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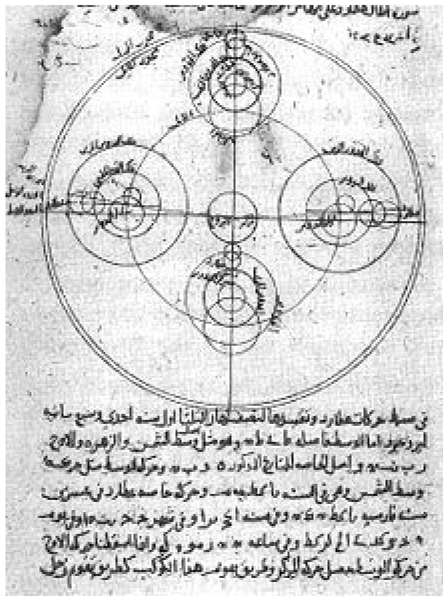
Emitted Charge and Ambient Charge

and how they affect one another



by Miles Mathis

A reader reminded me recently that my two methods of calculating charge for a planet don't match. I already knew that, but now that I have been called on it I suppose it is time to resolve the issue. I have given two different derivations. In my paper on the orbital distance of Mercury, I give this equation:

$E_2 = E_1(SA)^2V/M$

Where SA is the surface area ratio, V is the volume ratio, and M is the mass ratio. In my paper on the Moon giving up a secret, I use this equation

$E_2 = G - g$

Where g is the given gravity and G is the solo gravity (found from the radius ratio). My reader ran the first equation on Mercury, finding .4336. But using the second equation gives us .05. He asked which is right.

They are both right, in a way. The first one tells us the charge that the body is emitting itself. The second one tells us the charge field on the surface we would actually measure, since it is calculated from a field total g. In other words, it includes the ambient charge field. It is easiest to see the difference with Mercury, since it is closest to the Sun. When Mercury emits charge, that charge immediately meets charge coming out of the Sun. It hits a dense Solar charge field. As we have already seen, that charge from the Sun is able to tamp down the charge coming out of Mercury by .

3836. But if we look at the Moon, the Sun (or something) is tamping it down by much less: about .02. So my equations, though not wrong, are incomplete. To bring them together, we just have to calculate how much the ambient field tamps down the emitted field. We could start from either equation, but with Mercury it is simpler to start from the first equation, since it is already expressing Mercury E_2 as a fraction of the Earth E_1. This is better because we already know the radius differential of Mercury and the Earth, .383. Does that number look familiar? Yes, we just saw it a couple of sentences ago, so the equation becomes

$$E_2 = E_1(SA)^2V/M - (1/R) = G - g$$

OK, but why does that work? It works because we need to compare field curvatures, to establish a local charge density. By curvatures, I mean surface curves, not anything to do with Einstein. Because Mercury is smaller than the Earth, its curvature at the surface is greater. We compare both to the Sun's curvature, which is much less than either. The Sun's charge field is much flatter than that of the Earth or Mercury. And that is because the surface of the Sun—from which the charge is emitted—is curved much less, you see. This makes the charge density of the Sun much greater than the charge density of Mercury. Mercury's charge field dissipates at a much quicker rate.

If this is not clear, think of the old pufferfish I have mentioned in other papers. The pufferfish is spherical, with spikes sticking out all round. Think of a pufferfish with very long spikes. At the very ends, the spikes are not that close together, but as you move in the spikes get closer. They become *denser*. Well, charge moves out from a body like the spikes on a pufferfish. If the pufferfish is very small, you get a quick change in spike density as you move out. If the pufferfish is the size of the Sun, you get very little density change as you move out. This is often called a field gradient. The external field gradient of a large sphere is less than that of a small sphere. Less change.

To calculate this gradient, we just need to calculate the curvatures. With circles and spheres, the surface curvature is proportional to the radius. And since in my first equation we are dealing with relative numbers rather than absolute numbers, we can calculate relative curvature straight from relative radii. In other words, the radius ratio is all we need. And, since we are calculating Mercury from Earth numbers (E_1), we insert the Mercury/Earth radius ratio. We use 1/R instead of R, because our other ratios are Earth/Mercury, and here we need Mercury/Earth.

You will say, "Why aren't you including the Sun's curvature here? That was what was causing the difference in your mechanical explanation, after all." It got cancelled out. We could include it by writing the equation out in a fuller form, like this:

$$E_M = E_E(SA_E/SA_M)^2(V_E/V_M)//(M_E/M_M) - (R_M/R_S//R_E/R_S)$$

That's how we include the Solar charge field in the equation. That equation gives us both the total charge field in the vicinity of the body (G – g), as well as the charge actually emitted by the body.

So, we have found a way to bring the two equations together. But there is still work to do. To give us an idea of what needs to be done, let us move to another body. Let's apply the equations to the Moon to test them:

$$G - g = 1.051$$
$$E_2 = E_1(SA)^2V/M - (1/R) = 1.0714 - .273 = .8$$

Doesn't work. We are off by .25. Why? Because ambient field density of the Moon isn't caused mainly by the Sun. It is caused by the Earth. Because the Moon is so close to the Earth, it receives its greatest charge *density* from the Earth. As I said above, the Moon's charge is tamped down by .02, not by .273. How do we calculate that number? Like this:

$E_2 = E_1(SA)^2V/M – [1/(SA)R] = 1.0714 – .02 = 1.051$

And why did that work? Well, the surface area ratio times the radius ratio is approximately the volume ratio, so it is volume that is important here. It must be telling us that while Mercury doesn't care about the Sun's surface area or volume, for some reason the Moon does care about the Earth's volume. We can't just solve with a radius. Why? Because either the volume or (SA)R gives us R^3. The tamping here is proportional to R^3 instead of R. But again, why? Because we are in a field inside a field here. The Earth/Moon system is inside the Solar system. The Earth/Moon charge field is inside the Solar charge field. So we could rewrite the equation again, as

$E_2 = E_1(SA)^2V/M – [1/R^3]$ *or*
$E_1(SA)^2V/M – [1/RR^2]$

You will say, "But that's just an estimate right, or a dimensional analysis." No. You better run some numbers to see that when we are talking about ratios, the surface area ratio really is just the radius ratio squared. [The volume ratio is also very close to the radius ratio cubed, but I will have more to say about that later.] Which means that with one-moon systems, we could estimate an answer with this simplified equation

$\mathbf{E_2 = E_1R^7/M – [1/R^3]}$

But back to the original question. Why RR^2? Well, the R represents the radius ratio in the Sun's field. The R^2 represents the radius ratio in the Earth's field. Again, it is squared because it is a field inside a field. Look how it works in the equation. It diminishes the field effect. That is what would logically happen to a field inside a field. It would diminish.

You will say, "But why are we ignoring the Sun's 'tamping'? Shouldn't both the Sun and Earth be tamping down the Moon's charge as it clears the Moon's surface?" We aren't ignoring the Sun's field, we are just calculating the Earth's field inside it.

When we looked at Mercury, we calculated the Sun's tamping directly. The Earth's field had nothing to do with it. The Earth's charge number was only in the equation because we were using it as a known quantity. It was our data hook. It was to say that IF the Earth were at the distance of Mercury, it would have that charge. Then we replaced the Earth by Mercury, by substituting in its vitals instead of the Earth's. This gave us a number at the end, rather than just an empty equation.

But with the Moon, we couldn't solve that way. The Sun was not the source of tamping. The charge density of the Sun is not as great for the Moon as the charge density of the Earth. It is the Earth that is doing the tamping. The ambient charge field of the Moon is determined by the Earth, not the Sun. But we can't simply calculate the Earth's charge directly, using only radii. The Moon is inside the Earth's charge field, *which is inside the Sun's charge field*. That is why we needed both the R and the R^2. A bit tricky, I admit, but I think you are ready for it.

We know a bit more, but we still don't know all we need to know, so let's look at a third body.

Let's apply our original equations to Mars, to test them again:

$G - g = 1.52$
$E_2 = E_1(SA)^2V/M = .084$

Not even close. And Mars appears to need a negative tamping. Why? Because the equation is assuming that Mars and the Earth are in the same ambient field, but they aren't. We have to include the Jovians' charge (I call the four big planets Jovians), so this problem begins to get quite complex, like my Bode solution or my tilt solution or my eccentricity solution. Mercury was the simplest solution, since the Sun was the main influence. With Mars, we have multiple influences. But let's see if we can take some shortcuts, as usual.

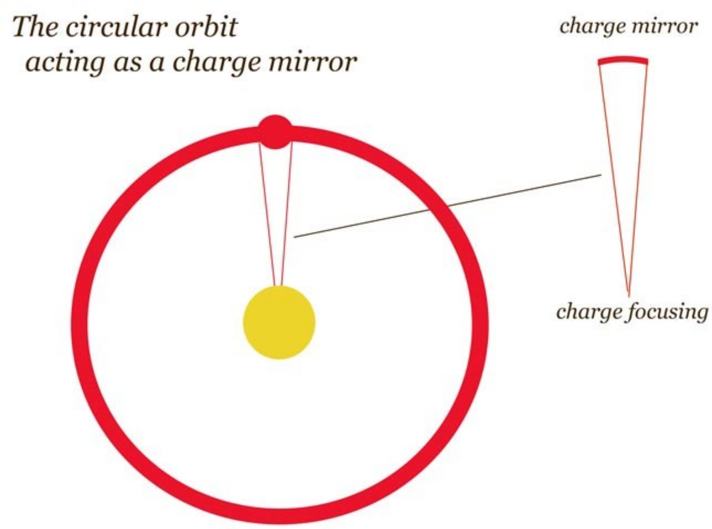
In my Mars magnetism paper, I found that relative Solar charge was 5.604 at Mars and Jovian charge was 4.752. I also showed that the charge from the Jovians was arriving at the Earth with a relative number 31.72. However, in that math we let the Sun's charge equal 5.6 in both positions, Earth and Mars. That can't be right. So we need a little bit more math. Letting the Sun's charge drop by the inverse quad—as I have done so many times—gives us 5.38 times less Solar charge at Mars (Mars semi-major axis is 1.523 times larger than the Earth's, so $1.523^4 = 5.38$). So we make the necessary change to the numbers above. Solar at Mars is now 1.042. Jovian charge at Mars is .8833. Solar at the Earth is 5.604. Jovian at the Earth is 31.72. We are calculating charge density here rather than magnetism (charge spins), so we don't subtract as we did in the magnetism paper, we add. Spins coming from opposite directions will substract, but densities coming from opposite directions will add. Therefore, the Earth's total charge density is 31.72 + 5.604 = 37.32. Of Mars, .8833 + 1.042 = 1.925. Dividing, we get 19.38. But since Mars is also smaller in the field, it will capture less of the charge field. So we have to use the size ratio once more. This gives us 19.38 x 1/.533 = 36.36 for our charge ratio between Earth and Mars. And we need one final manipulation. Since this number we are calculating will include the ambient field, obviously, it will be expressing how Mars emits into the field. Since the field is coming from two directions—inside and outside the orbit of Mars—we have to divide by two. At any dt at any dx, Mars can be emitting in only one direction. But the field is arriving from two (summed) directions—Sun and Jovians. This gives us a final number of 18.18.

And so that gives us a correction to our second equation.

$E_2 = 18.18E_1(SA)^2V/M = 1.52 = G - g$

That shows us how to get the total field of Mars, rather than the emitted number .084. But how did that work? It worked because unlike Mercury, Mars has a much *less* dense ambient field than the Earth. So the equation seemed to give us a sort of negative tamping. Mars is being tamped much less than the Earth, so if we start the equation with the Earth's charge field E_1, we have to work the equation inside out, as it were.

If you have learned nothing else from this paper and my papers on Bode's law, tilt, and eccentricity, I hope you have learned that the outer planets act like charge mirrors, reflecting charge back into the Solar system. They take in the charge and re-emit some of it back toward the Sun. I also hope you have understood that the circular form of their orbits allows them to act like focusing mirrors. The charge they reflect back into the system is focused as it moves back to the Sun, increasing its density and therefore its field power. This makes the Jovians much more powerful as charge entities than anyone has understood.



Charge moving back toward the Sun is focused because it follows pre-established charge channels, which move both in and out, and also because the Sun is acting as the channeler. The spin of the Sun pulls all charge toward it, so the entire charge field is shaped by the Sun. This is an analogue of the gravity field, which of course does the same thing. The entire unified field is focused at the Sun.

This is why charge is greater at the Earth than at Mars. That would have already been admitted by anyone who accepted charge, since charge must be stronger nearer the Sun. But the mirroring effect of the outer planets increases that gradient even more, since charge returning to the Sun is also made denser. The Earth get more charge from the Sun, *and* more charge from the Jovians, than Mars. That is why the Earth is more energized in all ways than Mars. It has far greater magnetism, as we saw in that previous paper. And now we see that it has greater charge overall. It is an ambient field that is much richer. This may explain why life is here.

It also helps explain why Venus is such an oven. Venus is simply overcharged. The ambient field from both directions is so rich in charge that the entire planet is overwhelmed. This is where much of Venus' heat comes from. Yes, the clouds create a greenhouse effect, but all these effects are secondary effects, caused by charge. And that is why physicists couldn't predict the heat on Venus: they didn't (and still don't) know about charge. According to their models, Venus should be cold. And you know what, according to their current models, Venus should *still* be cold. A gravity-only model can't make Venus hot, not even with all the clouds in the world. Why? Because you have to have something driving the greenhouse model. You have to have an initial source of heat. Clouds can reflect heat, but they can't create it. Heat can create clouds and gasses, but the heat can't create itself. The curent model of Venus is circular.

Now to wrap up by answering a question. I have used the same sort of math in several papers. Some of my readers have called it "mathismatics." It is a shortcut method using ratios and mechanical explanations. I find it much more visual, and it is relatively simple, but it requires being aware of all the interactions. Even those who like it have trouble using it, and it is because it has already taken three forms in about a dozen papers. Although these three forms are similar, they have differences. We have seen two of the forms here. I just used ratios to track charge densities, and I mentioned that the same ratios can be using to track the magnetic field as well. In the Mars magnetism paper I used these ratios to track magnetism, just being careful to subtract fields rather than add. But there is a third form, and that uses the same ratios to tracks charge strengths rather than densities. We can see that immediately with the Moon, which has a charge density higher than the Earth, but a charge strength lower. Although the Moon is recycling less total charge, its size and density combine to give it more charge density on the surface. Then again, this charge density falls off quicker as it leaves the Moon, due to curvature.

For this reason, we have to be highly aware of how charge is behaving in our equations. Are we looking at charge strength, charge density, or how charge will affect the magnetic field? Sometimes we will be following both charge strength and charge density, as in the tilt papers.

None of this is easy, as I am the first to admit. Even I get bogged down, and sometimes I have to let the numbers tell me what is going on. I have to feel my way ahead, asking what the logical outcome would be, and then moving slowly toward it.

I have actually resisted turning these ratio equations into "normal" absolute equations, because I didn't want to lock into a form before I dug out all the field variations. That is the problem with mainstream physics, as I have shown. They always rush to build a general equation before they have catalogued all the variations. They then have to come in later and tack on a bunch of pushes, in the form of unassigned constants. The best example of that is the cosmological constant I have written so much about. The initial field equations were locked in before Einstein or anyone else understood all the variations. And now we have a whole field of violations and cosmological constant pushes and phonons and so on. This while the equation just needs to be rewritten to contain more complexity, as I have shown.

So I am leaving this field math open-ended for now. I am still crawling through the field on hands and knees, trying to understand the way charge works. I am making progress, as you see, but much work is left to be done before we lock in any "normal" equations.