

Gravitation

Einstein understood the matter as a type of energy ($E=mc^2$), as energy in “frozen” state.

Matter is in fact a crowd of energy charges in space; it is an energy heterogeneous space. Matter consists of energy hillocks and energy cavities.

Present text describes, how energy hillocks (energy heights) by force reflect one another and how energy cavities, (energy shortages, anti-energy charges) attracts one another.

Gravity is a difference between reflects force of energy hillocks and attracts force of anti-energy cavities, finding in a matter.

Matter is “a frozen” type of energy

$$E=mc^2$$

Understanding of mass as a type of energy, relives understanding the nature of the matter. Matter could be understood, as a type of energy, for instance like energy knots and energy whirls.

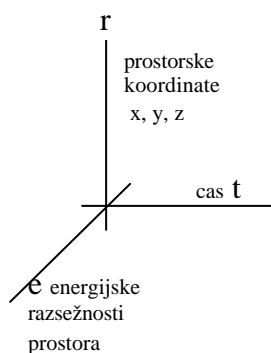
Energy is a property of space

In addition, the light, radio electromagnetic waves and other waves are also types of energy. We can also find electrostatics and magnetic fields as types of energy.

By applying the two magnetic parts in such position, that they reflect one another, I can push the second magnetic part by pushing the first one. There is a distance between them all of the time. Energy from the moving magnetic part is transmitting to the moved one, over the magnetic field.

Magnetic field is therefore a medium (type of energy in space) that enables transition of energy from one magnetic part to another one.

Energy dimensions of space



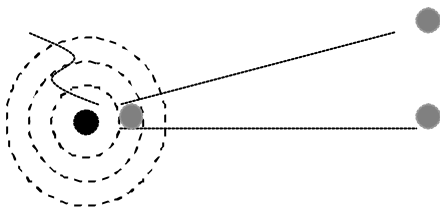
Energy diversity of space is possible, because space enables beside of three space dimensions (x, y, z), a time (t) as fourth dimension, also the energy dimensions (e).

Energy dimensions are jointed on shown coordinate system in axe (e), as the space dimensions are jointed on the axe (r).

In case of our sufficient mental sensibility and major conception on seeing five or more dimension's space, we should recognize energy like energy waves, like energy knots, like energy hillocks / cavities, like energy bulges / pit, like energy heights / shortages.

Energy hillocks and energy cavities

Dropped electron into atom's orbit causes:



- Birth of the photon (energy hillock), flying away in a space and
- Appearance of bounding energy in form of caught electron (energy cavity).

The photon and the bounding energy appear in pair. They did not exist before the electron drop in the atom's orbit.

Bounding energy

The electron cannot run away from the atom's orbit, because bounding energy him falls into captivity. Just an external energy can liberate electron from slavery, from energy cavity.

Electron can live atom in case of getting from somewhere the missing energy. The photon can for instance come back, runs into electron and beats it out of the atom's orbit.

The photon and the bounding energy in this case annihilate. The energy hillock fills up the energy cavity. After beating out the photon the bounding energy and photon despaired, they do not exist any more and the electron becomes its freedom.

Anti-energy

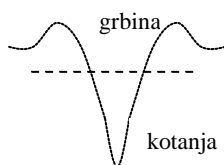
Because of the better and easier understanding of mass properties, I will use the term "energy" for positive types of energy (photons). For energy cavity (binding energy), which is actually an energy deficit, a negative type of energy, I will use term "anti-energy".

Anti-energy has it's autonomy

In the atom, beside the photon and the bounding energy, there is also energy, coming out of the mass of atom's nucleus and the electron's mass. Although in the atom exist positive type of energy (mass) and energy deficit, negative type of energy (in form of binding energy), they do not mix, they do not annihilate.

"Breaking of space" is splitting "nothing" in mass and anti-energy

In addition, the neutrons and protons in atom nucleus also bandaged bounding energy. The atom nucleus consists of energy, coming out from its mass and anti-energy coming out from bounding energies.



Similar principle we can find also in still smaller parts, for example on quarks level. Dr. Albrecht Giese¹ finds out, that matter comes out from phenomenon, called "breaking of space". Breaking a space could be a whirling of energy.

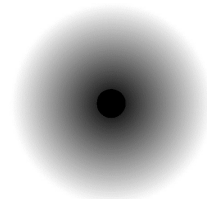
¹ Dr. Albrecht Giese - Relativity without Einstein (www.ag-physics.de)

Energy whirl (energy knot) splits a neutral space through energy dimension in energy hillock and energy cavity, as shown on the figure. From an energy neutral space, from a space without energy and a mass, we get energy and anti-energy, what we can see as matter.

Axioms of the energy dimensions

What for a fundamental principle of space energy dimensions defines mention energy and mass occurrences ?

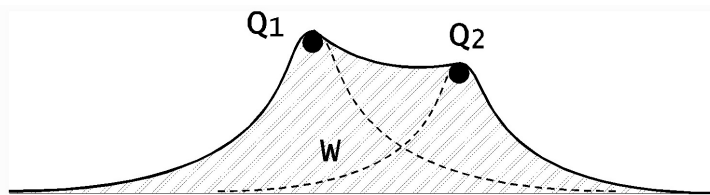
Let it be energy singularity for our needs in point concentrated energy, for instance a tiny mass part. Energy singularity can also be the electric charge (Q) and electrostatic field around it.



Electrostatic field around electric charge takes a state with minimal energy. Our expectations and measures show us, that energy density (and at some time electrostatic field density) is reducing in accordance of square on distance from electric charge.

At other types of energy singularities, I can see the equal rules. I am therefore forming further investigation on foundation that density of energy field around each sort of tiny energy singularity is reducing in accordance of square on distance from singularity.

Nature has tendency towards minimal energy also in case, when we have in proximity, one by another, two energy singularities. Energy takes as small as possible energy, within possibilities, as well in this case.

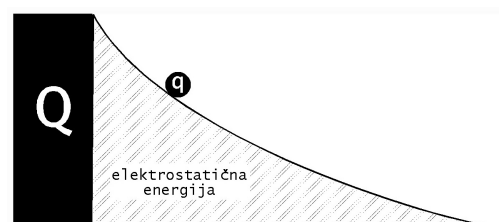


Approaching the two electric charges of the same kind (Q1, Q2) is possible by addition of energy from outside. Digressing of two electric charges causes reducing their and surrounded

electrostatic field energy.

Nature enforces tendency towards minimal energy by repulsive force between the electric charges.

Force is an instrument in nature for minimizing the energy. Force is a mechanism, which moves or tries to move things through the space. Force is therefore a mechanism for reducing energy.



Let us assume an electrostatic charge (Q), surrounded by electrostatic energy. On different distances from the electrostatic charge, there is a different energy field density. Gradient of the energy field density we can assume like an energy inclination, like an energy-hill, like energy-curved space.

Force drives another energy singularity (electrostatic charge) in direction of smaller energy on this energy inclination.

Energy field speed is limited. Limited speed (light speed) of energy field takes a consequence that we can remove energy singularity by pushing for a short time from a center of its own energy field.

We do not know origins of energy dimensions axioms .

We recognized properties of energy dimensions by experience. We do not know their origination. Further, I will simply take them like energy field axioms.

Mass singularity properties.

Matter (by Einstein) contains a lot of energy ($E=mc^2$). Mass particle is therefore a strong energy singularity. In the mass particle surrounding, we can therefore expect a strong energy field.

Closeness of two mass particles (i.e. energy singularities) should have, by written energy field axioms, causes a strong reflection force between them.

Experience shows attracting force between mass particles, not reflection force. For complete understanding of mass properties, I must therefore understand anti-energy and belonging anti-energy's fields.

Large quantity of binding energy, i.e. a lot of energy deficit or a lot of anti-energy in the mass particle, has to be considered. Mass is in same time energy and anti-energy singularity. In mass surrounding, I can expect so energy like anti-energy fields.

Energy dimensions axioms are also anti-energy axioms .

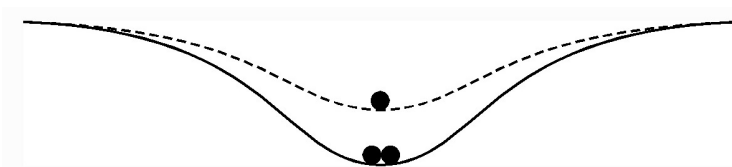
Terms energy and anti-energy describes the same thing on different sites of energy axis in coordinate system. Term energy is used for positive values of energy and the term anti-energy is used for negative values of energy on space energy dimension.

By changing the origin where energy is null, some of energies could become anti-energies and vice versa.

Anti-energy is therefore the same like energy. Difference between them is in sign (+/-) regarded to null value of energy. That is the reason why they have common energy axioms.

Anti-energy's field sets up attract forces.

By closing up the two anti-energy's singularities, when they come closer and closer, their common anti-energy singularity is growing. Each of singularity, one because of the other, is by approaching falling in deeper and deeper anti-energy singularity. Closing up the two anti-energy singularities, cause falling the both of them in still deeper singularity, in still deeper anti-energy.



Closing up the two anti-energy singularities means therefore decreasing of energy (anti-energy is growing).

Decreasing of energy is

happening in tendency of motion the nature towards lower energies.

Closing up of two anti-energy singularities the nature therefore rewarded with attracting force.

Black holes

Mentioned tendency of deepening and self-growing the anti-energy singularities is on first site unexpected.

Generally, we should expect leveling of energy hillocks and energy cavities on principle of entropy, but it is not true in this case. Phenomena in space, like black holes for example, legalize nature tendency of searching for a way towards dipping of anti energy singularities.

Black hole is an anti-energy (and energy) singularity. Potential energy is an important contribution to quantity of black hole's anti-energy. Potential energy is the way on black holes for catching and holding the mass and the light from universe.

Black hole is growing like mass singularity. Black hole singularity by catching the mass from universe becomes dipper on a present way, on a principle of closing up the two anti-energy singularities.

Gravity is a difference between energy and anti-energy force.

Two forces affect the two mass parts in neighborhood.

- reflect force of (positive) energy singularities inside the masses and
- attract force of (negative) anti-energy singularities of the same masses.

Attract and reflect forces are not distinguishable. They effect together as gravitation, as a sum of attract and reflect force.



As shows the measures of gravity, attract force is stronger than reflect force. It means higher anti-energy quantity in

mass part in comparison with energy quantity.

Energy coordinate origin

We can choose zero level on space (x,y,z) and time (t) dimensions (on axes of coordinate system). All zero level determinations are not the equal, because some of them relieve our understanding of occurrences, other brings us troubles in understanding.

In case of defining zero level on energy dimension (on energy axes of coordinate system), we come across more limitations. Gravity measurements exactly separate quantity of energy on positive and negative site of the energy axis. From this statement outcomes definition of energy coordinate origin, where energy level is equal to zero.

We cannot measure where on the energy axes is placed zero energy level. An empty space is feasible and believable zero energy place; places in universe, where energy level is equal to zero.

Universe could originate from nonmaterial starting-point.

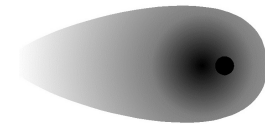
Common quantity of energy at mass and energy processes stays the same, is not changing. That is a reason why there is producing (or disappearing) the equal quantity of energy and anti-energy in pair in each such process. Consequently, we can expect energy and anti-energy balancing.

Although the energy in comparison with the anti-energy is not totally balanced in the mass particle, in total universe is expected balanced energy and anti-energy. In universe, there exist also different energy waves (light), which could present missing energy in mass particles and clear up differences between energy and anti-energy in mass, that provoke gravitation.

Sum of energies (together with anti-energies) could be zero in empty universe before big bang and could be zero today. Big bang could happen without initial energy or mass, considering all psychical principles.

Mass

In my mind, I speed up the mass particle (energy singularity). Energy field, belonging to singularity, comes after new singularity location with delay. That is a reason why energy field, belonging to singularity, is elongated. By acceleration, we displaced the centre of singularity from its own energy field.



Energy field responds on push in two ways. Field creates opposite force, which wants to holds the singularity (mass particle) on the same position i.e. in the middle of singularity. At same time, energy field begins with moving on new position around new location of mass particle.

Newton uncovered, that mass particle resists to acceleration with force, which is equal $F=m \cdot a$ (force is mass times acceleration)

Gravity means subtraction of energy and anti-energy forces, mass means their additions.

Attraction gravity force of two one-pound masses is small. The force that resists to acceleration is much stronger although the both forces come out of the some energy fields.

Gravity means different direction of energy and anti-energy force. That is the reason way they subscribe, one from another.

In case of acceleration there is different situation. By acceleration, we dismiss mass particle so from energy field, like from anti-energy field. By acceleration the both fields follow the new location of mass particle; therefore, the both fields in harmony together obstruct moving. Energy and anti-energy forces are summarizing.

In case of the mass rotation, the centrifugal force outcomes from permanent radial acceleration and at the same time permanent removable its energy singularity from its own energy field.

Gravity force is approximately equal with it's mass

Physics found out, that gravity force is equal to $G \cdot M \cdot m / r^2$, where "G" is gravity constant (6.6 10-11 Nm²kg⁻²), »M« and »m« are masses, "r" is distance between them.

In this equitation, gravity is reckoning from the mass, what is not in coincide with earlier recognitions. Gravity is proportionally with difference between energy and anti-energy, not with sum, reflected in mass.

Gravity equitation is not exact, but acceptable, because proportion between energy and anti-energy is in different types of matter is relatively constant. Proportion between energy and anti-energy is not absolutely the same, what we can see in isotopes masses; therefore, also gravity equitation is not exact.

From the book
Fizika in metafizika (in Slovene)
www.omnibus.se/beseda/