**The Geocentric Testimony of our Tides**

**A study of the near and far side effects**

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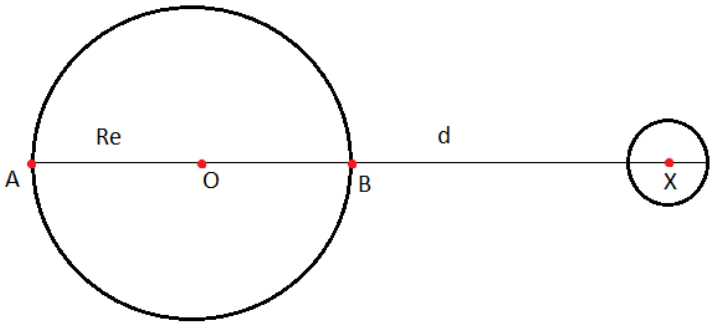
There are abundant attempts that try to resolve why the Earth's high tides occur when the Sun or Moon are at both the near side and far side.

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 RE, distance between Earth and Moon be d, and the mass of Earth and Moon be $m_E$ and $m_M$ respectively. O to X is taken as the positive direction. Note that RE << d.

Acceleration of point B $a_B$ is:

$$a_B = -Gm_E/R_E^2 + Gm_M/(d-R_E)^2 \ \sim= -Gm_E/R_E^2 + Gm_M/d^2\,(1+2R_E/d + 3R_E^2/d^2)$$

Acceleration of point A $a_A$ is:

$$A_A = Gm_E/R_E^2 + Gm_M/(d+R_E)^2 \ \sim= -Gm_E/R_E^2 + Gm_M/d^2\,(1-2R_E/d - 3R_E^2/d^2)$$

And $a_O$ is:

$$a_O = Gm_M/d^2$$

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

$$a_{AO} = a_A - a_O = -Gm_E/R_E^2 + Gm_M/d^2\,(1-2R_E/d - 3R_E^2/d^2) - Gm_M/d^2$$

$$\sim= -Gm_E/R_E^2 + Gm_M\,(1 +2R_E/d + 3R_E^2/d^2)/d^2 - Gm_M/d^2$$

$$\sim= -Gm_E/R_E^2 + Gm_M\,R_E\,(2 + 3R_E/d)/d^3$$

$$a_{BO} = a_B - a_O = Gm_E/R_E^2 + Gm_M/d^2\,(1+2R_E/d + 3R_E^2/d^2) - Gm_M/d^2$$

$$= Gm_E/R_E^2 - Gm_M\,R_E\,(2 + 3R_E/d)/d^3$$

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

$$a_{AO} = a_A - a_O = -Gm_E/R_E^2 + Gm_MR_E\,(2 + 3R_E/d)/d^3 + Gm_SR_E\,(2+ 3R_E/D)/D^3$$

$$a_{BO} = a_B - a_O = +Gm_E/R_E^2 - Gm_MR_E\,(2 + 3R_E/d)/d^3 - Gm_S\,R_E\,(2+ 3R_E/D)/D^3$$

$$\text{So} \quad a_{AO} = -a_{BO} \quad \text{and}$$

$$a_{BA} = a_{BO} - a_{OA} = 2a_{BO} = 2Gm_E/R_E^2 - 2Gm_M\,R_E\,(2 + 3R_E/d)/d^3 - Gm_S\,R_E(2+ 3R_E/D)/D^3$$

This is the acceleration difference from the near to the far side.

Since $a_{BO} = -a_{AO}$ , on both the sides, 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 ....$a_M/a_S$?**

Based only on static gravitational forces , the ratio is

$$a_M/a_S = [Gm_MR_E(2 + 3R_E/d)/d^3]/[\,Gm_SR_E\,(2+3R_E/D)/D^3] = (m_M/m_S)[(2+3R_E/d)/(2+3R_E/D)](D^3/d^3)$$

In MKS units:

$m_M = 7.35*10^{22}$ k  $m_S = 2*10^{30}$ k  $R_E = 6.38*10^6$ m  d = $3.84*10^8$ m  D = $1.5*10^{11}$ m

**$a_M/a_S$ ~= 2.35 theoretically due to geostatics; experimentally, $a_M/a_S$ ~= 2.16.... only an 8% difference.**

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

**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's far side in the .heliocentric model:

$CA_S = V^2/D = (30+.47)^2/1.5*10^8 = 6.2*10^{-3}$ m/s$^2$  V is the earth's orbital speed D is the AU.

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

At the center O:  $CA_S$ ~= $6.0*10^{-3}$ m/s$^2$

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

$a_S = Gm_S R_E (2+3R_E/D)/D^3$ ~= $5.1 * 10^{-7}$ m/s$^2$  where G = $6.67*10^{-11}$

**Result – the centrifugal force caused by the Sun compared to the gravitational acceleration toward the Sun is $CAs/a_s$ ~= 12,000 !!!**

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

1. **The first conclusion is that CAs does not exist – CAs is zero.**
2. **The second conclusion is that the Earth does not orbit...Geocentrism.**

**Summary**

This result adds to the burgeoning tests 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 orbital speed is added to the gravitational accelerations, the HC 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. Conversely, there are no proofs by scientific method testing or realistic interpretation of the test 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.