and his relativity that they really cannot survive without the formula $E = mc^2$ for $m = \text{mass}$ while this formula applies only to $m = \text{matter / antimatter}$ Since **Einstein** science has not made a clear distinction between the concepts of mass and matter. Therefore scientists are burdened with a highly basic (think) error in the scientific foundation for more than a century.

Most clearly that mistake manifests itself in particle physics where conversion of measured energy to 'mass' standard practice to achieve:

- the existing first generation of quarks (up and down)
- the intrinsically non-existing second generation of quarks (charm and strange) and
- the equally nonexistent third generation ones (top and bottom).

The Standard Model has to be revised. Eventually this model will be replaced by the four higgs of the Elementary Higgs Model of **Uiterwijk Winkel**. See **document F1a 2014**.

-) The essential problem for science:

Science is burdened with a serious problem because the famous formula $E = mc^2$, in fact, absurd and wrong for $m = \text{mass}$. This error brings a century of fundamental scientific research into question. This applies particularly

to the results of particle physics. Obtained test results should then be reviewed on their premises! A doomsday scenario for science, professors and scientists.

4.4 THE REFORMATION OF MATTER FROM PHOTONS AND PHOTINOS:

-) **The theory of relativity and Big Bang theory let totally unclear the stepwise transformation of mass ↔ energy:**

Both theories create a large, still unsolved problem of how mass is gradually converted into energy and how energy from mass is reformed in logical steps. These step by step reforms was appointed to the minimum and maximum 1 principle or *min/max1* and was further elaborated by the author in **document F1f**. This principle is a fundamental principle in nature.

Within the theory of relativity also remains utterly unclear

- a) how stepwise is reformed from matter to mass as protons and electrons, and
- b) how the elements of the periodic table with physical forces and chemical forces present thereon has been effected.

For the construction of the (anti) proton and (anti) electron see **document F1c**.

For the construction of the periodic system / table of elements and forces of atoms, see **document F1d**.

-) **The formation of photons from higgs:**

During the universe cycle all electromagnetic radiation and particle radiation are reformed for 100% into only ordinary protons and electrons via (anti-) photons, (anti-) rotor photons (in matter), (anti-) strings, (anti-) quarks. From there to ordinary hydrogen atoms. That building process is outlined in **figures 15d and 15e document F1c**. This stepwise building process and degradation process of matter from photons is completely missing in the theory of relativity and the Big Bang theory.

-) **Disappearance of photons of light and infrared:**

In practice that reformation process of protons and electrons allows for the continuous disappearance of previously by stars and supernovas emitted electromagnetic radiation (neutrinos + photons) and particle radiation within the universe-sphere-shell. There photons have a maximum residence time of approximately 14 billion years for photons of light, which is approximately 18 billion years for all infrared photons. Older photons are not found because they are reformed into electrons and protons.

-) **Atomic nuclei without neutrons:**

Document F1d shows the structure of nuclei with only protons and nuclear-electrons and thus without neutrons. See **Figures 19-23 of F1d**.

The vague concepts of 'strong' and 'weak' nuclear force are also redundant and can disappear. That clears the system of four fundamental forces enormously to solely the elementary electric charge (force) and the elementary magnetic spin (force). (The 'strong' nucleus force is a strong electrical bond. The 'weak' nucleus force is a weak magnetically bond or repulsion).

4.5 EINSTEIN WAS NOT ALLOWED TO USE MAXWELL'S FORMULAS FOR $m = \text{MASS}$:

-) **The Maxwell equations:**

The four derived **Maxwell** equations relate to charged objects. These formulas relate specifically to matter and specifically not include the mass of the carrier of charge, the electron!

The omission of a clear distinction between mass and matter is for Maxwell himself not disastrous.

Einstein based himself on the **Maxwell's** equations and the **Lorentz** transformations and used it for mass,

especially in $m = \frac{m_0}{\sqrt{1 - \left(\frac{v}{c}\right)^2}}$.

Einstein and **Lorentz** were not aware of that essential difference between *mass and matter*. You may not blame them.

With the presentation of the Big Bang theory the scientists should have demand clarity from the authors of this theory about

- a) the stepwise reform of energy into mass,
- b) the transfer of mass into matter and
- c) the ultimate formation of only protons and electrons.

That did not happen (enough or not at all). Over the past century it remained unnoticed that the **Maxwell** formulas were unduly stretched from matter to mass!

-) Theory of Relativity wrongly accepted for $E = mc^2$ with $m = \text{mass}$:

The failure to recognize the difference between mass and matter has been derailed by the theory of relativity and the **Lorentz** transformation. **Lorentz and Einstein** could not apply the formulas of **Maxwell** $m = \text{mass}$; but only partially for $m = \text{matter}$! Considering mass and energy as being equivalent, was a huge mistake in the science anno 20th and early 21st centuries.

In the application of the theory of relativity m was always matter and seldom mass. $E = mc^2$ is completely restricted to:

- a) $m = \text{matter}$ and the annihilation of *matter and antimatter* and to
- b) mass differences before and after nuclear reactions. Mass defect.

That limitation will be especially palpable in the research in particle accelerators and in astrophysics. The fundamental error of equivalence of mass and energy is now widely accepted in science! This should be corrected as soon as possible.

4.6 GRAVITY IS NOT DIRECTLY LINKED TO MASS BUT INDIRECT:

-) Relation between mass and gravity:

Like **Newton Einstein** coupled the phenomenon of gravity directly connected to mass. Both scholars had no sensible explanation for the origin of the phenomenon of gravity. Nearly a century after the introduction of the theory of relativity, the current science still not found a conclusive explanation for the phenomenon of gravity, where the effect on the atom comes from and what gravity generates!

In line with **Newton** and **Einstein** science considers gravity in 2016 as an elementary physical force of mass. **Einstein** explains gravity as a curvature of the space-time continuum. The more mass, the more curvature.

-) Gravity is the only force that is acting universe widely:

Gravity is the only force of the atom that is active at long distances, even on the scale of the whole universe. To understand the events in the universe must be known:

- a) What gravity is,
- b) Where the phenomenon grabs the atoms,
- c) Where gravity comes from,
- d) What gravity causes and
- e) How fast gravity travels in the universe.

At the **Large Hadron Collider** at CERN in 2012 the higgs was observed or but the discovery of the gravitational particle or graviton was not reported! If gravitational would be attached to mass, the graviton should also have been observed! So the coupling between the mass and gravity apparently does not exist.

-) Gravity is not an elemental force of mass.

Gravity is only one of speed derivative force of the atom:

The effects of charge and magnetic spin are the only elementary forces of the proton and the electron.

According to the author the other physical forces and chemical forces (including gravity) are not generated by mass but only by matter in the form of the atom and via the interaction between these atoms with the velocity of the atoms in the universe with respect to the center C.

In the universe relative to C *stationary atoms* generate themselves any form of physical and chemical force and hence no gravity! All such absolute stationary atoms relative to the center C are completely inert both physically and chemically!

-) Gravity is exclusively generated by the 'shell' electrons of the atom:

Gravity is not in the proton or in the atomic nucleus! In the **document E3** of www.uiterwijkwinkel.eu the author derived the essence of gravity and further explained in **document E3-1**. These documents shows that gravity is not generated directly from mass but only indirectly related to it.

Gravity is exclusively generated by the 'shell' electrons of the atom that interacts with the speed of the atom in the universe relative to the center C of the universe. This also applies to the other physical forces and chemical ones of the atom.

Different components

Each speed in the universe within the universe-sphere-shell generates its own gravitational force component! The author supposes that there are 5 - 9 different speeds of the earth in the universe and hence 5 - 9 different gravitational components. This also applies to the other physical and chemical force components and bond ones. This buildup in 5 - 9 components (one for each speed) also holds for the *gravity constant*.

That magnitude is not really constant but very slowly changes throughout the universe cycle! That includes almost all other forces, bonds and their physical constants! **Document G9.**

Unlike the science assumes in the year 2016, gravity is not a basic or elementary force!
Gravity increases proportionally with the speed relative to the C. Thereby the mass of the atom remains constant!

-) Einstein confused the concepts of mass and gravity;

Mass and speed are not related:

Within the theory of relativity and the current science the interaction of forces on the atom and velocity of the atom in the universe is not recognized. Within the theory of relativity mass increases with speed. The relative state of rest (99.99% of all higgs) is that their mass, charge and spin are independent variables. The mass of higgs particles do not generate gravity! Gravity is not related to space/time!
Gravity is only generated by the 'shell' electrons of normal and black hole atoms. Gravity increases linearly with the velocity of the atom in the universe!

Observing measurements the two totally different visions produce the same results with a world of difference with regard to the statement of the cause of the phenomenon and explanation of the measurement.
A century ago **Einstein** had no clear explanation for gravity and where this phenomenon would be on the atom. About speed **Einstein** interchanged the concepts of mass and gravity. An extremely annoying error in the theory of relativity!

-) Gravitational radiation is massless and travels faster than light:

The gravitational radiation produced by the electron shell is the only form of radiation without net mass, charge, spin and kinetic energy. So at the LHC it is useless to search gravity or the graviton by colliding protons. Due to the absence of mass gravity moves faster than light, and even with an infinite velocity through the universe. All gravitational radiation leaves the universe-sphere-shell immediately and in that respect it is unique, just like the universe clock time. The universe clock time also moves with infinite speed through the universe. Therefore always all items in the universe have exactly the same universe clock time.

-) Forces are not transmitted by particles:

The so-called gravitational particle or graviton does not exist. Other physical and chemical force particles do not exist too. The forces come directly from the higgs itself or are in the protons and electrons of atoms. Force-transmitting particles muddle the picture and make it unnecessarily complex.

-) Gravity is not deflected in the universe:

Gravitational radiation has no mass, charge or magnetic spin. Gravitational radiation will not be deflected in the universe or the gravity of stars and galaxies nor by their electric and magnetic fields of stars and galaxies in the universe. This massless gravity does not show any kind of wave motion or energy.

-) All forms of electromagnetic radiation are bound by the speed of light and exhibiting a wave motion:

All forms of electromagnetic radiation and particle radiation or based on mass, charge, magnetic spin and kinetic energy even if it is mass, charge and spin are not directly measurable. These types of radiation all exhibit the same type of wave motion. Because of their mass, all other forms of radiation linked to the limit of the speed of light c.

-) No gravitational lenses.

In addition to mass all subatomic particles (higgs, frankinos (neutrinos), photons, quarks and finally protons with electrons) and all electromagnetic radiation including particle one possess consistently a quantity of electric charge or dipole and magnetic spin or quadrupole.

Subatomic particles and especially free protons, electrons and neutrons do not generate any form of gravity!
Hence the gravity of stars or galaxies cannot exert any influence on the orbits of these subatomic particles. In the universe 'gravitational lenses' are not present.

These 'lenses' are caused by:

- a) electric fields,
- b) magnetic fields,
- c) by refraction during passage through atmospheres, coronas around planets and stars,
- d) via refraction as a result of passage through the extremely low concentrations of hydrogen and helium contained within all galaxies, the interstellar space, and
- e) via refraction by the extremely low concentrations of only hydrogen present in the intergalactic space!

-) All radiation (except gravity) is deflected and continues to travel for 100% within the universe-sphere-shell: The orbits of all the photons and subatomic particles are exposed to the influence of electric and magnetic fields emanated from stars, galaxies and black holes and refraction by the hydrogen gas between the galaxies. Because of this slight deflection all electromagnetic radiation and subatomic particle radiation keep moving completely within the universe-sphere-shell. Today it is several million light years thick.

On earth such deflections result in a completely distorted picture of the universe. These deflections cause all sorts of virtual images and thus all kinds of visual misunderstandings. Both in the empty universe globe within and into the empty outer sphere is absolute darkness and lacking any form of mass (radiation) and matter (particle radiation and molecules).

Due to mentioned deflections of all electromagnetic radiation those dark areas are completely filled with virtual galaxies. These images are from the thin universe-sphere-shell itself.

-) **Nuclear fission and fusion;**

no decrease of mass but of gravity and gravitational energy:

Einstein says that in fission mass is converted into energy (nuclear bomb, nuclear power plant). Most peculiar that is not the case. Mass does not disappear but gravity and thus gravitational energy!

During *nuclear fusion* shell-electrons fuse with the nucleus. In addition, the kinetic energy of the shell-electrons turns into heat. That fusing shell-electron loses as nuclear-electron the ability to generate gravity. Therefore it seems very deceptive mass would be gone! However, during nuclear fusion all mass remains unchanged in position and only gravity and associated gravitational energy disappears!

During *nuclear fission* a 92-uranium-235 atom absorbs a slow neutron. The new isotope falls apart into two smaller nuclei plus new neutrons. With the splitting of the atomic nucleus and electron shells electrical energy is changed into heat, because the shell-electrons come closer to the nuclei giving much heat.

On the outside of the nucleus each released neutron is built up from one proton and one nuclear-electron.

During nuclear fission mass seems to disappear while it is not the case. During the nuclear fission will disappear only a bit gravity and of the connecting gravitational energy.

-) **No curvature of space-time by mass and gravity:**

When **Einstein** derived his theory of relativity, insight into the origin of gravity still lacked fully as well as the structure of the universe in the beginning of this universe. **Einstein** made statements concerning gravity in relation to time and space in which mass and associated gravity would take care of the curvature of space/time.

During the Little Bang (**document G6**) the extremely big black hole and all black-hole atoms of the universe it contains divided into ordinary protons (ordinary matter) and ordinary electrons (strictly electrons are antimatter). With the disintegration of the black-hole atom also vanishes all gravity! The released protons and electron arrange themselves in spherical mono-layers of protons and electrons that all sides evenly and without gravitational expand in the form of a universe-sphere-shell. In the first period without gravity the universe-sphere-shell was already curved as a three dimensional object. Gravity has nothing to do with the natural curvature of the universe.

It often shown model of a rubber sheet containing a heavy ball works very misleading. It emphasizes the basic fallacies in current theories on the universe!

Documents E3 and E3-1 shows that **Einstein**, incidentally like **Newton**, was based on a complete misrepresentation of gravity with disastrous consequences for the sustainability of relativity.

-) Mandatory to add a factor $\cos \alpha$ to gravitational formula of Newton and Einstein:

In **documents E3 and E3-1** the author has derived the origin of gravity and **Franklin Roos** composed a new gravitational formulas governing the scale of the universe-sphere-shell. Simplification of these formulas and the omission of the factor $\cos \alpha$ results in the gravitational formulas of **Newton**. The fourth law of **Newton** is the limit case for 'small distances' of the earth and objects, and applies only within the Milky Way.

In the case of *mass and energy calculations* of the universe-sphere-shell a factor $\cos \alpha$ has to be added to the current gravitation formulas of **Newton** and **Einstein**. See the figures in **document E3-1**. For gravitational measurements within the Milky Way, $\cos \alpha = 1.0000$; beyond taking $\cos \alpha$ to zero and the other side of the universe is the effect of $\cos \alpha$ to the gravity even negative!

With $\cos \alpha$ added the universe-sphere-shell contains more matter and energy:

With that factor $\cos \alpha$ appears to be present much more gravity in the universe to the present day has been thought until 2016. So the universe has much more matter, mass and energy than calculated. The author expects that by applying $\cos \alpha$ the balances of the universe will already be much better!

-) Gravity and kinetic energy give direction to movement of atoms:

Each particle has a speed with a certain size coupled at its energy. The direction of this movement is often determined by gravity and to a lesser extent, due to electrical and / or magnetic fields.

Gravity results in a universal and uniform slow down the expansion velocity relative to C of the universe-sphere-shell.

This results in the development of various rotations and revolutions of matter, atoms, planets and galaxies in the universe. These gyrations are very structured.

Gravity ensures that all the atoms and molecules remain fully within the universe-sphere-shell with a thickness of only a few thousand to millions of light years. The electric and magnetic fields in the universe-sphere-shell separately ensure at all electromagnetic radiation and particle radiation for a deflection such that the resultant of their 5 -9 curved paths also continue to move for 100% within that thin universe-sphere-shell. (Thin is relative to its radius). Eventually gravity carries back all matter to C for the timing of the next Little Bang; see **document G6**.

-) As long as the essence of gravity is not known to be nothing sensible about the universe:

To say something sensible about the developments in the universe, one must explicitly know the origin, the cause and the nature of gravity. Only then the changes and processes in the universe can be explained and followed. The author refers to **document E3 and E3-1**.

4.7 WRONG VISION OF TIME AND SPACE:

When early 20th century **Einstein** developed special relativity and general one the phenomenon of the Big / Little Bang was still unknown as the fact that the universe is a spherical shell with only one center C which serves as fixed reference point.

Decades ago the Big Bang theory should have been resulted in one fixed zero point for both time and space. The consequences of the Big Bang theory on time, space and spherical shape of the universe already had to be some 60 years ago processed through adjustment of the theory of relativity!

The current prevailing view is that the universe started from a superhot Big Bang or from a singularity; a much more collapsed black hole. However, a singularity is not possible. When the author starts the universe with a super cold Little Bang (**document G6**) from a gigantic black hole with a radius of about 50 to 100 million km with all mass, matter and energy together. That explosion occurs at 0 kelvin without gravity!

-) Each galaxy starts with its own Big Bang:

At the start of each galaxy a local Big Bang occurs. These 4 to 20 billion Big Bangs occurred some 20 – 25 billion years after the Little Bang. These Big Bangs are described in detail; they form **phase 16** in the universe cycle (**G8**).

Both approaches, the prevailing Big Bang and author's Little Bang, are completely different but begin in one starting point in the universe of both (universe clock) time and space from a center C of the universe and result in both a universe-sphere-shell!

Due to the deflection of light within the universe-sphere-shell and the transformation of photons towards protons, electrons and hydrogen the maximum residence time of photons in universe is about 14 to 18 billion (10^9) years. This is the event horizon of mankind on the universe. We cannot perceive anymore the spherical shell shape nor these 4 – 20 billions of Big Bangs; one for each galaxy!

In principle in both theories the starting point of time and space is determined exactly the same! In the universe cycle (**document G7**) each cycle ends with a next Little Bang and time has a maximum of only one cycle! This also fixes the end point of the universe cycle at the center C of the universe.

-) Time and space start at the same time and in one place; postulates of time:

By theoretical considerations time and space start at the moment of the Big / Little Bang and from the center C of the universe. Time is the period that has elapsed since the last Little Bang.

Time is very fundamental and is difficult to define. In **document G7 chapter 6.5** time is represented in the form of a number of postulates which are repeated here in brief:

1) Time result from the universe cycle. Time is continuously generated from the center C of the universe; hence from one fixed point. Within one cycle, the time of universe Little Bang runs until a maximum of the beginning of the next Little Bang and the beginning of the next cycle. The universe time is reset then. Time is finite!

2) Time is like gravity without a) mass, b) charge, c) spin and d) energy.

Time is only a mathematical concept. The universe clock time has no direct relationship with mass or matter. It is an independent variable. The (universe clock) time spreads on all sides from C through the universe with infinite high speed. (Except time and gravity all other forms of radiation have mass, charge, spin and energy. Therefore their maximum speed is limited to a maximum of the speed of light.)

3) All over the universe ever goes exactly the same universe clock time. Time is location-independent. All particles in the universe have always exactly the same, driven from the center C of the universe, clock time relative to both C and relative to each other! Differences in time arise only when time is measured from other points than C.

4) Time is linked to the universe cycle and C. Nowhere in the universe time can go slower or faster whatever that means. So time-delay does not exist. Because of the universe cycle certainly time cannot walk backwards. Some Feynman diagrams are deluding. Everywhere applies the same linear progress in the settlement of the universe cycle and thus in universe clock time.

Time has no influence of gravity, electric fields or magnetic ones; also not in or near black holes. Black holes have the same universe clock time. The warping of space-time is one of the excesses of the theory of relativity.

5) The time control from C makes time suitable as a measuring stick of choice to monitor the progress of the universe cycle.

-) Time and space are part of the 12 basic parameters of the universe cycle:

Of the twelve basic parameters, the universe clock time is quite autonomous and fully independently of the other variables. It is not allowed to give a description of happenings in the universe by only some of the 12 parameters. In (theoretic) considerations always must be taken into consideration all 12 parameters.

In **document G7** the author describes qualitatively the relations between these 12 basic parameters in the 29 phases of the universe cycle. Every phase of the complete universe cycle is fully describe and hence to model mathematically from 2016.

The whole universe cycle is completely energy neutral. The law of conservation of energy requires that. During the first 5 to 10 billion years of the universe cycle atoms are absent and therefore gravity and gravitational energy are absent completely. During that whole period the expansion of the universe is not accelerated or decelerated.

Only when the Universe already largely expanded compared to C without gravity hydrogen is generated from protons and electrons. With this hydrogen atom / molecule gravity and gravitational energy enter the universe. d Then in the previous period that gravitational energy compared to C is built completely free of charge in energetic terms! That gravitational energy is now so emphatically sought 'dark energy'.

At the same time with the formation of the hydrogen atom and molecule in addition to gravity the other physical forces and chemical forces of this atom and molecule and their bonds arise; **document F1d**.

-) Time from C is absolute and relative from any other place:

Time and space, mass, matter and energy are only absolutely in relation to one another if the reflection takes place from the center C of the universe. From all other locations the observed quantities are relative! From C are always infinitely rapidly expanding *spherical time fronts* leaving the universe-sphere-shell always 100%. Therefore always all places in the spherical universe-sphere-shell have exactly the same universe clock time. Differences in the universe clock time are fundamentally impossible!

4.8 REFERENCE POINT IS NOT FREE TO CHOOSE, BUT IS EXACTLY FIXED IN C:

-) Super cold Little Bang results in a fixed reference point:

The universe always starts with a Little Bang and always from the same point C and same time $t = 0$. The universe / universe-sphere-shell therefore has only one fixed center C. The last Little Bang took place about 40 - 45 billion years ago. Each universe starts and ends in the same fixed point and absolute zero point of time and space.

In all theoretical considerations the reference point is fixed in C, which is still stuck exactly. Theoretical considerations must be made exclusively from C. All other location in the universe are not allowed!

When deriving the theory of relativity, **Einstein** wrongly taken the liberty to choose both its own frame of reference as this plot also move again. He has previously not realized that his theoretical considerations may be made only from the *center C* of the universe that this plot may never be moved! Today scientists realize the restriction to C either. By fixation of the observation point C is the derivation of the theory of relativity completely awry.

-) The time of observation is also established exactly:

At the Little Bang / Big Bang started the universe not only on all sides from one fixed central center C but also started the universe clock time at $t = 0$ seconds. That universe clock time spreading ever since with infinite speed from C and settled there with linear speed / progress. All places in the universe always have exactly the same universe clock time.

In theoretical reflections on events in the universe you do not have the freedom to choose:

- a) your own zero point of space neither
- b) your own zero point of time for your observations.

As a starting time applies only to the moment when occurred the Big / Little Bang. In all theoretical considerations it is bonded with both hands and feet at the instead of C as at the moment of the Big / Little Bang.

*** 5) SUMMARY ERRORS IN THE RELATIVITY THEORY PRINCIPLES.**

1) **Einstein** and modern science lacks a clear distinction between mass and matter.

In this document, the author stated where the dividing line lies between mass and matter. Not handling the line between mass and matter leads to major problems and misunderstandings. It leads to wrong conclusions. In the universe there is no 100% pure energy. Always (kinetic) energy is standard linked to mass and matter.

This means that mass and energy are not equivalent to each other! **Einstein's** formula $E = mc^2$ does not apply to $m = \text{mass}$ and only apply for annihilation. $E = mc^2$ is basically nonsensical for $m = \text{mass}$.

2) **Einstein** and **Lorentz** stretched **Maxwell's** formulas unduly for $m = \text{matter}$ of electrons to $m = \text{mass}$ of the electrons. However these formulas are only valid for $m = \text{matter}$ (motion of all electrons) and are not specific to the *mass* of these electrons! That mistake has already occurred in the formulas of **Maxwell** himself. This error has become first really tangle in the **Lorentz** transformations, the theory of relativity itself and later in the Big Bang theory!

3) Both the gradual conversion of mass into energy as the way back is completely missing in the theory of relativity and the subsequent Big Bang one. That is why this process cannot take place in reality, because the basic structure of the higgs is absolutely indestructible (**F1a 2014**).

4) Gravity is not directly linked to mass but only indirectly through the 'shell' electrons of the atom in interaction with velocity of the atom in the universe relative to the center C of the universe. The three dimensional sphere-shell shape of the universe is curved by itself. Gravity has no direct influence on the degree of neither curvature of space nor the progress of the (universe clock) time.

5) Time and space are no parameters used in isolation. Both are an integral part of the 12 basic parameters of the universe. Time is only generated in C and spreads from there, as massless phenomenon, universal and infinite speed through the universe. All items in the universe always have exactly the same universe clock time! In the universe are time differences in principle impossible. (Different times in two exactly the same atomic clocks are due to differentials in speed of these clocks in the universe!) The zero point of time ($t = 0.000$ s) starts at the Little Bang and the exact fixed at C. At the Little Bang the outer radius of the universe-sphere-shell is minimal.

6) No other point in the universe than C and no other time than the Little Bang can be used as a zero point of space and a starting time. This frame of reference is fixed at C and should not be moved. The space of the universe is, by definition, spherical of composition and structure. The universe contains an equal amount of protons and electrons.

* 6) DISCUSSION:

-) Errors in assumptions:

In formulating and adopting the principles of the theory of relativity much went wrong and **Einstein** was ugly misled and with him he misled us. This results in a structurally incorrect theory and incorrect interpretation of fundamental concepts such as the origin of: 1) time and space, 2) gravity, 3) mass and matter, and 4) the infinite high speed of time and gravity in the universe. The current conventional notions of space time and gravity must be fundamentally revised according to the author. The author made new postulates as a start for this purpose.

-) Infinite great speed and the speed of light:

Time and gravity have no mass and kinetic energy. Both move thereby by with infinite speed and beyond the universe-sphere-shell. For all particles with mass and kinetic energy as higgs, frankinos/neutrino's, photons, protons, electrons and atoms applies the speed of light as the maximum speed in the universe. By deflecting all radiation (except gravity and time) remains 100% within the universe-sphere-shell.

-) Principles determine the outcome:

Until 2016 it is seriously underestimated by theoretical considerations that:

- a) the location of the plot is fixed at the center C of the universe and
- b) the zero point of time is fixed at the time of the Little Bang.

These benchmarks of space and time are fixed exactly. During his theory, **Einstein** did not take into account them which led to incorrect results. After a century the theory of relativity does not fulfill longer the foundation of science with all its consequences.

-) Obstacle:

Anno 2016 **Einstein's** theories constitute increasing obstacles in the further development of the sciences. This applies especially for based thereon subatomic particle physics, astrophysics and cosmology, quantum physics and the structure of mass and matter in accordance with the *current Standard Model*.

-) Enough errors to reject the theory of relativity and to remove:

The author has traced at least seven errors about the postulations and thus sufficient errors to justify to reject the theory of relativity. Also reasons to leave and to remove this theory as soon as possible including related theories in the foundation of science. That will only happen after the acceptance of the complete theory of the author about mass and matter, the Little Bang and the universe cycle.

-) Drama

Many thousands of articles and dissertations are based on $E = mc^2$ for $m = mass$. These documents should all be reviewed at their starting points. A gigantic task for future generations of students and scholars. In some cases it appears that the investigators assumed $m = matter$ instead of $m = mass$. Then the damage is limited.

Articles and dissertations based indeed on $m = mass$ have much more extensive damage. This is especially the case in investigation with particle accelerators. Since the measured amount of energy is indeed standard 'regressed' to $mass$ and that is not allowed!

-) Simple Elementary Higgs Model:

The current complex Standard Model (<0.01% higgs in the universe) is replaced by the extremely simple Elementary Higgs Model of **Uiterwijk Winkel** (> 99.99% higgs in the universe). See **document F1a 2014**. That model includes only four higgs:

- a) two super symmetric higgs as building blocks for the (anti) proton and
- b) two super symmetric higgs as building blocks for the (anti-) electron.

This system with only four higgs cannot be verified experimentally because collisions of protons in particle accelerators lead to:

- 1) increased / reduced of their kinetic energy (a state of 'too high kinetic energy' or incidentally 'too low kinetic energy'). This means:
- 2) much higher angular speeds of these higgs and this results in
- 3) deformation of these higgs and increasing of their mass, electric charge and magnetic spin!

-) Extremely strong psychological resistance to reject the theory of relativity:

The distancing of the theory of relativity and related Big Bang Theory and Standard Model will not go without a fight. Anno 2016 theories supported universities by almost all professors, staff and graduates and numerous teachers in higher education. Many of them have been scientifically recognized for their work and research. Many of them are promoted effectively on research that is based on the work and principles of **Einstein**.

The current generation of scientists and professors will collectively, actively or passively, resist against the rejection of the theory of relativity, the Big Bang theory and the current Standard Model. One will oppose collectively to the limit, against the acceptance of the views of the author. Probably the author will be cursed, burked and banned as an outcast of science!

-) Author has elaborated a detailed alternative to the Big Bang:

The Big Bang theory can be replaced by the Little Bang theory and added thereto the universe cycle; **documents G6, G7 and G8** and underlying **documents F1a 2014, F1b, F1c, F1d, F1e and F1f**.

The universe cycle offers detailed and integrated view of all relevant physical, chemical and nuclear physical processes in the universe. The universe cycle is a great help to show precisely how the current universe (**phase 23**) came to exist from the 22 preceding phases and it can show the 6 phases to come. The Big Bang theory is not able to do this.

-) Universe still extends back almost exactly the same zero energy cycle:

The universe repeats its cycle of 29 phases completely energy neutral. This allows the cycle to repeat itself endlessly. These 29 phases are all based on the *min/max1 principle*. (Compare this with partial chemical reactions.)

Because of all this the universe cycle can be modeled completely mathematically and can be quantified step by step in detail.

Such a model of the universe cycle and its 29 phases results in quantitative detailed images such as movies. Exactly is to follow what is still happening, why and with what (nuclear) physical changes and chemical ones happen.

That mathematical modeling is not possible if one adheres to the theory of relativity and derived ones.

-) Copyrights:

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*** 7) CONCLUSIONS:**

- 1) From **document G5** www.uitewijkwinkel.eu it is shown that at least seven errors in the starting points of the theory of relativity of **Einstein** are interwoven. Those errors are so weighty that must be rejected both the general relativity and special one.
- 2) The Big Bang theory and the current Standard Model both based on relativity must also be rejected! Thus an important part of the current foundations of physics and astrophysics has to be changed for something better
- 3) The **Maxwell's** formulas are only valid for $m = \text{matter}$ of electrons. **Lorentz** and **Einstein** have the scope of **Maxwell's** formulas unduly stretched and made applicable for $m = \text{the mass of electrons}$. This is due to the (then) missing definition of the physical concepts of *mass* and *matter*.
- 4) The most elementary higgs itself and their *mass* are indestructible. Unlike **Einstein's** $E = mc^2$ suggests the mass of higgs cannot turn into photons nor into pure energy. Mass is not equivalent to energy. Furthermore, **Einstein** bequeathed how the transformation of mass \leftrightarrow energy *step by step* occurs.
- 5) The formula $E = mc^2$ is not sustainable for $m = \text{mass}$.
 $E = mc^2$ is partly sustainable for $m = \text{matter}$.
The author contained **Einstein's** equation $E = mc^2$ entirely to the phenomenon of annihilation with m is *matter* and *antimatter*.
During annihilation *mass* is not converted into energy but
 - a) only photons (majoranas) come free and also
 - b) $E = mc^2$ as rotation energy.
- 6) **Einstein** did not recognize that:
 - a) the zero points of time and space are defined and fixed exactly,
 - b) time and gravity move with infinite speed while all other forms of radiation, because of their kinetic energy, mass and matter are held up to the speed of light,
 - c) always each point in the universe has exactly the same universe clock time.
- 7) The space of the universe has been curved three dimensionally and the curvature is independent of gravity. Due to false visions **Einstein** came to incorrect relationships and conclusions about
 - a) mass and gravity,
 - b) time and space.
- 8) The rejection of the earlier mentioned theories has profound implications for particle physics and astrophysics. Numerous accepted and already published works, dissertations and reports scientific research in subatomic particle research and in astrophysics should be revised and brought up for discussion again. A doomsday scenario for Science and the scientists involved.

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*) The author has elaborated alternatives on the website www.uitewijkwinkel.eu for:

- 1) gravity (**E3 and E3-1**),
- 2) the Standard Model (**F1a 2014**),
- 3) the structure of frankinos (neutrinos) and photons (**F1b**)
- 4) the transition of photons \leftrightarrow proton / electron (**F1c**),
- 5) the building elements of the periodic system (**F1d**),
- 6) the atoms in a black hole state (**F1e**) and
- 7) the min/max1 principle (**F1f**).