return to updates

Climate and the Seasons

by Miles Mathis

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A perceptive reader recently asked me what effect my charge field had on the seasons. Realizing that I hadn't addressed the issue, I promised to do so as soon as possible. Hence this paper. The mainstream sources tell us the angle of Sunlight is the primary cause of the seasons. This angle is created by the tilt of the Earth and the changing relationship of this tilt to the direction of the Sun over the course of a year. According to current theory, which is pretty thin, other factors also play a part, the main secondary factor being the elliptical orbit of the Earth, which puts it farther away from the Sun in July and nearer in January. We are told this factor is about 7% of the total effect. All other factors are minor compared to these two.

Addendum, October 8, 2014: I was rereading this paper after more than a year and a half, and realized I missed something in my first analysis. My work in the past 19 months has allowed me to see several important additions.

The fact that aphelion causes warming rather than perihelion is of course opposite to expectation, but the mainstream once again glosses over it. They so successfully gloss over it, I didn't even analyze it fully the first time through. If Sunlight is the cause of warming, then we would expect overall warming at perihelion, when the Earth is closer to the Sun. So why do we actually find more warming at aphelion? Wikipedia puts it this way:

> Research shows that the Earth as a whole is actually slightly warmer when farther from the sun. This is because the northern hemisphere has more land than the southern, and land warms more readily than sea. The slight contribution of orbital eccentricity opposes the temperature trends of the seasons in the Northern hemisphere.

But if those two things were both true, the same mechanisms should *increase* the temperature trends in the south. In January, it is summer in the south and the Earth is nearest the Sun. Therefore, we should expect greater temperature swings south than north. We don't see that. Just the opposite. Ignoring the poles, the greatest temperature swings on land are north, not south. As you will see below, the poles are special cases, because charge is entering there. So we look instead at land at lower latitudes. If we compare the same latitudes north and south, and correct for elevation, the north has far greater temperature swings. Both the record lows and highs are in the north. That data doesn't fit the mechanism above at all. It is upside down to it.

If you still don't see it, think of this: if eccentricity suppresses temperature swings in the north, then with a circular orbit, the north would have even *greater* temperature swings. But current theory can't even explain the current temperature swings. How could it explain even greater ones, with no eccentricity to work with at all? In a circular orbit, the temperature swings in the south would be less and in the north would be more. But they can't explain the current difference north to south. How could they explain an even greater difference?

The whole “warming more readily” explanation is also a pathetic dodge, since although land does warm more rapidly due to heat capacity, it also cools more rapidly, for the same reason. Admitting that, the northern hemisphere would be colder in winter by that mechanism. If the heating and cooling of land is causing it to be warmer in summer and colder in winter in the north, then how is anything “opposing the temperature trend” in the north?

Once again, you aren't being educated by the mainstream, you are being hypnotized. They are selling you illogic as logic.

We would *expect* eccentricity to oppose the temperature trend in the north, since the Earth is farthest from the Sun in summer. But if that expectation were *true*, then we couldn't find more overall warmth at aphelion, could we? The only way we can find more warmth at aphelion is if the greater landmass in the north is giving us a greater temperature rise. But if we have a greater temperature rise, we can't have anything “opposing the temperature trend in the north”. You see, Wikipedia's third sentence contradicts its first two.

What the mainstream really needs to do is balance *three* factors: tilt, eccentricity, and landmass. Tilt causes the seasons, according to them. Eccentricity then should tamp down the seasons in the north, and landmass should push them back up. What they don't tell you is that the math for that doesn't work. Let's just do a very rough estimate, to get a feel for things. The difference between aphelion and perihelion is only 3.3%. But there is around 100% more landmass in the north. And the heat capacity of land is around 4 times less than water. But we have about 2.3 times as much water as land on the surface. Without dissipative effects, the Earth would be around 170% hotter in July than January. So if it worked as they say, their mechanism would be way too powerful. The oceans and atmosphere simply cannot dissipate that much heat quickly enough to get that number down to data.

Another thing that tells against this theory is the temperature gradient across landmasses. The oceans can act as a heat sink, and do, but if they were sinking all this excess heat we would see signs of it in the way the continents were heated in summer. If the current theory were true, we would see a steep heat gradient toward the middle of each continent, with the center of each landmass much hotter because it was further from the oceans. Yes, we see some gradient of that sort near the coasts, but nothing like what this theory would predict, especially toward the center of the continents.

The only way to explain all this data without these contradictions is with charge. Like this: In January, the southern hemisphere is tilted toward the Sun. Which means the south pole is tilted toward the Sun. This allows charge a straighter path from the Sun into the south pole. More photons enter. In July, the reverse is true, with more antiphotons coming in the north pole. If we assume we have $2/3^{rd}$ photons and $1/3^{rd}$ antiphotons, and recognize that 23.5 degrees is 26.1% of 90, we can solve this. So in January, we have (.667)(1.261) + (.333)(.739), and in July, we have (.667)(.739) + (.333)(1.261). By that reckoning, we still appear to have more total charge recycling in January [1.087 versus .913]. However, the fields aren't added, they are *integrated*. Heat from within is caused not by simple charge recycling, but by charge meeting anticharge and being spun up. It is mainly another magnetic reconnection phenomenon, like we have seen in many recent papers. If you are not clear on what I mean by "spun up," consult my paper on Period 4 of the Periodic table, where I show charge and anticharge being spun up as they meet on the pole of Iron. On a much larger scale, that is basically what is happening here. [You can also consult my papers on magnetic reconnection, albedo, comets, Enceladus, and so on.]

Since charge and anticharge have to meet to cause this effect, we will naturally see the greatest effect when we have the greatest amount of anticharge. As you see from the equations above, that is in July.

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Another thing the mainstream passes over is the fact that the Earth chooses to have its south pole closest to the Sun at perihelion. Given a gravity-only celestial field, how does that work? Obviously, it can't be explained with gravity-only. It can only be explained with charge. As I said, the Earth leans over at perihelion to allow as much charge into its south pole as possible. It is trying to create the straightest path for the charge at the time when there is most of that charge available.

If that is so, I will be asked why the Earth doesn't just lean all the way over to 90 degrees and stay there? Well, if the Sun were emitting photons only (no antiphotons), and if there were no outer planets or galactic core, that is what the Earth *would* do. But you see the Earth is trying to maximize several fields at once, since it is "feeding" on them all. It is also feeding on anticharge from the Sun, taking that in at the north pole. And it is feeding on charge from the galactic core (see below). And it is feeding on charge returning from the four big outer planets. It is these outer planets that set the tilt at 23.5 degrees, as I have shown in a previous paper. Therefore, it isn't efficient for the Earth to point its south pole at the Sun all the time. At perihelion, it is *most* efficient for it to do so, so that is where we see the greatest tilt of the south pole toward the Sun.

This matching of the south pole to perihelion is the clearest proof I could ask for my charge recycling theory. It is glaringly obvious that the Earth's tilt is being determined by charge considerations, and yet somehow that is ignored. Ask the mainstream why the Earth aims her south pole at the Sun at closest pass, and see what they say.

[Addendum, April 30, 2017: And of course it is not just the Earth that does it. As we see from this mainstream diagram of Mars' orbit, Mars does the same thing.
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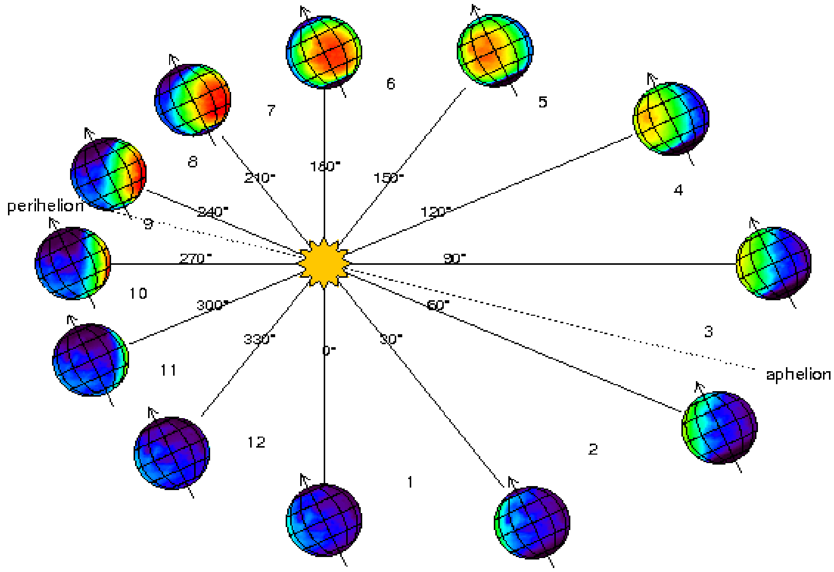

A reader sent me that, recognizing that it was confirmation of my theory. It is from the Mars climate database in France. As you see, Mars points his south pole toward the Sun as he approaches perihelion. As he approaches aphelion, he points his north pole at the Sun. But why don't the times match up perfectly? Why is the south pole match-up about 40 degrees away from perihelion, instead of right on it? Because Mars is much nearer Jupiter than we are, and is also receiving charge from Jupiter (and the other big four planets). I predict that how far off perihelion this match-up is varies, and depends on the positions of those planets. For instance, since in this cycle Mars is pointing its south pole away from the Sun in area 1, we should assume Jupiter is positioned in that area relative to the Sun and Mars. If he is not, then we should assume the center of mass of the four large planets is.]

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Now that we see the right answer, we have to go back and ask why the heating by landmasses was wrong. If the extra overall temperature in July is caused by magnetic reconnection and not by the heat capacity of land, then why doesn't the heat capacity of land seem to come into the problem *at all*? Because it was an idiotic idea to begin with, and a misunderstanding of both heat and temperature. The fact that land heats up faster could not impact this question, since the *speed* at which things heat up is not to the point here. It would impact daily temperature variations on land and in water, but would not affect *overall* variations like this, from January to July, across the entire Earth. One reason for this is that heat capacities of the materials involved do not change with small changes in temperature. For example, the heat capacity of water is the same at 25C and 100C. So if land heats up faster in summer, it also heats up faster in winter. It heats up faster during the day and cools off faster at night. At the atomic level, this is because land *channels* charge more efficiently than water. The charge stays in the water longer, so heat travels more slowly.

But in the current problem, that is all beside the point. It doesn't matter *how fast* the charge is moving through various substances that determines the overall temperature. It is the *amount* of charge present in the system (and how spun-up that charge is). For this reason, talking about the heating of the land was always just a diversion. It was another attempt at hypnosis, relying on your inability to understand
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heat.

If you still don't believe me, consider *this* problem that is never addressed by the mainstream. If their theory of heat were correct, then the overall temperature of the Earth in January would be way *below* what it is. At that time, the southern hemisphere is nearest the Sun. But at that time, almost all the Sunlight would be hitting the oceans. If the oceans were dissipating all the 170% extra heat in July, as above, then in January they would be absorbing almost all the heat from the Sun, sinking it with their extra heat capacity. The overall temperature of the Earth would plummet. That isn't what we see. As they admit above, the difference in overall temperature from July to January is slight.

Why don't we see these big temperature swings from July to January? Because heat transfer doesn't work like that. The mainstream theory treats each system as closed, but they are all connected. The land isn't one system and the ocean another. The north isn't one system and the south another. They are all transferring to one another. The land in the north isn't just heated by Sunlight. It is heated by the oceans around it and the Earth beneath it. And the land in the north isn't just heated by northern oceans. It is heated by all oceans. The oceans transfer heat more slowly, but they don't eat it or store it permanently. Given six months to stir and transfer, this heat capacity difference goes to zero.

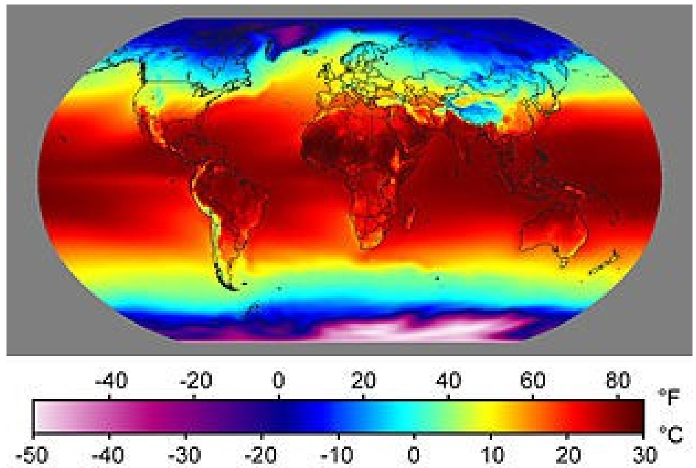
The "landmass heating faster" theory would work only if the time period we were looking at was too small for water to also heat up. But after the land heats up, the water can continue to heat. Given the amount of heat available, the land *doesn't* continue to heat up during that time, because it has already hit its limit. So in this case, the speed of heating isn't pertinent. And that is just one of several reasons that theory is garbage.

In short, the mainstream has mistaken change in heat for amount of heat. It is like mistaking acceleration for velocity or flux for field strength. [See below for more on heat capacity].

Talking about how fast land heats up is misdirection, and the theory was proposed only because they couldn't see any path to the right answer. Without charge recycling, you cannot solve this or any other physical problem.

Now we return to the original paper.

For more proof of charge influence, we can study large variations in temperature that neither tilt nor eccentricity can explain, given current theory. The greatest of these is the variation in temperature at the poles.



Annual Mean Temperature

This 2002 NOAA chart makes that perfectly clear. This diagram is mapping surface air temperatures, and averaging over 30 years (1961 to 1990). Since blue indicates about -15C and white indicates about -50C, we have a huge temperature difference at the two poles. Only one spot north goes to purple, indicating that spot in central Greenland is about -30C. Whereas most of the south pole is white or light purple, indicating around -50C. This should be a major indicator, but it is totally ignored at mainstream sites. I have seen it explained as due to more radiation reflected by snow at the south pole, but snow and ice at the south pole is no more white than at the north pole. If anything, it contradicts their theory for warming at the equator, which includes the idea that landmass is easier to warm than water. Since we have more landmass in the antarctic than the arctic, the antarctic should be warmer by that theory. It isn't. Please notice that Greenland is also contradicting that theory. Landmass at the poles is acting the opposite regarding warming than landmass at the equator. This turns out to be an important clue.

I will be told that landmass at higher latitudes can't be warmed because it is covered by a layer of ice and snow. But this implies that ice and snow act as a perfect insulator, which they are not. Ice freezes at 0C, but it can get much colder, of course. By the same token, Solar radiation can heat it, raising the ice temperature from -50C, say, to near zero. As the ice warms, the landmass beneath it warms also. So although snow and ice do act as insulators and reflectors, they are in no way able to explain such a large temperature differential, or to explain why high latitude landmasses should be colder than the areas around them. A thin layer of water or ice subsumed by land should not be colder than the surrounding ice, which is all water, by the current theory of heat capacity. If lower latitude lands are warmer, higher latitude lands should be as well, regardless of any insulating cover of snow. After all, snow may be a good insulator, but it can't be a better insulator than itself. What I mean is, the chart above shows Greenland as colder than the snow covered ice around it *and to its north*. By current theory, why would ice covered in a layer of snow be warmer than land covered in the same layer of snow? Doesn't this contradict the theory of heat capacity? Also notice that the central part of Greenland is the coldest of all. I will be told that is where the most snow is, but that is also *where the most land is*. I will show below that the cold is explained by the land, not the snow.

Current theory can't even begin to explain a variation this large. To calculate the difference, we have to switch to Kelvin. If we use 233K and 253K for our temperatures south and north, those temperatures indicate a difference of something like 8% north to south pole. Snow or whiteness differentials can't even begin to explain that. Since the tilt of the Earth doesn't change at all from July to January, the tilt can't explain it. I will be told that tilt plus eccentricity can explain it, because eccentricity adds a 7%

variation. Those two numbers are very close. But in fact, we can't use the 7% number at all, because that would be to assume it is always winter at the south pole. It isn't. The 7% number only indicates that the temperature *swings* from summer to winter at the south pole should be greater than the north pole, but it indicates nothing about yearly mean temperatures, which is what our chart maps. In other words, if it is warmer in summer and colder in winter at the south pole, the mean temperature is the same. A greater variation doesn't imply anything about the mean temperature.

To solve this problem with eccentricity, you would have to show that the extra warming the south pole gets in summer is less than the extra cooling it gets in winter—around 8% less. Since the total swing is only 7%, you cannot show a sub-variation that is greater than the whole variation. This means that the current theory fails.

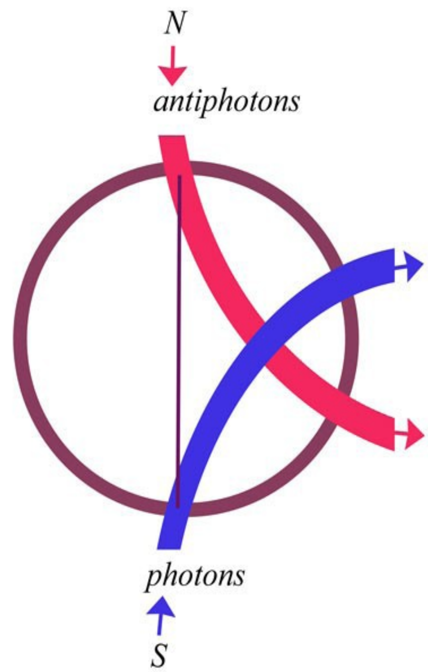
I will be told we can double the 7% number, since we will get the variation summer and winter. But we can't double it because it already includes that doubling. The difference in distance from the Sun at perihelion and aphelion is about 3.3%, and 7% is about double that.

So neither tilt nor eccentricity can explain the north/south pole variation. Before we move on, let us look at the landmass theory, to see if it can possibly help us here. We have seen that the landmass theory gets contradicted by Antarctica itself (and Greenland), but it is true that the southern hemisphere has less landmass than the northern. The north has about twice as much land as the south, or 100% more. I will be told this explains it, but it doesn't. The standard story is that because land transfers heat faster than water, land heats up more. But this is false. Yes, because water has a much higher heat capacity, land heats up *faster*, but it doesn't heat up *more*. There is only a given amount of heat or radiation available from the Sun over the course of a year. What this means is the land will change its *temperature* more and reach its maximum temperature faster than water, but after the land has reached its maximum temperature, the oceans will continue to warm. So, again, what we are seeing is that the land has greater temperature *swings* from winter to summer, but this won't effect the mean temperature we are looking at.

If it affected the mean temperature, then we would see at least three things we don't see. We would see the mean temperatures of the ocean areas *much* lower than the land areas, at all latitudes. We don't. We see solid horizontal stripes across the chart, at all latitudes. We would also see it much warmer in the north than south, at low latitudes, with differentials far greater than 8%. If the 8% change at the poles were explained by landmass, then we should see far more than 8% change at low latitudes. Since the change at the north pole should be caused from heat radiating up from lower latitudes where there is more land, the local change should be far greater than the distant change. It isn't. We should also see the yellow band in the north rising when it is above land, and falling when it is above water. That isn't what we see. The yellow band peaks near England, but that is clearly due to the gulfstream. Russia is conspicuous negative data to this theory of landmass, since where we would expect a large rise in the yellow band, we instead get a fall. See how the blue droops over Mongolia? We also see this in Canada, where the blue droops down above the Great Lakes. Neither the North American landmass nor the even larger Asian landmass helps at all in the matter of mean temperature, which alone falsifies this part of the theory. If anything, this data is strictly upside down to the landmass theory.

So neither tilt, eccentricity, nor landmass can explain the polar variation. What can? Charge. In a wide range of papers on everything from beta decay to the solar wind exclusion of Venus, I have proved that the ambient charge field in the Solar System is unbalanced. What this means is that it contains more photons than antiphotons. Antiphotons are just upside down to photons. A field with equal numbers of both will cancel all spins, canceling the magnetic field. But if we have a field with more of one than the other, that field will be magnetic to some degree. Magnetism is just the summed spin of the ambient charge field. This explains why there is no symmetry in beta decay and other quantum processes: the ambient charge field isn't symmetrical to begin with. The rules of conservation of energy require we conserve globally, not locally. There is no reason the local field in these experiments must be flat or symmetrical, and our data is simply telling us how unbalanced the field really is, in the vicinity of the experiment. The same thing explains the lack of magnetism in the field of Venus, since Venus is upside down to her ambient field. She is recyling antiphotons, and these cancel when they meet the ambient field just beyond Venus. In another paper, I was even able to calculate the percentages: we currently have about twice as many photons as antiphotons. Or, 1/3rd of the field is antiphotons.

For convenience sake, I have called the predominant particles photons, and these are the photons that come in at the south pole. The south pole has more incoming charge traffic than the north pole.



This by itself explains the pole variations, because in this mapping of charge recycling, heat maxima are defined as maximum charge emissions. Due to its spin, the Earth emits the most charge near the equator. Exiting charge increases heat because it increases local motion (either spin or linear). By the same field of potentials, charge minima are defined as either minimum charge emissions or maximum charge intakes. These charge minima are heat minima. In other words, where charge enters the most, it will be the coldest. Therefore we would expect the south pole to be the coldest, straight from the field definitions.

You will say, “That appears logical, but it doesn't seem fully mechanical. Can you tell us exactly how that works?” Yes. It works because everything, not only the Earth, is recycling charge. Every proton is recycling charge, every molecule, every rock, every mountain. Because the Earth is made up of protons, the main motion of all charge—even without the big recycling I illustrated just above—will be out from the center of the Earth. If the Earth weren't spinning at all, and were recycling no charge on a grand scale, the protons in the Earth would still be recycling. In that case, we would just sum the emission out from center, and we wouldn't have these big curves of charge recycling. But once we have a spinning Earth, we start the grand engine, and we see charge recycled as I have drawn it. This recycling is caused by density variations in the charge field alone, as I have explained in many previous papers, and as you will figure out for yourself without much effort, if you study the problem. The spinning sphere will create greater angular momentum at the equator, forcing the photon emission (by the protons) to favor that route. Once that happens, the greater emission at the equator will drive off ambient photons that are incoming, by direct bombardment. This will naturally set up field potentials, with incoming photons driven to the poles. Once that happens, the cycle is set, you see.

This means that—without no other input—we would expect the south pole to be about twice as cold as the north pole. Although we will have to take other things into account (just below), driving this number down to 8%, we already see that my theory has a mechanism capable of explaining the temperature difference. **And this means that although the seasons are caused in part by tilt, as we are taught, all the variations north and south are NOT caused by tilt or Sun angle**. Climate variations are a sum of Solar radiation and charge recycling, with charge recycling being a very major player. How major? Can we calculate what percentage of the effect is due to charge? I already ran some equations in a previous paper, showing about 44%* of the Earth's total heat is due to charge recycling. If you will remember, I was able to calculate that straight from the fundamental charge and the radius of the proton. But can I confirm that here, via different equations? Well, not from what we have learned so far. I need some point of contact between the two fields, and so far we haven't found any. We haven't found any effect on polar variation by tilt, eccentricity, or landmass; so we have no way to compare the two fields. However, we can find a point of contact if we continue, so I will proceed to the next section.

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Here I must apply my new theory to other variations in the first diagram above, to see if they can be explained by charge. Remember, I showed that some of the landmass data was actually upside down to mainstream theory predictions. Mainstream theory not only didn't explain the variations, it made them worse. That being so, I need to show that my theory is not upside down to them as well. I can't just explain one variation and leave all the others hanging (although that is what the mainstream normally does).

My theory does solve the landmass problem, since in my theory the main thing we need to look at is not heat capacity but density. In previous papers, I have shown that the continents actually block more charge coming up from the core or axis than the oceans do, and they do this because land is denser than water. Therefore, we would expect lands to be somewhat cooler *by this charge effect*, not hotter. And if we look at higher latitudes, we see this effect is primary. Study 60^{o}N, for example. If we look at Russia or Canada, we see the land cooler than the surrounding oceans. And if we continue to move up, we see Greenland as very obvious proof.

Of course, the mainstream analysts usually point to landmasses nearer the equator, which seem to show the opposite effect. Africa shows higher temperatures than the oceans around it, and it is this data that the mainstream normally leads with when mentioning landmasses. Fortunately, my theory can incorporate this data as well. Mainstream theory has to ignore Russia and Canada, but I can explain Russia, Canada, and Africa, all at the same time. How? Well, I now have a climate model with two major inputs instead of one, so it is quite easy to understand. All I have to do is show that charge is the determining factor at high latitudes and Solar radiation is the determining factor at low latitudes. I hope you can already see how easy that is to do.

At low latitudes nearer the equator, the Sun's rays are more direct, creating much more heat. In this
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position and *only in this position*, the Solar radiation factor predominates. In this position, we do find that the lower heat capacity of the land, as well as its lower reflectivity, allows it to absorb more heat more quickly, driving the temperature up relative to the surrounding oceans. And so we see the data from Africa. But at higher latitudes, the power of the Solar radiation falls off quickly, and even the mainstream admits that. In winter at only 37ºN, the power has already fallen off by half**. In summer, you have to go up to 83ºN to find the same amount of fall off. The average of these two is obviously 60ºN.

From this alone, we can already tell the power of the charge field is less than 100% of the direct Solar radiation field, but more than 50%. We know that simply because the charge field is not the predominant field on the equator, but it *is* the predominant field at 60ºN. If it weren't, then Russia and Canada would act just like Africa, as a matter of land versus ocean. They act in the opposite way, which means charge is the predominant field at 60ºN.

This confirms the number from my previous paper. If we make those last percentages into percentages of the total, instead of relative percentages, we find that charge must be between 33% and 50%. The number I found before was 44%. But can I fine-tune these current percentages? Perhaps. Let us list the things we know.

We know that at the equator, the charge field is less than 50% of the total field, but way above zero. Heating from Solar radiation peaks at the equator (as an average), but so does heating from charge. Since they are both peaking, charge cannot be much less than Solar radiation, as a percentage of the field. We also know this from looking at Africa. Central Africa is darker red than the oceans around it, but not much darker. The difference is clearly <5ºC. I would estimate about a 1-2% difference (go to degrees K). This indicates about a 2% difference between charge and Solar radiation effects there. This would make charge about 98% of Solar radiation on the equator, or about 49% of the total.

We know that at 60ºN, the charge field is greater than the Solar radiation field. But again, not by a large amount. I would estimate it no more than 51% of the total.

We know that at the poles, the charge field produces an 8% variation. If there were no other field, the charge field would produce a 100% variation. This would seem to indicate that the charge field is 8% of the total field, but that is leaving out a large chunk of data. That calculation would be true only in the case that there were 100% more charge particles at the south pole than north. That is not what my numbers from previous papers indicated. I found that the ambient field in the Solar System had 100% more photons than antiphotons, but I *did not* find that the ambient field would be denser where photons entered than where antiphotons entered. Both poles will encounter equal charge field densities, but because of the field polarities, only the photons will enter at the south pole and only the antiphotons will enter at the north pole. All the other photons will pass by or impact. And this is why the 100% difference in photons/antiphotons cannot cause a 100% difference in temperature or heat. Only if our baseline were absolute zero could it do so, and since our basic particle density is way above zero, our heat baseline is nowhere near zero. The 100% difference in photon/antiphotons cannot cause a 100% heat differential.

Problem is, we have two unknowns here. We don't know how far above absolute zero we are here due to field densities alone, and we don't know how much Solar radiation is adding to the mix at the poles. All we have found so far is that charge is greater than Solar radiation, and that Solar radiation is below 50% and at a minimum. Can we still solve?

We can, because we can return to the angle equation to calculate the Solar radiation percentage at the poles. Remember, using the sine equation, we found that radiation had fallen by half at an angle of 30°. At an angle of 0°, the radiation will fall to 0. However, due to tilt, the poles aren't at a 0° angle. In summer they are at 23°, and in winter at -23°. Since we can't go below zero, the negative angle is the same as zero. Therefore the average angle over the whole year is 11.8°. In other words, the poles do get some heating from Solar radiation during the year. The sine of 11.8 is .2, so Solar radiation at the poles is still 20% of its peak at the equator. This means Solar radiation is .51 x .2 = 10% of the total field at the poles. Since these percentages were calculated including only the two fields, this means the charge field is 90% of the total field at the poles. And since 90% of the field yields only an 8% differential, we can calculate that the Earth is only recycling about .08/.9 = 8.8% of the ambient charge field. The rest of the charge field is interacting with the particles in and around the Earth in ways that have nothing to do with this large-field recycling.

Now, if we sum these two fields across the entire globe, we find charge running from 90% to 49% to 90%, pole to pole. We find Solar radiation running 10% to 51% and back to 10%. But there is a lot less heat being produced at the poles. The charge field is producing 90% there, but that is 90% of a lower amount of heat. So we need to include the heat differentials from pole to equator. To do that, we have to switch to degrees Kelvin again. If we let the average of the poles be 240K and of the equator be 303K, we find the equator about 25% hotter (or the poles 21% cooler). So we weight the equator thusly. But we still aren't finished, since the polar regions are also a lot smaller than the equatorial regions. Of course, depending on how we define the pole, we could take it all the way down to zero. Since that won't help us calculate anything, let us go back to the first chart for help. We see that pretty much the entire continent of Antarctica is white or purple, so let us take the Antarctica as our south polar region. An equal area will be our north polar region. To find an equivalent region at the equator, we just transport whatever width of degree we use at the pole to the equator. For instance, if we take the Antarctica as being 40 degrees across, we measure 40 degrees at the equator. Using these numbers, the equatorial regions are about 11.5 times larger than the polar regions. So again, we weight the regions thusly. If we include all these numbers, we find that charge is about 50% of the total field, across all regions.

Of course that is just a rough estimate, using only the inputs above, and averaging from pole to equator by skipping latitudes in between. This is a bit above the 44% I calculated in that previous paper, but that does not concern me too much. It only means that the mainstream estimate of 10^{31}J for the total heat content of the Earth is about 10% too high.

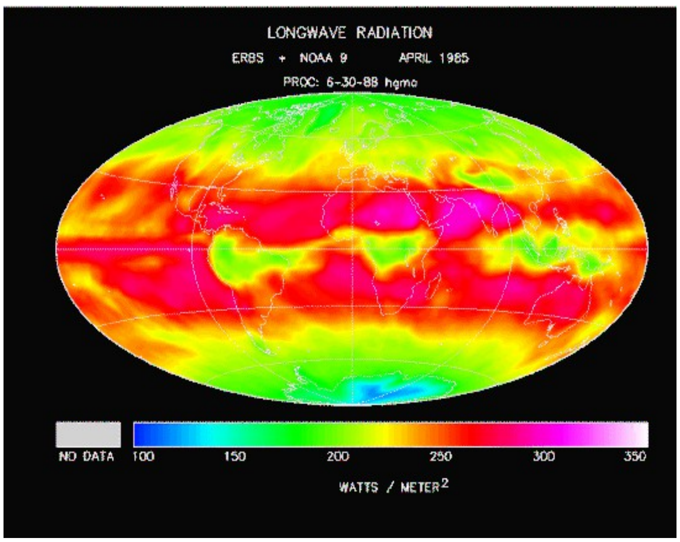
Now, what does all this mean for the current theory concerning why the Earth is warmer at aphelion? We are told the Earth is warmer when it is farther away, and that this is due to the greater landmass in the north. Is this true? No. It is true only short term, explaining local heating but not year-long means. And it doesn't apply to all landmasses. A rough reading of current theory would lead you to believe it includes the largest landmass in the north—Asia. I have just shown you why that isn't true. Because Asia is at high latitude, it acts predominantly as a charge entity, and is cooler than the oceans around it. The explanation of warmth at aphelion needs to be fine-tuned to include only landmasses near the equator, like Africa. What they should say is that there is more land from 0 to 30° north than there is from 0 to 30° south. This is the region where Solar radiation is most direct, so this is where it trumps the charge field. This is where the landmass theory actually works, allowing the low heat capacity of the land and its lack of reflectivity to drive up temperatures temporarily.

Notice that "temporarily". I should also add "locally." As you have seen in my addendum, this cannot explain why the Earth is hotter in July overall.

But charge has yet another addition to theory here. Charge recycling is much heavier north than south, and though much of that is damped back toward equality by the greater landmasses in the north (blocking charge from below, remember), there is still a differential, especially above the oceans. We can see that in the main chart, where the dark band in Africa is above the equator, not on it. If we move below the equator an equal distance in Africa, we do not find a similar dark band of red. Instead, we find a cooling. That is our major clue in this chart.

I will be told I just discounted a differential of that sort above, when I was arguing against that explanation for the 8% pole differential. I didn't discount it, I said it couldn't explain the 8% differential at the pole, since to do so it would have to be 30% or greater at the equator to maintain such strength as it dissipated north and south. It isn't anywhere near that large, but it does exist. And, although it does exist, it isn't an outcome of landmass. It is an outcome of charge. More charge is emitted north than south, which translates directly to heat. In fact, as I just showed, the landmass works opposite to the mainstream theory here, since it blocks more charge. If not for greater landmass in the north, the charge differentials north and south would be much larger.

Our main chart in this paper actually suppresses this data, since it charts averages over 30 years. In longer time periods, heat spreads out to nearby areas, masking some of the local data. In other shorter range charts, we have seen stronger evidence for charge peaks and charge differentials at 30°N and 30°S.



Some will complain, "By the main lines of your recycling theory, it seems there should be twice as much charge emitted north as south. Even with blocking by land, it seems the oceans north and south should show huge differentials, especially at 30°. Why don't they?"

This question deserves another paper, but I will give the short answer here. Remember, there is twice as much land north as south. Also twice as much charge north as south. So we have plenty of land to help block that extra charge, damping it back down to near equality. As for the oceans, we aren't seeing the differentials in these charts because these charts are averaged air temp charts, and air moves a lot faster than water. The local data is getting stirred out. If we looked at a chart of local water temperatures, we would see the differentials more clearly. The water IS warmer in the north, and that is known. The current explanation for this is that the oceans are larger in the south, so the heat dissipates into a larger area. Also that the southern oceans are connected and are fed by the cold antarctic seas. But you can now see that those explanations are upside down. Those things are true, but they are effects, not causes. Charge is the primary driver of local heat—especially at higher latitudes—and that heat then causes other known variations.

If you are having trouble believing any of this, let us go beyond these charts for confirmation. We will start with the fact that the south pole is known to orient to the galactic core. According to current theory, why would it do that? No answer from the mainstream. It is considered a mystery or an accident, like thousands of other "coincidences." But my theory offers a simple and logical answer. Since planetary poles are E/M entities, the south pole must be responding to charge from the galactic core. This indicates that the Earth is responding to these two fields at the same time, trying to maximize its charge input from both the Sun and the galactic core. The local charge field in the Solar system is set by the Sun, obviously. The Sun recycles charge from the galactic core, emitting it most heavily at the Solar equator. The planets then exist in or near this charge emission. But clearly, the planets receive charge from the galactic core directly, or why would they respond to it? The galactic field is actually the primary field, and the Solar field only exists within it.

This allows me to address a question I haven't yet addressed (mainly because no one has thought to ask it). If the tilt of the Earth is set by the Sun and Jovians—as I show in a previous paper—why wouldn't the south pole tilt toward the Sun at all times? Because it would require energy to turn it, and that energy isn't available. The south pole orientation relative to the Sun is set at perihelion, or nearest approach, where the Sun's affect is strongest. But since that position is also oriented to the galactic core, the galactic core acts as a sort of partial lock on that position. Given enough energy, the Earth could break that lock, but as it happens, the field energy never goes above the necessary amount to do that. So the Earth stays at 23.5 degrees.

Energy from the Sun is certainly available to do that, but it takes time to move a large object like the Earth with the charge field. As I have shown in previous papers, there is a time lag between field influences and large body responses. As it turns out, turning the Earth to face the Sun at all times is doable by the Sun, but it takes more than one year of influence to achieve it. So by the time the charge field influences have built up to near a level great enough to turn the Earth, the Earth is back at perihelion and back to the lock. The circular orbit destroys the build-up, taking it back to zero. That is why the Earth finds it more "efficient" to simply remain at its perihelion orientation.

From these interlocking mechanisms and overlapping charge fields, we see confirmation of my charge recycling theory on the Earth. These charge influences indicate charge recycling by both galaxy and Sun, so we would expect smaller bodies to recycle in the same manner. I have explained big holes in quantum mechanics and nuclear structure by giving the proton this same recycling profile, so, again, if protons, the Sun, and the galactic core recycle charge, why wouldn't the Earth? As it turns out, all bodies recycle, and we find evidence of that everywhere we look—*provided* we look.

For more evidence, we may look at the ice caps on Mercury. In just November of last year (2012), NASA was forced to admit that the poles of Mercury show evidence of ice. Given mainstream theory, this is clearly impossible. The surface temperatures of Mercury reach 700K (427C), over four times hot enough to boil water. Even without an atmosphere to hold in heat, there is no way the poles should remain cool enough to freeze. Given the known make-up of the crust of Mercury, the material itself would transfer heat up from lower latitudes to all higher latitudes. With current theory, there is nothing to prevent that heat transfer.

But with my theory, there is! If Mercury is recycling charge like the Earth and Sun and galactic core and protons, then he must be taking in photons at the poles, by the normal method I have diagrammed. Since these photons are moving the reverse direction of emitted photons (in rather than out), they cause cooling rather than warming. In other words, if emitted photons are defined as heat, then photons coming in must tamp down the emission. Tamping down heating is the same as cooling. It is this intake of charge that acts to prevent heat at lower latitudes from moving up to the poles. The incoming photons block this movement by straight bombardment. True, photons cannot be stopped or even slowed, but they can be diverted. Photon collisions are real, they cause diversion, which causes a longer path (or escaping path for a percentage of photons). This is what is happening at the poles of Mercury.

Of course this explanation also stands as proof of my charge mechanism in this paper. Nothing else can explain ice on Mercury so easily and directly. Well, if charge recycling is happening on Mercury, it is certainly happening on the Earth, which is spinning much faster. And if it is happening on Earth, it is happening roughly the way I have described it above. This paper is just the first step in outlining how charge effects climate, and no doubt it will require many extensions and corrections. But as a theoretical blueprint, I am confident it is worthy.

Conclusion: Along with all other celestial phenomena, the seasons can only be understood as an outcome of charge recycling. As we have seen, direct heating by Sunlight is certainly a factor, but charge recycling through the Earth is just as big a factor, and is actually more primary. To understand the uneven heating of the Earth's surface, we have to track not only the Sunlight falling on it, but also the charge recycling through it, coming up from below. Tilt may explain more or less direct Sunlight, but we then must explain the tilt. That can only be due to the various charge streams in the Solar system, including charge and anticharge from the Sun as well as charge returning to the Sun from the large outer planets. The Earth does not just accidentally point her south pole at the Sun at perihelion. The charge streams determine this and everything else.

*Assuming the total heat content is 10^{31}J, which is just a mainstream estimate.
**Mathematically, this is because the sine of 30 is ½.