



GLOBAL JOURNAL OF SCIENCE FRONTIER RESEARCH: A
PHYSICS AND SPACE SCIENCE

Volume 22 Issue 2 Version 1.0 Year 2022

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4626 & Print ISSN: 0975-5896

Frictional Heat Generation and Geothermal

By Li Xuefeng

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GJSFR-A Classification: DDC Code: 813.54 LCC Code: PS3552.R718



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I. THE ESSENCE OF FRICTIONAL HEAT GENERATION

When we were young, we often played the game of smashing sparks at night, that is, smashing the small stone in our hand on the big stone, you will find that if there is sliding, the spark will be very small, and the spark will be when it touches will be great. This is in great contradiction with the theory of frictional heat generation that we have learned. Is there any other explanation? The current popular explanation, the energy transformation of objects. If we must understand in this way, we will further consider how these energies are converted from kinetic energy to heat energy of molecular motion.

To talk about the essence of frictional heat generation, we must first talk about the essence of friction. The relative motion of two objects forms friction. From a macro perspective, the relative motion of two objects is the relative displacement of the two contact surfaces. From the perspective of microscopic particles, it is the relative displacement of the two particle clusters. The contact surface of the two particle clusters has obvious unevenness, and friction is the mutual collision of the convex parts of the contact surface. And the essence of the collision, we can infer that it is the pressure generated by the particles in the contact part. It can be considered that the essence of friction is: the pressure generated by the collision between the particles of the convex parts of the two relative motion contact surfaces. From the point of view of weak gas pressure, the molecular kinetic energy is increased, the molecular oscillation is intensified, and the radiation energy is increased. From the perspective of high-intensity pressure, just like the principle of proton collider, proton collision produces the same effect of splitting, resulting in great atomic splitting and releasing a lot of energy. Therefore, the heat generated by friction is generated by the strong pressure between the contact parts. When the pressure is strong, the particle structure

can be broken and changed, resulting in breaking excitation, thereby releasing a large amount of energy.

From the calculation point of view, the frictional heat generation Q , is proportional to the contact surface pressure, P and speed V . It can be seen from this that pressure plays a decisive role in frictional heat generation. The pressure formula for the collision of moving objects, $p=mv/st$. m is the mass, V is the decrement in velocity, s is the contact area, and t is the action time.

Substituting the data in can calculate the pressure at the touch. This formula extends to collisions between small particles and can be transformed into $p=mv^2/r^2$. V is the velocity and r is the particle radius.

Why, when there is a lot of stress, energy is generated? This is the scope of solid-state physics research. Strictly speaking, I don't know. I only talk about my own feeling and understanding.

We know that there are a large number of high-speed moving electrons around each atomic nucleus. Although two relatively stationary objects are stationary when viewed as a whole, they still have high-speed electrons at the level of the atoms in the contact surface and relative motion. As long as the pressure is large enough to make the two particles come into close contact with each other, breaking the respective laws of motion of electrons around their nuclei, the particle structure will change, resulting in mass-energy conversion to release energy. This is the essence of frictional heat generation.

We know that there is a large space around the nucleus, and there is a magnetic field generated by the movement of electrons. When the pressure on the material is greater than the binding energy, the normal feeling is that the object begins to change in shape or diffuse and slide around. But what happens if there is no room for activity? Let us boldly imagine that matter begins to compress space. At first, it compresses the circulation space of magnetic field lines around the nucleus. The magnetic cycle of a single atom cannot be completed, and the large cycle of the magnetic field of matter is forcibly completed, and the magnetic energy is collectively released to the outside, forming external magnetism. In the past, matter had no magnetism, because individual particles had their own magnetic cycles and exhibited random magnetism to the outside world, so there was no magnetism. Under the action of pressure, the magnetism is concentrated and released in a concentrated direction, so it appears magnetic to the outside. This is the principle of the formation of

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magnetism, and the magnetism of geomagnetism and stars is formed in this way. This is my reasoned understanding of the formation of the Earth's magnetic field, and I hope you can refer to it.

Under the pressure of the magnetic cycle, the pressure continues to increase, and the electron circulation around the nucleus is blocked. In order to achieve the cycle, the atom releases a part of the energy ions to keep itself intact. Due to the release of heat energy, the object begins to heat up, and as the pressure continues to increase, the material slowly liquefies, then vaporizes, and finally completes ionization. Continuing, the ions begin to decompose. First, the large ions are decomposed into small ions, and the small ions continue to decompose into a soup composed of protons, neutrons, and quarks. Finally, the quantization is completely decomposed, and the energy generation process of a star is completed. The reaction of protons in the ion soup of proton quarks is the pattern in the proton collider. The ions collide with each other and break apart, forming smaller ions.

Triboelectricity is a phenomenon we all know, and the phenomenon of stone tip sparks shows that there is an ultra-high temperature energy release process at the stone tip. The power of one person completes the spark of the stone tip, the power of the earth's plates, produces a volcanic eruption, and the power of the earth has geothermal heat. This is what I know about the source of the earth's heat.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Blackbody Radiation, String Theory, European Proton Collider Experiment.
2. Three properties of matter.