

## On multiple anomalies and inconsistencies regarding the description of light phenomena in contemporary science.

Short and private communication/publication

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1.2

**Keywords:** Michelson and Morley, null-result, Lorentz, Lorentz contraction, anomaly, paradigm, light, ray of light, laser, laser pulse, laser beam, photon, real space, real velocity, relativity of simultaneity, Einstein, thought experiment, light clock, relativity

**Abbreviations:** CS (contemporary science), CPBD (contemporary paradigms believer and defender), RS (real space), RV (real velocity), MWF (My Website Figure ; a reference to a dynamic Figure through an internet web link since it is not possible to directly implement dynamic/animated time stamp type of Figures in a Word or PDF format based static publication/document)

**Figures:** dynamic Figures in this publication are referred to as e.g. MWF24 (see Abbreviations). By clicking the link in Table 1 those dynamic figures will automatically open in your web browser.

Table 1 : MWF dynamic figures and their link

	Link
MWF2	<a href="http://www.absolute-relativity.be/images2/G6_Animation.gif">www.absolute-relativity.be/images2/G6_Animation.gif</a>
MWF23	<a href="http://www.absolute-relativity.be/figures/Figure23_Animation.gif">www.absolute-relativity.be/figures/Figure23_Animation.gif</a>
MWF24	<a href="http://www.absolute-relativity.be/figures/Figure24_Animation.gif">www.absolute-relativity.be/figures/Figure24_Animation.gif</a>
MWF25	<a href="http://www.absolute-relativity.be/figures/Figure25_Animation.gif">www.absolute-relativity.be/figures/Figure25_Animation.gif</a>
MWF26	<a href="http://www.absolute-relativity.be/figures/Figure26_Animation.gif">www.absolute-relativity.be/figures/Figure26_Animation.gif</a>
MWF27	<a href="http://www.absolute-relativity.be/figures/Figure27_Animation.gif">www.absolute-relativity.be/figures/Figure27_Animation.gif</a>

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### 1. Abstract

This publication discusses multiple anomalies and inconsistencies within CS with respect to the CS description of light phenomena in RS. The severe anomalies can be easily demonstrated when introducing photons. Moreover, these massive anomalies can even be proven experimentally through a straightforward laser experiment. The consequences for specific CS paradigms, based on light phenomena, therefore are detrimental. A paradigm is a theory/model that is believed to be true in a specific time era in the history of science.

Multiple contemporary paradigms in physics can thus be proven to be totally flawed and therefore should be abandoned and replaced (by better/new paradigms). The existence of flawed paradigms in science has been moreover the normal case, occurring over and over again as e.g. proven in the research by Thomas Kuhn on the history of science. CPBDs should definitely not be confident that our contemporary time era would be totally free of flawed paradigms. Multiple indications of flawed light paradigms are given in this publication and discussed further in much more detail within the extended publication (1)\*.

*Note* : a downloadable extended publication of over 400 pages is referred to as (1)\* within this text, also containing the contents of this publication but informing in much more detail about the existence and proofs of multiple flawed paradigms within CS as well as about important applications (on our planet and in space) resulting from those views. All information and contents related to (1) and the website was registered in front of a notary and was moreover also the subject of a patent text as well, thus ensuring an author's copy right protection.

(1)\* Etienne Brauns, *A shattered Equivalence Principle in Physics and a future History of multiple Paradigm Big Bangs in "exact" science ?*

The extended (notary registered) publication can be downloaded at <http://www.absolute-relativity.be>

## 2. The contemporary paradigm views by CS with respect to light phenomena

Before discussing the anomalies and inconsistencies within CS regarding light phenomena, a very specific CS paradigm needs to be pointed to first. That paradigm can be very well illustrated through three specific CS presentations on the internet. CPBDs consider these three examples as totally correct CS views.

### 2.1 A first example of a CS presentation of light

A graphical CS representation (model) within the YouTube video "*Time Dilation - Albert Einstein and the Theory of Relativity*" of a laser pulse exchanged between two space ships makes the CS principles very clear : <https://www.youtube.com/watch?v=KHjpBjgIMVk>.

In the video two space ships are assumed to travel perfectly in parallel at a very high velocity in RS. The upper space ship is indicated here as Ship1, the lower space ship as Ship2. A laser pulse is sent by a (perfect vertically mounted) laser, attached to Ship1, in the perfect vertically downward direction, towards Ship2. The midpoint of a mirror, being attached to the upper part of Ship2, is geometrically located perfect vertically below the laser source. In the YouTube video it is claimed by CS and the CPBDs that the laser pulse is always travelling exactly towards the midpoint of the mirror for whatever value of the velocity of the space ships ! CS thus claims that the laser pulse will always hit the mirror precisely in its midpoint for whatever velocity of the space ships. This is also very clear from the statement made by the narrator in the video about how the observer on an asteroid is observing the trajectory in space of the laser pulse. Indeed, CS claims in that respect that the **observer on the asteroid** will observe the laser pulse to specifically follow a slanted (!) trajectory until hitting precisely the midpoint of the mirror mounted on Ship2. Nonetheless the fact that the laser pulse is fired

in the direction perfect vertically downwards from the perfect vertically mounted laser, CS makes such claim.

In order to put things in perspective, an arbitrary example is given here while assuming a vertical distance of 1 light-second between Ship1 and Ship2 in RS. A distance of 1 light-second in RS approximates 300 000 km (comparable to about the distance between our planet and the moon). The laser pulse thus needs one second of travelling time to cross that vertical distance between Ship1 and Ship2. It is also assumed in this arbitrary example that both velocity synchronized space ships travel at a velocity of 10 % of the speed of light, thus at about 30000 km/sec (in the video the authors even mention a space ship velocity "near the speed of light"). In this arbitrary example both space ships thus will travel (during the second which the laser pulse needs to cross the vertical distance of 300 000 km) a horizontal distance of 30000 km. Notwithstanding the fact that the laser is geometrically mounted perfectly vertical on Ship1 to send laser-pulses also in the perfect vertical direction (perfectly perpendicular to Ship1 and Ship2), CS thus claims that the laser pulse does not travel in such perfect vertical trajectory in RS after its launch at the laser but in the slanted trajectory in order to arrive in perfect synchronization at the midpoint of the mirror mounted on Ship2 which has moved 30000 km horizontally to the left during the travelling time interval of 1 second of the laser pulse from Ship1 to Ship2.

A CPBD evidently will unconditionally support this view of a slanted direction towards the midpoint of the mirror from her/his CS based (conditioned type of) training regarding the classic "ray of light" CS model point of view. The CPBD will thus support the CS model of "a ray of light" simplistically represented as a straight line interconnecting the laser and the midpoint of the mirror. From that CS supported simplistic line model a CPBD takes "for granted" that the slanted trajectory of the laser pulse would indeed be observed by the observer on the asteroid, as introduced by CS in the YouTube video. As a result of that "ray of light image", a CPBD then thus considers or in fact rather "expects" that it is correct to claim that the laser pulse (thus photons) will also travel along the slanted trajectory (ray-of-light trajectory) as shown also in MWF25 (the blue slanted line as trajectory). CPBDs thus claim that photons travels along a ray-of-light. That simplistic view by CS and a CPBD however must then obviously also imply the CS principle that a laser pulse being fired in the perfect vertical direction must acquire (inherit) precisely the horizontal velocity vector component of Ship1 as in MWF25. In the next section however it is shown that CS then encounters from that very same principle insurmountable anomalies which completely destroy that CS principle of the (moreover extremely peculiar direction sensitive) inheritance of the horizontal velocity vector component of the laser source and also destroys the correctness of the "ray-of-light" concept. CS will not be able at all to counter those anomalies and inconsistencies, simply meaning that CS will be forced to abandon that principle and therefore also multiple contemporary paradigms being based on light. Annex 1 is moreover added to this publication in order to introduce two additional figures MWF26 and MWF27 which enable, next to MWF24 in section 3, to fully counter CPBDs who try to save their paradigms, such as expressed by the graphical representations within 2.1, 2.2 and 2.3.

## 2.2 A second example of a CS presentation

A second example of that firm belief by CS and the CPBDs is the representation at <https://www.youtube.com/watch?v=dBxo1eJLLwM> which gives an introduction to Einstein's relativity and, from the time stamp 2minutes15 seconds on, the explanation of a light clock. By scrolling directly to the 2':15" time instance within that video and watching it up to the 3':40" time instance it is very clear that CS claims it to be very true (thus that CS "expects") that the photon travels back and forth **exactly** between the midpoints of both mirrors at any velocity through space of the light clock device, for whatever velocity if the space ship.

## 2.3 A third example of a CS presentation

A third example of the firm belief by CS and CPBDs is presented at this link : [http://www.phys.unsw.edu.au/einsteinlight/jw/module4\\_time\\_dilation.htm](http://www.phys.unsw.edu.au/einsteinlight/jw/module4_time_dilation.htm) ; by clicking on the play button the animation can be viewed there. Zoe sits in the moving car and claims that a light pulse is bouncing forth and back **exactly** from the midpoint of the car's inside left mirror to the car's inside right mirror, for any value of her car's velocity. CS thus claims that Zoe in the moving car is always observing the light pulse to travel on the straight line interconnecting the midpoints of the two mirrors. On the other hand CS claims that Jasper (moreover being claimed by CS to be "at rest") will observe the light trajectory between the two moving mirrors as a zig-zag line.

The three examples 2.1, 2.2 and 2.3 in this section thus prove extensively these views and firm beliefs by CS with respect to light phenomena.

## **3. Two massive anomalies and inconsistencies in the CS light based paradigms**

Interestingly, it can be remarked first that Einstein never received a Nobel Award specific for his relativity theory but only on the basis of his work on the photoelectric effect, thereby proving the existence of discrete photons. So, it is also extremely strange that Einstein never used the concept of photons in his thought experiments. Within this publication however the discussion and description of light phenomena is fully based on photons.

### 3.1 A first anomaly and inconsistency regarding CS paradigms based on light

Consider within a thought experiment the figure MWF24 (the figure can be opened by clicking the link in Table 1) a laser which is mounted perfect vertically upward on a horizontally movable set-up. The laser is able to geometrically launch photons in the perfect vertical upward direction (y) while the horizontal (x) velocity of the movable laser set-up can be controlled to any value. The classic graphical reference frame representation (x,y) is used here. An observer Obs1 is at rest (the frame  $x_{Obs1}$ ,  $y_{Obs1}$  is also at rest). The laser set-up does not move in the vertical direction y and is positioned at the location  $x_{Obs1}=1$  at the start (t=0) within the thought experiment. Assume now that individual photons (or e.g. femto second

laser pulses) are launched each second from the laser, upwards in the perfect  $y$ -direction. In order to be able to demonstrate the upward travelling of the photons, the  $y_{\text{Obs1}}$ -axis is scaled in light-seconds (each  $y_{\text{Obs1}}$ -axis scale unit corresponds thus to the distance travelled by light in one second).

In the thought experiment, the laser resides at the location  $x_{\text{Obs1}}=1$  during the first 3 seconds and thus the three photons (being produced and labelled 1, 2 and 3) travel accordingly, as illustrated in MWF24. Since the laser source does not move in the horizontal direction during the first 3 seconds, evidently the three photons move upwards along the line  $x_{\text{Obs1}}=1$  (those three photons do not move in the horizontal direction). It is assumed in this thought experiment that immediately after  $t=3$  sec the laser is set in motion at an immediate horizontal velocity of 1 m/sec while still launching a photon each second. In addition, the assumption is also made that the laser immediately halts when arriving at the location  $x_{\text{Obs1}}=9$ . The photon phenomena according to the CS views within the three stages of the thought experiment are now discussed. Even a further detailed and even much more revealing discussion can be found in (1) when having in this thought experiment a finite acceleration and deceleration value.

CS claims that the photons, as being launched from a moving laser source, inherit the horizontal velocity vector component of the laser and therefore, the photons with labels 4...10 thus should behave as illustrated in MWF24. From the horizontal point of view CS thus claims that those photons will “reside precisely” (while of course travelling vertically upwards) “above” the laser during the travelling of the laser from the  $x_{\text{Obs1}}=1$  to the  $x_{\text{Obs1}}=9$  position. The label 4...10 photon’s  $x_{\text{Obs1}}$  locations are thus exactly the same (as claimed by the views within CS) as the laser’s  $x_{\text{Obs1}}$  intermediate locations in the  $1 \text{ m} < x_{\text{Obs1}} < 9 \text{ m}$  interval. However the dramatic consequence of those CS views is that the photons with labels 4...10 then will also keep on moving horizontally to the right : CS evidently cannot claim in any way that those photons (labels 4...10) would stop moving to the right (at the velocity of 1 m/sec) at the moment that the laser halts at the location  $x_{\text{Obs1}}=9$  ! It is trivial that there is totally no mechanism why those photons (labels 4...10) would be able to "notice" or "respond to" the halting of the laser source at the location  $x_{\text{Obs1}}=9$  and then also would stop horizontally moving to the right. It would be totally absurd if a CPBD would claim the latter.

In addition, the photons (produced by the halted laser at the location  $x_{\text{Obs1}}=9$ ) with the labels 11...15 will show a zero horizontal velocity vector component, according to CS, since the laser has a zero horizontal velocity from the moment that the laser halted in the position  $x_{\text{Obs1}}=9$ . Therefore the gigantic inconsistency within the views of CS becomes extremely obvious : the photons with labels 4...10 will simply keep moving horizontally to the right and therefore get completely disconnected, from a horizontal direction point of view, from the photons with the labels 1...3 and, in an analogous way, become also disconnected (from the horizontal point of view) from the photons with the labels 11...15. That is clearly illustrated within the graphical representation within MWF24, which is fully based on the CS views.

It is possible to classify the photons of type 1...3 as belonging to a group A, the photons of

type 4...10 as belonging to a group B while considering the photons of type 11...15 to belong to a group C. It should then be very obvious to CS and any CPBD that the reasoning above also holds in the case that the laser would continuously produce photons (thus a "laser beam" according to CS) instead of 1 photon or laser pulse per second. Indeed : consider a continuous laser, thus producing a large number of photons of the type of group A during the first 3 seconds. The very last photon within group A being produced by the laser, while standing still in the location defined by  $x_{\text{Obs1}}=1$ , will travel in the same way as all the photons of group A, thus along the vertical line defined by  $x_{\text{Obs1}}=1$ . However the very first photon being produced by the continuous laser when starting to move horizontally (movement assumed for now to be immediate in the thought experiment) to the right after 3 seconds will (still according to CS) inherit the horizontal velocity vector component of the laser and thus will start to travel as the type of photons of group B. That means a permanent/lasting horizontal movement to the right, as claimed by the views of CS. Therefore any CPBD will immediately understand that the first photon of the type group B will start to move away to the right in the horizontal direction, from the last photon of the type group A. That moving away effect between the two photons is a massive anomaly within the views of CS with respect to its linear/continuous/undisrupted modeling of light phenomena (thus evidently also regarding the CS extremely simplistic linear 'ray of light' or "laser beam" model). In the graphical representation by MWF24, as resulting from the CS views, there is thus clearly a positional disconnection/disruption between the photons of the group A and the photons of group B (of which the latter will keep on moving horizontally to the right). As a result : the "continuous" character of the so-called "laser beam" would be clearly destroyed by that disconnection effect. MWF24 thus proves that CS theory would result into the creation of three individual linear light segments totally disconnected from one another. Such forms a gigantic anomaly/inconsistency within the actual CS view of one coherent "total linear ray of light" (continuous laser beam), as claimed by CS.

As to introduce additional but in fact a fully analogous proof to the CPBDs, now with respect to the CS based presentation within section 2.1 involving the two space ships, a discussion regarding the two figures MWF26 and MWF27 can be found in Annex1. Both figures and the discussion clearly show in full the enormous inconsistency within the description of light phenomena by CS (see Annex1).

CS will not be able to explain/counter this massive anomaly which is thus certainly conform to a, by Karl Popper defined, falsification of the by, CS claimed, laser's horizontal velocity vector component inheritance principle which is thus a totally flawed paradigm within CS regarding photons. Such falsification is much stronger (according to Karl Popper's falsification theory) than a series of different so-called verifications. This point of view was moreover also totally supported by Einstein since he stated himself "*No amount of experimentation can ever prove me right; a single experiment can prove me wrong!*". As a result : one single anomaly/falsification can completely overthrow specific contemporary paradigms which are based on light phenomena. One single anomaly/falsification then ultimately leads to a situation by which the complete series of so-called experimental "verifications" needs a total revision as to detect the reason of an obvious misinterpretation

during those multiple types of verification experiments (see my detailed critiques on specific CS experiments/paradigms in section 12 within (1)).

### 3.2 A second anomaly and inconsistency regarding CS paradigms based on light

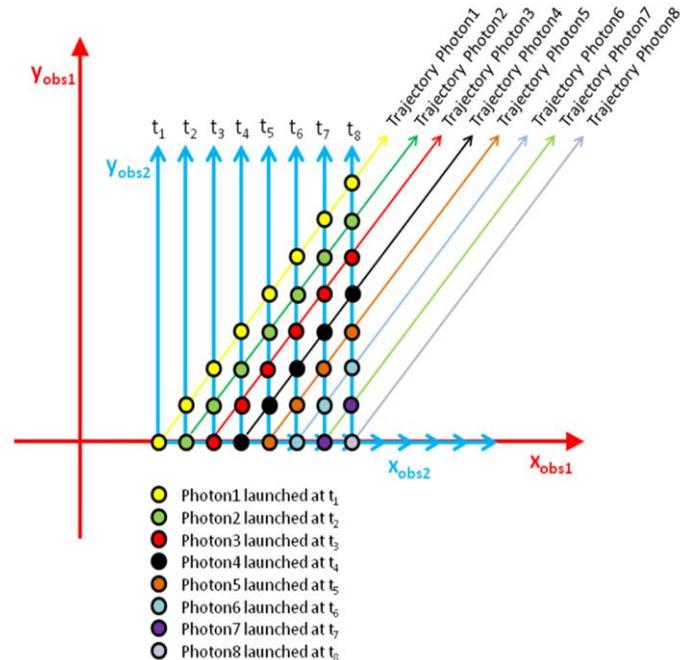


Figure A : Another anomaly from the views in CS

CS also needs to counter then the following severe paradox and inconsistency with respect to its views on light phenomena, as illustrated in Figure A. Figure A represents a reference frame ( $x_{Obs1}$ ,  $y_{Obs1}$ ) (in red) at perfect rest in RS and an observer Obs1 also at perfect rest in RS. There is a laser set-up which moves at a constant velocity in the horizontal direction to the right. An observer Obs2 moves along with the laser while the frame ( $x_{Obs2}$ ,  $y_{Obs2}$ ) (in blue) represents the reference frame of Obs2. The laser is located in the origin (0,0) of the reference frame of Obs2. The moving laser launches 8 photons at regular time intervals (thus  $t_1$ ,  $t_2$ ,  $t_3$ , ...,  $t_8$ ) perfectly in the vertical direction, thus perpendicular to the horizontal direction of the motion of the laser set-up. According to CS each photon inherits the horizontal velocity of the laser-set-up in a way that Obs2 observes each photon to travel perfectly along  $y_{Obs2}$ . The paradox (anomaly) which arises as a result of the views within CS occurs when analyzing the behavior of the 8 photons as a series of events at  $t_1$ ,  $t_2$ ,  $t_3$ , ...,  $t_8$  from the perspective of Obs1. According to CS Obs1 observes Photon1 to travel along an inclined trajectory, indicated as Trajectory Photon1 (in yellow) in Figure A as a result of the claim by CS that Photon1 inherits the horizontal velocity of the laser source. When now analyzing what happens to Photon2 (green) from the perspective of Obs1 it is clear that Photon2 also must inherit the horizontal velocity of the laser source, according to CS. Therefore the only possibility for Obs1 is to observe Photon2 to travel along the trajectory as indicated in Figure A by Trajectory Photon2 (in green). Trajectory Photon2 however is clearly parallel to Trajectory Photon1 : both trajectories do not coincide. Such is also the case for the trajectories of Photon3, Photon4 , ... Photon8. That clearly illustrated that CS theory on light shows a serious

inconsistency when claiming that light travels as a "ray of light" (thus that light phenomena can be graphically represented by a single line) as used by CS and also by Michelson and Morley within their world famous paper which can be downloaded here :

[www.absolute-relativity.be/pdf/MichelsonAndMorleyPaper1887.pdf](http://www.absolute-relativity.be/pdf/MichelsonAndMorleyPaper1887.pdf)

(or at the internet : <http://history.aip.org/history/exhibits/gap/PDF/michelson.pdf>).

Figure A thus in fact shows again a massive anomaly and inconsistency towards the CS views on light phenomena. CPBDs will not be able to explain the parallel trajectories Trajectory Photon1, Trajectory Photon2, ... etc within Figure A (see also Annex1), which must exist according to their own paradigms views, thereby proving the total inconsistency of the CS approach to graphically represent light in a simplistic way through "rays of light", thus through the simplistic drawing of a line.

Sections 3.1 and 3.2 thus show the existence of two massive theoretical anomalies and inconsistencies in CS light based paradigms (see also Annex1). The consequences of these anomalies are discussed even in much more detail within (1).

#### **4. Additional remarks**

The reasoning on the basis of light as photons within the two anomalies/inconsistencies as described within section 3 thus prove that specific graphical representations ("ray of light" ; "laser beam") within the CS light paradigms definitely need to be reconsidered as being falsified and totally wrong. The anomalies are even proven experimentally through a straightforward laser experiment as explained in detail within (1) and from MWF2 (see link in Table 1). In (1) it is proven that the CS principle of the direction selective inheritance of the horizontal velocity vector component of the laser (photon) source as explained in section 3 should be abandoned since it leads to a dramatic misrepresentation of the real photon phenomena in RS. The consequences for (therefore flawed) multiple paradigms in CS are extremely severe, as explained in much more detail within (1). Those paradigms are linked to the Michelson and Morley experiment, the Lorentz contraction, the light clock, the Mercury perihelion precession anomaly, Einstein's relativity of simultaneity (see the critique at <https://www.youtube.com/watch?v=Ex0bATIFg3M> in that respect), special relativity etc.

Moreover, the experimental set-up linked to MWF2 is much more straightforward than the Michelson and Morley experimental set-up. Importantly in that respect : a signal within the MWF2 related laser experiment of about 1 mm for a distance of about 10 m is indeed a very interesting feature. The Michelson and Morley experiment is fully based on an extremely small longitudinal effect (direction of the travel of light) since they used the interference principle. Moreover it can be remarked that the so-called null-result of the Michelson and Morley experiment was not at all a full null-result as proven by their Figure 6 within their paper, showing the expected effect but of which the signal amplitude was considered to be too weak. In (1) an explanation of that weak signal is given, thus questioning the null-result conclusion from the Michelson and Morley experiment.

The MWF2 type of laser experiment is however not based on such a very small Michelson and Morley experiment type of longitudinal effect (expressed in nanometre) but on an important large transversal effect (thus the observation of the effect is perpendicular to the longitudinal direction of the laser ; signal size expressed in millimetre for a laser beam length of 10 m), as favourably detectable on our planet. Therefore the laser experiment set-up, to create the result as shown within MWF2, is straightforward and sensitive, specifically in the case that a sophisticated laser (and optics system) would be used with a very low divergence (e.g. a sub-millimetre laser spot size at a laser-detector distance of the order of 10 m). Also the cost of even a very sophisticated optical set-up will be marginal when compared to the extremely high cost of contemporary (very large scale) scientific experimental set-ups involving laser/light set-ups (the extremely expensive experiments such as the Gravity Probe B and LIGO could e.g. be mentioned here). Regarding LIGO : surely read <http://www.absolute-relativity.be/node/6> section 4.3 "*A suggestion for an alternative much cheaper Gravitational Wave Detection set-up, when compared to the Michelson interferometer based LIGO set-up*". Therefore an extremely stringent call in this publication towards universities and/or research centres to simply re-perform the straightforward type of laser experiment as demonstrated within MWF2 to ASAP experience and prove by experiment the clear anomaly also themselves. At the moment that the result as shown in MWF2 is confirmed, CS is simply facing a very large conflict regarding its multiple, totally flawed, contemporary paradigms involving light/photon phenomena.

A much better light paradigm thus needs to be introduced in physics on the basis of photons. The improved paradigm will not only erase some existing flawed paradigms in CS (and is thus not only of theoretical importance in physics and science in general) but can lead also to important technical applications. The representation of light by simple geometrical lines as "rays of light" up to now might have been a sufficiently accurate approximation (but even wrongly considered as exact in CS) in the development of certain technical applications in daily practice (optics, photography, ...). However, when neglecting the important anomalies as described in section 3, wrong theoretical and practical conclusions are the result. In section 12 of (1) it is indeed shown that the accuracy can be significantly insufficient in specific applications such as geometrical space (distance) surveying on our planet (e.g. in the case of measuring, by e.g. a theodolite, the dimensions of large objects (buildings, constructions, ...), leading to significant errors. This all is linked to the effect of our planet's high RV in RS and the phenomena involving the trajectory of photons (which are travelling very fast through RS but still at a limited velocity value, thus not at an infinite velocity). The potential towards other technical applications is also very large and important, as explained within sections 11 and 12 in (1), including the concept of a RV measuring device.

## 5. Conclusions

CS should urgently look into the falsification of specific contemporary paradigms based on light, since multiple severe anomalies are illustrated in this publication. One very clear theoretical anomaly (MWF24) already has a very high falsification impact but moreover even

an experimental proven anomaly is discussed extensively in (1) and proven by MWF2 which, in addition to the theoretical anomaly, surely is going to be detrimental to specific contemporary paradigms based on light phenomena. **It is now up to the scientific world to re-perform ASAP the type of laser experiment being linked to MWF2 and to independently experience/confirm the existence of those major anomalies in order to conclude on flawed contemporary paradigms.** Even regarding LIGO : see also the remarks within (1) regarding the eventual opportunity to design an alternative (much more sensitive and much cheaper) measurement concept/device on the basis of the laser experiment as demonstrated within MWF2. That must surely stimulate CS to have a profound look at such an opportunity.

## Annex 1

Two additional figures MWF26 and MWF27 are introduced in this annex which enhance the illustration of an anomalous/flawed CS "ray of light" model (being used in the models within contemporary paradigms such as e.g. the Michelson and Morley so-called null-result paradigm)

- MWF26 : [www.absolute-relativity.be/figures/Figure26\\_Animation.gif](http://www.absolute-relativity.be/figures/Figure26_Animation.gif)

- MWF27 : [www.absolute-relativity.be/figures/Figure27\\_Animation.gif](http://www.absolute-relativity.be/figures/Figure27_Animation.gif)

Regarding the graphical CS representation (model) within the YouTube video "*Time Dilation - Albert Einstein and the Theory of Relativity*" of a laser pulse exchanged between two space ships: <https://www.youtube.com/watch?v=KHjpBjgIMVk> any CPBD will agree with the according/similar representation (fully based on the CS views the blue slanted trajectory within MWF25: [www.absolute-relativity.be/figures/Figure25\\_Animation.gif](http://www.absolute-relativity.be/figures/Figure25_Animation.gif)).

On the basis of MWF25, the following situation can be considered within the example of the two space ships travelling in parallel/synch through RS. It is assumed that both space ships will simultaneously halt at a specific time instance (see also the second CS example in section 2 of (2) regarding the movement and halting of a light clock), in a way that  $\text{Obs}_{\text{Ast}}$  who is first observing both space ships to move in RS over a specific distance, then observes the ships to end their movement and thus to arrive in a state of "at rest" with respect to  $\text{Obs}_{\text{Ast}}$ . This is depicted within MWF26 : [www.absolute-relativity.be/figures/Figure26\\_Animation.gif](http://www.absolute-relativity.be/figures/Figure26_Animation.gif). Any CPBD will agree with the graphical representation within MWF26 of having the laser pulse travelling further along the slanted trajectory as depicted (while both space ships stopped and are now both observed by  $\text{Obs}_{\text{Ast}}$  to be at rest). The obvious conclusion is that in this case the laser pulse will not arrive at the mirror of the Ship2 and even does not hit Ship2 altogether. The laser pulse will be observed by  $\text{Obs}_{\text{Ast}}$  to thus travel further into RS in this example.

On the basis of MWF25 and MWF26 consider then further also another situation as depicted within MWF27: [www.absolute-relativity.be/figures/Figure27\\_Animation.gif](http://www.absolute-relativity.be/figures/Figure27_Animation.gif).

Now the laser fires laser pulses within a regular time interval during the time that  $\text{Obs}_{\text{Ast}}$  observes both ships to move in synch through RS. Any CPBD will claim from the CS views that the laser pulses are located, from the horizontal point of view within MWF27, perfectly below the laser, thus on the optical axis line of the laser. As an arbitrary example it could be assumed that the vertical distance between the two space ships is e.g. 10 light-seconds and that e.g. each second a

laser pulse is fired.

It is also assumed that the laser continues to fire laser pulses after the time instance that both ships halted, thus when both ships are becoming observed by  $\mathbf{Obs}_{Ast}$  as to be at rest. On the very same grounds as within the discussion on MWF24 in (2) it must be very clear to any CPBD that the laser pulses being produced by the laser before the time instance that both ships halted will be observed by  $\mathbf{Obs}_{Ast}$  to all travel along their slanted trajectories as depicted in MWF27. These laser pulses will be considered as to be members of a group D of laser pulses. The laser pulses which are produced after the time instance that both ships halted and as observed by  $\mathbf{Obs}_{Ast}$ , are also depicted within MWF27 and are considered as to be members of a group E of laser pulses. It must be then become very clear from MWF24 to any CPBD that CS principles lead to the conclusion that  $\mathbf{Obs}_{Ast}$  is observing the group D of laser pulses to get completely detached from a horizontal point of view from the group E of laser pulses (groups D and E also drifting away wider and wider horizontally).

CS also claims that light from a continuous light-source (laser) can be modeled as a non-interrupted continuous "ray of light" (a non-interrupted linear "laser beam" principle). In the case that in MWF27 the laser would be a fully continuous laser (thus continuously producing photons)  $\mathbf{Obs}_{Ast}$  thus would also observe in an analogous way :

- 1) two completely detached segments of "rays of light" (two completely detached segments of a laser beam) ?!
- 2) of which the segment of the group D type of photons will keep moving further away sideways horizontally to the left and in separate parallel trajectories ?! Such is clearly a full inconsistency in the CS model of a "ray of light". Moreover, as remarked in (2) and described in detail in (1) (MWF2), that inconsistency/anomaly was even experimentally proven by a straightforward laser experiment.

Points 1 and 2 clearly shatter the ray-of-light concept within CS as being totally flawed.

The views by CS within section 2 of (2) are based on a totally flawed inheritance principle of the horizontal velocity vector component of the laser or light source. It can be noted that MWF 23 is then a more appropriate and consistent model:

(MWF23 : [www.absolute-relativity.be/figures/Figure23\\_Animation.gif](http://www.absolute-relativity.be/figures/Figure23_Animation.gif) )