

# All Energy Hypothesis

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## Abstract

Everything is a state of energy. Energy can influence each other, their relationship can be attraction, mutually exclusive or no affection. Space is kind of energy, it can be consumed and generated. Space consumption causes gravity.

## Hypothesis

- Everything is a state of energy

There are many forms of energy: particles, rays, fields, etc. They are the smallest constituent unit and cannot be divided anymore. They have no structure or even volume, they are just pure energy existing. Energy can be consumed or converted.

- Repulsion of Energies

Some energies may be repulsive, especially between the same kind of energy. Please imagine that if the same energies are not mutually exclusive when they meet, then they are very likely to fuse into greater energies, which would be found out by us already. The distance maintained by the same energy due to mutual repulsion is expressed as its magnitude. The mutual repulsion of energy is usually manifested as the particle nature of matter.

- Attraction between energies

Some energies may be attracted to each other, for example protons and electrons. Attraction makes energies meeting. Energies match others randomly. If the combination of energies is stable, they will keep staying in this form, or they will separate then meet other energies. Stability is a very important guideline. Stabler combinations displace the less stable ones, that is the essence of chemical reactions. Apparently, electron-proton structure is stable. The bonds keep molecules connected as a piece.

- Overlap of energies

There is no attraction or repulsion between some energies. They don't affect each other in any way. When they meet, they can overlap. They can go through each other without obstruction. The overlap of energies is usually manifested as the wave nature of matter.

- Space-Energy

Assuming space is also a form of energy. When a void exists, Space-Energy is put by repulsion to fill the void. The pattern of movement of Space-Energy is similar with the movement of gas moving to a vacuum, from a high-density place to a low-density place.

- Production of Gravity

Assuming there is a force field around the nucleus of an atom, this field prevents electrons from getting into the nucleus. But the electrons still can get in the nucleus under a certain probability. As soon as an electron breaks through the field, the electron will be teleported out of the atom. This teleportation consumes Space-Energy, and the Space-Energy will be extinguished with a void appears. The void will be filled by other Space-Energy immediately.

The space around the atom is constantly annihilated, and is immediately replenished by the nearby space. The movement of space carries everything in the space to the center of the earth, so we feel that we are pulled to the center of the earth by gravity. In essence, the space under our feet is decreasing, and we are carried down by the space above our heads.

Gravity is acceleration. Gravity is a side effect of atom exiting.

## Calculation of gravitational acceleration

Because gravity is generated by the annihilation of space, as the quantity of atoms is constant, the annihilation of space is constant, and the amount of space flowing to the substance is stable as well.

The annihilation of space is proportional to the mass. Presume there is a Mass-Space-Rate (MSR) in units of ( $m^3$ /gs), stand for the space is annihilated by 1 gram per 1 second. Then the total amount of spatial movement produced by a certain mass is:

$$M \times MSR$$

The total amount of moving-space through the SPHERICAL-SURFACES, which revolve the substance as the center, is equivalent. As the area of the SPHERICAL-SURFACE is larger, the intensity of the moving-space is smaller. If the distance from a point to center of sphere is "r", then the moving-space intensity at the point is:

$$A = \frac{M \times MSR}{S} = \frac{M \times MSR}{4\pi r^2}$$

For the purpose to calculate the acceleration between substance 1 and substance 2, we should add the accelerations of both:

$$A_{12} = A_1 + A_2 = \frac{M_1 \times MSR}{4\pi r^2} + \frac{M_2 \times MSR}{4\pi r^2} = (M_1 + M_2) \times \frac{MSR}{4\pi r^2}$$

$M_1$ ,  $M_2$  and  $r^2$  mentioned here are variables, the others are constants.

Assuming the  $M_1$  is the earth,  $M_2$  is the observation object on Earth,  $M_2$  is small enough to be calculated negligibly. The acceleration calculated by the method of spatial motion is:

$$A_{Earth} = \frac{M_{Earth} \times MSR_{Earth}}{4\pi r^2} = g$$

As we already measured,  $g=9.80665$  ( $m/s^2$ ),  $r_{Earth}=6371$ km,  $M_{Earth}=5.97237 \times 10^{24}$  kg, so we can calculate and get:

$$MSR_{Earth} = 8.37527 \times 10^{-13} \text{ (m}^3\text{/gs)}$$

Presuming the Moon, Mars and Mercury's elemental compositions are similar to earth, we can use  $MSR_{Earth}$  to calculate their gravities.

Moon:  $M_{Moon}=7.3477 \times 10^{22}$  kg,  $r_{Moon}=1737.1$ km, then we can get  $A_{Moon}=1.6229$ ( $m/s^2$ )

Mercury:  $M_{Mercury}=3.3022 \times 10^{23}$  kg,  $r_{Mercury}=2439.7$ km, then we can get  $A_{Mercury}=3.6976$ ( $m/s^2$ )

Mars:  $M_{Mars}=6.4185 \times 10^{23}$  kg,  $r_{Mars}=3389.5$ km, then we can get  $A_{Mars}=3.7235$ ( $m/s^2$ )

## The Explanation of Milky Way Galaxy

Energy can be converted, Space-Energy can be converted as well. People don't understand how the Milky Way Galaxy can hold all matter and don't spread out, so people take it for granted that there is a greater quality in the center of the Milky Way Galaxy, thus imagining the existence of dark matter.

Here is a more acceptable explanation: Outside the Milky Way, there are a lot of spaces constantly being generated. These spaces push the Milky Way's matter toward the center. The center of the galaxy does not necessarily need such a huge mass.



## Repulsion's Explanation of Diffraction

If photons are mutually exclusive, when they collide, they will bounce off each other like pinballs. The directions they bounce off depend on the angle they collide. If there are enough considerable collisions, the bouncing directions could be evenly dispersed in 360 degrees.

If two light intersect with an angle, the photons collide, they will not move in the original directions anymore, but new directions after repulsion, and the new moving directions are impossible to be calculated accurately. But fortunately, due to the sufficient number of photon collisions, the direction of the new movement will be evenly dispersed in a range. Because these two lights are moving forward in  $C$ , so we can naturally comprehend after colliding the photons will move within a scope like a cone, which angle depends on and bigger than the angle of the two lights.

Because of the randomness of the collision angle, photons will NOT move to the screen they should. After multiple repulsions, some areas on the screen get more photons and look brighter, other areas get barely photons like shadows. These visible shadows and bright make up diffraction.

In order to maintain an observable and stable diffraction pattern, the two lights must be the same frequency, then they could keep stable colliding.

The diffraction pattern is determined by the angle of the two lights, and the phase of the light has minimal influence. The angle will determine the bouncing directions directly. If the phase changes, the photons will miss the photon in the front, but will hit the photon behind it in the same angle, they will hit some photons anyway. The photons after colliding still will move in the scope of a cone.

Based on the above, let's review the Michelson–Morley experiment. For now we do not consider the hypothesis and inferences of this experiment for the time being, but focus on the design of this experiment. Since the light source and the mirror have no relative displacement for the entire experimental system, the angle at which the two beams intersect remains unchanged. Even if the phase changes, the Diffraction should keep stable. (Shankland 16) In other words, the Michelson–Morley experiment cannot prove or disprove any hypothesis.

Photons Repulsion can explain the Double-slit experiment (Feynman) as well. After the light goes through the double-slit, it will move in two long-strip-cones scope. These two long-strip-cones intersect. The photons repulse stably and hit the screen in multiple strips as we can see clearly.

In the which-way experiment, we release very small amounts of photons to observe. When the photon(s) pass the one slit, it will move in the long-strip-cone, but there is no other photon (or enough photons) to repulse. So the photon(s) move in the long-strip-cone without repulsions. Then all photons hit in the two strips, but not multiple strips. In other words, the cause of the which-way experiment is insufficiency of photons.

## Bibliography

Feynman, Richard P., et al. "The Feynman Lectures on Physics, Vol. 3." vol. 3, 1965, 1.1-1.8.

Shankland, R. S. "Michelson-Morley Experiment." *American Journal of Physics*, vol. 32, no. 1, 1964, pp. 16-35.