With it we sign the *spacetime limit* of a body on the one hand, of a stable particle with its internal spherical radius $r_{ov} = 2R_{ov} = R_{ov1} + R_{ov2}$ (R_{ov1} as inner magnitude of amplitude, without index v as dilated relative magnitude R_{ov1}, R_{ov2} as vacuum sphere running along to the amplitude over the elongation) for example.

On the other hand, we also understand the objectively available zero point of a body under the *spacetime limit*, for example, the gravitational or the electric center (center of gravity) of a stable particle with r = 0 (seen from the outside) or R = 0 seen from the inside.

The radius $2R_o$, we can take as *world limit* and the radius R = 0 is then the *world center of gravity* of a stable and convergent world.

The external observer wants to change the coordinate origin of his coordinate system into the *apparent* particle center having to be described because of the real measurement. Actually, the internal observer living in this particle only uses local inertial systems. Consequently, he cannot measure the slightest excellent middle main emphasis of his world. For him, the subjective question for the center of gravity has no sense although it exists objectively. Then he only speaks - as well-known - of the singularity knowing as well as nothing of the objectivity. This status is finished here by recognition objective limits and references in vacuum!

If a spacetime is closed according to Einstein, the plausible opinion follows telling of complete curvature of ways and times. Therefore, we assert here that we have to distinguish between isolated waytimes and external waytimes. That expediency will have to be proved at the general relativity principle. Just the curvature of an isolated spacetime works out the being of isolated mass and with it the relative being in the sense of Special Relativity Theory because of the interactions of isolated elementary cosms. Outside the inferred spacetime, there exist neither the internally measurable system of coordinate curvature nor the measurement of special relativity! This means: internal distortions of Euclidean state till the complete curvature (of cosm) only can appear during measurement procedure at the inside of spacetime.

General Relativity Principle

„The main laws of physics have the same form for two observers being in an arbitrary movement state using arbitrary coordinate systems following from each other continuously ." (/Q 12/, page 164)

Really, an external observer has his own coordinate system of different curvature relations than an isolated observer locked inside! The isolated man calculates his world limit $2R_{o(GK)}$ on his isolated mass M_o. The external observer just measures the external mass m_o of the receptacle cosm in which the isolated observer is living, and he calculates the amount into a collapse horizon r_k, which is essentially smaller than the world horizon being measured from the inside! Coordinate systems of both observers curve reaching the isolation of spacetime completely but with different absolutely existing diameters of an Euclidean coordinate system even made above of both systems (uncurved, because not mass-forming or spacetime-forming – that stationary vacuum). Let's have an example with the proton. Its coordinate system reaches just to 4.2×10^{-16} m in its radius of its horizon (two times the amplitude $R_{o(p)}$). Additionally, the universe has a horizon of about 1×10^{26} m. The curvature of universal geodetic lines seem to be extremely small and nearly negligible. Both material coordinate systems of universe and proton determined of *movements* do **not** follow from each other continuously, because the proton system does not work out over its horizon of 4.2×10^{-16} m.

> A continuity of coordinate systems only is able to construct for two common external observers at least or two common internally isolated observer at least!

After this explanation the **term 1** would be responsible for relativistic change of way dilation and time dilation of muon relatively to its isolated oscillation while the **term 3** has to be valid for way contraction

and time contraction t_w of the „potential wave" of the muon on its flight. From this, we see that the term 1 aims on a different waytime than the term 3 namely on the dilation of the oscillator's oscillation waytime in movement direction r_i. All states have the relation r_v to the gravitational horizon or their movement state v_v. Then we sign the differences with indices (because of the length of indices we leave out the identification for vacuum). Here is the world formula:

$$ds^2 = \frac{dr_i^2}{1-2R_k/r_v} + r_t^2 (d\phi_1^2 + \sin^2\phi_1 \times d\phi_2^2) - (1 - 2R_k/r_v) \times c^2 \times dt_w^2 \qquad (2.8,21)$$

In each case one of both way steps dr_i or dr_w or of time steps dt_i or dt_w would be able to be exchanged over $dr_i = c \times dt_i$ or $dr_w = c \times dt_w$:

$$ds^2 = \frac{dr_i^2}{1 - r_k/r_v} + r_t^2 (d\phi_1^2 + \sin^2\phi_1 \times d\phi_2^2) - (1 - r_k/r_v) \times dr_w^2 \qquad (2.8,22)$$

shortened in symbolic of Lorentz transformation (as the real world formula):

$$ds^2 = dr_i'^2 + r_t^2 (d\phi_1^2 + \sin^2\phi_1 \times d\phi_2^2) - dr_w'^2$$

term 0 = *term 1* + TERM 2 - term 3

Cosmos-function in vacuum	= *cosm-quality* (relativistic)	+ RECEPTACLE COSMOS-OSCILLATION	- ***Wave quantum quality*** (relativistic)

The term 0 represents the real binding term, a united term, a universal term or term, which is valid in vacuum. With suppression of one or some of the four terms one can describe such states taking out from unity, which limits are determined by the other terms, one cannot notice with suppression of them.

If we suppress the terms 1 and 3, so the first context is given; in suppression of term 2 we find the second context of ds^2. Then we set both contexts into each other and we get the global context (dialectics).

First Dialectics of Unity

$$ds_1^2 = r_t^2 (d\phi_1^2 + \sin^2\phi_1 \times d\phi_2^2) \qquad (2.8,23)$$

$$ds_1^2 = r_t^2 \times d\phi_1^2 + r_t^2 \times \sin^2\phi_1 \times d\phi_2^2 \qquad (2.8,24)$$

term A + term B

The static value r_t is the same as the amplitude of receptacle cosm $R_{o(GK)}$. In this respect, we have to distinguish this amplitude from those amplitudes of the observed elementary cosm $R_{o(EK1)}$ and from the relatively existing elementary cosm EK2 and its influence to the clock EK1 over that collapse horizon $r_{k(EK2)} = 2R_{k(EK2)}$! While EK1 and EK2 influence each other directly in the form of their external mass by eq. (2.7,1) by influence their clocks themselves, the amplitude of receptacle cosm $R_{o(GK)}$ has its own going that is *separating* the isolated coordinate system of all isolated clocks (elementary cosms) from the external coordinate system. To do like this, one has to imagine the crossing from a coordinate system into the other one like the change from a three-dimensional system of waytime into a different three-dimensional system but which is connected with the complete separation of those dimensions. Therefore, we cross over a fourth waytime dimension **j** from one cosm into the hyperspace of the other receptacle cosm. Nobody needs to develop well four-dimensional theories, if we already must jump from a cosm to the other cosm over the fourth dimension j.

It is necessary to define that radius r_t as follows:

$$r_t^2 \equiv j^2 R_{o(GK)}^2 ; \qquad j^2 = -1 . \tag{2.8,25}$$

This is the **Oscillator Solution of General Relativity Theory** by specification of ds_1^2 to:

term A = term B = dR_{GK}^2;

$ds_1^2 = 2j^2 dR_{GK}^2$ = term A + term B;

from that arises the following eq. with a common phase course of cosm oscillation $\phi_1 = \phi_2 = \phi$:

$$dR_{GK}^2 = R_{o(GK)}^2 \sin^2\phi \, d\phi^2 = R_{o(GK)}^2 \, d\phi^2 \quad . \tag{2.8,26}$$

This solution differentially describes the oscillating (vibrating) receptacle cosm.

Second Dialectics of Unity

It is given the following eq.:

$$ds_2^2 = dr_i'^2 - dr_w'^2 .$$

The term $dr_i'^2$ has to be that dilated amplitude $R_{o(EK1)}$ of elementary cosm 1 in the proximity of the elementary cosm 2:

$$dR_B^2 = dR_{o(EK1)}^2 / (1 - r_{k(EK2)} / r_v) . \tag{2.8,27}$$

In the area of the field of elementary cosm 2, the amplitude dr_w of the wavequantum will be shortened at elementary cosm 1. The potency of radiation of a smaller wave amplitude increases relativistically in the case of approximation; each increasing of energy of wavequantum is connected to the supply of relativistic wave or kinetic energy:

$$dR_w'^2 = dR_{w(EK1)}^2 \times (1 - r_{k(EK2)} / r_v) . \tag{2.8,28}$$

From this, the second dialectics will result:

$$ds_2^2 = dR_B^2 - dR_w'^2 . \tag{2.8,29}$$

We see the following relations:

Condition:	Relation:
1. Vacuum in rest:	
$v_v \to 0$	
$r_v \to \infty$	$ds_2^2 \to$ const.$_i$ and const.$_w$ = const. or 0,
no change of step	
2. Movement to the vacuum limit:	
$v_v \to c_v$	
$r_v \to r_{d(EK2)}$	$ds_2^2 \to$ from const. running to ∞ and from const. to 0.

The steps will become larger, but they are limited by receptacle cosm, if that stability should be kept. Otherwise, they can grow as far as they can concentrate energy for dilation in receptacle cosm. Because the imaginarily observed body with the external mass $m_{o(EK2)}$ or the particle as elementary cosm 2 with calculated collapse horizon $r_{k(EK2)}$ with eq. $r_{k(EK2)} = G_v \times m_{o(EK2)}/c^2$, even is inside of the elementary cosm 2 within its real horizon $r_{o(EK2)} = 2G_v \times M_{o(EK2)}/c^2$. The collapse horizon r_k will be calculated imaginarily by its external mass $m_{o(EK2)}$, but it isn't from the real internal mass $M_{o(EK2)}$. While such an elementary cosm 1 is on its way to the apparent gravitation horizon $r_{k(EK2)}$ and hasn't reached it yet, it already dives below the real vacuum sphere of elementary cosm 2 in the form of $R_{o(EK2)}$ where the isolated mass $M_{o(EK2)}$ reveals a completely other world like this: one already has left the external coordinate system before one has just even comes to the proximity of the horizon r_k calculated from the outside! In this respect, every discussion is senseless about infinity relatively of approximation to some gravitation horizon r_o from the outside! Even at the assumption of a compact mass, one is mistaken because it does not concentrate like a homogenous mash in higher concentrations approximately to the black hole anymore but in pre-quantizing. Each quantum then does not follow the opinion of a simple compact mass anymore.

Generally we interpret now the result of Schwarzschild solution like this:

> During a time step, the way is dilated from dr_i to dr_i', the other way dr_w will be contracted to dr_w'. Altogether this way step ds as Pythagorean will be developed by both changes, and they will also have a dilation here while the equation part with term 2, the receptacle cosm, remains without touch of it.
>
> The variable ϕ in the shape 1 and 2 lets appear the receptacle cosm independently from oscillations of elementary cosms. In addition, to the receptacle cosm a constant amplitude-like radius r_t as $-R_{ov(GK)}$ is given

If the wavequantum radius R_w will differentially decrease, then the wavequantum energy E_w increases while the energy of cosm E_{Aov} will be decreased relatively to the resting position in movement for the observer moved along into E_{Bv}. We distinguish into six types of ways (distances) and times (steps):

r_i – movement way of elementary cosm in receptacle cosm; its amplitude shift.
Elementary cosm period time /2π: $r_i = R_{Bov} = ct_{Bov}$,
dr_i – one step in the sense of elementary, non-dilated oscillator elongation $dR = c\,dt$.

r_w - potential intrinsic twist way, wave amplitude shift of an elementary cosm,
wavequantum period time /2π: $r_{wv} = R_{wv} = ct_{wv}$,
dr_w – one step in the sense of wavequantum elongation $dR_w = cdt_w$ or a contrary step on the rotation radius dr_{rot}

r_t – intrinsic amplitude of receptacle cosm: $r_t = R_{ov} = ct_{ov}$,
half an electrogravitation radius $\frac{1}{2}r_{ov}$ = amplitude R_{ov} measured from inside;
dr_t – one step in the sense of receptacle cosm oscillator elongation $dR_v = cdt_v$.
Here dr_t is determined by phase steps $d\phi_1$ and $d\phi_2$ (see oscillator solution).

r_v – absolute distance in vacuum from the idealized collapse radius r_{kv}, which is just observed externally.
This radius r_v in divergence against infinity corresponds to the fiction of rest in vacuum $v_v^2 \to 0$. Reversed: $r_v \to r_{ov}$, $v_v^2 \to c_v^2$.

r_k – collapse radius. Each external mass m can be calculated according to Einstein with eq. (2.8,11).

s - corresponds to a shift in form of a step ds that is developed by all the other waytime-like shifts. It is a function of cosm in its movement.

Total relativity.

The oscillator solution of General Relativity Theory lets appear the steps of receptacle cosm amplitude in term 2 as two times dR^2:

$$ds^2 = dR_B^2 - dR_w'^2 + 2j^2 dR_{GK}^2 \ . \qquad (2.8,30)$$

Together all physical oscillation dimensions are derived from this waytime-like differential form now, for example, as development of energy:

$$1/dE_s^2 = 1/dE_B^2 - 1/dE_w^2 + 2j^2 /dE_{GK}^2 \ . \qquad (2.8,31)$$

Schwarzschild solution contains the Hamilton function in the shape of energy moved along E_B:

$$dE_B = dE_{Ao} \times (1 - r_{k(EK2)} /r_v)^{½}$$

$$dE_{Ao} = dE_B /(1 - r_{k(EK2)} /r_v)^{½} \qquad (2.8,32)$$

Why has Einstein achieved such a result? If we wanted to see only one aspect, we had to leave all the others out i.e. to set them to zero. Because from the sum of four square terms one cannot pull a common root without losing overview. So Einstein found a mathematical force to understand the matter as a system of these four terms. Obviously, the matter is programmed like this!

Who sets terms to zero without taking notice of the total context is mistaken at the world! The present opinion does just this – it is mistaken because of its incoherent relativity where the infinity doesn't have to move from limits of finiteness!

Certainly, we are permitted to neglect one or several of the four terms for discussion of the solutions. We then mustn't sink into an ignorance opposite to the finiteness of this world, however, because term taken off from the context lets calculate infinities. Already in system finiteness closes everything.

This means (calculated from amplitude to oscillation length): the amplitude R_B (oscillation length $\lambda_B = 2\pi R_B$) in the shape of r_i' of a moved stable cosm may increase as high as its waytime dilation until the external amplitude $R_{o(GK)}$ of its receptacle cosm is reached. If it goes higher dilated, it cannot leave the receptacle cosm by crossing its dimension.

Though the calculation or oscillation length λ onto its amplitudical magnitude R, a fiction remains measured with reality. While dilation of oscillation length λ_o to λ_o' a cosm cannot expand its amplitude R_o onto really R_o'. Doing this, it had to bend finitely much but extremely high amounts of isolated mass getting free. This is a contradiction. In this respect, the real amplitude of cosm remains the same. Only its oscillation length is shifted by which the external energy of the cosm is relatively decreasing:

The success of elongation R to the amplitude R_o is shifted over the shift of oscillation length λ_o waytime-likely (cf. (1.1,6) and (1.1,7)).

If one divides the oscillation length λ_o arbitrarily, may be by 2π, which should give the rest amplitude R_o, then one gets only parts of oscillation length. When we speak about an amplitude shift, then we mean the part of shifted oscillation length. The real expanding of mass doesn't follow after this formalism. Otherwise, a relativistic body had to blow out. Instead of this, it shifts the step of its clock waytime-likely by shifting the oscillation length λ_o and the period time τ_o.

This problem marks the shift of period time τ_o as well as of frequency f_o after which for every shifted oscillation length λ_o' is valid the same intrinsic phase angle:

$$\phi = \phi \times \tau = 2\pi \times f \times \tau = 2\pi \times f' \times \tau' \ .$$

Even then, if one writes the shifted magnitudes on the abscissa, one recognizes that the relativistic part of ϕ' cuts the non-relativistic ϕ:

$$\phi_{rel} = \phi \times W_{SRT} \, . \qquad (2.8,33)$$

Here the *relativistic phase angle shift* is resulting. This way, the elongation is dilated to the same real amplitude R_o but only from the phase angle. The amplitude of a cosm is the analogon to the intensity, which isn't able to be changed at a relativistic change. If we write here of elongation steps, then these are parts of steps in calculation of oscillation length.

Third Dialectics of Unity

$$ds_3^2 = dR_B^2 + 2j^2 \, dR_{GK}^2$$

$$dR_B^2 = ds_3^2 - 2j^2 \, dR_{GK}^2 \, .$$

With the constructed condition as follows

$$2j^2 \, dR_{GK}^2 < ds_3^2 < 3j^2 \, dR_{GK}^2,$$

the dilated elongation step of elementary cosm dR_B can increase to the elongation step of stable receptacle cosm dR_{GK}, more of it doesn't leave the receptacle cosm. Again the terms are to understand for themselves, and realistic solutions have to be found from single terms extracted the root. If there should exist a constructive giving that would make that the elongation step exceeding over the elongation step of receptacle cosm like at open cosm - at protocosms -, so the content opens itself by anticollapse into the above situated upper receptacle cosm is as follows:

$$2j^2 \, dR_{GK}^2 < ds_3^2 < k \times j^2 \, dR_{GK}^2 \, , \qquad 3 < k < g \quad . \qquad (2.8,34)$$

The number g describes the order of magnitude of the above situated upper receptacle cosm horizon. For example, a quickly moved graviton cannot overcome the limits of its proton. But an energy giving to the stable proton from the outside of about three times 90 GeV as pair forming energy (2.4,56) is able to form protocosm pairs inside the proton. Though the proton becomes to a super-unstable cosm seed, heavier than 270 GeV/c^2. These isolated protocosm pairs represent a surplus, which - as soon as it finds together – is set free to the outside as energy and which is also producing there electron pairs and charged leptons and neutrinos under the effect of „weak force" or rare effect.

The distribution of energy of Schwarzschild solution means in each reciprocal states:

Total energy relativistic $^{-2}$	= dilation state of moved rest energy $^{-2}$	-	contraction state of wavequantum energy $^{-2}$	+	receptacle cosm energy $^{-2}$

$$1 / E_s^2 \; = \; 1 / E_B^2 \; - \; 1 / E_w^2 \; + \; 2j^2 / E_{Ao(GK)}^2 \; . \qquad (2.8,35)$$

If we set the summands (seen as single) of this solution and of our specially relativistic energy understanding in a coordinate system of four quadrants (ordinate for one divided by energy square, abscissa for velocities in vacuum), though we already recognize the intersection points that sign the finite behavior.

This can be worked also for the respective honest behave of the energies. We have to type the specific parallels of receptacle cosms selected for the rest energies, which are always fundamentally lower as the rest energies of their elementary cosms. As a graphic solution the dilations of the kinetic energies E_B of elementary cosm then cut themselves there with receptacle cosm energy $E_{Ao(GK)}$. Though the expected **cut of finiteness** is graphically given in the formulae, which shows us the maximum velocity v_{max} next to the light velocity c_v just taking part with it at death and rebirth of receptacle cosm. If we prolong the maximum velocity vertically into the ordinate parallel, then we get the cuts of relativistic

energy E_A and of wavequantum energy E_w. This way, the magnitudes got their finiteness by the maximum. Also the wavequantum energy cuts the line of receptacle cosm energy $E_{Ao(GK)}$ how it also shows that there can never be a resting elementary cosm in its receptacle cosm.

Just like this, we can proceed with the amplitudical times t and the amplitudes R, which we draw on the ordinate. But on the abscissa, we sign the way of electrogravitation horizon r_o up to theoretical infinity (really we mean the comparison of oscillation lengths). Next to the theoretic gravitation horizon r_o of elementary cosm, the wavequantum amplitude R_w and the relativistic amplitude R_A will develop to r_o if in positive ordinate direction the larger elementary cosm horizon $2R_{o(EK)}$ wouldn't lay as parallel to the abscissa where it shows the border of coming into infinity. Totally above in positive ordinate direction is the receptacle cosm amplitude $R_{o(GK)}$ as a parallel to the abscissa where it shows the limit of dilation of movement amplitude of elementary cosm R_B. The lead to the abscissa cuts the wavequantum amplitude R_w and the relativistic amplitude R_A. Except for this, the wavequantum radius R_w cannot increase into the infinity at small vacuum motions of v to zero (then the elementary cosm would absolutely stand) because it cuts the receptacle cosm radius. Here, the inner finiteness has been described of the quality of the receptacle cosm!

Infinity does not exist for participants at death and rebirth, if the receptacle cosm gives its limit with its own amplitude of wavequanta and their relativity (that's stability). The finite distance of this cosm to a gravitational field has its cause in the omnipresence of gravitational effects, may they even be small. This finiteness reality limits the relativistic factor W_{ART} to a finite value that comes from the special receptacle cosm. From this reason, the divergences of wavequantum amplitude R_w and of relativistic amplitude R_A to zero have no real character: at a determined amount that is derived by the system of movement possibilities coming from the receptacle cosm to the elementary cosms, the real horizon of a mass collapse only can reach a finitely small value next to the theoretical horizon of r_o! Otherwise, the resources of the whole universe were consumed. For overcoming these limits, one had to find other solutions without respect of inertia.

These results should have come from the General Relativity Theory. Till now, nobody found any indications. The first essential condition of relativity results in this question: How high can the speed of a moved cosm be raised actually if the movement problem is actually able to solve in special relativity over velocity relations? The answer is given by general relativity. Velocity limit of an elementary cosm is where it exactly reaches that dilation, which corresponds to the elongation of receptacle cosm. The general relativity answers to infinity fiction of special relativity with a clear fact: everything is relatively finite!

Just therefore only one General Relativity Theory is able to unify those formulae of special and general relativity in one system of opinion. United field theory on hand leads to the aim. Following equations originate from the graphic solution. They represent the conditions of calculation of finiteness with eq. (2.8,36) to (2.8,41). Thus, the following terms are valid for the resting magnitudes of observed elementary cosm ($E_{Ao(EK)}$ or $R_{o(EK)}$), which is moving in its receptacle cosm:

$$E_{Ao(GK)}^2 = E_{Ao(EK)}^2 \times (1 - v_{limit}^2 / c^2)^2 \qquad R_{o(GK)}^2 = R_{ov(EK)}^2 / (1 - v_{limit}^2 / c^2)^2$$

$$v_{limit} = [c^2 \times (1 - E_{Ao(GK)}^2 / E_{Ao(EK)}^2)]^{1/2} \qquad (2.8,36)$$

$$v_{limit} = [c^2 \times (1 - R_{o(EK)}^2 / R_{o(GK)}^2)]^{1/2} \qquad (2.8,37)$$

$$r_{limit} = r_{k(EK)} / (1 - E_{Ao(GK)}^2 / E_{Ao(EK)}^2) \qquad (2.8,38)$$

$$r_{limit} = r_{k(EK)} / (1 - R_{o(EK)}^2 / R_{o(GK)}^2) \qquad (2.8,39)$$

$$E_{wmin} = E_{Bmin} > E_{Ao(GK)} \qquad R_{wmax} = R_{Bmax} < R_{o(GK)} .$$

with (2.4,46) and (2.4,45) follows:

$$E_{wmax} = \{E_{Ao}^2 \times [v_{limit}^2 /(c^2 - v_{limit}^2)]\}^{1/2} \quad (2.8,40)$$

$$E_{Amax} = \{E_{Ao}^2 /(1 - v_{limit}^2 /c^2)\}^{1/2} \ . \quad (2.8,41)$$

If special cosms with their magnitudes are known like universe (see section 4.5.) from them the limit magnitudes of velocity, maximum contraction of collapsing mass could be calculated and further conclusions of finiteness of waytimes could be taken. If one will take part at infinity in the eternal universe, one must exceed the limit magnitudes especially the limit velocity.

2.9. Oscillator-Solution (by ARCUS, 1986 and 1992)

Theses:

The general relativity principle would cause infinite relativity.

Antitheses:

We mean this principle even limits the relativity on finiteness.

From this follows *for coordinate systems resulting from each other non-continuously, both observers live inside of two different worlds in their respective coordinate system.*

This precise interpretation we will use to explain the closed (locked) curvature of a spacetime according to the principle of cosm oscillation as a closed world how it is possible to think the relationships of physical dimensions working between two worlds to zero. In the last section, we showed that the bridging of two worlds is only running over the imaginary size of j.

That is valid for electrogravitational matter that is caused on stable particles, which also can be derived into unstable states. For the stationary vacuum, we don't use the postulate of general relativity principle anymore in separating but in connecting way. Exclusively, the generally given vacuum can be a magnitude that is becoming an object at the outside of a world and which can be continued in relatively external space. This means for example that between the isolated inside of two quantized oscillating black-white holes is not feasible some common external relationship, which would make contact between the isolated physical events with exchange of physical magnitudes directly closing movement systems (these laws are valid everywhere in the same way). Briefly said: *In the continuous coordinate system of the stationary vacuum that is transferring its most general law (of physics) onto all the existing things, independent but completely closed coordinate systems exist with subordinated and concrete physical operations according to the generally valid laws.*

Theses:

Generally resting mass of a „black hole" would be working into the generally stationary field.

Antitheses:

The contracted and isolated resting mass of a Black White Hole externally only is working in minimum magnitudes untill it will be changed by elongation coming into its package (by condensation). Consequently, its coordinate system is moving back below the vacuum sphere that horizon is falling now to the inside after the oscillation. Outsides, a completely different quality of mass can be noticed, which is the oscillation energy of the total sphere Σ_o divided by the square of light-speed c^2.

Present conception of "black holes" in stationary form and of total action of its internal mass into the external spacetime is invalid! Instead of this hypothetical feature, we substitute the matter by a system

of hierarchies, which are consisting themselves of non-stationary black-white holes living in the stationary vacuum. Their inner matter gives information to the outside indirectly:

The external movement forms the external cosm momentum in which it represents the receptacle movement of all the internal moving matter at the same event, those movements are hidden from the identifications of the outside. Just electric interactions can inform over isolated movements analogously gravitational features.

This external cosm momentum determines the externally measurable mass m_o (cf. eq. (2.6,1)), but all the isolated mass M_o as expression of static gravitation charges – these are the isolated cosm momenta - and of dynamic gravitation charges (these are wave quanta and elementary magnets) will be locked below the gravitation horizon calculated from the inside!

> **You see, all the oscillation mass M_o is that cause of locking in the course of a general change of qualities!**

If there are two kinds of mass – gravitational resting mass and electromagnetic momentum mass – that find together the locking, though each mass itself works out the total curvature of its intrinsic coordinate system! Every isolated and gravitomagnetic momentum mass takes part at the curvature of its massive coordinate system. The sum of electromagnetic momenta allows a special solution – the radiation cosm solution as one of the Friedman solutions (see section 3.2.3, page 460). One could assume such divergently locked photon cluster, which one must see as a magnetic monopole pair with two magnetic charges oscillating themselves in congruence. Such a kind of special light worlds we sign as **Magon Pairs** or PK-magon pairs and abbreviate them as magnet-antimagnet.

Just the movement only is able to give a function to the interior as well as to the exterior with an intrinsic existence. The whole logic shows our objectively idealistic assumption: if a real primordial substance is moved, then it draws a real picture that then is becoming a real importance. Though a closed movement draws a mass into the matter and projects the totally transparent picture of universal movements to the outside while an open movement in our brains is thinking into the inside of matter, into chemical and physical real-processes (materially provable movements), and while the same open movement draws our soul to the outside into the nothing like this non-material state is seen by us (a projection to the outside that is not provable from the inside).

This point of view is radically consistently relativistic. It pulls a completely new judgment of the physical magnitudes within the solution equations of the Relativity Theory and the Quantum Mechanics. In this respect, it is the key to the unity of the theories and at the same event, it is the base of philosophy. On this fact, we will come back especially in section „2.12. Cosm momentum and *magnetic momentum*“.

The external mass m_o that is taken to the inside becoming there the mass M_o, contracts and starts collapsing at r_k. Below the divergence horizon $r_d = r_{o(PK)}$ that mass M_o is falling on, observed from the externally valid coordinate system. After reaching the amplitude $R_{o(PK)}$, this mass M_o changes its coordinate system by the imaginary number j. That mass M_o changes to the oscillation mass of the new quantum $M_{(PK)} = M_{o(PK)} \times \cos^2\phi$, which reflects the oscillation to the outside as that external protocosm mass $m_{o(PK)}$. Now that adjusted Planck quantum is oscillating on half a period $\frac{1}{2}\tau_{o(PK)}$ in the shape of a *protocosm* into downward elongation -dR and upward elongation +dR back to the quantum amplitude $R_{o(PK)}$. There the coordinate system changes under special conditions:

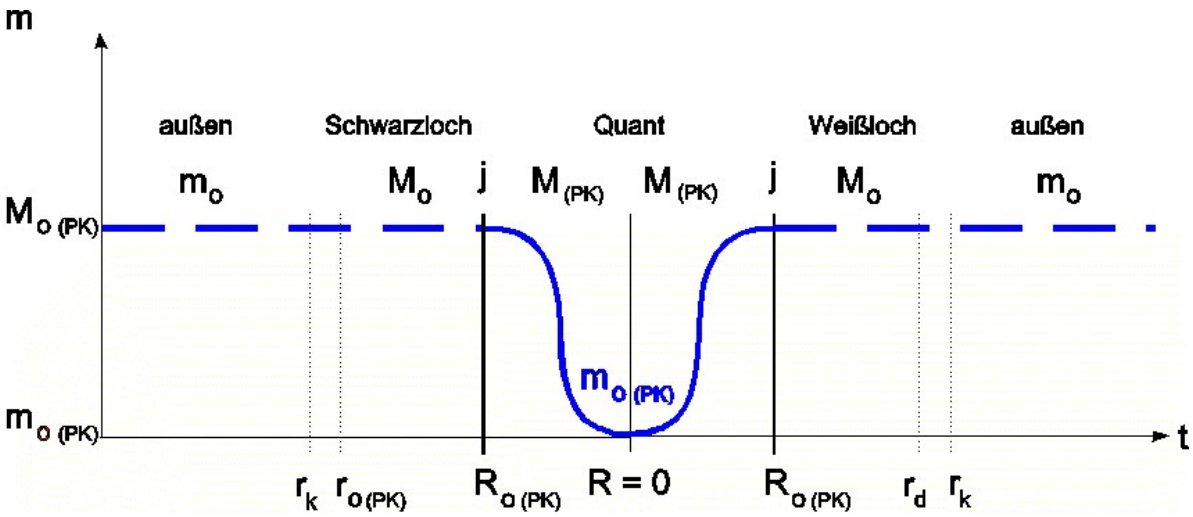
1. *Energy Shortage*: The internal energy accelerates the subprotocosms just as if they would be protocosms of a stable particle. In the result, the internal mass gets external because of its divergence after which a certain measurement of quantized radiation comes to the outside, but the internal structures don't have enough energy to pass the way out over the collapse radius r_k. Here we have a black hole that now and then emits rays into the course of its intrinsic period. Such a building is the PULSAR. Present explanations of the working of a Pulsar, we just cannot follow anymore in our theory of quantizations.

2. *Energy Stalemate*: The internal dilation energy can accelerate the topmost subprotocosms strongly that they survive the path below the collapse radius r_k without anticollapsing before. It doesn't require

any additional assumptions, because it certainly seems to be logical that in universe a complete palette of diversely energetic interactions will have led to the different celestial bodies. That pulsar will show a higher dose of radiation.

3. *Energy Surplus*: It can accelerate the subprotocosms of the topmost cosm sentences as strongly that those periods are dilated until they have exceeded the collapse radius r_k at least or even far away from this radius (in 2020 I called these special protocosms Energy Cosms). That white hole phase installs the externally known solar systems and galaxy systems. The central black hole system remains there, which energy is becoming impoverished during the procreation process of further ranks of protocosmic interactions until it passes over from energy stalemate to energy shortage. Such protocosms having energy surplus was produced in radiation fire. Therefore, from their external mass function $m_{o(PK)}$ will be set free essentially more internal mass $M_o > M_{o(PK)}$ than it is possible in relationship of stability assumption or in a undamped oscillation with eq. (2.7,1) and (2.7,4). …

Illustration 2.9;1: The Change of Coordinate Systems between Outside and Inside



Explanations from German: außen = outside, Schwarzloch = Black Hole, Quant = real Quantum, Weißloch = Whit Hole.

With the above mentioned three points we master the whole universe. Now we want to prove the oscillator inside the stationarity.

I. The observer “I” means that the relativistic effects would be able to be compensated with his view from the inside to the never reachable end of its receptacle cosm to $r \to \infty$, *practically in the pseudo infinity*. At the same event, his elementary cosm seems to rest in vacuum.

II. But if the observer “II” looks at one of his elementary cosms from the outside, then he is already separated by the radius r_o from each of these elementary cosms and their inner worlds. By the horizon condition it is already valid $t = +\infty$ (Kruskal solution, see section 3.2.2.). In this respect, he is not interested in the effects of his elementary cosms describing his receptacle cosm.

> Now the observer is allowed to do something that was caused with the general relativity principle from which he wins a new view at the hierarchy of cosms.

In this case, he suspends the generally valid relativity, because the spacetime of the observer “I” is not the spacetime of the observer “II”. Though every observer has his own relativity, so he relatively has his spatial limits being in his own world.

Therefore it is valid: $r_v = \infty \neq r_t$.

We distinguish between the pseudo-infinite coordinate r_v and the finitely determinable coordinate r_t that could be measured by the observer at his receptacle cosm or at one of his elementary cosms by exceeding or falling over the horizon limit of pseudo-infinity there, at the same event.

Consequently, every observer must define his ways. By reasons of definition of an amplitude R_o and its amplitude time t_o (both are equivalent over $c = R_o/t_o$) we give a definition like in eq. (2.8,25):

$$r_t^2 \equiv j^2 R_{o(GQ)}^2 \qquad \text{and} \qquad t_t^2 \equiv j^2 t_{o(GQ)}^2 \,, \tag{2.9,1}$$

The relativistic terms disappear, because the terms 1 and 3 are different of the external world. The equation (2.8.24) changes into the form as follows:

$$ds_1^2 - j^2 R_o^2 \cdot d\phi_1^2 = j^2 R_o^2 \cdot (\sin^2\phi_1 \, d\phi_2^2) \;. \tag{2.9,2}$$

That movement of R_o is determined from the magnitude or spherical coordinate ϕ_1.

Just now we already saw that the observer stays on an x-arbitrary point of an oscillating surface determined by ϕ_1. If there is a coordinate for him, then it is a polar coordinate ϕ_1 that says to him, he has arrived a determined elongative height. Above there, each position on the spherical surface has the same right. Because of the adjusting of ds_1 follows:

$$ds_1^2 = j^2 R_o^2 \times d\phi_1^2 + j^2 R_o^2 \times d\phi_1^2 = 2j^2 (R_o^2 \times d\phi_1^2)$$

$$R_o^2 \times d\phi_1^2 = R_o^2 \times \sin^2\phi_1 \, d\phi_2^2 \,. \tag{2.9,3}$$

We form a dR^2 from the left term of this equation and set ϕ_1 as ϕ shortened:

$$dR^2 = R_o^2 \times d\phi^2 \qquad \text{or} \tag{2.9,4}$$

$$d\phi \;= \pm \, dR \,/R_o \;. \tag{2.9,5}$$

Because of (2.3,2) the following relation is valid:

$$d\phi = \pm dt \,/t_o \,. \tag{2.9,6}$$

And now, we integrate it to:

$$\int_o^{2\pi} d\phi = \pm \, R_o^{-1} \int_o^u dR = \pm \, u \,/R_o = \pm \, \phi_o \;. \tag{2.9,7}$$

ϕ_o is then the maximum magnitude of the phase angle of 2π (cf. eq. (3.2.3,13) and (3.2.3,14))

This yields the following integrable basic equation:

$$\mathbf{dR^2 = R_o^2 \sin^2\phi \, d\phi_2^2 \;.} \tag{2.9,8}$$

It is extracted the root to this eq.:

$$\mathbf{dR = \pm \, R_o \sin\phi \, d\phi_2 \;.} \tag{2.9,9}$$

Assuming the phase angles of all oscillation elements of the sphere ϕ determined by R_o would agree in their common receptacle cosm, what they must, otherwise there wouldn't be any community:

$$\phi = \phi_2 \;, \tag{2.9,10}$$

we can integrate uncertainly and get four equations analogously to (3.2.3,25). With (2.9,10) the integrals of the unity of waytimes that reflect the WORLD FORMULA, have taken the following form:

$$R_I = + R_o \cos\phi + const_{(r)} , \quad (2.9,11)$$

$$R_{II} = - R_o \cos\phi + const_{(r)} , \quad (2.9,12)$$

$$R_{III} = + R_o \cos(-\phi) + const_{(r)} , \quad (2.9,13)$$

$$R_{IV} = - R_o \cos(-\phi) + const_{(r)} , \quad (2.9,14)$$

$$t_I = + t_o \cos\phi + const_{(t)} , \quad (2.9,15)$$

$$t_{II} = - t_o \cos\phi + const_{(t)} , \quad (2.9,16)$$

$$t_{III} = + t_o \cos(-\phi) + const_{(t)} , \quad (2.9,17)$$

$$t_{IV} = - t_o \cos(-\phi) + const_{(t)} . \quad (2.9,18)$$

Each of the involved waytimes oscillate according to such a principle that they form a space – the spacetime. Actually, we move us only within the single dimension WAYTIME, which one means to have the fourth coordinate today, but that is really the first and *the only one coordinate*, because our behavior to reflect coordinates in Euclidean systems was *unrealistic* under inclusion of the time grafted onto. The imaginary number j is just a sign of interpretation keeping mathematically exactly if a spacetime consisting of its waytimes has to be connected to another spacetime.

In this respect, the equations seem to be like the correlation result of Schrödinger's ψ-function, which came next to reality relatively to the sky waves. After that basic equation of a three-dimensional oscillation of something oscillating - namely $\Delta\Psi$ (Ψ = the anything moved in three-dimensional way and time) – the oscillation of a spacetime was recognized as the product of moved cosms without knowing more. This one is secondary because the primacy of waytime was disregard. We recognized the primacy of matter with the cosmological oscillation of all cosms on orbits, which describe areas, but they don't describe orbitals explained spatially.

The variety of all areas may form the orbit, but not reversed. Though the objectivity of spatially oscillating particles was mixed up with the wavequanta of moved particles. This means: Schrödinger anticipated the reality. An electron is forming the very first pre-step of a cosm but still no cosm. Only 7.8×10^{46} electrons are able to form a black hole, which would correspond to the radius of hydrogen atom. Consequently, the Schrödinger cosm is flat (it isn't still locked) – it is an *interaction area* in which the electron is rotating without observing directly.

The illustration 2.9;2 at page 367 shows the solution of positive phase angle. For negative matter, the negative phase angle is existing. The positive and the negative amplitude pointer $\pm R_{o(z)}$ is moved by $+\phi$ into the direction $\pm R_{o(x)}$ as well as it is also forced drawing the helix (P) because of the left rotation of the circle area $R_{o(x,y)}$ with $+\phi$. In total interval of phase angle, the running point P describes a closed helix – like the draw of a number 8 in spatial dimension seen from $r_{(y)}$.

The large axis of each ellipse described this way corresponding to the diagonal of a square R_{Go} because of the distance of the example $R_{o(z)}R_{o(y)}$. Starting from $\pm R_{o(z)}$, Goedel's radius R_{Go} moved with angular velocity ω is also drawing the rolling of the Friedman circle $R_{o(x,y)}$. Friedman radius R_o is given by projection of a Goedel-radius R_{Go} onto the x,y-plane. If one projects the running point P into this x,y-plane, then its point P' is drawing a circle of the radius $+½R_{o(y)}$ (= small half an axis of ellipse) exactly two times with the same right sense within the total interval of ϕ_o.

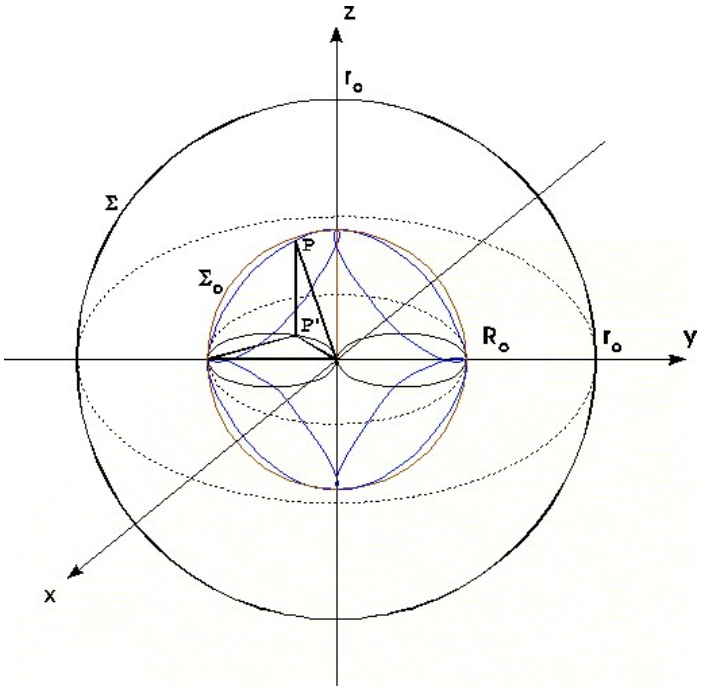
The radius $-R_{o(z)}$ moved along is also forming a double circulation with the right-directed rotation over a radius of $-½R_{o(y)}$ with its running point and its projection.

The distance PP' corresponds to the elongation ±R. After the law of Thales, the running point P' is drawing right triangles of the cathetes OP' and $P'R_{o(y)}$ and of the hypotenuse of the amount of $|R_{o(y)}|$. This right triangle made by the origin 0 and the points P and P' is congruent to the Thales triangle. Changing angles complete the proof. Therefore the variable triangles consist of the amounts of the cathetes R and R_2 and the hypotenuse R_o, where always is valid:

$$R_2 = R_o \sin\phi \quad . \tag{2.9,19}$$

That totally isolated event is locked by r_o or its vacuum sphere Σ. The movement of this right-directed matter (positive gravitation) is exclusively determined by $+\phi$. This $+\phi$ decides about space and time after making R_o, t_o constant! With $-\phi$ negative gravitation is given.

Illustration 2.9;2: Oscillator Solution – the World Formula in Illustration



We define both circles made by P' draw of the radius $±½R_{o(y)}$, which additionally yield the same perimeter like the Friedman circle as

Parity orbits (PB).

These are idealized arcs. They only appear exactly, if the mass density would be stationary and if then an element would be moved from R = 0 to R = R_o with vacuum light velocity. The way's length would have the magnitude of K_o. In reality, the non-stationary density makes moving in spiral shape. In the beginning, the density is extremely high but not infinitely high because of the discontinuity over the central mass negation. Also the orbit curvatures have begun extremely. A parity orbit therefore one has to imagine as spiral smoothed up to the circular arc.

Half a perimeter of the Friedman circle $u = 2\pi R_o = \lambda_o$ like half an oscillation length or calculated as half a period time, we define to K_o:

$$K_o \equiv ½u = ½\lambda_o \, . \qquad (2.9,20)$$

The same rotation direction of both parity orbits (rightly in direction of z-axis ≡ positive) is to interpret as positive gravitation by yielding to a dipole behavior of force rotating positive gravitation charges on them reflecting the attraction in the x,y-plane - a cohesion. The left-directed rotation led by the negative phase angle has to be seen as negative gravitation in dipole shape. Such cosms making negative gravitation hold themselves together - negative attraction. Because of eq. (3.2.3,6) it also gives the same structure to the electric cosms, but we know their dipole behavior from Maxwell's theory. So we must conclude: *contrary poles of gravitation generally repel each other*.

Because it is valid: if on both parity orbits two charges rotate with the common denominator of electric type in right- or left-directed rotation, then their poles of the common denominator of its dipole repel themselves on both sides of x,y-plane. We see the reverse processes that lead to the attraction; but we also know that the *contrary rotation directions are compensating themselves* in mathematical congruence.

Like we have the force defined as result of movement ($\pm\phi$), forces always compensate themselves if **contrary charges** of gravitational and electric origin are standing in the distance of zero or in relative congruence to each other. Mathematical congruence never will be complete (divergent congruence), if the spacetimes shall be moved on the same way into the same direction, because their own extension prevents the equality. The perpetual polarization follows from the divergent congruence.

From the compensation of the dynamic magnitudes, which externally diverge to zero, the vacuum state of the cosms can be justified. The compensation of dipole forces always then will be reached, if below of r_o the contrary cosms (cosms and anticosms) compensate their parity orbits and their force. Though vacuum cosms of primary type arise, which are consisting of the primary charges of gravitation and electrition.

The vacuum is the absolute space where relative spaces are possibly made from movements of cosms. Is there actually a body given, created with the absolute space, which physically earned the name "volume"; volume with all its thermodynamic consequences? No, it isn't. In vacuum, some measurement of some volume of a real physical phenomenon "particle" does not exist, where protocosms are moving, which firstly form out the secondarily relative intrinsic space of special types of cosms. During a *waytime-like movement of protocosm matter* in vacuum, one cannot speak of a change of volume of vacuum! This is senseless! In this respect, neither a universe expansion nor that contraction exist before protocosms tip out their contents at all!

The apparent amplitudical or the elongative volume V_o or V will be installed. It is named:

$$V_o = 4\pi \times R_o^3 /3 \, , \qquad (2.9,21)$$

$$V = 4\pi \times R^3 /3 = 4\pi \times (R_o \times \cos\phi)^3 /3 \, .$$

From this cohesion, the amplitudical or elongative density is able to be calculated:

$$\mu_o = M_o /V_o \, , \qquad (2.9,21a)$$

$$\mu = M /V = \mu_o /\cos\phi \, ; \qquad \cos\phi \neq 0 \, , \text{ (cf. (4.1,6) to (4.1,10)}$$

$$\mu = k_\mu /R = R_o \times \mu_o /R \, . \qquad (2.9,21b)$$

The cosm density is centrally installed and falls to the deepest value μ_o with the upward elongation $R \rightarrow R_o$. These magnitudes are idealized, because this theory only requires that they are related on elongations. But that elongation is running most subtly differentiated of the single elements of matter.

There are essentially denser areas where thinner spaces are connected. On average value, the density is then μ_o if the elongation has reached R_o de facto by running installation with $½\lambda_o/\pi$.

Each body installed by its protocosm consisting of cosms has its own waytime. After its installation, it radiates out and it receives in the momentum exchange of making the forces with intermediate electromagnetic and gravitomagnetic radiation. When the complete exchange of electrogravitational radiations has gone, it goes off of its installation place again. This means: between the installed bodies, which came from protocosms themselves and which now take contacts under each other in the installed receptacle cosm by radiation exchange, no spatial times exist but only waytime-like contacts.

One cannot take the concept of spacetime primarily. More the waytime is the primacy of formation of spatial contacting of a quantity of such bodies of spatial shape, those insides are only the same product of waytimes again.

In this respect, all the theories must lead to mistakes, which go up into a higher dimension instead of recognizing the reality of birth of three-dimensional spacetime $r_{(x,y,z)}$, $t_{(x,y,z)}$ from *one single dimension* and its exceeding of its limits in overcoming of the fourth dimension j. Because it may not be valid to cover the coordinates x, y and z being dipoles:

$$ds^2 = dx^2 + dy^2 + dz^2 - dct^2$$

(Minkowski spacetime).

Under such aspects, one always discusses separated terminologies like „way-like" and „time-like". With our definition of commonly observed installation waytimes or oscillation waytimes, the line element ds is always three-dimensional. From this the *„waytime-like" unity* is given as following:

$$dct^2 = dct_x^2 + dct_y^2 + dct_z^2$$

and

$$dr^2 = dx^2 + dy^2 + dz^2 .$$

Under this condition, the waytime $dr^2 = dct^2$ is equivalent to the three-dimensional „waytime-like" calculation of polar coordinate: the three-dimensional state is a fiction of the one-dimensional state.

Minkowski spacetime is better solved relatively by Einstein's spacetime. But it was mistaken interpreted in a rudimentary way of present physics under neglecting of coordinates by making dependent a sphere on dilations of local waytime and on contractions of wave-waytime. That sphere is even way and also time itself.

It is only allowed to see the relations between the movements of particles or of particle systems in the total system of all movements in spacetime without losing from the eye that here a unity is given, which adjusts their own ways and times on a common synchronized relation: **either both have dilation or both have contraction!** The way is a vector, because the movement direction in vacuum has an essential importance. According the equation

$$\boldsymbol{E} = \boldsymbol{F} \cdot s \quad ; \quad \text{F as force, s as way or distance,} \tag{2.9,22}$$

one can give the radial energy with force multiplied with radius as follows:

$$\boldsymbol{E} = \boldsymbol{F} \cdot R \quad . \quad \text{(/Q 5/, page 75)} \tag{2.9,23}$$

We can speak of *angular momentum vectors*, which quantize their energy magnitudes:

$$\boldsymbol{E}_{wv} = \boldsymbol{F}_{wv} \times R_{wv} \tag{2.9,24}$$

(as a reversible dipole),

$$\boldsymbol{E}_{Aov} = \boldsymbol{F}_{Aov} \times R_{ov} \tag{2.9,25}$$

(as an irreversible dipole – a monopolar phenomenon).

The *orbital angular momentum* I_B is equal to the effect in circular way $u = 2\pi r$:

$$\boldsymbol{l}_B = \boldsymbol{m}_A \times r^2 \times \omega \times 2\pi = \boldsymbol{m}_A \times r^2 \times 4\pi^2 \times f \ . \qquad \text{(cf. /Q 5/, page 328)} \qquad (2.9,26)$$

In our theory, each amount of an orbit radius r is then equal to a potent wavequantum amplitude R_w in development of $n\boldsymbol{\hbar}$ and $R_{w(n)}$; the rotations radius $R_{rot(n)}$ of that orbit must be coupled at the relativistic *movement mass* $\boldsymbol{m}_B$. The electromagnetic momentum of an elementary current circulating using the elementary charge e_o results as follows:

$$\bar{\mu}_{½(n)} \equiv ½\boldsymbol{e}_o \times r^2 \times \omega \quad ; \quad \bar{\mu}_{½(n)} /2\pi = \bar{\mu}_{½(n)} \qquad (2.9,27)$$

If I_B from eq. (2.9,26) corresponds to the wavequantum angular momentum I_B of the electron e^- then it is valid

$$\boldsymbol{l}_B = \boldsymbol{\hbar}_{½} \text{ or } \bar{\mu}_{½(n)} \ .$$

By eq. (2.9,27) one yields the Bohr's electro-magneton $\boldsymbol{l}_{½} = \bar{\mu}_{½}$ by substitution of all the wavequantum relations ($r^2 \times \omega/n$) and of shortening of special relativity:

$$\bar{\mu}_{½} = \boldsymbol{e}_o \times ½\boldsymbol{\hbar}/\boldsymbol{m}_{o(e)} \ . \qquad \text{(/Q 11/, page 185)} \qquad (2.9,28)$$

The cosm magnitudes of elementary charge and resting mass of electron remain in vacuum. The e. m. angular momentum $\bar{\mu}_{½}$ works out the atomic angular momentum of mass ½ħ (gravitational).

That electromagnetic momentum exists objectively really and it has two sides in our theory – one for the positive and one for the negative charge of waves $\bar{\mu}$. In this respect, it is vectorial.

A monopole mass $\boldsymbol{m}_o$ is effectively just as heavy as the complete effect of wavequantum masses $|2m_w|$ thus like the effect of the wave quantum mass (dipole mass) $+|m_w|$ or $-|m_w|$ because the negative monopole mass also fills up the field, but it remains irreversible. The same behavior is valid for monopolar rest energy E_{Ao} on which one has to calculate two equivalent wavequantum energies $|2E_w|$.

Like shown, the rotation direction in the direction of the vector is defined according the electric developed Stern-Gerlach knowledge of electrically determined momenta:

clockwise - positive,
counterclockwise - negative.

$\pm n \times \boldsymbol{\hbar}$ (bosons) or
$\pm n \pm ½ \boldsymbol{\hbar}$ (fermions) .

The electromechanic parallelism is always then correct when a mass rotation is coupled with a charge rotation spatially and firmly.

2.10. Harmonical Oscillation of Cosms

Theses:

Corpuscles would not oscillate themselves. Nothing currently indicates that they are oscillators.

Antitheses:

> Those formulae of vibrating systems well-known today change smoothly into the construction after which the isolated mass of a Black Hole is oscillating and by which it is able to be explained fundamentally as a quantized and non-stationary Black White Hole. Only then it represents a clock that is able to change its run into relationship to the vacuum. Stable cosms oscillate harmonically undamped. Unstable cosms follow the principle of a damped oscillation.

We choose an oscillation equation like this

$$\partial^2 R / \partial \lambda^2 = \partial^2 R / v_f^2 \times \partial \tau^2 \quad . \qquad \text{(cf. /Q 7a/, page 65)} \qquad (2.10,1)$$

Here in R is the elongation in a point of oscillation on the oscillation length λ or on its temporal analogon of period time τ, which yields again the wave length λ over the wave velocity v_f - here the vacuum light velocity c. We take the solutions of the oscillator of the externally single level of n = 1 in that form

$$R_{(t)}^2 = R_{o(t)}^2 \times \cos^2\phi \qquad (2.10,1a)$$

with a vectorial ϕ-installation (2.10,6). **This is the waytime-like formation of the cosm!** Four solutions follow from the cosine function (cf. eq. (3.2.3,24) to (3.2.3,27)); here for the way firstly:

1./2. $R_{I,II} = \pm R_o \times \cos\phi \quad ,$ (2.10,2) (2.10,3)

3./4. $R_{III,IV} = \pm R_o \times \cos(-\phi) \quad ,$ (2.10.4) (2.10,5)

If the following magnitudes are given

R_o	- way-like cosm amplitude = max. elongation,
R	- way-like elongation onto stationary r,
r	- general way coordinate in stationary cosm,
ϕ	- phase angle (in rad) corresponding (3.2.3,13),
τ_o	- oscillation time; period time; curved time,
f	- rotation frequency, frequency of a total oscillation,
u	- perimeter way of the unit circle of radius R_o or
λ_o	- oscillation length („wave"-length), $\lambda_o = u$,

then for harmonic oscillations of a field of spherical moved gravity centers, the system of equations (2.10,6) to (2.10,19) is valid as following:

$$\phi = \omega \times \tau_o \quad ; \qquad (2.10,6)$$

with

$$\tau_o = 1/f \qquad (2.10,7)$$

there ω is the angular frequency or the angular velocity how it is effectively given in the Friedman cycloid:

$$\omega = 2\pi \times f \quad . \qquad (2.10,8)$$

The radial oscillation velocity v_{gr} is relatively to the maximum $v_v = c_v$ that is possible on the passing of the unit circle perimeter u

$$v_{gr} = R_o \times \omega \times \sin\phi \qquad (2.10,9)$$

(index gr – group front of gravity centers of elementary cosms in receptacle cosm, which maximum takes the amount at crossing zero (limit R = 0)

$$c_v = v_{max} = R_o \times \omega \quad . \tag{2.10,10}$$

The oscillation velocity becomes the form like that

$$v_{gr} = c_v \times \sin\phi \quad . \tag{2.10,11}$$

Tangential velocity v_{ph} of reversed movement is calculated to the eq.

$$v_{ph} = c_v \times (1 - \sin^2\phi)^{1/2} = (c^2 - v_{gr}^2)^{1/2} = c_v \times \cos\phi \; . \tag{2.10,12}$$

It is valid now: $c = (v_{ph}^2 + v_{gr}^2)^{1/2}$.

Here the group of outermost protocosms (the top protocosms) is moving itself with the group or oscillation velocity to a radial maximum relatively to the radius while the phase is expressed by the radial tangential velocity v_{ph}, which takes light velocity c_{ph} on the amplitude R_o of cosm tangentially to it. With this process, the perimeter velocity v_u or v_ϕ isn't yet described whith that an elementary cosm had to be moved along holding on a circular way of the radius R_o (cf. (2.20,7)).

The actual acceleration has to be calculated with that eq.

$$a = dv/dt \tag{2.10,13}$$

as a deceleration, it is as followed

$$a = -R_o \times \omega^2 \times \cos\phi = - c \times \omega \times \cos\phi \; , \tag{2.10,14}$$

$$a_o = -R_o \times \omega^2 = - c \times \omega \quad \text{as the maximum of a,} \tag{2.10,15}$$

$$a = a_o \times \cos\phi \; , \tag{2.10,16}$$

$$a = - v_{ph} \times \omega \; .$$

A further calculation of a cosm resting in vacuum gives this eq.:

$$\lambda_o = c / f_o = c \times \tau_o \; , \text{ (equivalence of way-like and time-like state)} \tag{2.10,17}$$

$$u = \lambda_o = 2\pi \times R_o = \pi \times r_o \; . \tag{2.10,18}$$

Protocosms have a temporary vacuum sphere (cf. section 3.2.1.). Their unusual feature insists by forming no ideal but a substructured life. In this respect, they don't oscillate harmonically undamped like the cosms, but damped, and then they are not harmonical anymore. Protocosms only live for half a period. Their sub phenomena of their arisen life introduce the discontinuity of their oscillation function like it's known by Friedman solution (3.2.3,24). For the perimeter of a protocosm is valid:

$$u_{(PK)} = \lambda_{o(PK)} = 2\pi \times R_{o(PK)} = \pi \times r_{o(PK)} \; . \tag{2.10,19}$$

Relatively to cosms for anticollapsing and collapsing protocosms follows because of (2.8,7a):

$$\lambda_{o(PK)} = \lambda_{o(K)} \; , \qquad \tau_{o(PK)} = \tau_{o(K)} \; . \tag{2.10,20}$$

A protocosm only lives about 1π long. While the Friedman solution (3.2.3,27) adjusts on 1π for ideal, harmonical and undamped oscillation, the protocosm now has been opened with its intrinsic phase angle measurement. Usually, on the graph of this function (3.2.3,24) between 0 and π, the protocosm state decays. But the cosm does not decay, it locks its horizon r_o totally showed by the solution of (3.2.3,27). The measurement R_o as amplitude is the expression of the isolated intensity of elementary

cosms as well as of a part of the oscillation length λ_o or the perimeter u of unit circle, too. On the section R_o of λ_o, the **partial time** or the **amplitude time t_o** is valid corresponding to (2.3,2), (2.10,7) and (2.10,18):

$$R_o = c_v \times t_o \qquad R_{o(PK)} = c_v \times t_{o(PK)} .$$

Never a material element is moving to the cosm amplitude R_o during t_o, because all the waytimes are running curved after the oscillation length λ and the amplitude time τ. Therefore, the elongative real way is made from the amplitude $R = R_o$ to the central dot $R = 0$ with the average velocity v_r during the oscillation velocity v_{gr}. For the example of a cosm, the following eq. are valid:

$$¼\lambda_o = ½\pi R_o , \quad ¼\lambda_o / c = R_o / v_r$$

$$v_r = 2\, c_v / \pi \ . \qquad (2.10,21)$$

By this means, on the elongation way, a different time is given – the radial time t_r – relatively the part of period time $t_o = \tau_o / 2\pi$:

$$v_r = R_o / t_r \qquad t_r = ¼\tau_o . \qquad (2.10,22)$$

Extended with c_v we get:

$$c_v t_r = ¼ c_v \tau_o = ¼\lambda_o = ½\pi R_o .$$

$$t_r = \pi \times ½R_o / c_v = ½\pi \times t_o . \qquad (2.10,23)$$

The time t_r has no real importance. It expresses the radial velocity of lifting and sinking the amplitudical sphere Σ of the cosm from ($\Sigma_o = 4\Sigma$) that does not arise from radial movements but from arc-like movements of elementary cosms, which really do not form a sphere filled with mass but a flat rotation ellipsoid that well-flatting is not filled but funnel-shaped open. The original building of system orders in universe in our theory has the name **Double Funnel** (see section 4.10.)**.**

2.11. Particle Wave Cohesion

Werner Heisenberg (1901-1976) meant to have recognized in 1927 that it isn't possible to determine the location and the momentum of an electron with arbitrary precision (cf. section 2.4.). One called this consequence as *Uncertainty Principle*. From this, one concluded that electrons would have no determined orbits. For this reason, one completely did it without the broader analysis of the particle character and saw the electron as pure wave that should make a three-dimensional wave after Erwin Schrödinger (1887-1961). The solutions of his wave functions were called **orbitals**. This concept dating from the English implied the thought, on orbits although here actually the orbit of electron has been left an area of a lot of electromagnetic interactions by observation. Because of the low vividness of the model, finally one carried back the electrons as particles into this wave system and asserted now that the electrons have to stay in arbitrary areas of the wave spaces with a high probability. The square of wave amplitude would be a measure of the position probability of the electron (Max Born).

We short the content and number the statements:

Theses:

1. Location and momentum of an electron are inaccurate.
2. Electron paths would not exist.
3. Negation of the particle concept in favor of the wave concept.