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The Real Reason for the Earth and Other Planets to Move Awav from the Sun as Well as Natural Measures to Mitigate Global Warming

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Abstract

After mastering the radar technology and the tracking technology of interplanetary spacecraft, scientists have calculated that the sun and Earth are gradually moving apart. But no one knows the reason for Earth moving away from the sun. So the author has researched deeply into various factors affecting Earth's movement, and found that during the normal rotation of Earth around the sun, the atmospheric pressure on the trailing hemisphere of Earth is higher than the other hemisphere, effectively increasing its speed, thus making Earth gradually move away from the sun along a spiralline, alleviating global warming to a certain degree. Generally, any planet of any galaxy can move away from its parent star under the sunshine of its parent star.

1. Introduction

Astronomers have been trying to gauge the distance bewteen the sun and Earth for thousands of years. In the 3rd century BC, Aristarchus of Samos, notable as the first to argue for a heliocentric solar system, estimated the sun to be 20 times farther away than the moon. Although this is not a very accurate data, but it is a great progress in the study of astronomy. By the late 20th century, astronomers had a much better grip on this fundamental cosmic metric, which is called the astronomical unit. In fact, thanks to radar beams pinging off various solar-system bodies and to tracking of interplanetary spacecraft, the distance between the sun and Earth has been pegged with remarkable accuracy. The current value stands at 149,597,870.696 kilometres. After mastering this kind of accurate measurement technology, Russian dynamicists Gregoriy A. Krasinsky and Victor A. Brumberg calculated, in 2004, that the sun and Earth are gradually moving apart [1]. It's not much-just 15cm per year-but since that's 100 times greater than the measurement error, something must really be pushing Earth outward. But what? One explanation is that the Sun is losing enough mass, via fusion and the solar wind, to gradually be losing its gravitational grip. In fact, there is no basis for this claim. In fact, the sun is in its mature stage. Signs of global warming suggest that the sun's light and heat are increasing. This means that the sun can get enough material to meet the need of its burning. So the sun's mass has not been reduced. Other possible explanations include a change in the gravitational constant G, the effects of cosmic expansion, and even the influence of dark matter. None has proved satisfactory.

A recent explanation was proposed by Takaho Miura of Hirosaki University in Japan

and his colleagues. In an article submitted to the European journal Astronomy & Astrophysics, they argue that the sun and Earth are literally pushing each other away due to their tidal interaction. It's the same process that's gradually driving the moon's orbit outward: Because the tidal bulges on the Earth exert a gravitational pull on the Moon. The Earth rotates faster (once every 24 hours) than the Moon orbits (once every 27.3 days), thus the bulge tries to "speedup" the Moon, making the Moon move away from the Earth. In fact, they have distorted Newton's theory of tides. Although Newton had proved that the Moon's gravitational pull can raise the tides on the Earth, he didn't mention that the tidal bulges on the Earth can speedup Moon's revolution. Since the mass of a tidal bulge is much less than the mass of the Moon, it has almost no gravitational pull on the Moon. Even if a raised wave ahead has a little gravitational pull on the Moon, a raised wave behind has also a little gravitational pull on the Moon, which can offset the gravitational pull of the wave ahead. Especially, when the mass of the Moon was still small, its gravitational pull on the ocean water wasn't strong enough to raise Earth's tides, not to mention Earth's tidal bulges exerting a gravitational pullon the Moon or speeding up Moon's revolution. Hence, their viewpoint is wrong. In addition, there is no tidal bulges on the Mars, but Mars' moons have been moved far away from the Mars [2].

Hence, why Earth moves away from the sun is still an open problem. Fortunately, the author has researched deeply into various factors affecting Earth's movement, and has found that during the normal rotation of Earth around the sun, the atmospheric pressure on the trailing hemisphere of Earth is higher than the other hemisphere, effectively increasing its speed, thus making Earth gradually move away from the sun along a spiral line, alleviating global warming to a certain degree.

2. The Real Reason for Earth and Other Planets to Move Away from the Sun

In order to find the real reason for Earth to move away from the sun, we should look for some heuristic information. In fact, after planetary scientists announced that they have observed a slight increase in Earth's distance from the sun, some people have made more careful observations [3]. "The Earth is being nudged out into a bigger orbit, " said Dr. Biggy Lips. "Starting this summer, we noticed a small but detectable increase in the Earth's orbit. It's as if each day something is giving the Earth a little kick. The impulse is causing the Earth to speedup just so slightly, pushing the Earth to higher orbit. The jolt of energy is very small but builds up overtime. To increase the orbit, the "push" would have to be on the trailing side of the Earth, effectively increasing its speed. This means the pulse of energy is occurring just before sunset." After days of careful seismic monitoring, scientist believe the source of energy seems to be

coming from the vicinity of Manhattan NY. "Some bouncing motion is occurring every afternoon," said Dr.Lips. "If we don't find the cause soon, and stop it, the Earth will be propelled completely out of the Solar System."

See how carefully these experts made their observations of the movement of Earth. But one cloud is enough to eclipse all the sun, so they did not know the real cause of Earth's orbit variation. Standers-by see more than gamesters. The author has analyzed various factors that cause Earth's orbit-variation, and has found that during the normal rotation of Earth around the sun, the atmospheric pressure on the trailing hemisphere of Earth is higher than the other hemisphere, as is shown in Fig. 1(b), effectively increasing its speed, thus making Earth gradually move away from the sun along a spiralline. This can be proved as follows.

During Earth's revolution around the sun and self-rotation, we can consider a hemisphere including 12 time-zones and using district A1 as its central district, called hemisphere A1. When hemisphere A1 is in the daytime, as is shown by the orange area in Fig. 1(a), it is exposed to the sunlight, so the temperature of this hemisphere was generally higher than that of the other hemisphere, making more vapor and other gas molecules evaporated from this hemisphere than from the other hemisphere, these molecules were enveloped by stratosphere and couldn't escape from troposphere. While the back hemisphere of Earth undergoing the cooling of night, many gas molecules condense into dew and fall to the ground, causing the temperature of this hemisphere drop a lot. Hence, when district A1 is at sunset, as is shown in Fig. 1(b), the atmospheric pressure of hemisphere A1 is higher than the other hemisphere. Since the areas of the two hemispheres are equal, the atmospheric pressure of hemisphere A1 is usually higher than the other hemisphere, which is equivalent to exerting a thrust to the trailing side of Earth along the direction of the Earth's revolution, effectively increasing Earth's speed, making the Earth gradually move away from the sun along a spiral line.



Fig. 1. That the atmospheric pressure on the trailing hemisphere of Earth is higher than the other hemisphere makes Earth gradually move away from the sun

In fact, this result is a key to attack the problem of galaxy formation and evolution. It's well known that early in 1543 Poland astronomer Copernicus published "On the Revolutions of Heavenly Spheres", in which he proposed heliocentrism, thus made great contributions to human correctly understanding the Solar System, but in nearly 500 years, the origin and evolution of the Solar System remained a mystery. Although people have put forward various hypotheses, including more than 40 kinds of hypothesis which have more impacts, yet so far no one is perfect, they all have unsolvable problems. Among these hypotheses, the most widely accepted hypothesis of planetary formation is Kant and Laplace nebular hypothesis, which maintains that 4.6 billion years ago, the Solar System formed from the gravitational collapse of a giant molecular cloud which was light years across. Most of the mass collected in the centre, form the Sun; the rest of the mass flattened into a proto-planetary disc, out of which the planets, moons, and other bodies in the Solar System formed. However, since the dawn of the space age in the 1950s and the discovery of extra-solar planets in the 1990s, the theory has been both challenged and refined to account for new observations. But even if the refined hypotheses still cannot explain some basic facts. Why the planets can move around the Sun? Why all the orbits of the planets are prograde? Why all the planets (except Pluto) have orbital planes that are inclined by less than 6 degrees with respect to each other? Why Terrestrial planets are dense, rocky and small, while jovian planets are gaseous and large? Why Mercury and Venus, which originally had more matter near the disc centre to form their moons, haven't had their own moons? Hence, the existing hypotheses are incredible.

Fortunately, the author of this paper, through a study on the origin of the Moon and Earth, has discovered some formation mechanisms and orbit-variation mechanisms of natural satellites and planets, therefore, could reveal the formation and evolution of the Solar System and other galaxies, the expansion of the universe and global climate change. According to the author's generation theory of galaxy formation and evolution, the eight planets in Solar System originated from the satellites of the protostar (or giant planet) that formed the sun later. During the growth of the eight planets, they unceasingly incorporated the nebula materials from the protostar or interstella matter near the orbits to become larger and larger, and gradually moved away from its parent star under the impact of moving objects or the drag of the gravitational force of the protostar whose rotation was speeding up or laterly the radiation of the parent-star after the parent-star became a star constantly giving off light and heat [2, 10].

Hence, the fact that Earth are gradually moving away from the sun has refuted Kant and Laplace nebular hypothesis, while supports the generation theory of galaxy formation and evolution, which is proposed by the author. So it is an important result.

3. Natural Measure to Mitigate Global Warming

Global warming is becoming a great issue of all human

beings. It relates with the future and destiny of mankind, and affects the political, economic and social development of every country. Therefore, it is a natural choice for human to strengthen cooperation, seek common ground and explore proper countermeasures [4-6]. However, due to lack of understanding of the causes of global climate change, there are serious differences and struggles in the international community's position on the global warming [7, 8].

According to the existed research results, factors that can shape climate include solar output, Earth's orbital variations, volcanism, magnetic field strength, ocean variability, and human influences.

- (1) Orbital variations: Slight variations in Earth's orbit lead to changes in the seasonal distribution of sunlight reaching the Earth's surface and how it is distributed across the globe. There is very little change to the area-averaged annually averaged sunshine; but there can be strong changes in the geographical and seasonal distribution. The orbital variations have a large impact on climate and are notable for their correlation to glacial and interglacial periods.
- (2) Solar output: Since 1978, output from the Sun has been precisely measured by satellites. These measurements indicate that the Sun's output has not increased since 1978, so the warming during the past 30 years cannot be attributed to an increase in solar energy reaching the Earth.
- (3) Volcanism: Volcanic eruptions release gases and particulates into the atmosphere. Eruptions large enough to affect climate occur on averages ever altimes percentury, and cause cooling (by partially blocking the transmission of solar radiation to the Earth's surface) for a period of a few years.
- (4) Magnetic field strength and Ocean variability: Some recent (2006+) analysis suggests that global climate is also correlated with the strength of Earth's magnetic field and ocean variability.
- (5) Human influences: Climate changes are in part caused by human activities. Of most concern in these an thropogenic factors is the increase in CO₂ levels due to emissions from fossil fuel combustion, followed by aerosols (particulate matter in the atmosphere) and cement manufacture. Other factors, including land use, ozone depletion, animal agriculture and deforestation, are also of concern in the roles they play – both separately and inconjunction with other factors – in affecting climate, microclimate, and measures of climate variables.

From above, it can be seen that at present many people tend to believe the emission of greenhouse gases is the primary factor in global warming. But this conclusion has caused a lot of controversy in scientific circles [7]. Many experts represented by NIPCC have refuted this view with plenty of evidence, and they believe natural driving is the main factor for global climate change, but they haven't found such a convincing natural driving force yet [8]. So the author has researched deeply into various factors that could affect climate change, and has found a compromise result, that is, with the growth of Earth's mass, Earth can absorb more and more greenhouse gases from both the cosmic space and human production, including water vapor, carbon dioxide and dust particules, making atomsphere thicker and thus the greenhouse gases captured by the atomsphere difficult to escape, finally inhencing greenhouse effect, causing global warming [9].

Now that we have found the root cause of global climate change, we can find the corresponding countermeasure. Since the cause of global climate change includes both natural factors and human factors, therefore, in solving the problem of global warming, we should exercise discretion, and suit our methods to the situation. For the human factors of global climate change, we should make full use of the scientific and technological means to control climate change and its effects, make appropriate energy development strategies, gradually stabilize and reduce greenhouse gas emissions, increase greenhouse gas absorption, and take necessary measures to adapt to climate change.

For the natural factors of global climate change, we are not helpless. Instead, good heavens has given us a skilled arrangement. That is, during the normal rotation of Earth around the sun, the atmospheric pressure on the trailing hemisphere of the Earth is higher than the other hemisphere, effectively increasing its speed, making Earth gradually move away from the sun along a spiralline, thus alleviating global warming to a certain degree. Hence, Earth gradually moves away from the sun can be regarded as a natural measure to mitigate global warming.

4. Conclusions

During the earth's revolution around the sun and self-rotation, the atmospheric pressure on the trailing hemisphere of the Earth is higher than the other hemisphere, effectively increasing its speed, making Earth gradually move away from the sun along a spiral line. Thus, we can see the reason for Earth moving away from the sun is the change of atmospheric pressure of the earth under sun shine. Some other planets in the Solar System, such as Mars, Jupiter, Saturn, Uranus and Neptune, pressures will also change under sunshine, thus making them move away from the sun. Generally, any planet of any galaxy can move away from its parent star under the sunshine of its parent star.

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