Circlon Tidal Forces

by James Carter

Ocean tides are caused by the push and pull of the electrons in the atomic radiation chains. These electrons have expanded in size to the orbits of the sun and moon. They form virtual atoms with the sun and moon serving as their nuclei. An atom from the moon joins with an atom from Earth to form a pseudo Hydrogen atom that uses its ionization energy to push on Earth and the moon and sun. You cannot push on a rope, but you can push on the link of a chain.

If the local interaction of gravitational expansion does not affect the Cavendish balance, then its observed motion must be caused by a non-local effect such as electrostatic force. If the motion of the Cavendish balance is caused by electrostatic force instead of gravitation, the tides in the oceans caused by the motions of the moon and sun are also likely to be the result of long range electrostatic forces produced by the electric charges of the sun, moon, and Earth. Measurements of tidal action are more easily explained by electrostatics than by gravitational attraction or curving spacetime. The Cavendish balance does not measure the force of a gravitational constant. Rather it is a qualitative demonstration of the electrostatic forces that cause ocean tides.

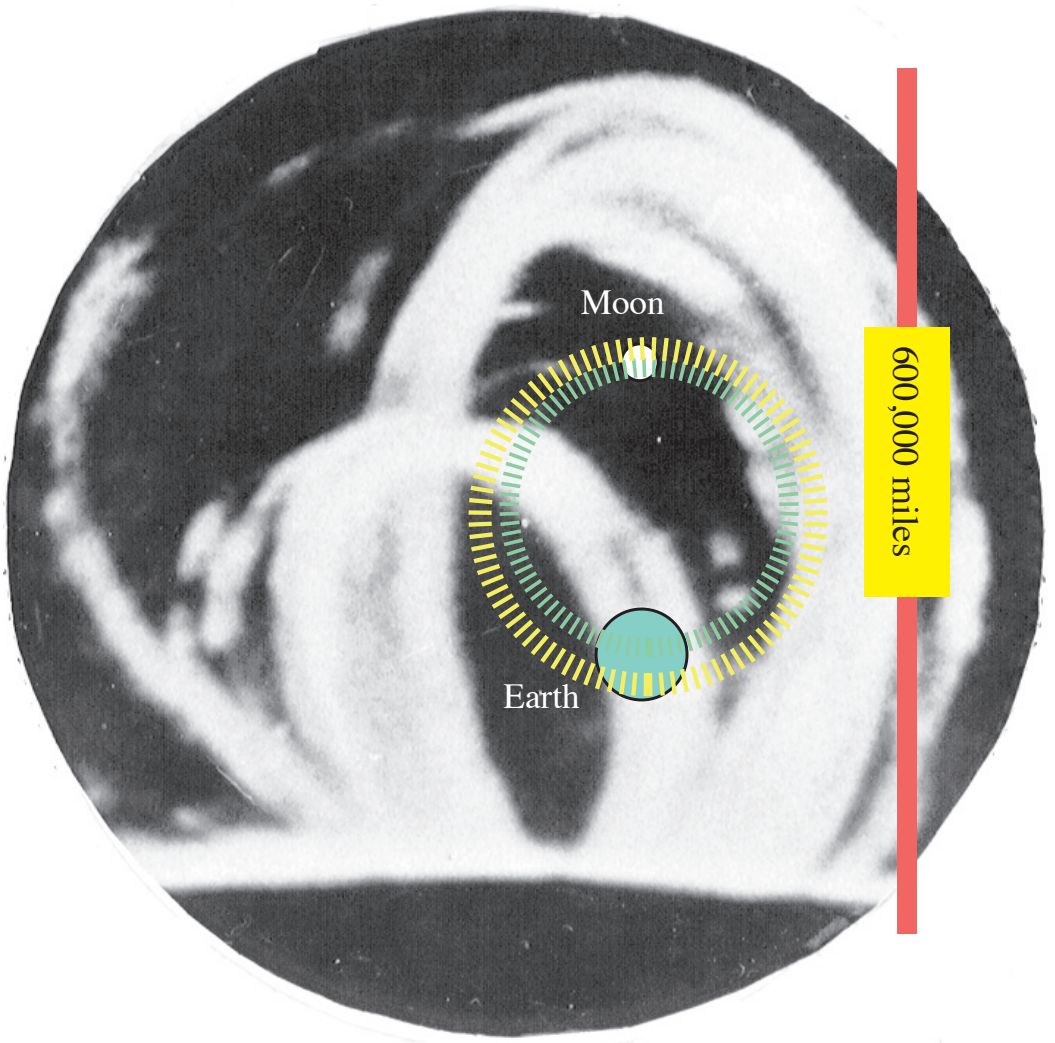
Just as gravitational motion cannot move a Cavendish balance, it is also incapable of moving the oceans in response to the motions of a distant moon and sun. Without gravitation, an electrostatic connection must exist between the Earth, moon, and sun to produce the tides. This force is many orders of magnitude smaller than the gravitational force that some people once believed to exist between these bodies. In a gravitational theory of lunar tides, an enormous force is needed to accelerate the whole Earth toward the moon. It is then believed that the differential in this gravitational acceleration between the near and far sides of Earth causes equal high tides on both sides.

Electrostatic Tides

The electrostatic tidal effect between Earth and the moon requires a far weaker force than gravitation because it does not have to move the whole mass of Earth to cause the tides. It only needs enough force to move the surfaces of the oceans a few feet. In fact, this tiny force between the moon and Earth plays almost no part in the measurable dynamics of these bodies other than the small motions in the water of oceans.

An example of the magnitude of this force is the way in which the orbit of the moon has slowly increased its radius over billions of years due to tidal friction. This friction slows both the Earth's rotation and the moon's orbital velocity. The angular momentum lost from the Earth's slowing rotation is gained by the moon's increasing orbital radius.

The energy needed to slow the moon's velocity is transferred by the back and forth sloshing of the oceans. Geologists have determined that ocean tides were much greater hundreds of millions of years ago than they are today because the Earth and moon were closer together in the distant past. The true electrostatic force of these tides is tiny compared with the enormous forces needed to cause the tides using gravitation.



Loop Prominences and Lunar Tides

Loop prominences on the sun are formed by countless electrons that have been expanded to more than 600,000 miles in diameter by enormous electrical storms on its surface. The Earth-moon orbit of 240,000 miles would easily fit inside of the enormous links in these electron charge chains. These are the same as the smaller electron charge chain links connecting the moon and Earth that provide the force needed raise and lower ocean tides. This is a very small force that moves ocean water and has virtually no effect on the motion of Earth and moon. The sun's charge chains are single ionized loops but the prominences connecting Earth and moon are two separate charge chains that couple together and form a stable pseudo Hydrogen Earth-moon atom. The sizes of Earth and moon in this drawing are much larger than scale.

Electrostatic Forces in the Universe

From Dirac's discovery of the antimatter principle, we must conclude that there are equal and constant numbers of protons and electrons in the universe. Because of their much higher velocities from neutron decay, electrons are able to travel much farther than protons. This makes them much more likely to come into contact with concentrations of matter such as our solar system. Moreover, because of their much smaller masses, electrons are much more likely to be pulled toward and captured by groups of protons. As a result, most electrons in the universe have become confined to the stars and galaxies, leaving a significant number of free protons in the empty reaches of space in between.

One piece of observational evidence that would tend to validate this idea is that protons outnumber electrons by more than 50 to one in the cosmic ray flux that enters the Earth's atmosphere from all directions of deep space. The explanation for the lack of electrons in deep space is that most of these particles have become attached to stars, planets, comets and clouds of gas and dust. Of the thermal particles that remain in deep space, the vast majority are protons. With the heavenly bodies containing significantly more electrons than protons, it follows that each of these bodies has a significant negative electrostatic charge.

These electrostatic charges would be manifested as repulsive forces between the Earth, moon, and sun. The magnitude of these forces would be very small compared with the attractive force attributed to gravitation and would certainly have only minor effects on celestial mechanics. Whereas gravitational theories need to accelerate the whole mass of the Earth to account for the tides, an electrostatic nature of the tides only requires enough force to move a thin layer of water on the Earth's surface. However, these tiny electrostatic forces can explain the tidal forces between the Earth, moon, and sun with a far higher degree of accuracy than can any of the much larger gravitational force theories.

When Newton studied the tides, it was quite apparent to him that they could be caused by a force that was exerted between the Earth, moon, and sun. He believed that his newly developed theory of Universal Gravitation was the source of such tide generating forces. When he calculated how the gravitation of the moon and sun would influence the Earth's oceans, he found that gravitation did, indeed, supply a qualitative explanation of the tides. However, in modern times, when very accurate instruments allow the precise, quantitative evaluation of the tides, gravitational theories failed to account for them except in the same general way described by Newton.

For Newton's theory of Universal Gravitation to explain the tides, sufficient force must be achieved, not from the pull of the moon and sun on the Earth's oceans, but from the difference in the pull between the near side of the Earth and the far side. This relationship can be seen in the formula used in gravitational theories to represent tide-generating forces:

$$F/G = 2M/R^3$$

The tide-generating force (F), divided by Earth's gravity (G), is equal to twice the mass of the moon in terms of Earth's mass (M), divided by the distance to the moon in terms of Earth's radius

cubed (R^3).

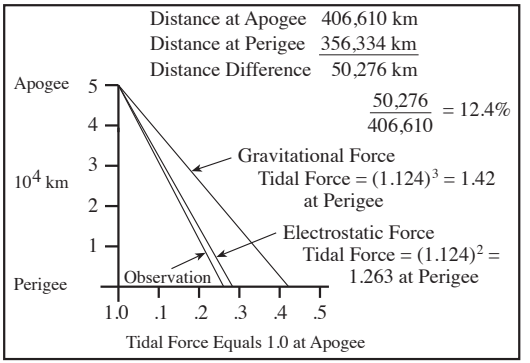
According to this formula, we are forced to conclude that the tide-generating forces are inversely proportional to the *cube* of the distance between the bodies involved. This formula is completely theoretical and is useless at predicting tidal magnitude for any given place on Earth, because the continents and the irregularities of the ocean floor severely affect ocean movement. However, even though the above formula cannot be expected to predict the *total* magnitude of the tides for a given spot on Earth, it should be very accurate at predicting the *difference* in tidal magnitude that occurs between the moon's apogee and perigee, and between the Earth's aphelion and perihelion.

The moon is 12.4 percent farther away from the Earth at apogee than it is at perigee, while Earth is 3.3 percent farther away from the sun at aphelion than at perihelion. According to Newton and Einstein's gravitational theories, which state that tidal forces vary according to the cube of the distance between the bodies involved, the lunar tides should be 29.7% greater at perigee than at apogee, while the solar tides should be 9.25% greater at perihelion than at aphelion.

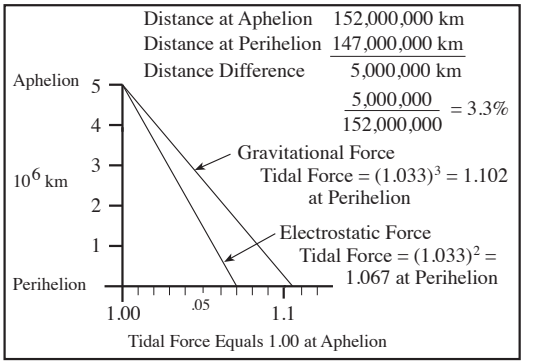
This, however, is not the case. Careful measurements of lunar tides show that they vary by only about 20%. This amount is very close to what would be expected if the tide-generating forces varied with the *square* of the distance between the Earth and the moon. If tidal force was 1.0 at apogee then it would be $(1.124)^2=1.263$ at perigee. This is an increase in magnitude of 20.8% and not the 29.7% predicted by gravitational attraction theories.

While this is never mentioned by any gravitational theorists, this 9% discrepancy between prediction and observation is no small matter. This effect should only vary with distance and it should not be affected by the shape of the continents or the contours of the ocean floor. The missing energy involved in this 9% discrepancy is enormous. For a gravitational theorist to be correct, he or she would have to explain where all of this missing energy has gone.

THE DISTANCE DEPENDENCE OF LUNAR TIDES

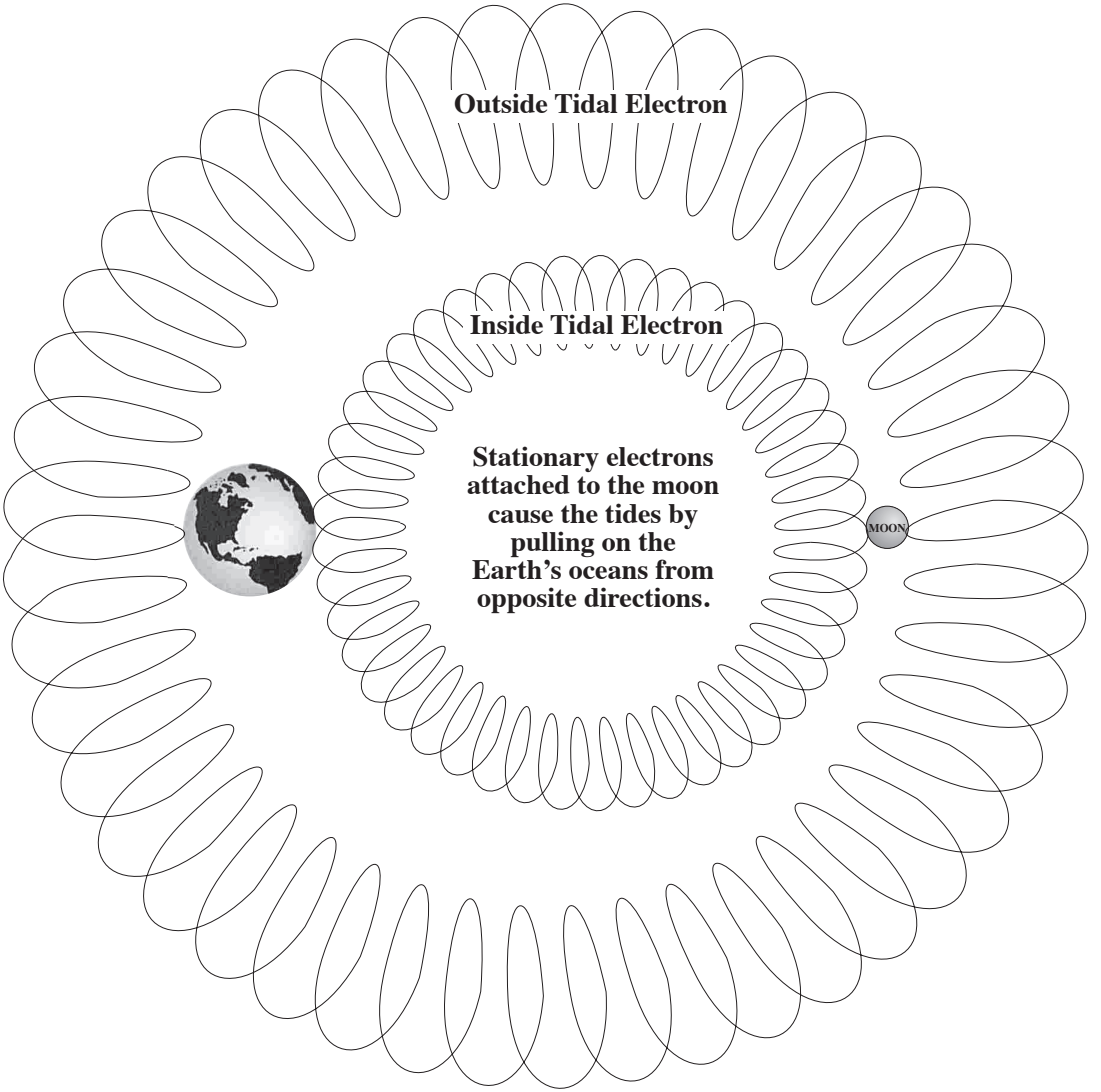


THE DISTANCE DEPENDENCE OF SOLAR TIDES



As far as solar tides are concerned, I have been unable to find any data that relate to the dif-

ference in their magnitude between perihelion and aphelion. However, by extrapolating from the observational data on lunar tides, one would expect the solar tides to vary by about 6.3% if their magnitude varied with the square of the distance between the Earth and the sun.

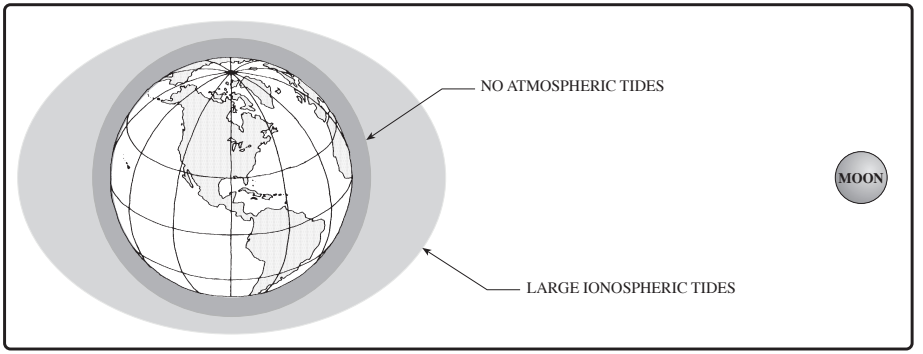


Another discrepancy between theory and observation that cannot be explained by gravitational theories, is the fact that tide-generating forces seem to be blocked by matter. Newton's gravitation

theory was based on the idea that gravitational forces cannot be blocked in any way by the presence of matter or any field. Unlike other forces such as magnetism and electrostatics, gravitational forces cannot be altered in any way other than a change in distance.

While no observational data support the gravitational theories of the tides, there are data that virtually confirm the existence of strong electrostatic forces between the Earth, moon, and sun. This is the presence of gigantic lunar and solar tides in the ionosphere. These tides have a magnitude of over 40 miles in height, and their cause is not even hinted at by gravitation theories.

The electrostatic charge of the Earth is concentrated in the ionosphere, which is a layer of highly charged particles surrounding the Earth. The existence of these tides invalidates the gravitational theories of tides, since there is no way that gravitation could even begin to cause tides of this magnitude in the ionosphere. If it could, there would also be large tides in the uncharged, yet far more massive atmosphere and, demonstrably, there are not.



However, when tide-generating forces are measured deep inside mine shafts, it is found that they fall off quite rapidly the deeper within the Earth that they are measured. This finding is in complete disagreement with the very tenets of gravitation theories that require that gravitational forces cannot be blocked in any way by the presence of matter. However, if tidal force was a form of long range electrostatic force then we would expect them to be strongest on the Earth's surface and weaker when measured deeper and deeper within the Earth.