

The Geocentric Testimony of our Tides

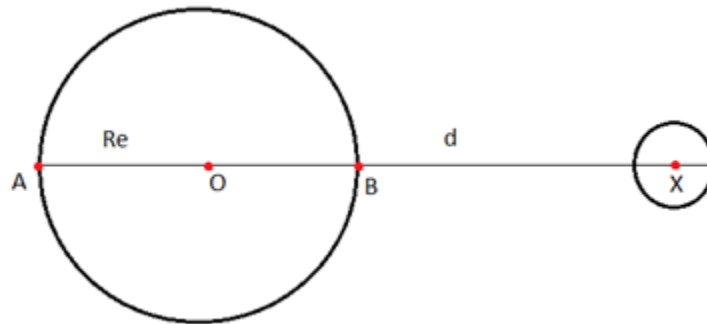
A brief study of the near and far side effects of gravity

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There are abundant attempts that try to resolve why the Earth's high tides occur when the Sun or Moon are at both the near side and far side.

Also an issue is why the Moon is more than twice as important as the Sun in determining local tidal ranges.

Geostatics: Let us try to find the acceleration at points A and B with respect to the center of the Earth O, due to only the gravitational influence of Moon and Earth, as shown in the figure.



O and X are the center of the Earth and Moon respectively. Let the radius of Earth be R_E , distance between Earth and Moon be d , and the mass of Earth and Moon be m_E and m_M respectively. Acceleration to the right is positive. Note that $R_E \ll d = \text{distance OX}$.

Acceleration of point B a_B is:

$$a_B = -Gm_E/R_E^2 + Gm_M/(d-R_E)^2 \approx -Gm_E/R_E^2 + Gm_M(1+2R_E/d)/d^2$$

Acceleration at point A is:

$$a_A = Gm_E/R_E^2 + Gm_M/(d+R_E)^2 \approx Gm_E/R_E^2 + Gm_M(1-2R_E/d)/d^2$$

And a_O is:

$$a_O = Gm_M/d^2$$

Thus, the accelerations of point A and B with respect to O are:

$$a_{AO} = a_A - a_O = Gm_E/R_E^2 + Gm_M(1-2R_E/d)/d^2 - Gm_M/d^2$$

$$\approx Gm_E/R_E^2 + Gm_M(1 - 2R_E/d)/d^2 - Gm_M/d^2$$

$$\approx Gm_E/R_E^2 - 2Gm_M R_E/d^3$$

$$\begin{aligned}
a_{BO} &= a_B - a_O = -Gm_E/R_E^2 + Gm_M(1+2R_E/d)/d^2 - Gm_M/d^2 \\
&\sim -Gm_E/R_E^2 + Gm_M(1+2R_E/d)/d^2 - Gm_M/d^2 \\
&\sim -Gm_E/R_E^2 + 2Gm_M R_E/d^3
\end{aligned}$$

Replacing the Moon with the Sun will repeat the same calculations...with $m_M \Rightarrow m_S$ and $d \Rightarrow D$

The combined effect of Moon and Sun – acting in the same straight line – is

$$\begin{aligned}
a_{AO} &= a_A - a_O \sim Gm_E/R_E^2 - 2Gm_M R_E/d^3 - 2Gm_S R_E/D^3 \\
a_{BO} &= a_B - a_O \sim -Gm_E/R_E^2 + 2Gm_M R_E/d^3 + 2Gm_S R_E/D^3 \\
\text{So } a_{AO} &= -a_{BO} \text{ and}
\end{aligned}$$

$$a_{AB} = a_{AO} - a_{OB} = 2a_{AO} = 2Gm_E/R_E^2 - 4Gm_M R_E/d^3 - 4Gm_S R_E/D^3$$

This is the acceleration difference from the near to the far side, caused by the gravitational attraction of the Earth, Moon and Sun...to order(R_E/d and R_E/D)

Since $a_{BO} = -a_{AO}$, on both sides of the Earth, water will be trying to accelerate equally from the center of the Earth, **causing the same tides on both sides of the Earth.**

What is the ratio of the lunar acceleration to the solar acceleration of the tides.... a_M/a_S ?

Based only on the static gravitational forces above, the ratio is

$$a_M/a_S = [2Gm_M R_E/d^3]/[2Gm_S R_E/D^3] = (m_M/m_S)*(D^3/d^3)$$

In MKS units:

$$m_M = 7.35*10^{22} \text{ kg} \quad m_S = 2*10^{30} \text{ kg} \quad d = 3.84*10^8 \text{ m} \quad D = 1.5*10^{11} \text{ m}$$

$a_M/a_S \sim 2.35$ theoretically... due to geostatics.

Here are the values of the Moon/Sun tidal force ratio, a_M/a_S , as cited by online sources:

Physics forum	2.16
NOAA	2.5
Hyperphysics	2.27
Wiki	2.22
<u>NJIT</u>	<u>2.2</u>
<Average>	2.27

Gravity only – no dynamic central forces = 2.35 ..a difference of 3%

The Moon's acceleration of the tidal water is more than twice that of the Sun at the New Moon alignments.

The geostatic prediction is consistent with a cosmic model where the Earth is stationary.

Only gravitational forces produce the tides.

Geokinematics:

The Moon causes no Centrifugal Acceleration on the Earth's tides because the Earth doesn't orbit the Moon....the Moon orbits the earth.

But the Sun causes a Centrifugal Acceleration on the Earth in the consensus heliocentric model:

On the far side: $CA_S = V^2/D = (30+.47)^2/1.5*10^8 = 6.2*10^{-3} \text{ m/s}^2$

V is the earth's orbital speed D is the AU.

On the near side $CA_S = V^2/D = (30-.47)^2/1.5*10^8 = 5.8*10^{-3} \text{ m/s}^2$

At the center O: $CA_S \sim 6.0*10^{-3} \text{ m/s}^2$

How does CA_S compare with a_s , CA_S/a_s ...the Sun's centrifugal acceleration of the earth compared to its gravitational acceleration ?

$a_s = 2Gm_S R_E/D^3 \sim 5.1 * 10^{-7} \text{ m/s}^2$ where $G = 6.67*10^{-11}$

$CA_S/a_s \sim 6.0*10^{-3}/5.1 * 10^{-7} = 1,170$

Result – the central force caused by the Sun compared to the gravitational acceleration toward the Sun is almost 1200 times larger! Were this true, the tides would be a thousand times higher than reality...

This is wildly beyond the size of a_s and a_M , whose values do give the correct tidal range!

Summary

1. **Since gravity alone explains the tides - the first conclusion is that CA_S does not exist – CA_S is zero.**
2. **The second conclusion is that the Earth does not orbit...Geocentrism.**

This result adds to the burgeoning experiments that test and confirm the geocentric hypothesis.

Static gravity alone accounts for the observation of the double tides on opposite sides of the Earth and the different range of the lunar and solar tides.

When the centrifugal acceleration of the Earth's [alleged] orbital speed is added to the gravitational accelerations, the Helioc theory is exposed as fictitious. There is no evidence of a centrifugal acceleration ...or force... in the tidal behavior.

This agrees with other tests, like Newton's Bucket, Sagnac's rotor and R. Wang's linear Sagnac version. They also support an immobile Earth.

Conversely, there are no proofs by testing by scientific method or realistic interpretation of the tests that the Earth orbits the Sun.

The rise and fall of the tides around the world is a semi-diurnal repetitive demonstration of the Earth's central position in the universe.