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MODIFIED THERY OF RELATIVITY (MTR)

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1. Abstract

For decades, two aspects of nature have been overlooked.
One is an Anisotropic Dark Flow Acceleration (DFA). The other is Relativistic Resistance to Motion (RR).
The consequences of their inclusion will significantly expand our current world view. Initially, this means that a large number of kinematic mysteries will be solved. But the consequences are far more far-reaching.

MTR	Modified Theory of Relativity
DFA	Dark Flow Acceleration
EDFA	Effective Dark Flow Acceleration
DFD	Dark Flow Direction
RRDFRT	Release of Relativistic Dark Flow Related Tension
SRR	Sideward Relativistic Resistance

CF	Centripetal Force
SR	Special Theory of Relativity
GR	General Theory of Relativity
RR	Relativistic Resistance Against Motion
DFHP	Dark Flow Horizontal Plane
RSRR	Release of Sideward Relativistic Resistance

Keywords: *Theory of Relativity, - Dark matter, - Dark Matter, - Dark Flow*
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2. Introduction

The Special Theory of Relativity (SR) does not rest on any solid foundation of cause and effect, but the theory is rather built on superficial reasoning that describes different perceptions of reality relative to each other.
SR does not really contribute to gaining a deep insight into understanding nature or the Lorentz transformation (which is the mathematical basis for this part of special relativity theory) including, in particular, which deeper process is responsible for changing the course of time/the clock.
The theory of General Relativity (GR) also fundamentally lacks a deeper causal understanding suitable to substantiate which process is responsible for changing the course of time as well as which process is responsible for the deformation of space around an astronomical object. The problem with the prevailing theory of relativity is often an overly superficial insight which, on the one hand, has indeed often led to correct factual predictions and results, but on the other hand, the theory lacks depth and coherence and therefore often leads to fatal illogical misinterpretations as well as the need to ignore even simple thought experiments. Not least, in addition to this, the prevailing theory is unsuitable in terms of being able to solve the great, unsolved cosmic challenges such as: Dark Matter [1], Dark Energy [2] and Dark Flow [3].

MTR solves these challenges by specifically demonstrating what went wrong more than 100 years ago.
MTR takes its point of departure from the theory of relativity which claims that space is deformable and really only questions what the consequences would be if this deformable property is in fact elastic.
Thereby, a series of consequences almost automatically arise, which lead to a somewhat different nuanced world view than the one we know from the previously ruling theory.
When the nature of space is elastic, the strong nuclear force (matter) must absorb the elastic substance of space in a process responsible for creating matter. This process stretches the elastic space towards matter, thus the process which the Lorentz transformation basically reveals. This simple basic characteristic thus becomes a main thread in MTR and leads to a long series of consequences which seem to have fallen neatly into place in a new and far more coherent worldview.

3. The Lorentz Transformation is a mathematical expression of more than just the stretching of time in that the transformation basically expresses the stretching of space around and towards mass/energy. The nature of

space therefore retains a deformable nature in MTR, but now with a new, elastic property which will play a far more far-reaching role than the old, rather superficial and incoherent consideration of the deformation of space.
The first fairly inevitable consequence is that the cause of gravity becomes self-explanatory and logical in that matter and space are connected (elastically). Just as simple, the mystery of Dark Energy almost solves itself in that this simply becomes the opposite of gravity, the so-called Dark Energy, and therefore testifies to a prehistoric universe (gravity) in disintegration (Big Crunch/Big Bang).

4. The consequence of simple thought experiments means that not only time, but also the physical ruler must be a proportional, relativistic variable. Let's say that Bob lives on the top floor of a skyscraper and Alice on the bottom floor.
They both agree on the distance *(d)* that the elevator in the building travels when it moves (up and down).
But Alice will measure less time *(t)* relative to Bob.
When Bob and Alice calculate *d/t = v* (where *v* is velocity), they will naturally find that they do not agree about *v*.
But since it is utopian to imagine the elevator moving at two different speeds (at the same time), the only possibility is that *Bob's and Alice's perceptions of 1 meter are different*.
It is therefore a logical, mathematical consequence that the rulers (physical as well as non-physical) must be a relativistic variable, whereby modification of the theory of relativity in that area as well becomes an inevitable, logical/mathematical requirement.

$m' = \frac{m}{\sqrt{1-\frac{2GM}{rc^2}}}$	$m' = \frac{m}{\sqrt{1-\frac{v^2}{c^2}}}$
GR	SR

5. Energy and Process
The total (local) energy level is responsible for the local stretch of space. Energy is the primary factor in any relativistic transformation. Gravitational fields as well as the (true) relativistic kinetic energy (motion relative to absolute rest) contribute to the one and same process which is responsible for relativistic transformation.
The total stretch of space at a given place thus becomes the driving force for a proportional transformation of both time and space as well as the physical ruler. This means that the reality we see changes proportionally as a result of the change in the overall impact on/extent of the local space. The *theory of relativity* could therefore be renamed the *Theory of Reality*.

Transformation in GR is mathematically based on a combination of escape velocity and the Lorentz transformation.
In SR, the mathematical basis is exclusively the Lorentz transformation.
MTR, like the prevailing theory of relativity, is based on the Lorentz transformation, whereby both theories largely have exactly the same results. But there are significant differences which will lead to the realisation that the old theory of relativity must be modified.

MTR does away with the claim in SR that there allegedly is no absolute frame of reference.
The new claim is that relativistic transformation only occurs as a consequence of motion relative to absolute rest.
Against this background, the concept of "absolute movement" is introduced. The consequence is that the total kinetic energy possessed by an object is dependent on the direction of movement, thus on whether the total energy either increases or decreases, whereby kinematic conditional relativistic transformations obviously can also have opposite signs.
In practice, this means that a stretching of time will only occur with movement that leads to an increase in absolute speed (slower time measurement) whereas the opposite occurs when movement occurs in a direction that reduces absolute speed.

6. Relativistic Resistance against Motion (RR).
MTR also differs by claiming that movement in space is limited by RR. (Relativistic Resistance to Motion).
An object's (real) increase in kinetic energy also increases the relativistic mass and thus also proportionally the elastic tension (tension) in the surrounding space where a fast-moving object is moving at a given time. Because the elastic property of space and a fast-moving object (substance) are linked, an increase in the elastic tension

of space will oppose movement in any direction resulting in real speed increase (relative to absolute rest). It is this process that MTR has named Relativistic Resistance to Motion (RR)

$$RR = 1m/s - \frac{1m/s}{\sqrt{1 - v^2/c^2}}$$

Snapshot of deceleration factor.

$$RR = 1m/s - \frac{1m/s}{\sqrt{1 - \frac{(v^2 - RR)}{c^2}}}$$

The RR found in the first equation is subtracted from the speed v,
and the same equation can be repeated in each subsequent second
as this is a non-linear deceleration

For the sake of simplicity, the RR value can be used as an approximately correct acceleration or deceleration factor at relatively low speeds, but not at speeds very close to c. A more precise way to express this mathematically is the following equation:

Resistance Against Motion (Newton).		
$F = M * \gamma$		
F = Force (Newton)	*M = Mass*	γ *= Gamma*

7. Dark Flow (DF) – an excellent test reference frame.

There are many indications that Dark Flow is a real phenomenon.
In the following, a wide range of consequences will be analysed.
Maintaining a certain Dark Flow speed requires a constant force with the same strength as RR to counteract RR's influence. Otherwise, an object will decelerate, and Dark Flow would not be able to take place.
The first consequence therefore is as follows: Dark Flow must be linked to a Dark-Flow-Acceleration (DFA).
The second consequence is as follows: The strength ratio between RR and DFA is equal as soon as a certain speed is reached.

8. Dark Flow and the interaction between RR and DFA.

Let's assume that DF is a movement of 1000 km/s.

- RR linked to DF can be calculated based on equations opposite to 5.5e-6m/s^2
- Because RR will grow in step with speed, RR and DFA will equalise when, in this example, 1000 km/s is reached.
- DF can thus take place unhindered at constant speed (without deceleration and without escalation to extreme speed) because the 2 basic forces keep each other in check.

But this balance can change as soon as the Centripetal Force (CF) from an astronomical object is implicated.
Dark Flow takes place against a southern direction whereby it is also interesting to research the consequences "under" the southern atmosphere of astronomical objects.

9. Release of Relativistic Dark Flow Related Tension… (RRDFRT)

According to Newton's second law, forces can be equalised. CF can thus equalise DFA (because both are gravitational forces).
When south-facing CF counteracts DFA, valid for a certain test object (which is under an astronomical object), this leads to the object losing its counter factor DFA, hence the balance between RR and DFA will cease. A directional movement towards the Dark Flow direction can no longer take place as RR will now oppose such.
RR without the DFA counter-factor will therefore mean a beginning acceleration in the direction opposite to Dark Flow.
RR therefore transforms from being a resistance factor to being an opposite acceleration, whereby reference is made/changed to (exposed) RRDFRT.

RRDFRT – is actually RR in 'resolution' (and like RR), a unique force which cannot be compared to gravitational force and which also does not follow the same resultant force laws as gravitational forces normally do.

Because CF often has significant strength, this can offset a test object's influence of DFA from a fairly "steep" angle and in a fairly large area (under an astronomical object) and thus expose RRDFRT.
Although this may sound fanciful, this phenomenon has already been observed by virtue of the unexplained accelerations that became known in the phenomena:

- Flyby Anomalies.
- Oumuamua kinematic anomaly.
- Allais Effect.
- Significant kinematic anomaly measured by gravity measurement (Greenland Scoresbysund in 2017.)

In all these phenomena, exposed RRDFRT is the driving force.
The latter two phenomena show simple methods of testing the claim scientifically which, of course, can and must be used.
When CF balances out DFA, CF will always lose strength corresponding to the strength that the newly exposed RRDFRT factor possesses. It may therefore sometimes be a little unclear whether RRDFRT is at play or whether it is simply CF as we know it.
This will be further covered below.

10. Forces Affecting Our Solar System.

Our Solar System has anomalies that have not yet been discovered.

DFHP

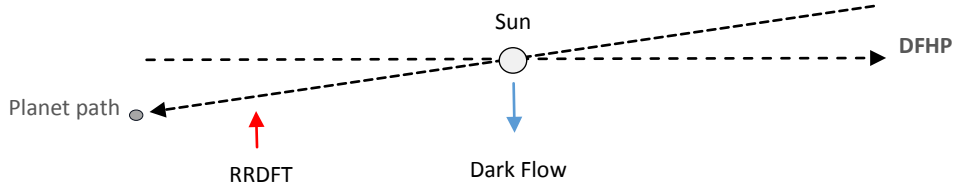

Figure 1.

Figure. 1 illustrates the meaning of Dark Flow Horizontal Plane (DFHP)

RF, DFA, RRDFRT

As soon as an object is situated below the DFHP, RRDFT is exposed.

P1, P2 and P3 = Periods of the orbit
CF = Centrifugal Force
DFA = Dark Flow Acceleration
RRDFRT = Release of Dark Flow Related Tension

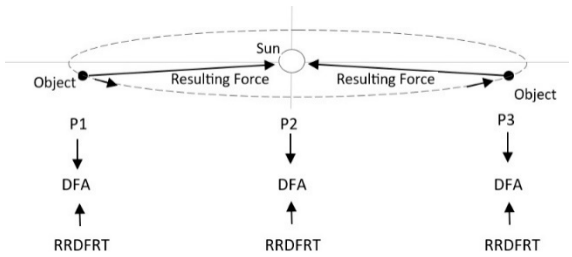

Figure 2.

An object situated (more or less) under the Dark Flow Horizontal Plane (DFHP) (figure 2) will be affected by 3 forces.
The centripetal force (CF) and DFA are both affecting any objects situated more or less right under the Sun.
According to Newtons 2nd law, these 2 forces (CF and DFA) must merge into a resulting force.
As soon as DFA is cancelled out, RRDRFT is exposed to the exact same extent as the counteracted DFA.
In regular orbits (more or less horizontal relative to DFHP), it can be difficult (impossible) to distinguish whether changes of CF, DFA, RRDFRT components have taken place.
Whenever an object moves under the sun (or under other astronomical objects), the RR's influence will convert to RRDFRT influence. Passive force influence is thus converted into an active force influence.
This happens at the expense of CF, which (under astronomic objects) counteracts DFA whereby it is CF that loses the active influence that RRDFRT gains and to the same degree.

The result is that even though there is constant conversion between the forces CF, DFA, RR and RRDFRT, the orbit will behave as if nothing had happened. The only measurable thing that happens is that an object on its way below DFHP loses kinetic energy and regains this energy on its way up above the DFHP. It is this phenomenon that is responsible for Mercury's Perihelion anomaly, flyby anomalies and Oumuamua's sudden acceleration.

RF, DFA, RRDFRT

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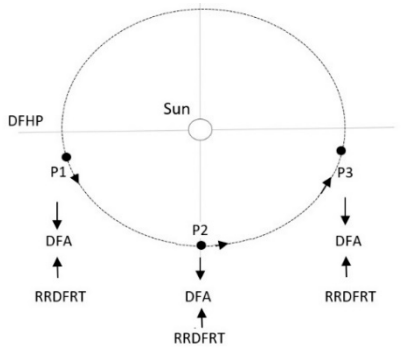


Figure 3.

The more a planet's orbital inclination is aligned with the Dark Flow axis, the more RRDRFT will affect the kinetic energy of the orbit (figure 3). The impact is as follows:

- period-1 (P1): = reduction of kinetic orbit energy.
- period-2 (P2): = no deviation relative to what is expected.
- period-3 (P3): = the orbit will recover energy lost in period-2

11. The Cause of the Allais Effect – Solved

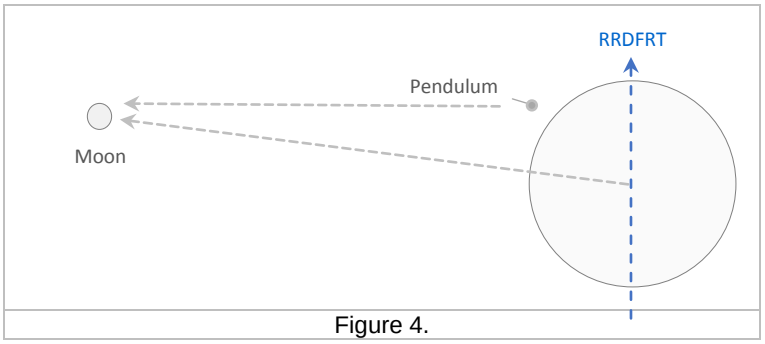


Figure 4.

The cause of the Allais Effect [4] is also completely identical with the same cause-and-effect relationship as shown opposite:
The Earth periodically lies 'under' an astronomical object ('under' the Moon).
This creates the possibility that a test object (on Earth) can be brought in a different acceleration reference frame than Earth. The prerequisite is that the height-level difference between the position of the moon and the position of a test object – relative to DFHP – is different (see figure. 1).

The illustration (figure 4) shows that the centre of the Earth is "under" the Moon whereas that of the test body (the pendulum) is at the same level as the Moon. The Moon therefore only has an upward pull in Earth, which frees Earth from DFA's influence and, as a result, exposes Earth to the upward acceleration caused by the RRDFRT.
The test body (the ball of the pendulum) is at the same level as the Moon and is therefore not exposed by RRDFRT in the example. This means that it is Earth that "pulls" the test body with it (towards the north). This creates a measurable situation and this is precisely the thing that is interesting.

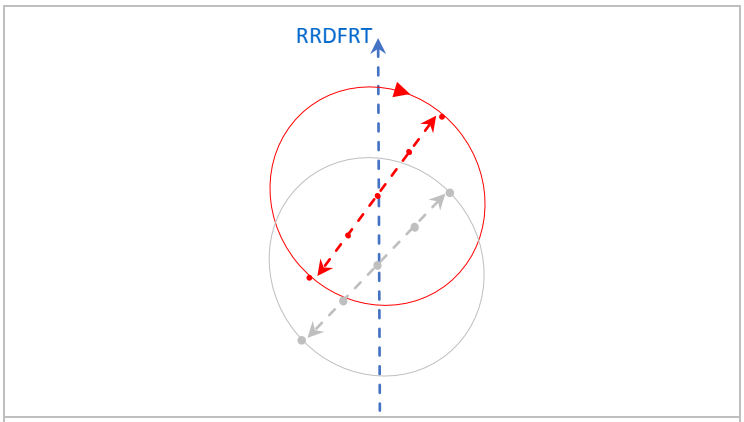


Figure 5.

The 2 arrows in figure 5 indicated the swing direction of a Foucault pendulum.
RRDFRT (blue arrow) illustrates a pendulum that is pulled northwards as it follows Earth's acceleration towards this direction.
Earth's acceleration secondarily/indirectly forces the test body of the pendulum to do the same, which then explains the unexpected rotation of the pendulum (indicated by circle with red arrow) which is the hallmark of the Allais Effect.

12. The Allais effect & Gravity Measurement

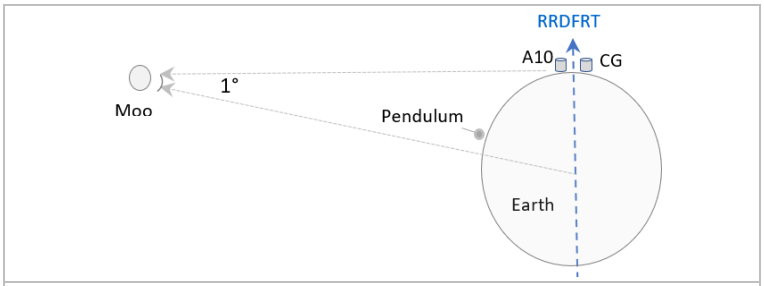


Figure 6.

In this illustration (figure 6), the centre of Earth is 1° "below" the Moon.
This is sufficient to offset part of the DFA, and thus Earth is exposed to the RRDFRT.
Earth accelerates northward with a force of about 50 µgal.

Both gravimeters (CG5 and A10) are at the same altitude as the Moon (figure. 6), whereby the test body of the gravimeters is not directly affected by the RRDFRT.
The test bodies (inside the gravimeters) are therefore in different acceleration reference frames relative to Earth which is a prerequisite for the RRDFRT to be measured. Experience has shown that a spring-based gravimeter (CG5) is less vertically restrictive than an absolute gravimeter (A10) and is therefore preferable as long as the DFA/RRDFRT direction is not completely known/determined.
Once you can fine-tune the DFA/RRDFRT direction over time, any gravimeter will be able to measure RRDFRT.
Based on the Dark Flow speed (which is roughly known), the full RRDFRT potential can be calculated/estimated to be up to 500 µgal, but only 50 µgal can be detected by the methods above (because Earth is as small as it is).

Figure 7 shows how the Moon's centripetal force (red arrow) changes directions in the hours before (or after) a solar (or lunar) eclipse.

It is the Moon's vertical attraction of Earth that neutralises a part (50µgal) of DFA's influence on Earth and thus correspondingly exposes RRDFRT. Exposed RRDFRT causes Earth to accelerate vertically which, under the right circumstances, can be measured with a relative gravimeter.

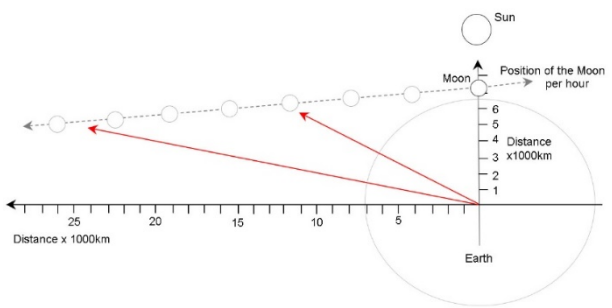


Figure 7.

The Resulting Upwards Acceleration of **Earth** due to gravity of the **Sun + Moon**

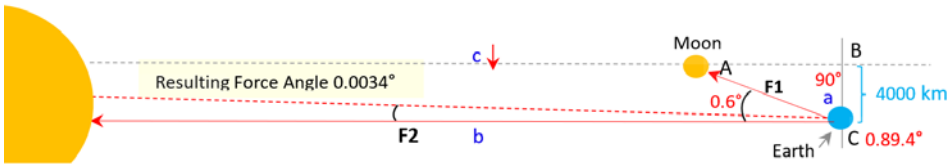


Figure 8.

Force 1 – (acceleration) (Moon) = 0.000034 m/s^2
Force 2 – (acceleration) (Sun) = 0.0059 m/s^2

a (km)	**C**	Resulting Force (RF)	Upwards Acceleration		m/s^2	µGal
3.000	0.45°	0.0026°	sin(0.0026)0.006	=	0.00000027	27
4.000	0.60°	0.0034°	sin(0.0034)0.006	=	0.00000035	35
5.000	0.75°	0.0043°	sin(0.0043)0.006	=	0.00000045	45
6.000	0.90°	0.0051°	sin(0.0051)0.006	=	0.00000053	53
7.000	1.06°	0.0061°	sin(0.0061)0.006	=	0.00000063	63

Seen from an isolated perspective limited to the point of view of prevailing knowledge, no (measurable) vertical acceleration should be expected because the resulting force on the CG5's test body (from the Sun and Moon) should only mean that the direction of force (in this example) will point slightly above the centre of the Sun (figure 8). When a vertical acceleration can still be measured, it is completely unexpected according to prevailing understanding.

13. Significant gravity anomaly measured in Scoresbysund on 7 to 8 August 2017

During the lunar eclipse on 7 August 2017 (UTC 18.20), acceleration due to gravity measurements were performed in Scoresbysund (Greenland) with a relative CG5 gravimeter (red curve) and an absolute gravimeter A10 (blue curve).

A marked anomaly appeared in the relative (red) measurement data.

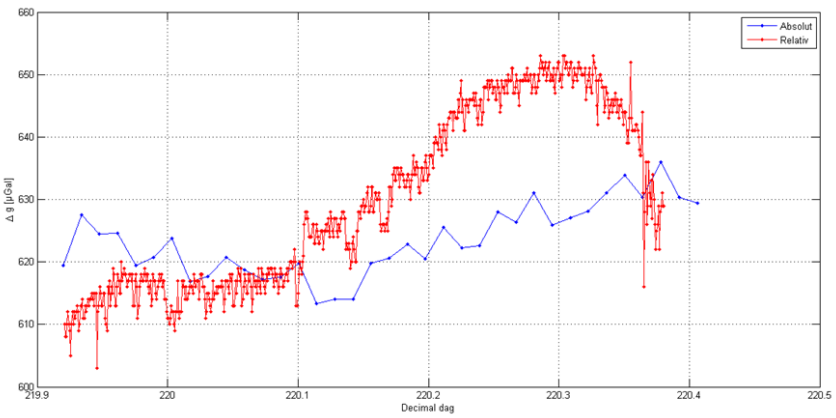


Figure 9. (Sun Moon tidal corrected).

The measurement (figure 9) only started 3 hours after the lunar eclipse had reached its maximum (7 August at 21:50).

The graph first shows a gradual increase (of a total of 40 µgal) in the first 8 hours (until UTC 05:00). Only 11 hours after the lunar eclipse maximum, the curve began to break. The position of the moon at the maximum of the lunar eclipse was Gamma 0.87, which corresponds to approximately 0.8° north relative to the ecliptic plane. When the sine curve began to break, the moon's position was 0.2° north of the ecliptic plane.

This shows that the Dark Flow Acceleration Axis must be expected to deviate relative to a perpendicular vertical axis that cuts through the ecliptic plane (see also figure 1: Dark Flow Horizontal Planet, DFHP).

The late start of the anomaly is probably because the CG5 test body was overexposed to RRDFT influence, whereby Earth's upward acceleration only became measurable partly after the Moon had lost altitude (to 0.2°) and partly after Earth's rotation in the early morning of August 8 brought the relative CG5 to a progressively lower (southerly) position.

The blue curve (the absolute gravimeter) is not seen to be able to measure the anomaly, which is probably because an A10 gravimeter is far more vertically restrictive than a CG5.
However, the Dark Flow Acceleration Direction (DFAD) has not yet been precisely determined. It will require quite a few measurements to get there. Therefore, it is not possible for PT to fully predict exactly which measurement results are to be expected.

14. Solar Eclipse 24 October 1995 – Measurement Dhoraji India

During a random gravity measurement on 24 October 1995 in Dhoraji (India) [5] in connection with oil exploration, an anomaly of between 10 and 12 µgal was observed early in the morning between 6:30 and 7:30.

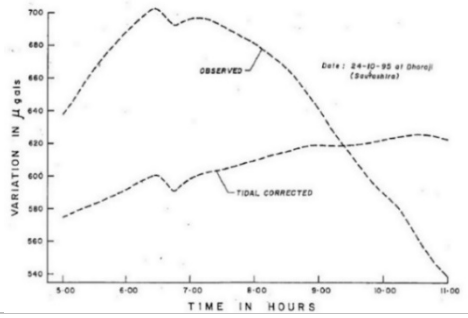


Figure 10.

Figure 11.

At that time, the Moon was at the height of the ecliptic plane and the measuring position about 10° above (figure 10).
The explanation may be a change in measuring directions which, at the time when the anomaly occurred, had just changed from having been directed towards a slightly northerly direction (on the night side) to shortly afterwards (via Earth's rotation (figure 11) being directed towards a weak southerly direction (on the day side).

Many more gravity measurements are required in order to learn more about the exact direction for DFA axis, and also which time of the year RRDFRT is over-exposed. The Sun's inclination relative to DFHP is also important to fully understand, and thereby when Earth is more or less 'under' the Sun.

15. The Mysterious Acceleration of Oumuamuas – Solved.

In 2017, the comet Oumuamua [6] was discovered.
The comet caused astonishment because it suddenly accelerated on its way out of the solar system.
The acceleration anomaly is also within the framework of MTR that can be easily calculated based on the simple equations shown opposite.

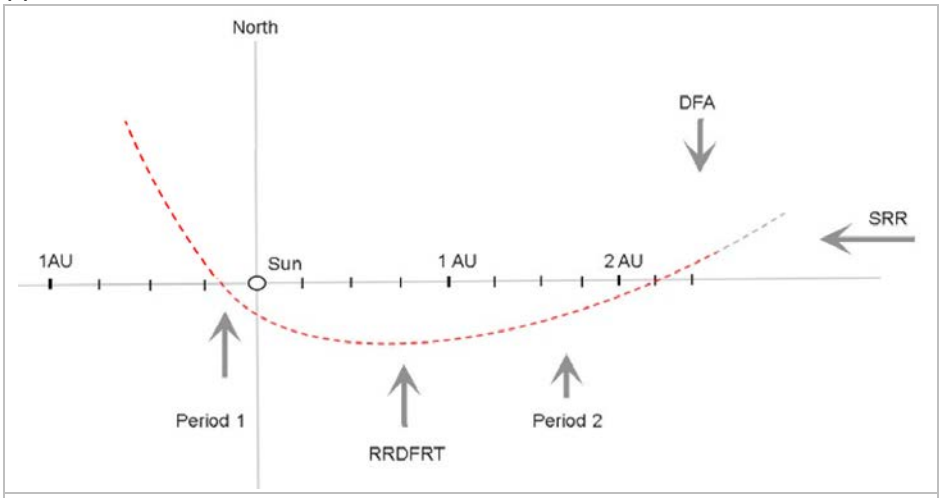


Figure 12.

Period 1: - Deceleration
Period 2: Acceleration and course change as a result of Oumuamua being predisposed to RRDFRT under the Sun.

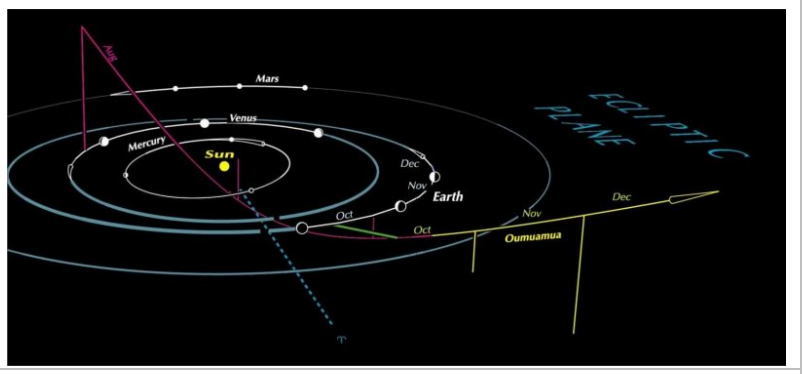


Figure 13.

On October 17, Oumuamua again moved above the ecliptic plane (Figure 12 & figure 13).
But the acceleration anomaly only began to die out at the end of October 2017 and then gradually finally disappear completely five weeks later. The continued exposure of the RRDFT (a total of seven weeks) after Oumuamua moved above the ecliptic plane (northward) means that Earth is 'under' the Sun in the autumn (seen from a Dark Flow perspective) and that the DFHP orbital inclination relative to the ecliptic plane must be about 10°.

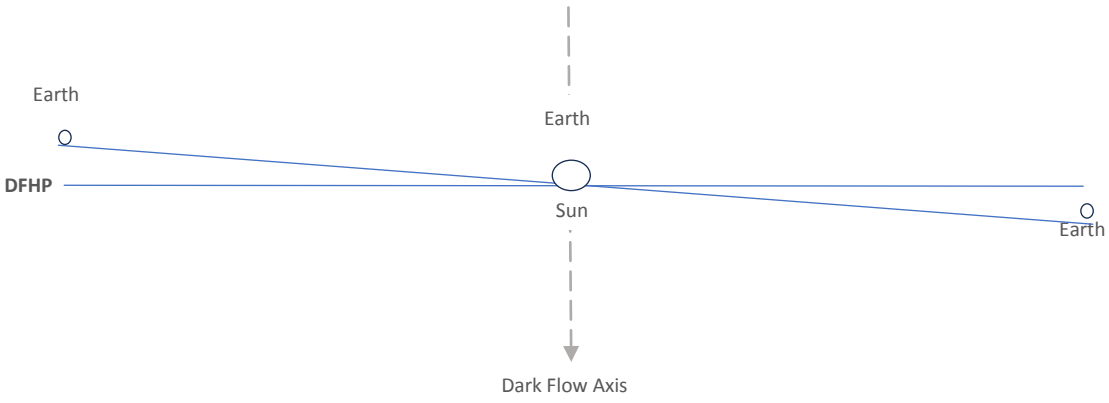


Figure 14. *DFHP = Dark Flow Horizontal level.*

The illustration in Figure 14 shows that Earth's lowest point 'under' the Sun's equator occurs in September. It is not certain that this shows perfect coincidence with DFHP.

One can then object that when Earth is also under the Sun during this part of the year (just like Oumuamua), then Earth must also be exposed to RRDFT influence and therefore also accelerate northwards. Oddly enough, Earth does just that (see figure. 1). We simply take Earth's (and other planets') orbital inclination for granted without raising questions as they hide the very same phenomenon as discovered by the flyby anomalies.

Oumuamua belongs to our solar system. On its way out of the solar system (to the north), it will first be accelerated by the RRDFT, then slowed down by the EDFA (see below) and finally return from roughly the same direction it came. This obviously also applies to Pioneer probes 10 and 11; they will also turn around. Both RR and DFA are responsible obstacles for escape attempts. It works just like throwing a stone into the air – the stone must come back.

16. The Balance Between DFA and RR – The Cause of Dark Matter Solved.

The influence of DFA and RR effecting objects in the Dark Flow will always try to equalise each other. This happens as soon as certain Dark Flow speed has been achieved. The force of DFA is responsible for the speed Dark Flow can reach. RR will increase proportionally with speed until RR fully counteracts DFA. But this is not the end of the story.
Stars will periodically try to "escape" DFA when moving (more or less) opposite DFA (north). During such escape periods, the *absolute speed* of the "escaping object" will decrease and will also decrease proportional to this RR.

This means that the before-mentioned balance between RR and DFA will be disturbed, and DFA will again be the dominating factor. Such scenario will be referred to as **EDFA** (Effective Dark Flow Acceleration), which means DFA minus RR.
The consequence is that in the end of the day, everything is under DFA's control. Everything must follow Dark Flow. Any escape will be prevented. Based on the simple equations shown above, it is simple to verify these claims mathematically.

EFDA▼

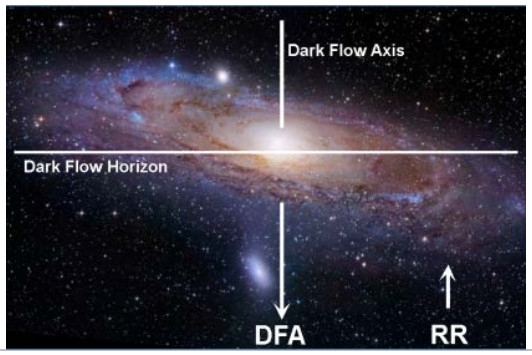


Figure 15. ◄ DFA - RR ▲
Galaxy movement almost perpendicular relative to the DFA axis.

EFDA▲

Figure 16. ▼ DFA RR ▲
Galaxy that moves aligned with Dark Flow

If the orbit inclination of galaxies deviates just a little from the Dark Flow Horizon Level (figure 15 & figure 16), EDFA will be exposed. EDFA will cause objects moving north to decelerate until they "turn around" and again fully follow Dark Flow at the maximum Dark Flow speed.
Our unawareness of RR and DFA explains why we cannot account for the large kinetic energy added to galactic and cluster systems (so-called Dark Matter).
DFA and RR are responsible for objects being trapped in their orbits and reveal where the large kinetic energy unaccounted for comes from. Dark Matter as a *mysterious phenomenon* is therefore no longer necessary.

17. Spooky Alignment of Quasars Across Billions of Light-years – Solved.

New observations with ESO's Very Large Telescope (VLT) in Chile have revealed alignments over the largest structures ever discovered in the Universe [7], (figure. 17).

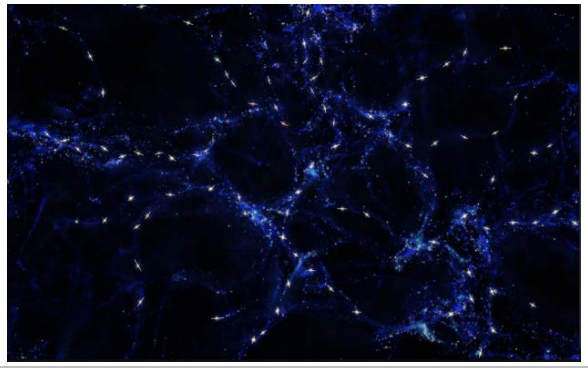


Figure. 17

Researchers estimate that the probability of these alignments simply being the result of chance is less than 1%.
If galaxies moved more or less aligned with the DFA axis (figure. 15), DFA and RR will force more and more mass into the centre of these galaxies, and eventually these galaxies will collapse and become quasars. This explains the formation of quasars and why aligned "spooky" pattern must be expected.

18. The Mysterious so-called Planet-9 signature – Solved.

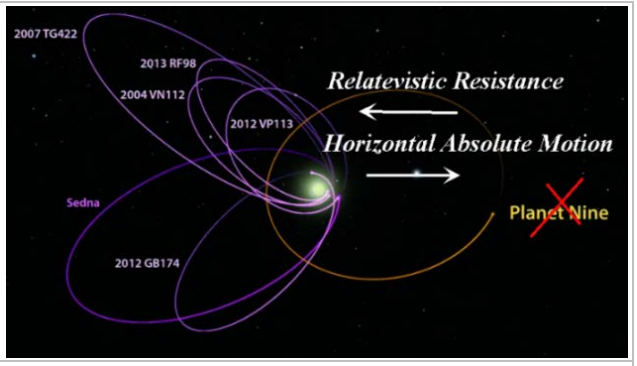


Figure. 18

Also, horizontal movement (relative to the Dark Flow Axis) increases the absolute speed, thus proportionally the RR (figure. 18).
Therefore, it is not strange that even in our solar system, we see what is called the Planet 9 (or planet X) signature, which is simply due to the same principles: SRR (Sideward Relativistic Resistance). Of course, Planet 9 does not exist.

19. Twin Galaxies – what really happens.

SRR = Sidewards Relativistic Resistance

RSRR = Release of Sidewards Relativistic Resistance

Figure 19.

Figure 19 shows a galaxy moving rapidly to the right. Stars following the galactic orbit direction towards the same direction as the moving galaxy (to the right) will decelerate towards the centre of the galaxy whereas stars heading to the left will be accelerated due to RSRR and can therefore escape such a galaxy (if RSRR is strong enough) and form a new galaxy.

20. Strangely coherent coordinated motion of dwarf galaxies – Solved.

Figure 20.

SSR and RSRR are also responsible for dwarf galaxies escaping from a parent galaxy (Figure 20).
But later, when the directions of force are changed, a union with the parent galaxy can take place again.

50 percent of galaxies have this strangely coherent coordinated motion of dwarf galaxies, which is a big problem that contradicts the standard cosmological models. It challenges the understanding of how the universe works including the nature of dark matter." [8]

21. Galaxies and Orbit Inclination

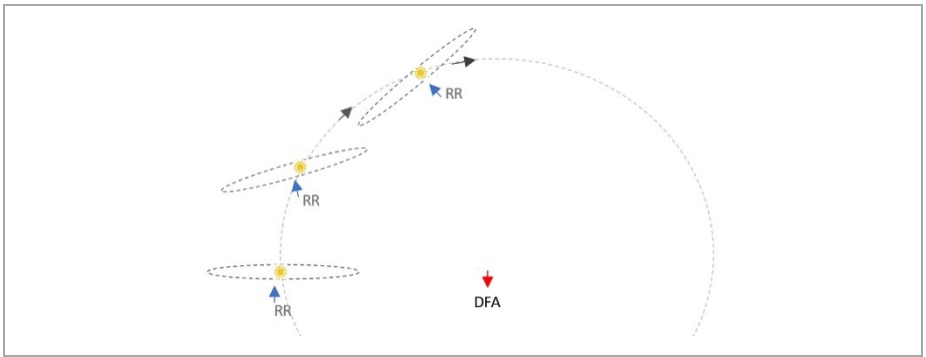


Figure 21.	The illustration shows a solar system changing its inclination

Figure 21 illustrates a solar system moving north in a galaxy where the orbit inclination of the galaxy is aligned with the Dark Flow Axis.
Due to the orbital motion of a solar system, the absolute motion direction is, of course, also changing. Correspondingly, the direction of RR affecting the solar system is therefore also changing. A change in the RR direction will force planet orbits to change their inclination.
It is relevant to divide galaxy motions in four periods: Two periods moving mainly south/north (vertical) and two periods where galaxies are (also) moving sidewards. The purpose of such four periods will be further covered right below.

22. Mysterious Coincidence between Earth's orbit inclination and magnetic pole reversals of Earth – Solved.

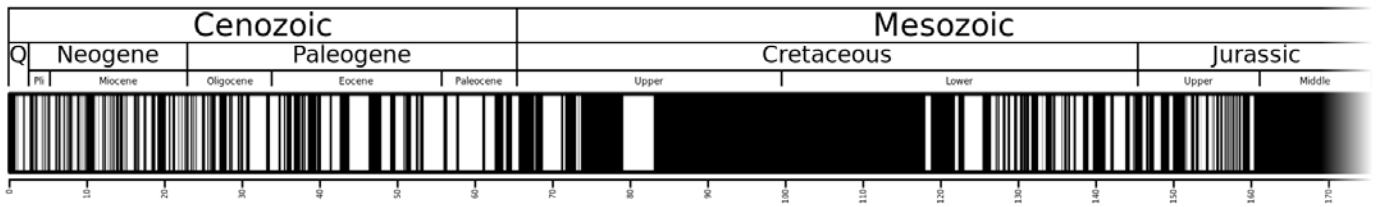


Figure 22. Geomagnetic polarity over the past 169 million years, trailing off into the Jurassic Quiet Zone. Dark areas denote periods of normal polarity, light areas denote reverse polarity. Credit: Public domain

Figure 22 illustrate pole reversals that have occurred while the solar system has completed almost one orbit in the milky way (which is 220 million years). The graph is missing 50 million years. It is possible to imagine that one orbit consists of 4 periods; two periods when Earth's magnetic field polar reversals are stable and two periods where magnetic pole reversals have constantly occurred. In two of the galactic periods, RRS will be highly exposed (see also section 20). These two periods are expected to lead to significant changes in the orbital inclinations of Earth (and other planets). During periods when Earth's galactic movement occurs across the Dark Flow axis, there appears to be a clear destabilizing effect on the frequency of magnetic pole reversals. This new understanding could certainly contribute to better understand mysteries connected with Earth's magnetic field.

23. Simple Consequences

- The elastic property of space is the fundamental substance of the universe.
- Energy (elementary particles) absorbs the elastic substance of space in a process in which matter is formed.
- Absorption of space stretches the elastic substance of space towards mass whereby gravitational fields are formed around matter.
- A gravitational field as well as its strength is an expression of the elementary particles' total consumption/absorption of space.

- The tension of space due to a gravitational field can (locally) exceed the absorption force of elementary particles whereby supernova and Big Bang can occur (because gravity overcomes the strong force).
- Dark Energy is just matter and gravitational field(s) in solution.
- The physical ruler and the passage of time are both proportional relativistic variables.
- Distances are thus also relativistic variables depending on the relative frame of reference in which they are measured.
- The meaning of relativistic distance shortening simply means that units of measurement tend towards infinity because units of measurement are stretched proportionally with the stretch of space in gravitational fields.
- The mathematical consequence of the speed 'c' does not mean that distance ceases to exist, partly because distance shortening does not apply to photons and partly because elementary particles will never be able to reach c.
- In strong gravitational fields, time, measurement units, distances and therefore also the EM Spectrum are stretched.
- Black holes are only black because the EM spectrum is stretched and redshifted. There is nothing else mysterious about them.
- Photons are energy fluctuations in the elastic structure of space. Unlike elementary particles, photons never absorb the elastic substance of space whereby photons are never subject to relativistic transformations under any circumstances.
- Gravitational fields follow astronomical objects in motion. This is why photons embedded in gravitational fields also follow. The interpretation of the Michelson-Morley experiment [9] is therefore misunderstood.
- A magnetic field occurs when particles in fast motion "create a vacuum in the elastic density of space".

24. Predictions

There are several methods to confirm the MTR theory.

It will soon be possible to measure anomalies in the orbit of the ISS after launching the PHARAO program [10].

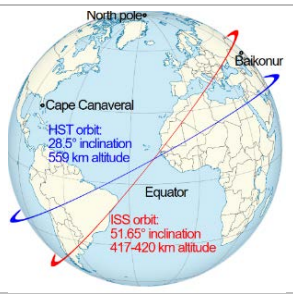
Estimated Predicted anomalies – ISS	
ISS Speed Orbital speed: 7.66 km/s Orbital period 5574 second Anomaly period 12% x 5574 = 668 seconds Time dilation anomaly 1-1/sqrt(1-7660^2/299792458^2) = -3.264e-10 ´per/s **Time dilation anomaly per ISS orbit** = 668 * 3,264e-10 = -2.180e-7 second **Orbit acceleration anomaly** = 5e-6 x 668s = 0.00334 meter per orbit	 **Figure 23.**

Figure 23 shows the orbit of ISS

25. References

1. Dark Energy here
2. Dark Matter here
3. Dark Flow here and here
4. Allais Effect here
5. Mishra, D.C. and Vyaghreswara Rao, M.B.S. (1997) Temporal Variation in Gravity Field during Solar Eclipse on 24 October 1995. Current Science, 72, 782-783.
6. Oumuamua here
7. Spooky Alignment of Quasars Across Billions of Light-years here
8. Mysterious dance of dwarfs may force a cosmic rethink here and here
9. Michelson-Morley experiment here
10. PHARAO here and here