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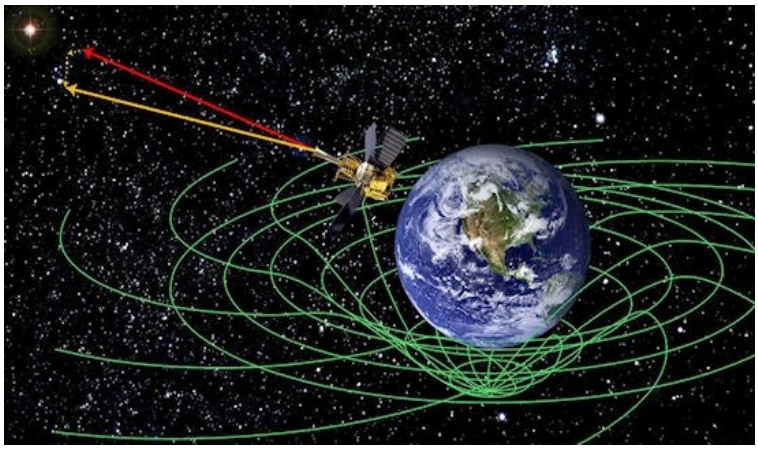
GRAVITY PROBE B
and space-time



by Miles Mathis

Once again, it is my readers that keep me up-to-date. I don't read the current propaganda for myself, since I know that is what it is. But my readers ask me questions about new articles, and occasionally I feel I must continue to show how bald the propaganda is, and how corrupt physics is. In this case, I was sent this article from NASA about the gravity probe. This gravity probe mission was created to test Einstein's theory of space curvature, and we are now told that it confirms it completely, in an "epic result." Clifford Will of Washington University in St. Louis goes further: "One day," he predicts, "this will be written up in textbooks as one of the classic experiments in the history of physics."

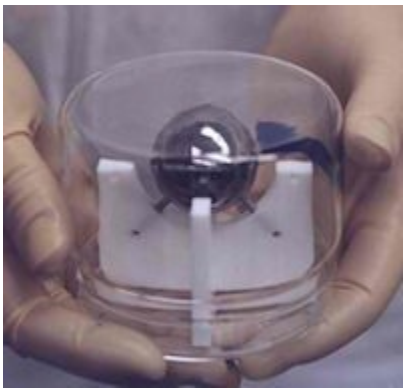
Will it? It might be, as an example of our ability to make a round ball. But as a proof of the curvature of space or anything like that, it will be remembered only for its blindness. We have been planning and funding this mission since 1963, we are told, so it somewhat pathetic we don't know any more about the fundamental mechanics of the Solar System than we did 48 years ago. Despite the fact that astrophysics has been taken over by particle physicists, and despite the fact that particle physics is based on charge, half a century later we are still blind to the charge field at work in the universe.

I will come back to charge, but first I want to remind you that this is the same Gravity Probe B project that was given a grade of F in a NASA review in 2008 by a group of senior advisors, and denied any further funding since, "the reduction in noise needed to test rigorously for a deviation from general relativity is so large that any effort ultimately detected by this experiment will have to overcome considerable (and in our opinion, well justified) scepticism in the scientific community".** They continue:

The noisy data meant that GPB could not measure the effects as precisely as astronomers had by firing laser beams at mirrors left of the Moon by the Apollo astronauts.

I'm going to let that pass for now. I just wanted to let you know that is the experiment GPB was trying to best.

In a nutshell, what the Gravity Probe experiment did is measure the tilt of little gyroscopes.



If the tilt is zero, no curvature of space-time. If the tilt is not zero, we are supposed to have proof of curvature. The gyroscope tilts because space is curved.

The primary problem is that there is absolutely no effort in this experiment to consider, mention, or try to block the main cause of that tilt. It is simply assumed that *any* non-zero outcome is proof positive of their theory and that any tilt that does not match their needed numbers is only an anomaly or "observation" that can be explained away later. That is horrible science, no matter how you look at it.

Of course, you may say that it is always difficult to consider unknowns in an experiment. Scientists can only address other known factors, and the charge field I am talking about is not known to them. But that doesn't wash because it *should* be known to them. Even without me shouting in their ears for a decade, they have had copious evidence before that, for several centuries. To continue to ignore charge at the macrolevel, and to only address certain effects of it, like local fields, is a tall sign of incompetence.

It is also clear at a glance that the numbers in this experiment were pushed to provide confirmation. I can't tell you exactly how from this article, since they don't provide the math, but we may assume they did it in the same way they did it in the Hafele-Keating experiment. I have already exposed the Hafele-Keating experiment as a fraud, and in that experiment they do the same thing they do here: they claim great accuracy in measurement, but make a hash out of the basic theory and of all rules of science. The Hafele-Keating experiment is the one where the airplanes with atomic clocks flew around the Earth, and the clocks gained or lost tiny fractions of seconds compared to clocks on the ground. But there, as here, the non-zero result is just assumed to be caused by gravity, with no effort to consider, discuss, mask, or limit any other effects. Just as the most obvious example, the E/M field is utterly ignored in both experiments! This despite the fact that the E/M field is known to have chirality, and is known to affect gyroscopes (and clocks*).

We also know that it took at least four years to push the numbers into line, since the probe itself has been grounded for that long. Any time the final tweeking takes four years, you know you have some pretty dirty numbers.

But back to charge. When I say charge, I don't mean some kind of static that needs to be degaussed or

something. Those coming here anew, who haven't read my other papers, may need to be warned. When I say charge, I mean the charge they talk about in quantum mechanics: the pluses and minuses on the electrons and protons, that are supposed to be virtual, or mediated by virtual photons. I have shown that this is the charge that underlies the E/M field, and it is the same at the macrolevel as at the quantum level. I have ditched the virtual or messenger photons and have replaced them with real charge photons. It is these charge photons that are not addressed in astrophysics, which has caused the muddle of dark matter among a thousand other muddles. This Gravity Probe experiment is just another side of effect of these thousand muddles.

My theory of quantum spins brings all this out into the open, but it has been known for centuries that the E/M field has chirality. That is what all the hullaballoo concerning lack of symmetry in QED and QCD is about, for heaven's sake (see beta decay, kaon decay, and so on). And that is what the right hand rule is about, too. We have a right hand rule, but no left hand rule, remember? These physicists who have ignored the E/M field in recent experiments are not only ignoring quantum theory that is half a century old or more, they are ignoring classical electrical theory that goes back almost to the time of Benjamin Franklin. It is incredible that no one mentions this to them. As usual we get a lot of horn tooting and backslapping, and absolutely no analysis of the basics. That is how my criticism differs from any others you will read. They talk mostly about engineering failures. I am pointing mainly to failures of theory.

To make this all even more explicit, we may revisit my own theory, which makes this chirality into real spins. Rather than let charge be virtual, I have demanded that it be physical and mechanical. The photon cannot be a point particle with no mass, radius, or spin, and the electron cannot be a probability with no radius or spin. I have shown that all the known particles, from photons to Z particles, can be reduced to stacked spins. These spins have a real radius and a real velocity. With this quantum spin equation, I have already answered a mountain of unanswered questions in QED and QCD, and done it simply and transparently. This is why I can see how absurd this gravity probe experiment really is.

I have shown that magnetism IS the spin on the photon, so the fact that they ignore the magnetic field in this experiment is, for me, like ignoring the water when you go swimming. “Look at me, I am not swimming, I am in a zero-gravity warp! Buoyancy, what?” I have long since written papers describing photons as tiny gyroscopes, solving superposition with these gyroscopes, solving entanglement in the same way, and so on. So when I see an experiment with gyroscopes that ignores the magnetic field, I know I am watching the unfolding of another farce.

To be even more specific, I can tell immediately that what is causing the tilt here is not the gravity field, it is the uneven E/M field. The field at the Earth is determined by charge arriving from the Sun and all the planets, and since this incoming charge is not always the same, you are going to get tilt. I showed both the mechanics and the math of this in my papers on planetary tilt, and this little gyroscope in this experiment is like a little planet. The influences all have to be added up, to find the tilt.

You will say, “OK then, why don't you do the math for this tilt, as they did? If you can match the data better, we will look at your theory more closely, perhaps.” But I don't need to do that to prove they have committed fraud. Any monkey can push math to match data. We see it done everyday. The problem here isn't math matching data or not, the problem here is that you have scientists flagrantly ignoring the first rules of science. As I have already said, one of the first rules of any science is showing that your data can't be caused by other known mechanisms. If, for example, I propose that water falls in a waterfall due to gravity, it isn't enough to show the water falling, or to write equations that match the data. I must consider other possible causes and eliminate them. I must show that the

water isn't falling due to magnetism, that it isn't falling because it was pushed, that it isn't falling because of suction from air currents, etc. This is basic stuff, and has been agreed upon since the dawn of civilization. It is called the scientific method.

At the very least, this gyroscope should have been shielded from ions, and it may have been, we don't know. This would mean the engineers were at least awake. But even this would not be enough, since to shield the gyroscope from charge would require shielding from photons, not just ions. Since physics doesn't admit the power of photons in a charge field like this, there is no reason they would try to shield from photons. And this would be very hard to do, anyway, since photons pass though most matter without much of a problem. To block the charge field would require a satellite too heavy to launch with current propellants.

Another question begged is why it was necessary to use a satellite at all. Why not measure a gyroscope on the Earth? Francis Everitt of Stanford says,

> Imagine the Earth as if it were immersed in honey. As the planet rotated its axis and orbited the Sun, the honey around it would it would warp and swirl, and it's the same with space and time.

Well, even if that were true, there is honey enough on the surface of the Earth. In fact, there is less honey in near orbit, since gravity is weaker there. Why not measure on the surface? Could it be because NASA is involved, and NASA doesn't get as much money for boring experiments on the Earth? I will be told it is because the experiment needed to be in a place where the satellite could be pointed at a single star [IM Pegasi] the whole time. If the experiment had taken place on the Earth, the star would be blocked much of the time. Not true. Any star is as good as any other for this, so choose the pole star and set up at the pole. Too cold, I will be told. Oh, and it isn't cold in orbit? This wasn't a manned mission. Too hard to find the spot at rest relative to the star, I will be told. But the spot isn't at rest regardless, since the Earth is orbiting the Sun. And, we are told they were in polar orbit anyway, so this wasn't an issue. They either ignored the parallax or corrected for it.

Then we are told the gyro was in orbit so that it could avoid gravity and float without colliding with any walls. Problem there? The satellite feels drag, and the gyro would drift forward. Solution, a "drag-free" satellite. We know that is impossible, so they elaborate:

> Inside the spacecraft, instruments monitor the distance between one of the gyroscopes and its chamber walls with extraordinary precision—to within less than a nanometer (a millionth of a millimeter). The spacecraft's thrusters respond to any changes in that separation. In effect, the spacecraft chases the gyroscope and flies along the same "drag free" orbital path that it does.

Do you believe that? I don't. The satellite already has to use thrusters to make orbital corrections for itself. No satellite can fly without some "governance." That governance must interfere with this precision "chasing" of the gyro, and vice versa. If the satellite does nothing but chase the gyro, it will gain too much acceleration and will escape. If the satellite governs its own orbit, it will cause the gyro to collide with its container. You can't solve both equations simultaneously.

In this article from Stanford we get confirmation of this problem. The satellite's systems were knocked out by solar flares as well as by the South Atlantic Anomaly. This must have affected the ability of the satellite to chase the gyros. Even if the gyros had been polished to a blinding sheen, this constant crashing into their containers must have caused scrapes. If there were not "patches" on the gyros to begin with, there must have been patches after these mishaps.

And this brings us to another problem. If the satellite was in polar orbit, it crossed both poles. That is what a polar orbit is. Well, of course the poles are the areas of greatest E/M activity, both in power and variation. This is known by every schoolboy, since we can see the aurorae. Furthermore, it is known that the poles aren't the same. Not only do we have different flattening and E/M effects on the surface, we have different effects in orbit. Again, this can be seen in the difference between the aurora borealis and the aurora australis. It can also be seen by studying the shape of the magnetosphere, which is not the same north and south. So the satellite is travelling through this variation in every pass, and it is being totally ignored? Could we find a more extravagant example of scientific negligence?

Well, yes, maybe we can, since we are then told,

How do you block a planet's magnetic field? "We used superconducting bags," says Kolodziejczak. "The gyroscope assembly is placed inside lead bags, which in turn are placed inside a large cryogenic container called a "dewar" holding 400 gallons of liquid helium. The helium cools the lead bags to 1.7 degrees above absolute zero (1.7K, or about -271C). At this temperature the lead becomes a superconductor, thus blocking out Earth's magnetic field. The ambient magnetic field within these bags is reduced to less than 3 micro-gauss, which is about the same as in deep interstellar space.

a dewar

So, we get an answer to our previous question. Some blocking was attempted. Anybody see the problem here? The satellite was in Earth's orbit, where the magnetic field is huge (especially over the poles). And what a superconductor does in those circumstances is take the resistance inside the bag to zero, so that all external charge passes without any blocking at all. That is what superconducting means. It conducts. It allows E/M to pass, both electricity and magnetism. The superconducting fluid is not minimizing the magnetism, it is maximizing it! In other words, no photons or ions are being blocked at all, except the ones blocked by the walls of the dewar or by the completely still lead atoms. But because the lead atoms are still, the charge passes it more easily than if it were warm. The freezing is counterproductive here, which shows again how confused these physicists are. A superconductor only ejects the local magnetic field via the Meissner Effect if the field is very weak. But they weren't supposed to be ejecting the local field, they were supposed to be blocking the Earth's field, which, in an orbiting satellite, *is constantly coming in from outside* and being refreshed.

You will say, "The E/M field variations were not being ignored, since we were being told about it from the team at Stanford themselves. The problem was fixed." Well, maybe the computers were brought back online, to keep the satellite from crashing, but the problem was not fixed. Just because they admit

that the South Atlantic Anomaly exists does not mean they masked it out of the hull, or were able to mask it properly out of the data. The point is, they don't know the size of the field effect at all points, so they cannot possibly mask it. They don't even know much about the ion field, as is clear from these press releases, and they know less or nothing about the photon field.

This report at Digital Journal admits that, despite all the multi-million dollar technical tricks touted in the articles, "there were unexpected data-muddying wobbles the researchers had to clear up"; but even there we aren't told what they were. Could these polar variations have been "unexpected"? And even if so, how were they masked? Physicists now know that E/M fields affect gyroscopes, but they don't have field equations to calculate the exact amount. This means they cannot have just subtracted out the charge effects. This problem is way beyond them, so pardon me if I doubt that they solved it to within an atom's eyelash again, as they always claim.

Surprisingly, an article at ScienceNews gives us a clearer picture of these data-muddying wobbles.

> The first analysis of this data revealed unexpected anomalies. The gyroscopes had behaved badly—wandering around and pointing in strange orientations. Irregular patches on the surfaces of the spheres were to blame. Everitt knew about these patches and expected interactions with the housing that would create small forces, or torques. But unanticipated patches on the housing itself amplified these electrostatic interactions. "The torques were 100 times larger than we were expecting," says Everitt. "It was a horrible shock." Despite this setback, in 2007 the Gravity Probe B team confirmed one prediction of general relativity. According to Einstein, the Earth's gravity warps spacetime like a bowling ball on a trampoline. This geodetic effect was measured with an error of about 1 percent.

So, there *were* E/M effects, but they were "unanticipated patches on the housing that amplified electrostatic interactions." Still no word on the E/M field of the Earth, which should have been anticipated. Also no word on how these "patch amplifications" were masked. How do you possibly create equations for those patches interacting with patches on the gyroscopes, when you didn't even know about them beforehand? Could they even point to the patches on the housing, or do they just intuit them? My guess is they "calculated" the interactions by simply subtracting out the data they didn't like, after the fact.

The reporter at ScienceNews, Devin Powell, also contradicts the claims of other articles when he says,

> Other experiments had already confirmed this "frame-dragging" effect, predicted by Einstein's theory of general relativity. The new results, marred by technical difficulties, won't set any records for precision.

Beyond that, he admits that Gravity Probe B was a "beleaguered project." Wait, I thought this was the most precision ever attained, in about a dozen different ways! Most of the articles online or in the major papers start with something like this, "armed with 13 new technologies and four of the most perfect spheres ever created. . . ." Was that just salesmanship? Powell continues,

> After NASA pulled the plug in 2008, private funding arranged by an executive at Capital One Financial† and the royal family of Saudi Arabia bought some extra time to clean up the data. By comparing the overall wobble of each sphere to the tiny magnetic fluctuations on its surface, the team worked out how the patches were interacting. The researchers also discovered that the motion of the revolving spacecraft could occasionally kick the spinning spheres into new orientations.

Aha, I am proved right again, *while* I am writing. I just said that was how they did it, and with a little more research, I have proof. They "cleaned up the data." How did they do it? They found out how the patches were interacting from the data itself. They worked backwards from the data to find out how

the data was missing their theory! That isn't science, gentlemen. Can't you see that?

Just to be clear, you can't work backwards from the data, since that is cheating. There is nothing to prevent you from just subtracting out whatever you don't like. You find an "anomaly", and then measure the anomaly *in the data*, and then say that the unpredicted and unmeasured fluctuations are causing the anomaly. That is cheating. To do this without cheating, you would have to measure the fluctuations directly, *not from the data*. You would have to take some E/M apparatus onboard the satellite to measure the interaction between the patches. You can't just clean up the data by applying some computer model to it, or some other abstract compression. You can't do that because it completely compromises both your data and your experiment.

It also compromises all the numbers. I said in the beginning that I could tell the numbers were pushed, and now you see how. These mathematicians needed the tilt to be a certain number, and they knew that number going in from field equations. They tell us that themselves, in the articles. They needed to find 39 milliarcseconds per year. So if the average tilt of their gyro is 100 marcsecs per year, say, they figure the patch interactions are causing about 60 of those. They can't *measure* the patch interactions because they don't have the equipment onboard to do that. That would require landing and another refitting. It would also require that they had equations to calculate the tilt of gyroscopes from electrostatic fields, and I will tell you a secret: **they don't have any equations like that**. There are no existing equations that will tell you how much a given gyroscope of a given mass, radius, and angular momentum will tilt given a certain electrostatic charge. All they have is Coulomb's old equations, and some rough updates to that, but they have nothing that will tell them the tilt of a free-floating gyroscope. And even if they did have such equations, those equations would depend not only on the charge in the gyro and the charge in the craft housing, they would depend on the ambient field, which, as we have seen, they are totally ignorant of. They think they can eject the ambient field with a superconductor and the Meissner Effect, and that when the satellite moves into new space, the field won't come back in. They think that a superconductor will act like an insulator! That is sort of like putting in earplugs so that you can hear better. So they had to either model the interactions, based on nothing really, or they just *assigned* the 60 marcsecs to the patch interactions, with no math or theory at all.

And this brings us back to the E/M field of the Earth. In assigning their errors to these electrostatic interactions between patches on the gyros and patches in the housing, they are of course admitting that the gyro should be affected by the E/M field. Electrostatic interactions are just a subclass of electromagnetic interactions, hence the similarity between the names. So they are trying to tell us that their errors are caused by electrostatic interactions between gyro and housing, but that nonetheless the electromagnetic field of the Earth can be ignored. They will answer, "No, we masked the field of the Earth with the superconducting bags." OK, so these superconducting bags eject or mask the field of the Earth, but they don't affect charge between the housing and the gyro? How does that work? Are we to understand that the superconducting bags were taped to the *outside* of the housing? How can you claim that you have nullified the E/M field inside the satellite, then turn around and claim that electrostatic charge between housing and gyro is causing your errors? Are you saying the electrostatic charge no longer requires an E/M field? Are we supposed to be in the presence of some revolutionary new physics here, where electrostatic charge passes between objects in no field?

Another curious thing we find if we dig is that IM Pegasi was tracked relative to quasars, with radio telescopes and interferometry. That is odd because you normally track something less known against something more known. You don't use something with a question mark next to it as your baseline. That is common sense. And yet it is well-known that our data from quasars is not solid. It is not solid

because it relies on red-shift assumptions. We aren't sure what quasars are, and we aren't even sure *where* they are. So it must or should raise eybrows to use them as reference points of any kind.

It is also worth pointing out that this announcement from NASA was published in *Physical Review*, another red flag. *Physical Review* has been gatekeeping since the time of Einstein. Einstein wouldn't even work with these people (or their predecessors), so it is ironic to see them claiming to have proven his theory.

We are also told that this mission proves Einstein was right about black holes. Three problems: 1) Einstein didn't give a flip about black holes. He didn't even believe in them. 2) This is again transparent salesmanship, since science writers know most people like to read about black holes. They now try to work black holes and wormholes and time travel into every article in every magazine. 3) This mission proves nothing about black holes, since it proves nothing about gravity. Given all the garbage in the data, it doesn't even prove anything about E/M, other than that it exists. All this mission proves is that physics has crash-landed on some alien planet where science is extinct.

Finally, we are told by many of these writers that the gravity probe proved something that didn't need to be proved, or was already proved. False again, since if you study the previous proofs they turn out to be as solid as this one. [Don't even get me started on firing laser beams at mirrors on the Moon.] All the supposed proofs of GR, studied carefully, only prove that gravity exists, which we already knew, or that time differentials exist, which I accept; but they never even come close to proving that space is curved or that space-time is a real thing. They can't, because curved space and space-time are both mathematical systems, not existential things. Even Minkowski understood that. As I have shown, you can write your field equations with tensors (curves) if you like, and if you have enough chalk and a big enough blackboard. You can also write them with highschool algebra and straight lines, on post-it notes. But it is just foolish to build satellites to go in search of a proof of math. It is like looking for proof of the existence of the number 2. To say it again, THE CURVATURE IS IN THE MATH, NOT IN SPACE.

*Atoms are affected by magnetic fields. *All* matter is affected by magnetic fields, since nothing is completely non-magnetic. Ions are just affected more. Since atomic clocks run via atoms, we may deduce that atomic clocks are affected by the E/M field.

**http://www.newscientist.com/article/dn13938?DCMP=ILC-hmts&nsref=news3_head_dn13938

†Is that the same Capital One that charges exorbitant fees and usurious percentages?

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