

# Evert Aether - Physics and - Philosophy

## 04. Exclusion and Inclusion

Only three chapters to the intensive discussions about the aether, the status of temporary nature sciences and alternative motion processes of light.

### 04.01. [Subject](#)

Aims for this fourth part.  
Feedback at the presentation of the gapless aether.

### 04.02. [Space-Time-Quantum-Zero-Point-Energy](#)

Demarcation of terms of Relativity- and Quantum-Theories.  
How famous physicists criticize their sciences.  
How to overcome the present blockade.

### 04.03. [Light-Ether](#)

Propagation of light demands a medium.  
Within a medium more or less 'polluted' the light-pattern are moving forward by different speed.  
How the 'paradox' behaviour of photons is explained plausible.

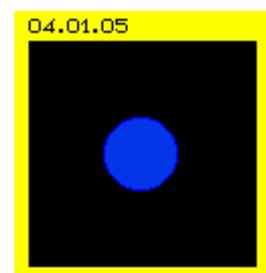
## 04.01. Subject

### God and the World, Everything and Nothing

It's just two years ago when I published first three parts of Aether-Physics and -Philosophy at my website. At introduction-part were defined terms used, second part described the Universal Aether-Movement and third part described the principle of Local Aether-Movements. I got lots of mails and additional hints, exchanged ideas with some hundred readers.

The reactions to the published ideas showed me where my explications were not sufficiently clear or where readers could not follow the line of thoughts. I had to learn how difficult it is to achieve an agreement about even simple terms. For example, I really did try to describe real simple mechanic motions - however practically all critic readers argued with abstract terms, without direct relation to simple reality, e.g. instead of 'movement' using 'forces' or even more abstract the empty-word of 'energy'.

As single absolute sure bases of all considerations I stated: there is Something (at picture 04.01.05 represented by blue circle surface). Opposite to Something (which really exists) is Nothing (not existing), here marked by 'not-colour' black. For me it's logic, a Nothing excludes any existence - however I had many discussions what 'real existence' would mean - and if Nothing could not be also some relative-nothing - just like 'space of universe' commonly is called 'vacuum' - thus an emptiness which is not quit empty - so talking at logic level of 'little-bit-pregnant'.



This blue surface e.g. could represent total Something which we call the universe. Some critic readers urge, thus I also should have to name God as creator of the universe - even I excluded this question clearly, because this question is beyond our horizon. I exclude this question concerning the 'creator' or 'constructor' of the universe, simply because men all times are creating or constructing - nevertheless this does not exclude other possibility for

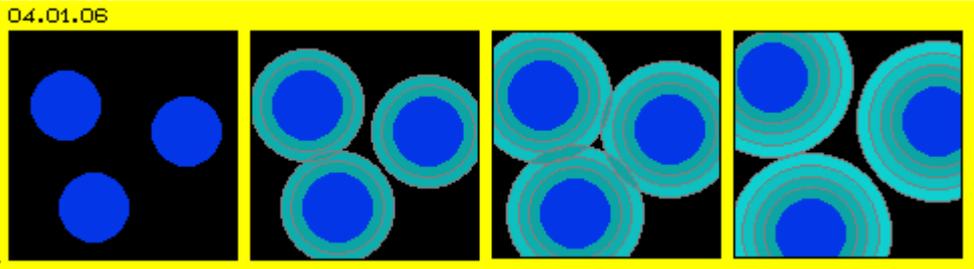
producing existence in general. Above this, no science can approve why lastly something exists. One can calculate backward - by fictive formula, based on questionable parameters - when the universe probably became existing by big-bang - why and who or what however big-bang started and all questions concerning status before that explosion, still are without an answer.

Other critic readers accuse me to 'materialize' God as everything should exist of aether. I also made the clear statement concerning this question: aether is the medium of all occurrences and nothing else than a medium. Everything we know as physical-material are (relative coarse) aether-movements and I am sure, everything we know as mental-spiritual are also represented by this medium (by essentially finer movements pattern). It well could be, God uses this medium - and the medium thus might be morphogenetic for other occurrences - however a medium rests a medium and by itself nothing else (so the medium is never equal to God).

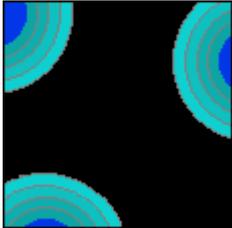
**Pressure through Nothing**

It's an open question whether the total Something (whole universe) is finite or infinite, i.e. if an outer border must exist. I leave open also this question, however everyone has to think about most questionable conditions which are demanded for the existence of an outer border. Such faces next to Nothing come up also at any 'twisted universe' or additional 'parallel-universes' or 'worm-holes' and other hypothetic suggestions of different researchers - and none of them produced a convincing answer concerning demanded borders.

The problem of a border between Something and Nothing (resp. what should be outside of



Something) however exists not only at outer border of an universe, but numberless times within an universe and within our world. Common science tells, not only the universe is empty, but 'vacuum' exists also between all parts. At Sun-system or at atoms, all times is assumed the existence of a core (plus planets or electrons or something else) - and Nothing between. Here at picture 04.01.06 and at this animation, any parts again are marked by blue colour and between of that Nothing is marked by black colour.



Whenever one is thinking by parts, inevitably come up gaps between - and common science eliminated the aether to fill up this space. As a substitute that space is called 'vacuum' and this relative emptiness is filled up by 'fields' - which again is only an abstract empty-word. Critics might argue, the fields naturally are real and represent exact calculable forces. However, why and how the forces of all fields should affect - is a totally open question.

In principle, there are only two forces of pushing or dragging affects. Fairly reasonable are affects of rejection (like sketched at these pictures). The parts could show some 'radiation' and its pressure could affect versus other parts thus enlarging the distances between. If parts at their flight collide with other parts, also elastic push would be reasonable by these mutual radiations.

By this 'radiations' thus would come up a mechanic effect between material particles - however how could 'pressure' be transported, if not by likely 'material-mechanic' means? Or in general, the common understanding will finally be, any kind of radiation lastly is some

motion - and any movement implies Something-in-motion - and 'vacuum' by sure is too empty for, contains too less movable somethings - and 'fields' are only abstract numbers and thus are nothing which could achieve real affects by themselves.

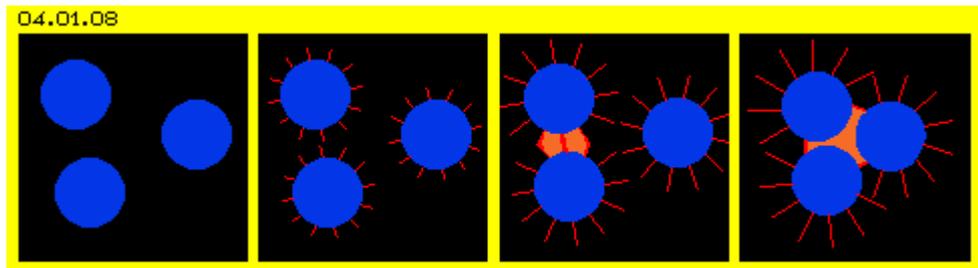
Certainly many specialists can explain the affects of fields by many words, nevertheless all common analogism can not plausibly explain, why these effects come up and can even less explain why some affects inevitably work by strange vectors. These 'phenomena' are only to explain, if all spaces between are filled up not by - nearby empty - vacuum, but by a real material aether.

### Drag through Nothing

Long time ago, Newton recognized 'how apples fall from trees' and by inertia- and gravity-forces he was able to calculate the tracks of planets. He mentioned on and on, the phenomenon of gravity is calculable however this occurrence does not imply any 'dragging force'. For example he wrote '... a body affecting to an other body via distance through vacuum without mediation by some medium, for me is most great absurdity, so no man able to consider any philosophic question can really think about ...'. Nevertheless this mental picture of 'attracting forces' became common understanding.

There were and are scientists who consider space to be filled up with a fluid-like aether. The tracks of turning and rotating planets well could be explained by flux-technologic calculations.

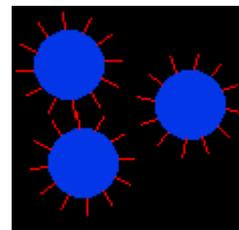
The problem however exists in general as attraction can also affect between non-turning and non-rotating



particles, e.g. between unlike magnetic poles or charged particles. However, how should one imagine any 'attraction' via Nothing? Sure, there are fields and forces to calculate, however this does not contribute to a real explanation of the essential processes.

At picture 04.01.08 and this animation are sketched three material parts (blue Somethings) swimming within Nothing (black emptiness). The parts should mutually get in touch anyhow, here symbolized by red 'feelers'. If these (magnetic) 'field-lines' meet, they develop a tendency to become shorter resp. to reduce the distance between the parts in general. How they produce that behaviour - still rests their secrete miracle.

As a substitute here are marked light-red fields between the parts, within which attraction could occur. At the other hand this picture obviously suggests, between these parts could come up a 'protected' area and the parts are not really dragging mutually - but are pressed together by any force from outside. As mentioned upside, the idea of pressure-forces affecting from outside onto parts is much more plausible than any 'mysterious elastic rubber bands' of dragging forces.



Indeed, some scientists suggest the gravity resulting of pressure forces, however these theories describe properties of demanded medium rather different (or prefer not to define their medium and properties at all). Unlike magnetic poles obviously seem to demonstrate attraction - however also magnetism could alternatively be explained by pressure forces. It's common understanding, unlike stuff works attracting and likely stuff works rejecting - and it rests unexplained e.g. why likely charged particles of atomic nucleus should keep together unbelievable dense and strong (and no 'glue' can explain that miracle sufficiently).

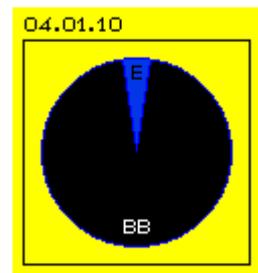
### Naive and off the Mark

Certainly could be objected the previous pictures would represent the problems really naive. That's correct - and corresponds in total with common science: it's real naive believing these effects would result of fields or their affecting through Nothing. It's really unbelievable how 'apathetic' scientists neglect the basic 'phenomena', e.g. total contradictions of common 'knowledge' about atoms. Again one could accuse me naivety because other solutions are available, e.g. by quant-theories - which same time however ascertain, the processes are not to understand by 'common mind and experiences'. Physics lastly end into pure spiritual questions - however rational researches must not end thus early.

Here it's not previous spiritual question whether or why or how any God or any Spirit created the universe. The general problem of attracting or rejecting affects - via distances and via the Nothing of suggested vacuum - is the basic question within the material word, thus direct in front of the door of all nature sciences. By this point of view, all suggestions of common explanations of the main stream sciences indeed are 'unbelievable mysterious'.

This broad generalization naturally does not meet all positive achievements of nature sciences and techniques. Indeed, people without technical interest and knowledge can use many useful machines. One well can drive a car knowing function of only few parts. Nearby all technical tools demand basic knowledge of only few Somethings (E, German Etwas) in order to profit of the performance of remaining 'black-box' (BB). This disc at picture 04.01.10 visualizes e.g. a relation of 5 percents knowledge and 95 percent ignorance.

For example this is the actual status of knowledge at astronomic science: as known are assumed materia with their masses and inertia and weights, speed of light and its bending and red-shifting, physical forces of electric and magnetic nature, great number of so-called nature-constants, everything well calculated by well known formula. However, if the calculations should fit to the observed reality of total universe, missing are further 95 percent of 'unknown, dark, abnormal masses or energies'. Is this a neglectable tiny 'mistake' or a clear case of 'totally missing the target'?



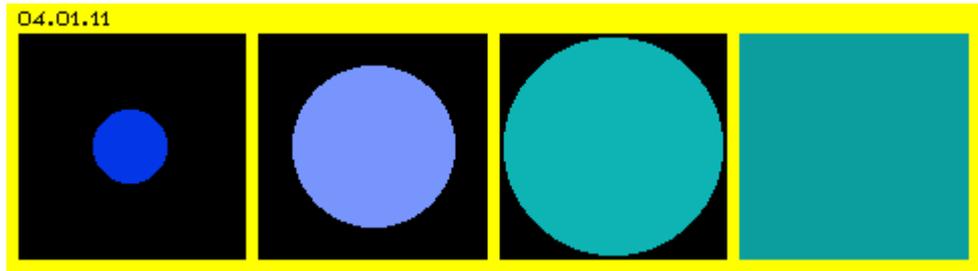
### Aether, particle-less

This 'stuff unknown' one could simply call the old-fashioned 'aether' - and re-define its properties by actual clear physical terms. There are missing 'masses', so the aether must be a substantial matter. Previous relation well could fit, as All is aether and all aether is in motion - and only a small part shows motion pattern resulting these physical occurrences, which we are used to measure, weight and count.

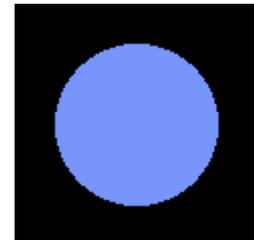
Indeed, the discussions about the aether came up by many physicists and explorers. For example, my workouts concerning the aether resulted questions and comments and hints all day long, by hundreds of emails. Many colleges 'agree in total' - and next moment they try to convince me by opposite positions. Many other colleagues think these aether-considerations are totally in vain, as the Relativity- and Quant-Theories explain everything. Most people however did not really realize, 'my aether' is part-less substance and thus totally different to common understanding. Up to now, practically nobody did really follow this idea of an absolute continuum, as nobody can imagine any motion within a gapless solid material substance (so I have to describe these necessities and possibilities at following chapters once more in details).

Present-days physics can not solve the problems as long as bound to think-by-particles and to the suggestion the affects between parts could work via Nothing. Further on: if this Nothing is replaced by an aether - and that aether again is assumed to exist by particles - same unsolved problems are only placed at a lower level.

So I am forced to ask this 'killer-question' on and on: no matter which kind of particles, why should particles not



disperse into the emptiness, which inevitably exists between parts. What else could result than (at picture 04.01.11 grey) a mixture of Nothing and Something? The existence resp. Non-Existence of Nothing and Something is mutually excluding, logical like physical. Thinking by parts implies prerequisites and affects - which physics up to now were not able to explain. The physicists disregard these essential problems as negligible 'phenomena' or side-aspects.

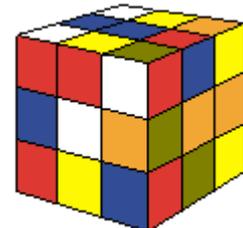


I did not receive any acceptable answer to previous question (of dispersion of parts into vacuum). As a substitute 'elastic-swinging' aether or likely constructions are suggested, which however demand numberless additional prerequisites (which practically no author mentions precisely). For example, within a particle-aether or elastic-aether could not exist real constant of energies - all would end into 'heat death', this grey stuff of previous picture.

### Subject

The basic subject of Aether-Physics thus is the question, 'what the world keeps together most inside' - like Goethe's Faust asks urgently. At following parts of these workouts however, I will not discuss philosophic aspects, i.e. all 'mental-spiritual' stuff is excluded and only pure physical questions are considered.

At first I will show once more, why the problems of actual physics find 'reasonable' answers only when the aether is assumed to be the general medium for all occurrences. I will define demanded properties really exact and I will describe the possibilities and necessities of its motion pattern.



A 'magician' designed this well known cube with its possibilities of movements into all three directions. Complex motions are necessary to produce an optimum order. Above this, some might think about the construction of the 'inner gear', which results the cohesion of the cube and nevertheless allows these movements. The aether functions just like this - and totally opposite to.

## 04.02. Space-Time-Quantum-Zero-Point-Energy

### Crystal-clear Aether

Naturally, just at the 100-years-Einstein-events many readers told me, since Einstein the existence of an aether is refuted. Indeed, young Einstein 'eliminated' the aether as everyone knows. Unknown however mostly are the statements of elder Einstein as he ascertained the aether being inevitably existing. I refer to earlier chapter 01.01.04 'All or Nothing' and especially 01.01.05 'Space and Time' with commentaries on these aspects. Because these statements of Einstein are mentioned scarcely, I quote his speech of 5.5.1920 at the University of Leiden once more:

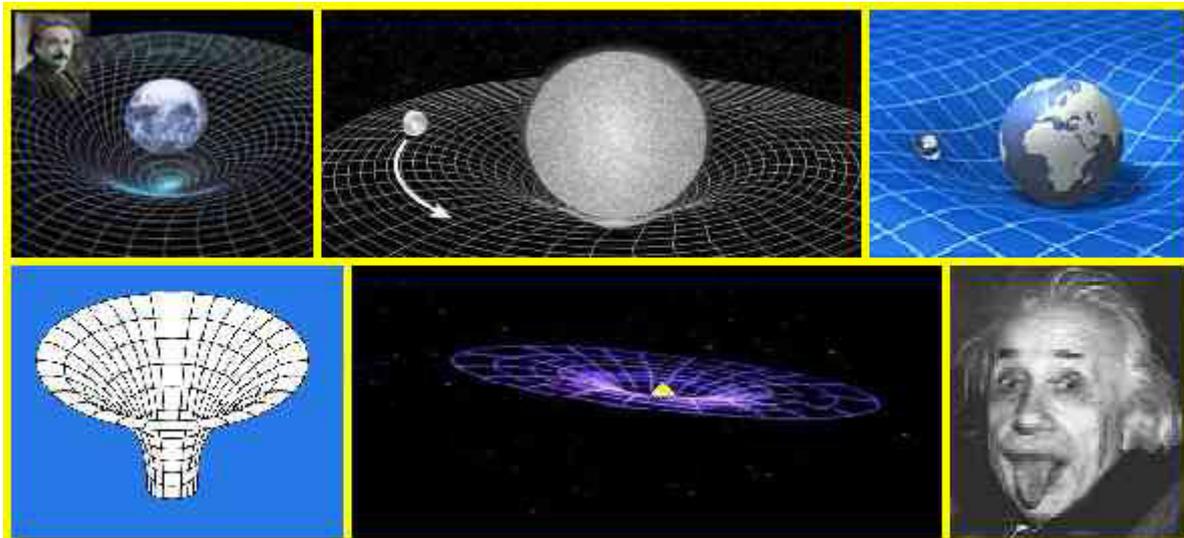
'Summarizing we can say: based on relativity theory the space shows physical qualities, based on the existence of aether. Based on relativity theory space without aether is unthinkable, because within an aetherless space not only the motion of light could not exist, but no existence for measurements and clocks would be possible, so no physical space-time

distances could exist. The aether however can not be thought to show properties like ponderable media, thus not to exist by particles moving through space and time, so the common term of motions is not usable'.

Ok, just that's - or at least like that: the aether is without any separated parts - however if that primary medium would not move within itself, no 'existence' of secondary occurrences would be possible, neither of 'clocks' nor of anything else.

### **Nebulous Space-Time-Bends**

Only the elder Einstein made statements so clear to understand. The younger Einstein loved to put (mentally) his followers into rockets and trains and dark lifts and most astonishing, many followers believed (and still believe) only a relative subjective worldview is possible - even the stationmaster has objective knowledge about resting and driving trains. Not all vehicles drive by light speed through the space, nevertheless Einstein convinced many followers (and many still are convinced), space and time are connected anyhow - and in addition that space-time is bended by masses. He could not explain all attracting forces mentioned above, but he only claimed the gravity to be effected by bended space (without any explanation, why and how masses could affect that bending).



Everyone knows this dented rubber-sheet, alongside which the planets 'fall' around the Sun, all times straight-ahead, however 'straight' now means at curved lines. I doubt, anyone could achieve concrete imagination of 'spacetime' nor could really understand Einstein's Relativity-Theories - because one can not understand wrong statements but only can detect points of false statements (like done by comprehensive literature of Einstein critics). Here for example some pictures concerning 'gravity by spacetimebending' voluntary are arranged, picked up from websites of noted scientists. It's up to the readers to understand these visualisations, I only mention some questions:

- Like at previous rubber-sheet, the grid of spacetime at all pictures is bended down, further down than the central mass. However, why or by which force can these sheets respective grids be dented or pulled down below the affecting masses?
- If a planet or a moon become some slower - will they fall down at tracks south of the south-poles?
- Funnel downside-left represents a strong bending into a Black-Hole. Do masses affect the gravity only into one direction or should many of these funnels be arranged all around Black-Holes?

- Is this possible to imagine resp. which bended lines would result by many overlaying funnels? Can these imaginations of spacetimebends fit to reality at all?

Mind you: specialists had time for decades to visualize and demonstrate that critical aspect of Einstein's ideas by fitting and convincing graphs. For me, only best-known Einstein picture right side down shows a clear message: 'it was all a fake - and nobody got it!' In spite of the overwhelming evidence by famous scientists, most main-stream-physicists still refer to the validity of relativity theories. Also I refer to Einstein - however to his late statements claiming the real existence of a real aether.

### Four Dimensions

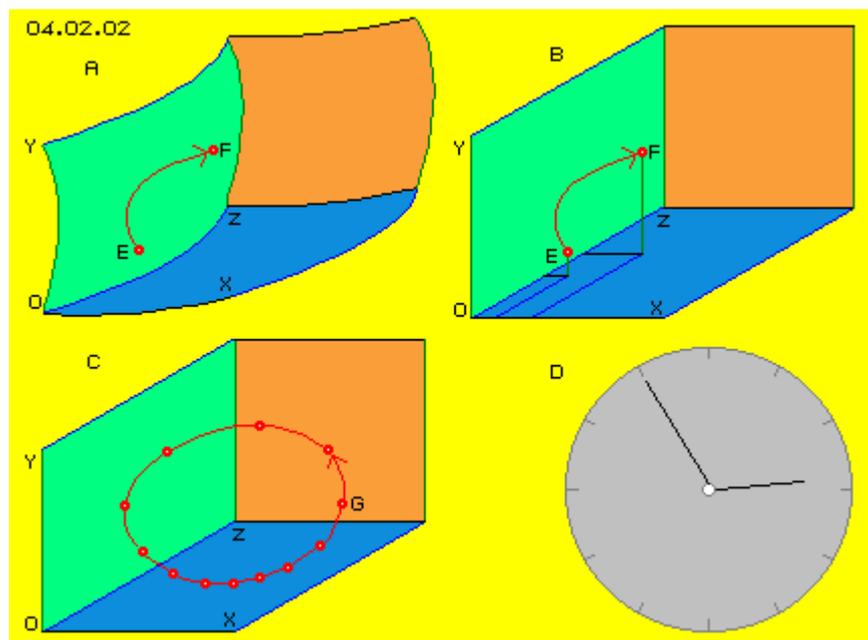
In that respect, a report of 25. International Mathematics Congress at Madrid is interesting. Mathematician Grigori Perelman from St.Petersburg, occasionally called 'most intelligent man of world', refused to take the Fields-Medal – a highly esteemed award - even he probably had solved the most difficult problem of mathematics: the properties of the surface of four-dimensional bodies (thus concerning the space-time world-view). Probably he would have the legitimate claim for rewarded one million Dollars, offered by the American Clay-Foundation for the solution of the 'Poincaré-Presumption', which troubles experts since hundred years.

I always thought, mathematics as the 'most clear science' would have no problems with calculations at fictive dimensions as you like it. Obviously however, the solved problems may not concern the real relations of surfaces of these fictive bodies. At the other hand it's reassuring to learn, mathematics deny a solution if much too fantastic fictions are put as axioms. So it also might be clear, Einstein's famous mathematic tricks can not represent the reality (like disproved by many authors).

Nevertheless I agree with Einstein: bendings are most important, no real straight lines exist. At picture 04.02.02 at A is shown the 'bended space' (see bended X-, Y- and Z-coordinates) and Something within is moving from E to F at a curved track. Relativity-mathematicians will like to calculate that 'uneven curve' relative to each bends of space with its locations and accelerations.

However, I have problems already with the idea, into which direction the vector of inertia will show. Straight-ahead naturally - however here this won't mean exact forward but into direction corresponding to all bends of all three dimensions same time (if time as fourth dimension is neglected, thus only the three-bended-dimensions-space-problem here should be solved).

When e.g. a comet comes near to the Sun, it will cross a spectrum of 'bended space lines' towards inward. At its nearest point, just before crossing these space lines outward again, the comet will move at a section of a circle



around the Sun. So the inertia of that comet momentary shows into direction of a circle - and how should it ever be able to escape the Sun? On basis of previous pictures all comets would gather somewhere 'down south of south-pole'.

### Term of Space

In English, the common word 'space' is synonymous with room, gap, place etc., at the other hand with emptiness and also used equivalent to universe. Analogue in German language, common word 'Raum' (room) sometimes is used similar to the term universe. Basically however Raum/room means something like living-, dining-, assembly-, class-room or hollow etc. In scientific sense, Raum/room is a pure geometric term e.g. describing a volume.

In order to describe exactly bodies, shapes, places, distances, movements etc., a right-angle coordinate-system is necessary. The zero point of that frame of reference can be chosen as we like it. Einstein is right: nearby everything is bended, especially the tracks of movements. Only these fictive coordinates of an abstract room (at B) must theoretically be thought to be absolutely straight - otherwise e.g. any real curved line could not be defined by comparison with theoretic straight lines.

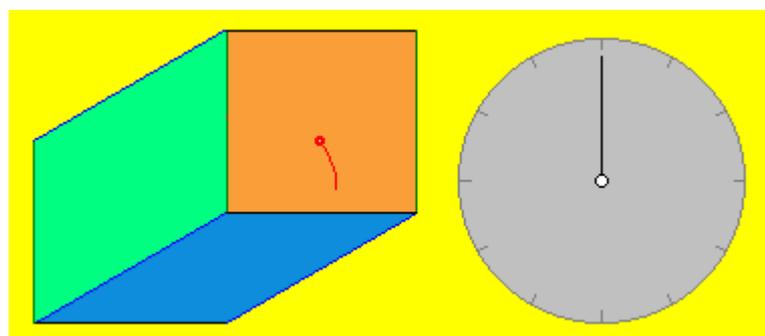
So here I use the terms room and space only by that geometric sense, as clear term for a right-angled coordinate system. Within a voluntary chosen section within that room/space resp. frame of reference, any location is simple to define by X-, Y- and Z-numbers. For figurative sense of the 'space' here exclusively is used the clear and common term 'universe'. Descriptions here mostly need no numbers, but movements most are described by terms like left/right, front/back, up/down, which all are related to that fictive coordinates resp. frame of reference.

At picture at B again is marked, Something is moving from E to F. This is the graphic representation of a real movement. That Something must be real, otherwise no motion could be real. 'Room' however is not real but exclusively a fictive term, only necessary for exact inspection or discussion or communication of real processes. That not-real room never can show 'energy'. Real within a room only is that substance of aether. Energy is not real but a fictive term, in reality existing exclusively as motions.

Many readers take offence at 'old fashioned' term of aether and suggest to use modern terms e.g. like 'space-energy'. Once more I state clearly: 'space' is a geometric fictive term, analogue 'energy' is only an abstract collective noun. 'Space-Energy' combines two fictive terms, i.e. it's an empty-word (which only can produce confusion and never ever can produce useful explanations). Analogue, room is not equivalent to aether, because room is something abstract, while the aether is real concrete substance.

### Term of Time

At previous picture at C, again the coordinates X, Y and Z are drawn respective that 'room' is marked by green, blue and red walls. Something (G) within is moving unsteady at an uneven track. Diverse positions (easy to define by each values of the three coordinates) of that red point are marked. Aside at D, a clock is shown and the movements of the clock-hands are well known (and some positions while turning are marked at the border of clock-face). Here at the animation, the red point takes position one by one (and each distance moved is marked). Aside of, the animation shows diverse positions the 'clock-hand' takes one by one.



Real are only these movements (and this animation is only a graphic representation of). Movements of the red point and the motion of the clock-hand are totally independent. Naturally, the red point like the clock-hand each are located at one determined position within space, at the following moving to next position. By this coarse animation, naturally it will take a while until coming to next position - however nowhere exists really something like 'time'.

Within our body and around our body, everything really is in motions (even it seems resting), however these motions need no 'room' (previous fictive green-red-blue walls) to be really moving. Analogue, these motions need no 'time' to be really moving. There is no time as a real occurrence, but each time-measurement basically is some suitable motion. Finally and exclusively, if one wants to inspect the 'speed' or 'accelerations' exactly, the abstract term of 'time' comes up.

These measures basically are only a comparison between two independent movements. For definition of a distance, the fictive frame of reference called 'room/space' is used and for definition of 'time' a most steady repeating event is used (lastly again based on any motion, which repeats moving distances of same lengths). Scales for distance and time, theoretic can be used as we like it - and this clearly indicates, 'dimensions of space and time' are pure abstract - while all movements are real facts - and all movements logical imply something real which is moving.

The 'scholarly dispute about time' ended with that understanding, nevertheless new mysteries about the nature of time come up on and on. Indeed, 'time' is not constant, as a clock at different environment 'ticks' other kind. Clocks are made of atoms, atoms are aether-vortices and their 'revolutions' are depending on behaviour of surrounding aether. Already a clock up at mountain ticks faster than same clock down at the valley. Clocks of GPS-satellites must be back-calculated (however twenty times 'slower' than the formula of Relativity-Theory tells).

So it's an absolute fiction resp. totally inept trying to explain real processes of the universe by pure abstract terms of space and time or even on its combination spacetime or even based on the curved four-dimension abstraction.

**Quantum-Theories**  
 When the Relativity-Theory does not work, the worldview is based on second standing leg of physics, the Quantum-Mechanics (resp. its following theory variations). The development and statements of that science theories are documented e.g. by Jim Al-Khalili at his book 'Quantum', for example by these wonderful pictures. 'A guide for the perplexed' - the subtitle promises.

Astonished one reads e.g. the following sentences: 'At the one hand, Quantum Mechanics are bases for understanding the world, at



the other hand it seems nobody really understood what that theory tells. The paradox of Quantum-Mechanics are demonstrated by the famous example of double-gap-experiments, 'because no other experiment shows its riddles more expressive and wonderful'.

Naturally there are explained Planck's investigations about quanta and Einstein's Nobel Prize for introduction of photons and his explanation of the photo-effect. As a result it's stated, 'today the wave-particle-dualism is assured without any doubt', followed by the statement 'physicians are still irritated by the concept of photons'.

Schrödinger designed his famous 'wave-function' and its interpretation was discussed by decades and still no agreement is reached. Heisenberg generated his 'unsharp-principle', which allows only probabilities e.g. for the location and impulse of particles, these also overlaying to 'superpositions', which 'collapse' only by observer. Schrödinger's famous cat is still discussed, uncertain whether it's alive or dead until someone looks into the box - unbelievable useless loops of imaginations of these intelligent men. Today one accepts, based on 'decoherence', an event becomes real by interactions also of other kind - e.g. an anvil functions as observer, so the hammer will get a hammer finally when hitting an anvil.

Based on wave-function and super-position, the author starts a second attempt for explaining the double-gap-experiments, finally establishing: 'we have a right for rational explanation, however up to now none was found'. Again and again he claims the validity of quantum-theories, because mathematics are 'logical consistent, however the problem is nobody can tell about the facts by non-mathematic language'.

Bohr himself formulated: 'There is no quantum-world. There is only a quantum-physical description. It's delusion to believe, the subject of physics would be the detection how nature works. Physics concern only what we can say about the nature'. Rather hard disappointment for a layman: physics is what physicians talk about nature - physics is not the ambition to explain why and how nature works. So it's probably true like Al-Khalili writes: 'some of most famous scientists of our time even admitted in public, nobody really can understand the quantum-theories'. And these scientists really studied not only popular-scientific literature (like quoted here).

Despite of this admission, still 'particle accelerators' are build and particles are bombarded by high-speed wave-particles in order to crack out most sub-elementary particles and to detect the ultimate bases of the material world. Hundreds and thousands of these 'quarks' are detected - however these can not be brick stones of materia but are wreckage of destroy.

### **Zero-Point**

At the very moment, 'Spektrum der Wissenschaft' (German periodical 'Spectrum of Science') published a special script 'Vom Quant zum Kosmos' (From Quantum to Cosmos) with diverse articles of famous scientists concerning these problems.

Again the history of Quantum-Theories is discussed, up to most new results. Here I will point out only one of these findings, concerning 'Bose-Einstein-Condensate', shown at the cover picture of that magazine. Author of the article is Graham P. Collins, editor of 'Scientific American'.

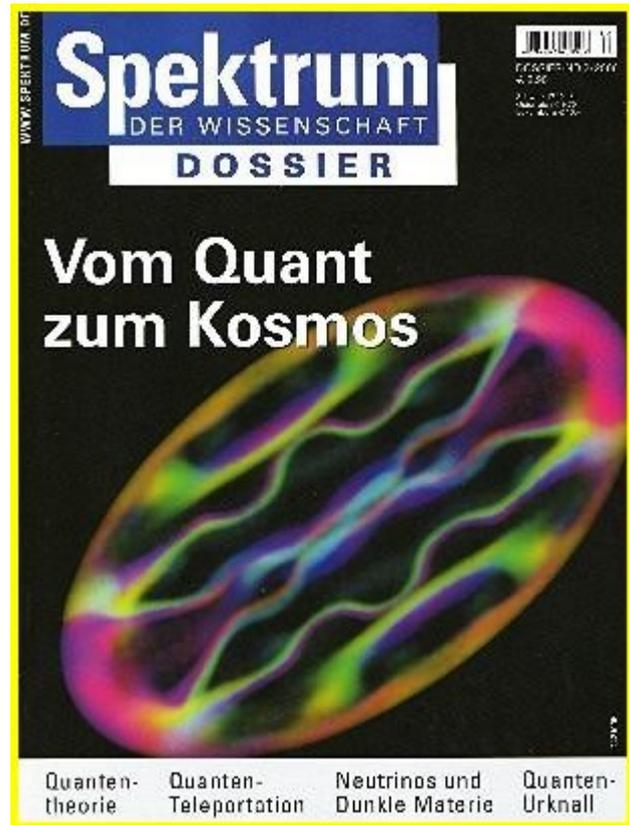
By common understanding, the structure of materia withdraws an observation based on 'unsharpness-principle'. At previous particle-accelerators, materia is 'bombarded' by most fast flying 'particles', so naturally no sharp picture of 'resting materia' can result. Opposite, if atoms are 'calmed-down' at its best, sharp picture of structures could result.

Just this is achieved by 'atom-traps', where the possibility for movements of atoms is limited at its best by laser-radiation and magnetic fields, so the atoms are practically cooled down to

minimum temperature. The atoms transmit into a status of gas-like condensate - and photos really show 'quantum-vortices', e.g. like the cover picture shows that 'physical state of plasma'.

That article remarks: 'In August 2000 Wayne Hu of Princeton University and his team suggest, dark invisible materia, obviously more than ninety percent of masses of the universe, could exist in shape of Bose-Einstein-condensate by particles of very few mass. If this daring hypothesis fits, most cold gases would be most widespread same time'.

The temperature far out at the universe naturally is rather deep, because there are few 'particles' to hit onto a thermometer. Everywhere would be these 'gas-condensates', which now are assumed to show rather few 'masses' - because otherwise the common calculations again would not fit, based on too much 'invisible resp. dark' materia.



At these zero-point-experiments, condensates are to 'stir around' by laser and diverse vortices-pattern can be produced - and directly documented by photo-pictures. Indisputable there are no 'hard parts' to detect - and just at these condensates resp. by minimum temperatures anything hard or solid should 'crystallize'. Unmistakable Collins states 'the classic idea of atoms as particles, which meet like minute marble, fail for interpretation of these experiments in total'.

At this background it's really unbelievable, why researches still aim to find any 'particle' or masses, as all experiments lastly show nothing else than movements. However these experiments do not show the movement structures of atoms at all, but these pictures primary show motion pattern of atom-traps, i.e. their strong magnet fields in combination with laser radiations.

### **Ether and Movement**

These condensates also are not identical with the medium of these occurrences. So I can not accept the suggestion of many readers to replace the old fashioned aether by common term of 'Zero-Point-Energy'. The aether is the primary real substance, which is in motion within itself. The temperature (no matter of zero-point or of Sun's surface) is measuring the motion of secondary occurrences (so at level of previous 'marbles'). And 'energy' anyway is only a pure abstract term, not describing real facts.

The term of 'Zero-Point-Energy' again is a combination of abstract terms, thus is a senseless and content-less empty word. This term really represents the 'perplex astonishment of physicians', below zero movements of 'material movements' still exist motions on and on. This shows obviously, 'materia' is only a secondary occurrence, which can appear only at basis of a primary medium.

Who ever wants to talk about new worldview must refer to one - or preferably both - pillars of common physics, Einstein and Quantum-Theories. So do I, referring to Einstein's mature

statements: space without aether is unthinkable, the aether may not be assumed to exist by particles and the aether shows no 'normal' movements like known from the materia-world. In addition I refer to recent confirmations of Quantum-Physics, which could not detect any 'hard particles' of materia even at most extreme situations - but only they were able to find steady movements in most diverse pattern.

The common physics stick at a dead-end as long as sticking on particles and wave-particle-dualism. In addition, common physics stick at wrong ideas about movement-pattern, especially concerning 'waves' - like discussed next chapter.

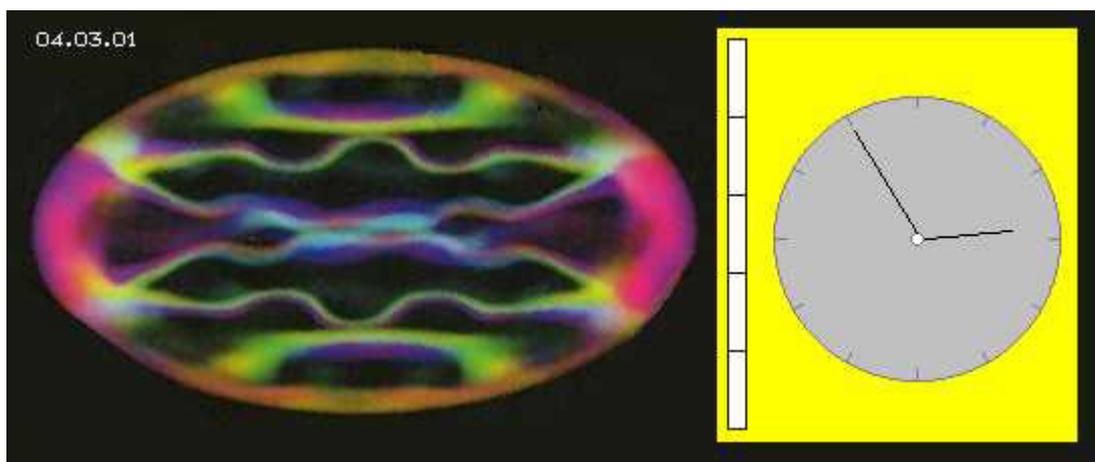
I am sorry these critics might upset some readers, however incomprehensibility and the paradox of Relativity- like Quantum-Theories 'shout' for understandable worldview. I won't go on with critics but I will point out the logic alternatives by simple words and clear defined terms. However, some geometric imagination is necessary to check the complex movement processes within only three dimension space. I hope my simple pictures and animations will help to visualize and understand the new ideas and processes.

### 04.03. Light - Aether

#### Real or Abstract

Once more I'll point out the difference between the real world and 'fictive comparison-worlds'. Picture 04.03.01 again shows the plasma of previous zero-point-experiments. Obviously one can see Something, 'wobbling' within itself, where no internal borders are to detect. This swinging-structure is produced by magnetic fields and laser and same time this photo is generated by that light. Laser radiations hit at different spots of different motions, are reflected differently, resulting this coloured picture.

If this 'prison' would be opened, the motions would take other shapes. That Something however would go on existing really. As upside assumed a plasma like this would exist within whole universe. I called that part-less Something a 'continuum' and named it 'aether' - however an appropriate term would be 'aether-plasma'. The substance outside of local movement pattern I called 'Free Aether' with its basic 'Universal Aethermovements'. These occurrences of local size (like at this picture or e.g. electrons or even galaxies) are called 'Bounded Aether', moving in shape of 'Potential-Vortices-Clouds'.



That plasma exists of one substance and one 'piece' of that substance is positioned directly aside next likely piece. Differences exist at different positions only concerning each present motions, which however run smoothly and are totally merging into another. As the aether is gapless, one can not talk about 'aether-particles'. Also previous 'piece' of that substance (or a portion of) is not really to divide by clear border lines. So I use the geometric term of 'aetherpoint' to observe the movements of aether at one spot. Naturally that substance has

extension (piece aside piece resp. point immediately next neighbouring point), not only within that small plasma-bubble but universe wide.

Any movement can not occur by shifting of parts alongside any border faces, but only by turning of one point around the other and all neighbouring points must behave analogue. Like this picture shows, only swinging and winding movements can occur, locally with differing intensity resp. at ways different curved. At the centre of a motion pattern the movements in general are relative wide and reduced towards outward to swinging movements at narrow tracks.

At this picture once more is drawn a clock and by comparison with its movements, e.g. the frequency of swinging movements of the plasma can be described. There is also drawn a scale and it's obvious, analogue to 'time', also the extensions resp. 'room' becomes measurable by comparison. That abstract 'world of space and time' (here marked yellow) are fictive man-made voluntary comparison-scales, while real existing is only the 'world of aether-plasma and its motions'.

Some readers will find annoying or unwitty as I point out the differences of real and abstract stuff on and on. However, the basic essence of all occurrences is not to detect by discussion with imprecise collective nouns (like practice at most sciences), but only by precise descriptions of properties of the basic substance and its motion pattern - because only that procedure can explain logically the 'laws of nature'.

### **Aether and Light**

Aether is transparent resp. invisible, at least the Free Aether, here e.g. marked by 'not-colour' black, and we can not see the aether motions. Some movement pattern however are called 'light' (e.g. previous laser-radiations) which are emitted by local movement pattern (as 'release of stress'). There are also lots of movement pattern which reflect radiations diverse kind (everything we can see by colours plus frequencies invisible for our senses).

Naturally many readers pointed to the fact, the aether was assumed to be the medium of light-propagation until disproved by experiments of Michelson and followers, so the 'light-aether' now is assumed not existing.

By common understanding, also other occurrences of electromagnetism do not necessarily demand the existence of a medium. The idea of 'fields' with their properties and effects are well known and calculations fit well to reality. Nevertheless one does not really know, why and how physical fields produce these results. It's absolutely right: 'light-aether' does not exist - because this medium does not only transport the light but is the real basis for all occurrences of the universe.

Besides previous difference of fictive world of comparison-measurements and real world of aether-plasma, once more is to differ into world of primary aether movements and secondary 'world of occurrences' resulting of. That difference becomes distinct when comparing the appearance of sound and of light.

### **Movement of Parts and Plasma**

At picture 04.03.02 the black colour represents a silent and pitch dark night. A car sends (by its battery) a signal of light and of sound same time. The light is to see many kilometres far and is spread or absorbed by particles of air only little bit. The energy of sound however 'falls flat' sooner or later, i.e. gets lost in shape of heat.

The sound is an occurrence of the particle-world. Based on mechanic movement (of a horn) a pressure wave is produced, particles of air transmit the impulse to each following particles. Based on chaotic molecular movements, this process comes ahead not straight line but by

zigzag. Based on molecular speed of some 0.45 km/sec results the sound-speed of only some 0.3 km/sec. Parts of the original impulses affect also into sideward directions, resulting that 'sound-cone' and finally total fading.

Opposite, the light obviously is hindered by air-particles only little bit and comes ahead 100.000 times faster - because that movement occurs directly within the aether itself. Naturally one could think, light (quants, photons, as particles or as waves) could fly through Nothing (like common understanding) and thus flies thus fast - if some strange phenomena would not exist.

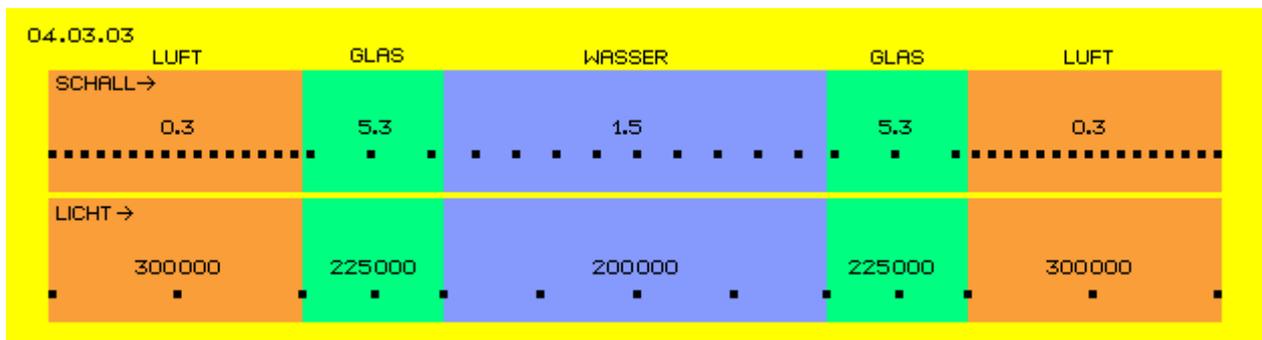


### Acceleration after Deceleration

Picture 04.03.03 shows well known 'Problem of Beer Glass'. The sound (German Schall) resp. the light (German Licht) are send via air (German Luft) into direction of glass (German Glas), penetrate the glass, runs through water (German Wasser), afterward again is moving through the glass wall and finally flying away through the air again. The speeds of sound and light within each medium are marked coarse by km/sec. Black points represent schematic the impulses. The distances between the points correspond to covered distance each time-unit (however relation between sound and light naturally is not true to scale). The spreading of sound here is not regarded.

The sound-impulse comes ahead within the air nearby these 0.3 km/sec. Within glass, the atoms are situated much more narrow. They are arranged neatly in 'row and line' within the crystal, so the impulses come along much faster by some 5.3 km/sec. Within that grid the atoms hang 'elastic', the impulses however partly affect aside and spread into sideward directions.

At following water, the molecules are much more slacked, so the sound impulses are delayed to some 1.5 km/sec. Nevertheless, the speed of transmission within next glass wall is accelerated again. Probably some parts of the sound-energy at the following will go on 'sneaking' through the air again.

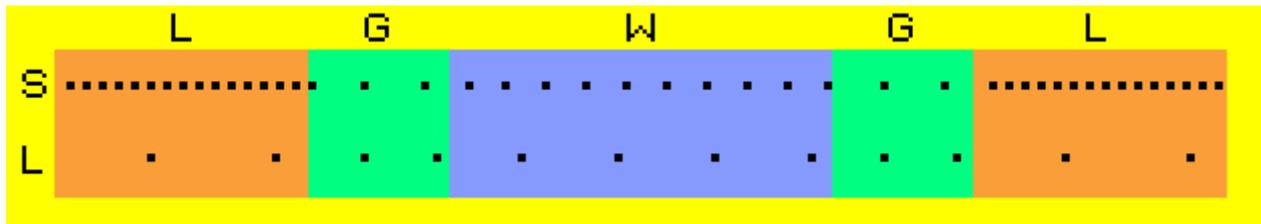


The propagation of light behaves opposite: the maximum speed comes up within air (or vacuum in sense of air-free environment) with these defined 300 000 km/sec, the speed is reduced within glass at some 3/4 and within water to some 2/3. Now the light is accelerated again within the following glass and air, without any doubts, nevertheless most astonishing.

That 'phenomenon of self-re-acceleration' conflicts with all rules of common physics, no matter the light is assumed to be a wave or a photon-particle, with or without mass. It's secrete of all physicians, how an impulse, reduced by a resistance to less propagation,

afterward could increase again to faster transmission by itself (and here I use intentionally these common collective nouns to point out that problem).

One can realize that fact of varying speeds by observing the way of one sound-impulse (S) and one light-impulse (L) at this animation. At the world of particles it's common understanding: obviously, a sound runs fast within a hard matter (glass G) and slower within liquids (water W). It's also easy to understand, if impulses are hitting again at a glass-face, the impulse again becomes faster running through the dense medium (because running more direct line). Later on the impulse is transported again some slower by zigzag ways within next air. That 'energy- and information-transport' via particles thus is common understanding.



As everybody knows (or believes) by common understanding, the light runs through a vacuum and needs no medium. The delay of light within areas of dense materia thus can be explained by the glass-grid representing some barrier. Never however is to explain the autonomous re-acceleration by common understanding of physics. Any acceleration inevitably demands additional energy input - and where from should that energy come?

Sound is motion of particles, impulses are running faster or slower, depending on the density of particles. If light however is assumed to need no medium, the density or void of material particles can show no affects. As reverse logic conclusion one could ask, why the light within 'pure vacuum of space' is running by a limited (light-) speed instead of self-accelerating up to unlimited speeds.

### Light-Medium

That phenomenon is only to explain by the assumption, also the light propagates through a medium, not at the level of particles like sound propagates, but within that (light-) aether itself. Based on the enormous speed of light was assumed (analogue to sound) that a light-medium must show enormous density. However now it was impossible to explain, how massive material should be able to move through a massive light-aether.

The general misunderstanding still is, any hard materia (like the earth or even like electrons or photon-particles) would fly through aether like bullets. Previous zero-point-plasma definitely approved, nowhere exists any 'hard-core' materia. There are 'frozen atoms' building plasma bubbles, which can expand even to millimetres - and nothing else is to regard than motions (at this case however primary the motions of that 'prison'). There is not aether at the one hand and materia at the other hand, but all stuff exists of the same substance of aether and is produced as occurrences by its motion pattern.

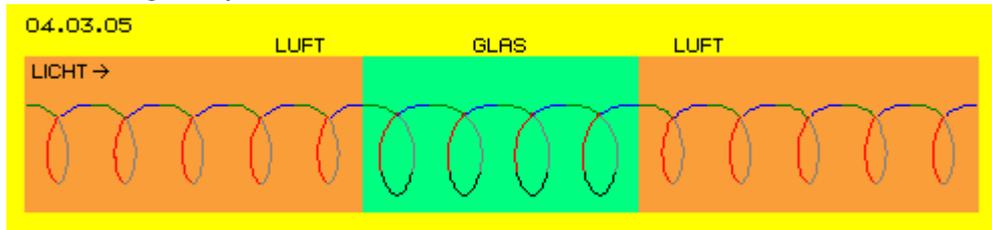
Everything is only some vortex within the aether. Only these vortices structures are moving through the aether. The propagation of vortices however demands the whole aether environment to move corresponding (only towards outside by decreasing intensity). This restructuring in front, aside and behind of the vortex can not occur timeless fast. Nothing is pushed ahead or aside by fast motions, but the speed keeps constant all times and only the ways of motions become wider (and more narrow again when the vortex did pass by). Thus no infinite fast motion is possible and e.g. also a light-vortex-complex can fly through the universe only by a limited speed. Above this, nothing can ever fly straight ahead. The light e.g. can move forward only by screw-like winding.

## Light-Loop-Tracks

At picture 04.03.05 very schematic is shown the track of a light-impulse (German Licht) through air (German Luft, red, resp. also through 'vacuum'), so through relative clear aether regions. Free Aether is swinging at relative narrow tracks, here simplistic marked as small loops. Bounded Aether like e.g. the atoms of glass (German Glas, green) move at relative wide curves, here schematic marked as some larger loops.

The decisive criteria now is, swinging motions of Free Aether like of Bounded Aether move by same speed, not by constant 'rpm' (resp. constant angles speed) but by likely absolute speed, no matter at wide or narrow tracks (thus by constant 'turning momentum'). Here at this picture for example, small loops are build by two sections (grey and red) and larger loops are build by three sections (grey, black and red). From loop to loop are sketched two further sections (blue and green). So at this schematic example, tracks within air and within glass would show a relation of lengths by four to five.

The source of light now impresses an impulse onto these swinging motions. That



impulse however can not run only into direction straight ahead, but must follow these loop-tracks, i.e. can come ahead only at screw-like track (which again is a very simplistic example, because all swinging motions walk into all three dimensions same time).

Within air resp. vacuum this light-impulse comes ahead relative fast, within glass however it must walk along 'longer deviations'. At both cases, the impulse by itself is moving same distances at likely time-units, however at tracks more or less directed towards forward (five narrow loops within air and only four wider loops within glass).

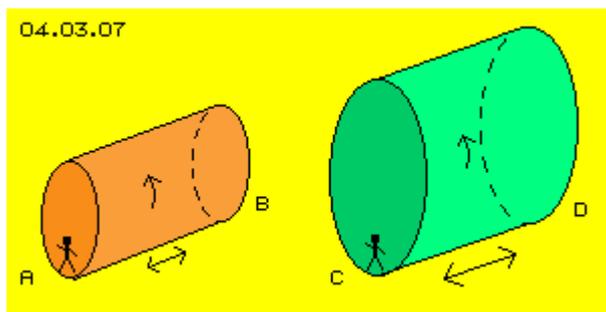
At this animation are shown three light-impulses resp. ways



they run each time-unit. These sections of tracks are curved different kind, theoretic however all sections are of likely lengths. Within air (red) the impulse jumps fast ahead, within glass (green) however it comes ahead slower because running at wider loops. At the transition from glass to air occurs no absolute acceleration of the motion, but now the light-impulse again moves at loops more narrow, thus jumping ahead faster. One can see that effect at its best when observing one impulse from left to right.

The light-impulse is 'riding' at the swinging movements of aether, coming faster forward at the narrow tracks of Free Aether and crawls ahead slower when forced to move at wide deviations of Bounded Aether.

Sometimes it's allowed to use most simple examples, even they are rather simplistic. This picture 04.03.07 shall visualize circled movements around a longitudinal axis, however combined with a movement into direction of that axis (like the aether all times is moving at curved tracks, i.e. is swinging into all three directions same time).



Two light-impulses are represented by two 'matchstick man', which shall move from A to B and from C to D. the length of their steps is constant. They have to walk through pipes, which are turning around their longitudinal axis (see arrows). The large pipe is turning slower than the small pipe, so the absolute speed at their circumference is likely. Each 'step' of the light-impulses thus will lead into diagonal direction (the matchstick man thus walks at a spiral tracks, corresponding to previous diagonal loops).

In addition however, these pipes move to and fro into longitudinal directions (see double-arrows). The large pipe also at this direction is moving longer distances than the smaller pipe (however both pipes still by likely speeds). So the right matchstick man within its 'coarse aether environment' moves at longer deviation stretches and will reach its aim later than the left matchstick man within its 'clean aether environment' - even turning- and longitudinal- and step-speeds are constant, only the distances of ways walked are different.

So this picture shows an example of three-dimensional movements. These presentations however are very simplified and real movements can be described precisely only at later chapters. Nevertheless these simple examples clearly demonstrate, previous phenomenon of autonomous re-acceleration is logically easy to explain, if a medium for propagation of light is assumed - and this aether-medium shows the properties claimed here.

### **Limits and Inertia**

Already in earlier parts I mentioned this equality of absolute speed within the Universal Aethermovement and the movement pattern of local 'Potentialvorticesclouds'. There I assumed the basic speed would be the 'light-speed or faster'. As now the signal-speed of light are maximum these roundabout 300.000 km/sec, the basic speed of aether movements should be significant faster (as all swinging motions represent 'deviations' into all three dimensions).

The aether nowhere rests and 'waits' for a source sending a light-impulse. The light-source by itself is a swinging vortex and around it, all aether is swinging too. So an impulse can never be generated running 'straight-linear-ahead', but all times can only be 'impressed' resp. overlaid onto already existing aether-swinging-motions.

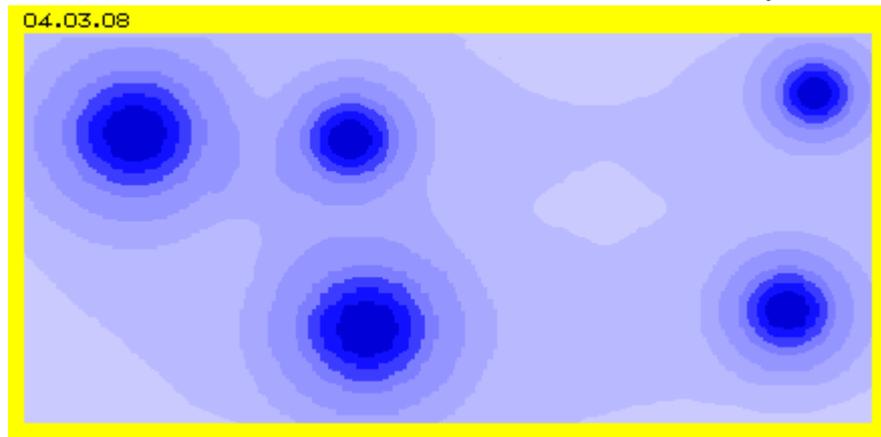
Each impression, and each change of aether motions in general, can not only concern one local point, but simultaneous whole aether environment is involved – resulting the speed-limits. Opposite, that 'inertia' means at the other hand, any impressed overlaying impulse goes on and on without losses (i.e. real energy-constant exists, by guarantee however only within that gapless aether-plasma).

### **Clean and Fine or Dirty and Coarse**

So based on these considerations (and many other scientists and authors) one must assume, the aether really exists and the light can propagate only via that medium. Above this one must leave the wrong common idea, here exists an aether and there exists material as two different substances. Never ever could be detected any 'hard core' of materia. By the gigantic particle accelerators like by previous zero-point-experiments lastly only pictures of movements could be registered.

For most people painful might seem this idea: there is nothing else than movements of only one medium and all variety of occurrences are only 'illusions' based on different pattern of aether movements. All aether universe-wide is moving by basic swinging motions. All local limited occurrences are vortices complexes of aether motions. Again however one may not think, there is Free Aether at the one hand and embedded some separated vortices systems of Bounded Aether at the other hand. Because everything is bound to anything quite substantial (by that unique substance), vortices systems in principle can not have fix borders (even some of appear like 'impenetrable hard materia').

At picture 04.03.08 voluntary are drawn some Potential-vortex-clouds. At each centre the swinging at wide tracks is marked blue, towards outward finer motions are marked by blue more light.



Common sciences knows various physical fields with different forces and effects. In reality, these are real movements of aether within and also around vortices systems. Here are marked these transmission areas of different intensity, which e.g. could result the occurrence of clusters within a fluid or grid-structures of a crystal.

This means, between atoms exists no clean shape of motions pattern of Free Aether, but only some kind of 'dirty' aether. Also around assembly of atoms, for example around whole earth, the aether moves relative 'coarse'. Gravity, earth-magnetism, manifold reflected radiations result unlimited overlays of swinging motions. Only far outside at the universe will exist Free Aether by pure shape of Universal Motion.

Depending on the 'pollution level' any light-impulse has to walk different long deviations. So at earth surface never can be measured the absolute maximum of light-speed and thus all measurements show different results depending on location and time. Only far outside within 'clean environment' the light will achieve its aether-conditioned maximum speed.

Motion pattern between vortices systems naturally are 'deformed' into prevailing directions. A light radiation won't come ahead straight line, but naturally will be bended somehow. Such an one-sided deformation near celestial bodies is called gravity - and perfectly natural thus the track of light becomes curved.

So the light not at all moves by constant speed, but depending on motion pattern rushed through resp. previous 'pollution level' at its way. The light not at all moves straight line forward but in principle at screw-like winded tracks, mostly even at most unlike sections, and perfectly natural each aether area of asymmetric motions results a corresponding changes of the track. At no case however anything can occur, also no light can occur, without a medium steady moving within itself.

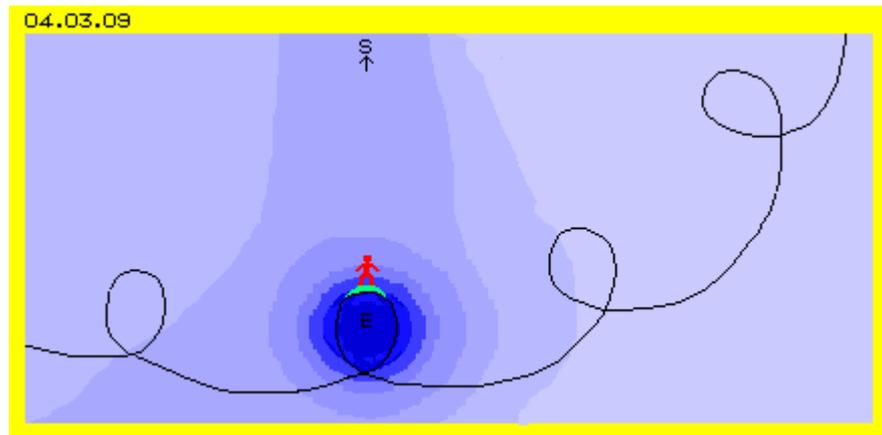
### **Proof of Aether**

The disappointing proof of light-aether by Michelson and followers was a totally wrong attempt, because based on a typical 'thinking-by-bullets': the material earth flies through resting aether, thus 'ears are buzzing by aether winds at the top of hills'.

At picture 04.03.09 I draw (likely naive) the earth (E) and a matchstick man (red). Around the earth the aether is multiply 'polluted', for example this man is pressed down at its green ground by asymmetric aether movements. Other 'pollution' keeps off harmful radiations, which especially come from the Sun (S, far upside of picture) by wild storms. The earth rotates around its axis and rotates around the Sun same time, so that ground plus matchstick man perform a journey through the 'space' (as fictive frame of reference) in shape of a looping track (black line).

Indeed, these motions occur in - nearby - resting aether. However all atoms of that ground and of that man and of all environment, the material occurrences there and the aether of that

area, all these various vortices systems plus the 'dirty' aether between are likely impressed by these both turning movements (and above this overlaid by the wandering of whole galaxy through the universe).



Every aether motion system there and additional aether between are deformed parallel to each other, show in common these overlaid turning impulses. Naturally one can send light impulse to and fro, longitudinal and cross - and will not find any difference, because naturally also that light must follow the general 'deviation' of that area. Within aether areas likely 'dirty' resp. aether motions deformed same kind, the light speed naturally is likely. Naturally exist differences between areas of different 'pollution', e.g. already some kilometre upward, see previous mentioned problems of GPS-satellites.

Within 'clean' aether out there, the light naturally will move faster ahead, like space-vehicle shows at journeys outside of the Sun system. Some 'winds' seem to decelerate their speed - however their signals could also become faster out there and thus some faster back home. Opposite, the light from objects far away had to run through many and diverse 'polluted' areas, so the signals become weaker and delayed, so 'red-shifting' appears (however, the measures of 'Hubbel-constant' vary multiple, even from same location). In general and in principle, one can not assume constant speed of light nor linear propagation - and at no case one can extrapolate relations of earth-surface into 'endless' wide universe.

Each light-impulse deforms intermediately the aether area it's wandering through - besides that case, when a local aether vortices system won't allow to be deformed, i.e. it appears impenetrable resp. visible for us. Totally analogue kind, all atoms of previous environment (ground, man, air and other 'dirt' there) deform the aether 'resting in space' for short time while wandering through the universe. Like light runs through aether as small vortices 'not to grasp' - same kind propagate all these complex aether vortices systems through the aether of the universe.

We all are 'not to grasp' because we are only a compound of swinging vortices within the aether. This might seem a hard idea, nevertheless just easy to understand - analogue to the swinging motions of previous pictures within the plasma-bubbles, high sophisticated approved.