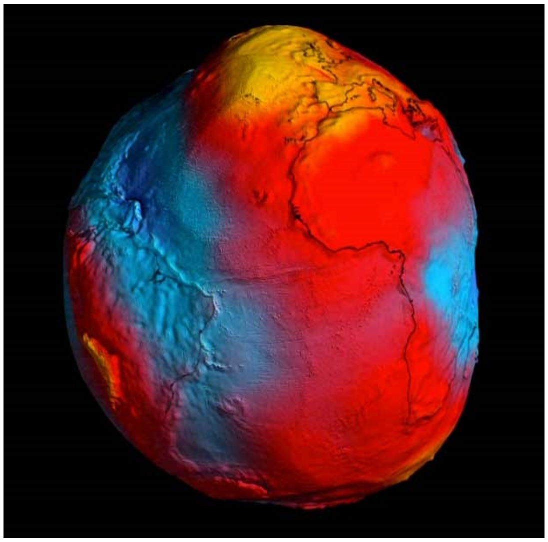
The GOCE Satellite provides more proof of my Unified Field



by Miles Mathis

In news released on March 31, 2011 at the BBC*, we get more proof of my Unified Field. Above is the diagram they published from the GOCE mission in Europe. This is a papermache model of the gravity field of the Earth, exaggerated to show variations. Yellow is most gravity and blue is least. You can't see the south magnetic pole in this particular view, but it is yellow like the north pole.

With a gravity-only theory, this is impossible to explain. Physically, we have flattening at the poles—the opposite to the above schematic—which means if you apply Newton's equations or Einstein's field equations to the problem, you get less gravity at the poles. Not only is there a greater radius at the equator—and gravity is directly proportional to radius in Newton's equations—but there is more mass at the equator as well. Gravity is directly proportional to mass, too. To explain data like this requires the mainstream to either torture equations, or to propose the unprovable: that the interior of the Earth is denser at the poles.

To see what I am getting at, remember that sea level is higher in some places than others. Sea level is highest around New Guinea and lowest below India, which matches this GOCE schematic (see image 2 below). The scientists offering us this model even point to that fact, offering the shape of the model as an indication of a sort of "virtual" sea level. Unfortunately, that doesn't work with the poles. The poles are known to be flattened, which starkly contradicts this model. Due to flattening at the poles, the "sea level" at the poles is very low, compared to average radius. But here it is modelled as very high. Strange that we get no commentary on that from the mainstream. It is ignored.

Another problem is explaining the high at New Guinea. We know that the sea level is highest there, so we should expect less gravity, right? But here we are told there is more gravity there. How can more gravity cause higher seas and less gravity cause lower seas? That is what I mean by torturing equations. The mainstream's first response is no response: they ignore it. They don't report on it. The second response is to invert the logic and math, to make it seem that more gravity can cause higher seas.

Here is how they torture the logic and the math. Some have answered me, “What do you mean gravity is directly proportional to R? A greater R implies *less* gravity, by this equation: g=GMm/R^2. That is inversely proportional, not directly proportional!” Ah, but that is the wrong equation for this problem. We are not just moving an object to a greater radius, we are asking how radius affects the gravity field of an entire planet. And bigger planets have greater gravity fields, as we know. So the question is, if we made the Earth larger, and let it keep its current density, would g go up or down? Everybody should know it would go up, according to current equations and theory. That is the math we need, not g=GMm/R^2. This means that g at the equator should be greater than g at the poles, according to current theory. There is more mass in the line of the radius under a point on the equator, you see, and that is what matters to Newton and Einstein. The only way this would not be true is if the density was *less* at the equator, but I will show that is not the case.

[I have had readers write in and complain, saying that I have it wrong. They insist g=GMm/R^2 is the right equation. Well, yes, if you use it right, it can be made to work; but it usually isn't used right. Here is what I commonly see happen: they say, “Since a point on the equator is at a greater radius, if we use that equation we find g is less.” I say, “But that only works if you keep M the same.” They say, “It is the same Earth in both cases, so how could M change?” I say, “You have to take into account the mass beneath the 'point' you are considering. It can't be the same in both instances.” They say, “What?” I say, “Start with the point on the pole. Say it is at R=6360km. Then run the equation. Then go to the point on the equator. Say it is at R=6375km. If you run the equation with the same value for M, you are implying that the point on the equator is resting on 15km of air, or of vacuum. If you are assuming the Earth is a consistent object, without huge density variations (which you are, in running the equations like that), you must take into account the extra mass beneath the equator. Because the point on the equator is at a greater R, it must have more mass beneath it, any way you look at it. And this is true whether you look at mass along the radial line beneath the point, or if you look at total mass beneath the point (the entire Earth). By definition, the point on the pole can't feel the gravity of as much Earth as the point on the equator. This is due simply to the definition of radius. The radius in that equation is *defined* as the radius *below* the object, or between the point and the center. Since the number you use is 6360, the point on the pole can't feel the mass of the other 15km. If you change the radius, you must change the mass. If you don't, you are implying that your equator is floating 15km up in the atmosphere, in some geosynchronous orbit. Given that, you must see that M will increase faster than R. Say we double R. By the inverse square we quadruple the effect, or decrease gravity by four times. But mass will increase with volume, by $4\pi R^3/3$. So if we double the radius, the mass increases by more than 8 times. Mass increases more than twice as fast as radius, which proves what I said above. *In this problem*, gravity is directly proportional to radius. If you increase the radius, you increase the mass, which then increases the gravity. In Newton's equation, gravity is inversely proportional to radius only if R is empty space. R here is not distance of separation, it is actually radius. I hit this problem with even more rigor in http://milesmathis.com/weight.html.]

Since a first running of Newton's or Einstein's equations would imply less gravity at the poles, what some scientists have done is propose that the surface of the Earth at the poles is pulled on more strongly by gravity, actually pulling it down; and that the surface at the equator is pulled on less. That would indeed explain what we see, except for one thing: it is not supported by the field equations. We would need more mass at the poles to start such a motion, and we have no indication of that. In fact, as I said, less radius would imply less mass, given roughly the same density. That is, from what we *do* know, it is probable the poles weigh less than equal areas on the equator.

For instance, if we look at the magnetic north pole, we know the crust is thinner there, since the pole is most often over water. There is not much land anywhere near the north pole, so, at least as far as the crust goes, we have less mass. But even stronger indications come from the equator. It has long been argued by the mainstream that there was more mass at the equator, as well as a more dense mantle there. This has been common wisdom for at least two decades, as you can see from this oft-cited paper, and was assumed before then. This made the Earth into a sort of gyroscope or top, and explained its angular momentum. It also explained things like precession.**

But obviously you can't have it both ways. If there is more density at the equator, there can't be less gravity there. The only way to push data into line with the field equations is to propose more density at the poles. But all evidence points to more density at the equator. The mainstream even admits this. So they cannot explain this model from GOCE at all. Both the polar flattening and the higher equatorial density work against them. This new data conflicts loudly with their old theory and data.

I have been answered by some that the centrifugal effect overwhelms the effect of gravity, and that is why we see the Earth in the shape it is. They would say gravity alone would create the potato shape we see under title, but the centrifugal effect trumps that, and the equator is forced out. Unfortunately, that explanation also fails for a number of reasons: 1) In the tidal equations the mainstream has fudged, the centrifugal effect is *half* the gravitational effect. See my first tidal paper, or any mainstream math. How can it be half there and more here? 2) There is no indication that the tensile strength of the Earth is low enough to allow either gravity or the centrifugal effect to cause that much deformation. 3) The mechanics still wouldn't work, even if we ignored 1 and 2. Even if the centrifugal effect does overwhelm gravity, we still have to assume that gravity resists the centrifugal effect. The two have to be in opposition, or the centrifugal effect would increase without limit. In other words, if gravity is not resisting the centrifugal effect, the centrifugal effect is only resisted by tensile strength. But tensile strength cannot resist a continuous force. Once deformation begins, it cannot be stopped. This is because tensile strength decreases with R, and deformation increases R. Why is this important? Because, by the current theory, *both* models of gravity fail. I have shown why the model flat at the pole fails. So the mainstream backtracks and gives me the potato model above, saying, "OK, gravity *is* stronger at the equator, so we modeled it like that. Gravity pulls in more there, so we get more deformation there, or would, without the centrifugal effect." Hopefully, you see the problem there. It contradicts the GOCE model, which tells us that blue is a low, not a high. It also sets us into a feedback loop, since if gravity pulls the equator lower, R then decreases, which increases gravity again, which pulls harder, which pulls the equator even lower. We are in a feedback loop, which could only end in a black hole.

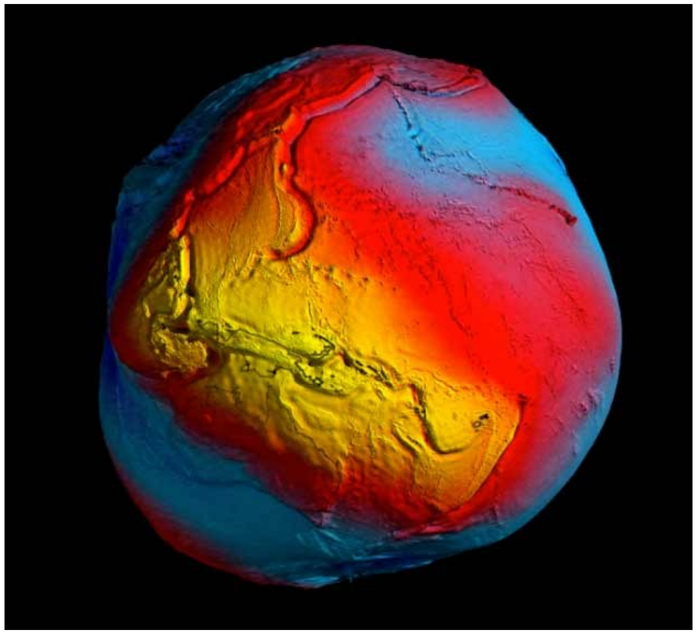
You will say, "Good lord, you have shown that both gravity models fail. But it has to be one or the other right? Either gravity pulls more on the poles or on the equator." Yes, and that is precisely the problem, as we see from the GOCE model. If the mainstream uses one set of equations to explain the high on the equator near New Guinea, it can't explain the high at the north pole. And if it explains the north pole, it can't explain New Guinea. The current field equations—no matter how they are pushed—can't explain highs at *both* the equator and the poles.

But using my unified field, as below, we don't encounter any of these paradoxes. Deformation isn't caused by gravity variations or by the centrifugal effect. It is caused by charge recycling and emission. It isn't gravity and the centrifugal effect that are resisting one another, it is solo gravity and charge. The centrifugal effect is real, and will cause a force, but it is the tertiary cause here, and can be ignored in the first instance.

Yes, in my Unified Field Theory, we have a perfectly logical explanation for these polar variations from GOCE, one that doesn't require any jumps of logic or *ad hoc* theorizing or reverse modeling. It also allows us to keep the data showing more density at the equator. We can keep both the old data and the new; we just have to update and extend the old theory. I have shown that all celestial bodies pull in charge at the poles and emit it at the equator. They do this by simple rules of angular momentum and field potentials. And this charge is real: it has mass. It is a real bombarding field, and the photons that make it up are not virtual or messenger. They have radius and spin as well as mass. Beyond that, I have shown precisely where and how this charge field fits into Newton's equations, Coulomb's equation, and the Lagrangian. In previous papers I have already said that charge coming in the poles would affect the Unified Field there, by augmenting the total field; in the same way it would damp the total field at the equator. This is because charge and gravity are in vector opposition. In the Unified Field, charge causes a force opposite to that of solo gravity (I still call the total field gravity, to match current wording). At the foundational level, charge is always repulsive, while solo gravity is a pseudo-attraction. But in this problem, we have charge variations. We have more charge coming in at the poles and more going out at the equator. By simple and straightforward mechanics, this makes the total field bigger at the poles. We have a larger unified field force, which we now call gravity. But since the photons are moving *in*, the force on the crust is *in*. This charge vector is what causes the polar flattening, by direct and real bombardment.

If you are lost, stay with me. We start with solo gravity, which is dependent on radius only. It shows no variation. All the major variations we see are due to the charge field. So if you are at the same radius from the center of the Earth, your solo gravity vector is always the same, no matter where on the Earth you are. But if you are at either pole, you have charge photons beating on the top of your head, pushing you down as well. This makes you weigh more. If you are at the equator, you have charge photons coming up from below you, pushing on the bottom of your feet. So you weigh less. That is a very raw explanation, but it gives you the basic mechanics. I think you can see that by Occam's Razor, my explanation is unbeatably simple. But can it answer all the other data as well? Here and in other papers, I have shown that it can.

I will hit a couple of the biggest outstanding questions right now. The GOCE data shows other variations than pole/equator. A hostile reader will point out that I chose the best view for my under-title illustration. What about this view, over Indonesia?



It is clear from analyzing all the views that we have not only the pole/equator variation, we have a land/water variation. And in this particular view, we have even more. We have an extreme high near New Guinea which counters both the land/water variation and the pole/equator variation. What in the world is going on there?

I will hit the first question first. Why the land/water variation? Again, this one is simple. Water, being 2-3 times less dense than land, blocks less of the charge field. More charge coming up means you weigh less. Remember, GOCE is not measuring solo gravity or charge, it is measuring the total effect. It is (unknowingly) measuring the Unified Field. The crust is also much thinner under the water, being as little as 5-10km thick, while the crust under land is five or six times thicker, up to 50km. Again, less blocking from the crust means more charge coming up.

But what about Indonesia? This one is a little more difficult. It stumped me until I noticed that the area in yellow mirrors an area of very high seismic activity. And, if we follow this lead, we find the GOCE maps mirroring the seismic maps all the way round the Earth. The GOCE model would seem to be a stacking of three models: the pole/equator model, the land/water model, and the seismic model. But why would seismic activity tie into this gravity model? Well, our evidence becomes circumstantial here, admittedly, but if we follow our nose, we come to the possible conclusion that something is seriously bottling up charge in these areas. Charge getting through is bluer, remember, so yellow is telling us less charge is coming up. This area of yellow is right on the equator, so it can't be more charge coming down. It must be less charge coming up. If that is so, then we have a new foundational mechanism for Earthquakes. It is possible that the plates beneath these areas are made of denser materials, and that charge is blocked to a greater degree than elsewhere. The charge, being blocked, looks for places to pass, and these places are the seams between the plates, of course. This means that if the sensors on GOCE were even more sensitive, they might pick up bluer or redder lines inside the yellow, that follow the fault lines. For all we know, GOCE may be seeing these already. This model is not finest thing I have ever seen. It is papermache, after all. We await more detailed maps or models.

At any rate, I propose that the plates beneath this yellow high are the densest on Earth. We cannot measure deep Earth densities directly, but we may be able to measure these plate densities. The crust is only 5-10km thick under the oceans, so we could compare this plate to the Indian plate (which is the bluest). If I am right, the Indian plate should have the least density, and it should be far less dense than the plates under Indonesia. The Russians have already bored to 12km on land, and the Japanese have a ship, Chikyu, that we are told is capable of 7km in the ocean, so this direct measurement is not beyond us.

Addendum, April 2012: Some have not seen how this causes both the polar highs and the New Guinea high, so I have added these paragraphs. The charge field solves this problem because charge is moving in at the poles and out at the equator. Therefore it is in vector addition with solo gravity at the poles, and vector subtraction at the equator. The gravity vector is always in; but at the poles the charge vector is in, and at the equator it is out. We sum charge and gravity at the poles. We subtract charge and gravity at the equator.

This makes the unified field sum higher at the poles, but because the charge is moving *in*, it pushes the surface of the Earth *down*. It is charge that causes the polar flattening, by direct bombardment. In general, the unified field is weaker at the equator, simply because charge is moving up, counteracting the gravity vector. And this charge moving up pushes the surface of the Earth up, making the equator larger. But under New Guinea, some of this charge is blocked. This causes a unified field high again, which we call gravity. At the equator, less charge means *more* weight.

But we have another factor adding to the complexity here, and that is that as charge pushes the crust out at the equator, gravity rises due to that increased radius. So we get a greater unified field due to greater radius, and a lesser unified field due to more charge coming up. The total we measure is a balancing of these two factors. And, as we can see from the models, different places on the equator balance these two factors in different ways, creating very different fields. Due to a difference in crust and plate densities, we get can get either highs or lows near the equator.

Finally, I have to explain how a unified field high at New Guinea can be causing high seas. Notice that I seem to have the same problem the mainstream has with this one, since if the plates under New Guinea are blocking charge, we should have a unified field low there. My theory explains the high seas very well, but it doesn't explain the yellow high. We should have a unified field low here, and a unified field high south of India. The answer to that problem is in the operation of the GOCE satellite itself, which—it turns out—isn't actually measuring the unified field on the surface. We are told that the satellite is low-flying so that it can be closest to the source, but of course the total effect on the satellite and on the crust can't be the same.

The satellite orbits Earth as low as possible to observe the strongest possible gravity-field signal – hence GOCE has been designed to skim above Earth at a height of just 250 km.

That's low for a satellite, but it's hardly skimming the Earth. Another overlooked fact is this:

An electric ion thruster at the back continuously generates tiny forces to compensate for any drag that GOCE experiences along its orbit.

This means that the satellite is actually *correcting* for gravity. The thrusters don't just compensate for drag, they also compensate for gravity, since the satellite's orbital height is determined by a vector addition of gravity and orbital speed, as in the old equation $a = v^2/r$. Therefore, the satellite must read its own corrections to gravity as gravity.

But the main problem here is that the satellite doesn't read charge like the crust reads charge. I will be told that we have only increased R by about 4% at the height of the satellite, but since charge falls off by the fourth power, that is still quite significant. Two other factors are also important in monitoring charge: 1) once charge clears the surface of the Earth, it has much more lateral freedom. It spreads out to all four sides, and any variations on the surface quickly dissipate. 2) The satellite is above most of the atmosphere at this height, so while the charge coming up is quickly dissipating, there is *more* charge coming down from the ionosphere and the Sun and so on. This multiplies the affect of dissipation.

What this means is that—when over the equator—the satellite is measuring mainly solo gravity variations caused by radius variations. That is why its data follows sea levels in many places. But it is not measuring the charge variations. So the satellite is not able to "measure" the unified field. It measures solo gravity and radius differentials caused by charge, but not charge itself. It is missing the charge differentials. Because the GOCE satellite cannot measure the charge, it cannot measure the huge variations caused by crust and plate density variations. Those variations will have dissipated in the data as the photons rise into the upper atmosphere to meet the satellite. For this reason, the data from GOCE is very skewed. Because it is basically measuring the average or "virtual" radius at New Guinea, it appears to give us a gravity high. But if we include the charge field, the unified field is actually at a low there (on the surface), as we have seen.

You will say, "But that still doesn't explain how the charge can be low while the crust and seas are pushed up. Didn't you say the charge was pushing them up?" Ah, but it does explain it, quite directly. The average radius is high there precisely because the charge is *blocked*. Because the charge can't get through, it is bottled up, pushing the crust and seas higher. So we have to split the effects, you see. If we could measure charge on the surface, it would be *low*, because it isn't getting through the dense plates. But if we measure its pushing effect, that is high. Because it isn't getting through, it is pushing more. Blocked charge has more pressure than charge that is being let pass, you see. So we have low charge and therefore a lower unified field on the surface, at the same time that we have higher seas and crust. This is the explanation of the seemingly confused data from GOCE. They just aren't measuring the unified field correctly, because they don't know of it.

You can now visit my newer paper, which uses the Unified Field, and this theory of dense plates beneath Indonesia to explain the South Atlantic Anomaly.

To see how this affects Canada's gravity deficit, you may visit my paper explaining that with charge as well.

*http://www.bbc.co.uk/news/science-environment-12911806

**I have shown that this explanation of precession fails, but that doesn't matter here. What matters is that the mainstream *agrees* that there is more density at the equator.

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