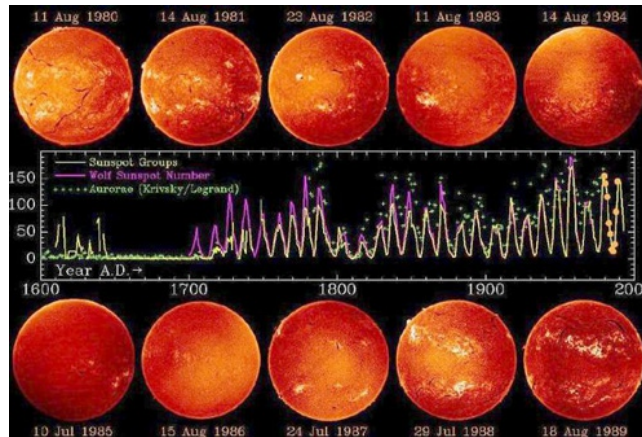


[return to updates](#)

# The Cause of the Solar Cycle



*by Miles Mathis*

*First published September 6, 2014*

*Extended September 24, 2014*

One of my readers sent me a link to [wonderful new data from NASA](#). Although NASA and the rest of the mainstream are not so good when it comes to theory, they are quite adept at compiling data, so I have to thank them in this case. Without their numbers I could do nothing.

It has been known for a long time that the main Solar cycle is about 11 years, but that is just an average. It goes from a minimum of about 9 years up to about 14 years. Although some theories have been presented, the cause of all three numbers is unknown. I will show you the correct answer here.

The reason I so quickly hit on the right answer is that I knew where to look. In [my other long paper on Sun cycles](#) (ice ages), I have already shown that Jupiter is the cause of the secondary variance. In this case we will see that Jupiter is the cause of the *primary* variance. Upon reading the NASA data, Jupiter is the first place I looked. The NASA writers even give us a hidden clue, though it is doubtful anyone but me tripped over it. They say,

The team found magnetic parcels in sizes that had been seen before, but also spotted much larger parcels than those previously noted -- about the diameter of Jupiter.

Even I didn't get the message the first time I read that. It took a second reading. The first time you read that, you just think the parcels *accidentally* match the size of Jupiter. You can't see any physical reason Jupiter would be projecting his image onto the Sun, so you don't go there. You just keep reading. This is the same reason the mainstream doesn't think to look at Jupiter as the cause of the 11-year cycle. Given mainstream theory, there doesn't seem to be any physical way that Jupiter could be causing the magnetic cycles of the Sun, so no one goes there. To them, Jupiter affecting Solar cycles

smacks of astrology, so instead they look for the answer in the Solar interior.

I will pause to confirm that my theory of charge influence is completely physical, and has nothing to do with paranormal or mystical causes. In fact, it is much more mechanical than what normally passes for physics these days. It is known that celestial bodies have prominent E/M fields, and the charge field simply underlies and causes these E/M fields, just as it does at the quantum level and [in Maxwell's equations](#). [There, the D field causes both the E field and the H/B field, and the D field is what I am calling charge here.] What the mainstream doesn't understand is that the local magnetism of Jupiter, say, doesn't have to travel from there to the Sun in order to cause the Solar magnetic responses and cycles. So what we are seeing isn't strictly a magnetic transference through space. What we are seeing is a *charge* transference through space which then causes a magnetic reaction on the Sun. What is traveling between the bodies is real photons with real field densities and real spins. These photons can then cause various E/M effects once they hit large bodies that are composed of ions or ion fields.

But back to the problem at hand. That passing mention of Jupiter finally jogged something in my head, and it was so simple it made me laugh. What is the orbital period of Jupiter? 11.862 years. Ho-ho!

So why isn't the Solar cycle exactly 11.862 years? Because Jupiter isn't the only cause. To calculate the cycle in any given year, we have to track *all four* of the Jovians (Jupiter, Saturn, Uranus and Neptune). Basically, when the charge fields of Jupiter and Saturn are in line, we get a maximum (of some kind). When Jupiter and Saturn are at 90 degrees, we should get a minimum. The full maximum would be when all four Jovians are in line with the Sun.

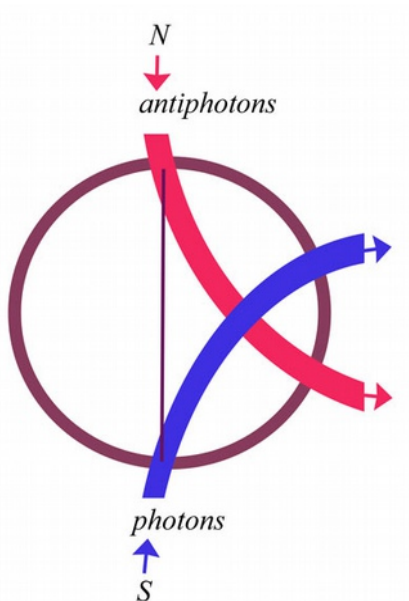
Do we have any other evidence for this? We do. The great conjunctions of Jupiter and Saturn take place every 18-20 years. If we return to the NASA paper, we find

This process [Solar Cycle], from migratory start to finish at the equator [of the Sun] takes 19 years on average, but is seen to vary from 16 to about 21 years.

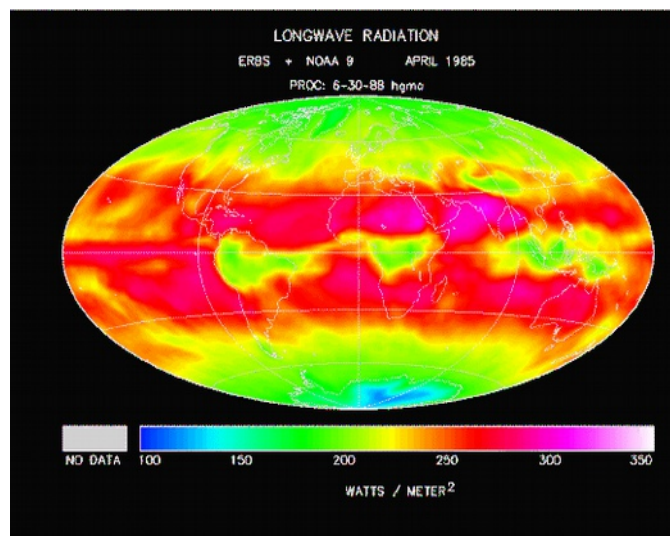
We have a match: an average of 19 years in both places.

I have to imagine someone has seen these number matches and proposed an influence from Jupiter and Saturn. But they probably got bogged down in the field mechanics pretty quickly and couldn't make it work. They therefore gave up or tried more esoteric solutions. But if you have my unified field equations, you find the calculations are all well-oiled from the beginning. We will find no sticky spots.

And we have much more evidence indicating we are on the right track before we even do any math. If we return to my papers of the past five or six years, we find this diagram many times:



I used that diagram to show how a spinning sphere recycling photons would naturally pull in charge at the poles and emit them most heavily at 30 degrees north and south. I then used that necessary field phenomenon to explain the [Earth's tropics](#), the [Equatorial Anomaly](#), [Plate Tectonics](#), and this NOAA diagram:



This charge recycling theory immediately explains the limit at 30 degrees they are finding in the sunspot motion. The Sun isn't creating an E/M field in its core or body, by some nuclear means, as the mainstream believes. The Sun is recycling a greater charge field coming in from the galactic core and the surrounding galactic field. It is taking that field in at its poles and re-emitting it nearer the equator. From there, it travels out on the Solar plane to all the planets, where it is recycled by them in turn. A sort of circuit is then created, and the charge returns from the planets back to the Sun.

In other words, they are seeing clear evidence here of a charge or magnetic feedback loop from the large planets (or *all* the planets, but mainly the big four). The rolling bands in the video from NASA are clearly residue of an E/M field effect, like we see in circuitry, radio, and other similar phenomena.

This is so obvious, I have to think they are suppressing the information on purpose, once again to protect their pet theories. They can't admit the obvious here, because it would be (and already is) the final nail in the coffin of their gravity-only theory. They have to pretend not to remember that the orbital period of Jupiter is 11.862 years, pointing at the Solar cycle, and that the great conjunction is about 19 years, since if they start along that path they will very soon come to a point where they have to admit I was right all along. Eventually they will end up where I have already been for years: with a working unified field in the Solar System that is capable of explaining the mechanics (and generating the equations) [beneath Bode's Law](#), all [the axial tilts](#), the [eccentricities](#), the [albedoes](#), [magnetic reconnection](#), the [Coriolis Effect](#), [Lagrange points](#), and on and on.

So, I have already shown you where the main numbers are coming from. It would be a miracle if I were able to explain the other main numbers in the article that easily, right? Well, if I were just lucking onto these numbers by coincidence, it would have to be a miracle if I were able to explain the 55 degree latitude of bright spot and g-node arrival. But of course it isn't a miracle, since the reason I am able to calculate these numbers so easily is that I am existing in the correct field theory. I will now prove that.

The red and blue bands in the NASA video are born at about 55 degrees north and south. That is 55 out of 90, which is 61.1% of the way from equator to pole. As a fraction, that comes out to about 1/1.637. If Jupiter and Saturn are indeed the main players here, I should be able to calculate that number straight from those two bodies. We start with the charge strengths of the two bodies, which I have shown can be calculated from their mass and density. So we can use the numbers from my Bode paper, where I showed that Jupiter recycles 6.445 times as much charge as Saturn. We get relative charge strength from mass *times* density. See previous papers for more on that logic. But Saturn is 1.84 times as far away. Since charge density *increases* as it comes back toward the Sun, Saturn's charge will increase more than Jupiter's. This is one of the most important things I discovered in my previous papers and calculations, and although it is logical on a close look at the field mechanics, it wouldn't be expected in a cursory mathematical analysis. That is why it is so important. This brings Jupiter's charge influence down to 3.5 times that of Saturn.

But let's bring Uranus and Neptune into this, just to see their effects. Jupiter has 22.84 times the charge of Uranus and 15 times the charge of Neptune. But Uranus is 3.68 times further away, and Neptune is 5.78 times further away. So Uranus' effect at the Sun is 1/6.2 that of Jupiter, and Neptune's is 1/2.6.

Good lord! That means Neptune's influence on this cycle is actually greater than Saturn's, as a matter of *charge density*. This forces us to bring Neptune into the main mix as the number two player. Neptune conjoins with Jupiter every 12-13 years, and Saturn conjoins to Jupiter every 18-20 years.

So, using these numbers, let's look at greatest maximum and greatest minimum. If we give Jupiter a charge strength of 1, and let all four Jovians be in conjunction (or at least in a line), we would have a total incoming charge of 1.83. By the same token, the greatest minimum would be  $1 - .83 = .17$ . However, NASA isn't seeing that differential, since the time period is very great. In mapping their colored bands, they aren't mapping periods that long. They are only mapping the Jupiter/Saturn conjunction and the Jupiter/Neptune conjunction. If we take just the Jupiter/Saturn conjunction, we see that is rocking only from 1.286  $[1 + 1/3.5]$  to .714  $[1 - 1/3.5]$ .

We have to then ask, how does that rocking between the two planets fit into the four planet feedback? To find out, we just divide 1.83 by 1.286. That tells us that the Jupiter/Saturn rocking is .7 the total possible rocking. Now, if we assign greatest maximum (full conjunction) to 90 degrees and greatest

minimum to 0 degrees, we can calculate a solution here. So if we could just isolate the Jupiter/Saturn rocking, we would expect the bands to phase in at about  $.7 \times 90 = 63$  degrees.

If you aren't clear on what I did there, I assumed these bands we are seeing are feedback bands, created by the looped field on the surface of the sphere. We are seeing a sort of magnetic reconnection from the Jovians, but the created circuit is having to stack on the existing field of the Sun. In other words, we have the looped field created by charge returning from the planets, but the Sun is also constantly recycling a new field coming in from the galactic core. So the looped field from the planets has to stack on the main field. If the looped field from the planets was all coming in from the same direction, the Sun would just add it to the main field by pulling it in at the poles, same as it does with the main field. But since the looped field is coming in from staggered planets on opposite sides, we get interference. This interference drives the bands down the surface, away from the poles. Full interference would drive it toward the equator, where it would completely interfere with emitted charge and disappear. By the same token, zero interference would keep it near the poles. Therefore, if all four Jovians were in conjunction, their looped charge would just return in a line and go straight to the poles. In that case we wouldn't see the bands at all.

We can also link this to [my paper on magnetic reconnection](#), where I showed the same charge loop causing the brightness of the corona. Both phenomena have precisely the same cause, but take place at different levels on the Sun. Since the corona has a low density, a lot of this returning charge will get past it, hitting the lower levels of the Sun where the ion densities are far greater. At these lower levels, we have a different interaction, because our result is determined by an E/M interaction of ions rather than a charge interaction of photons. In other words, ions aren't just randomly recycling photons at this lower level, as they were in the corona. The ions are in plasma down lower, one that creates strong lines of charge. This gives a structure to the interaction, allowing the effect to travel in lines (and bands, at higher levels of structure). Where the effect in the corona was mainly gaseous and unstructured, causing "scattering" and brightness, the effect lower down is more liquid or plasmic, with the energy remaining in circuits rather than being released as light.

So why do we see 55 degrees right now instead of 63 degrees? Because we have so far failed to take Neptune into account. Remember, Neptune has slightly more charge strength (density) in this problem than Saturn. So we can never isolate the Jupiter/Saturn influence. We always have to check where Neptune is.

To finish off the math, and prove it is correct, I will back-calculate the necessary position of Neptune here without knowing what it is beforehand. I hope you can see how easy that is to do. I calculated 63 degrees as  $.7$  of 90, but we need to find  $.611$  of 90 in order to get 55 degrees. So we just go back and look at how we got  $.7$ . That was from dividing 1.286 by 1.83. So to get  $.611$ , we need to divide  $x$  by 1.83. In that case,  $x = 1.12$ . Now we just need to work that into the Jupiter/Saturn mix, which we represented by this term  $[1 + 1/3.5]$ . So we just extend that equation to find what we need:

$$[1 + 1/3.5 + y] = 1.12$$

You see,  $y$  is then the influence of Neptune on Jupiter/Saturn.

$$y = -.166$$

But we already found the normal influence of Neptune is  $+1/2.6$ . So Neptune must be in a position in this problem where he is supplying only 43% of his maximum influence. Since his maximum

influence is at conjunction, and his minimum influence is at 90 degrees, he must be at some angle to the Jupiter/Saturn conjunction other than 90. Since the cosine of 64.5 degrees is .43, we assume Neptune is somewhere near that angle to opposition in this problem.

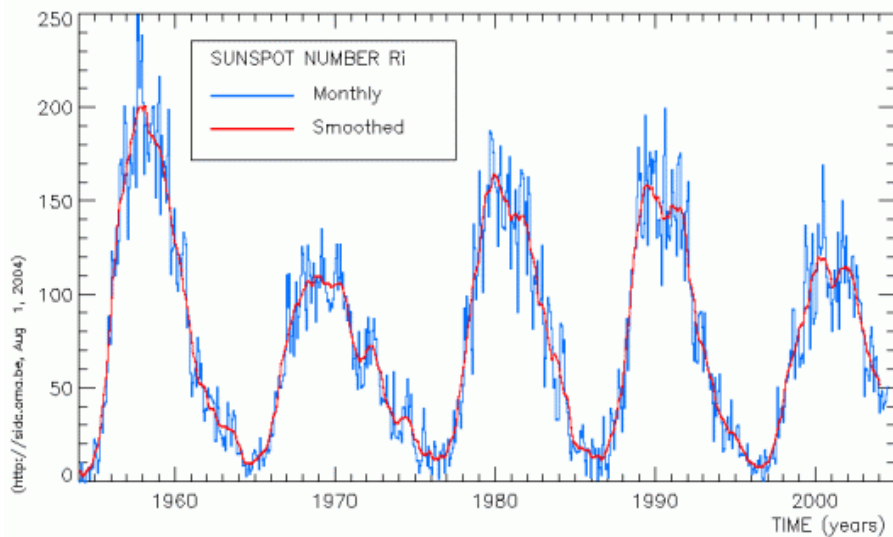
---

---

Now, let us return to the video and look at specific years in specific cycles, to see if we can apply my unified field calculations to the actual Solar cycle graph. According to NASA's video in that article, a band appeared at 55 degrees in about 1998-9, peaking at 2000, and there was a great conjunction of Jupiter/Saturn in 2000. At the end of the article, they tell us another is expected in about 2020, and another great conjunction will be here at the end of 2020. So far that confirms my analysis. And that—by itself—is such a giant clue it is difficult to believe no one in the mainstream is following it strongly.

But where was Neptune in 2000? Well, in 2009, Neptune and Jupiter were in conjunction. So they were also in conjunction in late 1996. This puts them in opposition in 2002-2003. In 1999, this puts Neptune at about 90 degrees, moving toward opposition. In 2000, Neptune was between 60 and 70 degrees from opposition from Jupiter, *which confirms my calculations*. Compare that angle to the angle I calculated above.

What you should take home from that last analysis is that in 2000, Neptune was moving toward the line while Saturn was on the line (with Jupiter, I mean) and then moving away. This created an extended peak, of just the sort we see in the Solar cycle charts.



See how the peaks all have flat tops, some more than others? Also notice how most of the peaks are obvious double peaks. What you are seeing there is both Saturn and Neptune, as both create peaks with Jupiter. We just saw that in my simple analysis, as first Saturn and then Neptune hit the line with Jupiter.

Neptune's conjunction with Jupiter in 2009 is confirmed again by NASA's video in that article, since we find another band appearing at 55 degrees in that year. But this band is red instead of blue. How

do we explain that? Although the long cycle is about 19-20 years, we have two half cycles with reversed magnetism inside that. Why? Given my theory and field, wouldn't we have to propose that Neptune had the opposite magnetic field to Saturn to get that? We know that isn't true. And that wouldn't explain it anyway, because Jupiter is still recycling more charge than either Saturn or Neptune. To get the total to flip, Jupiter himself would have to flip, and we have no indication of that, either.

Fortunately, our new unified field gives us a simple answer here as well. We are seeing a period of reversal that is about half the great conjunction cycle. Well, in that cycle, Jupiter and Saturn aren't lined up once; no, they are lined up *twice*. The first time they are in conjunction and the second time they are in opposition. As a matter of charge influence, both alignments create a charge field stacking. But as a matter of magnetic influence, one alignment will be opposite the other. One will be positive, the other negative. In short, that is what is causing the band flip. For the full solution, we again have to include Neptune and Uranus, but you can see the primary mechanism just from my analysis of Jupiter/Saturn. We will look at this much more below.

To close out this section, I will point out something else very important and make a prediction. I have shown you that the charge influence of Neptune is much greater than anyone realizes, and that it is very close to that of Saturn. If Saturn's influence is 1, Neptune's is 1.346, only about 1/3<sup>rd</sup> greater. So Neptune and Saturn are acting almost as replacements for one another in this dance, which would confuse anyone that only got halfway into this solution. Only my unified field allows me to sort through all this.

It also allows me to make a prediction. NASA pretends that predicting when the next Solar cycle ends is a big deal, but I have shown you can calculate that straight from the next conjunction of Jupiter/Saturn (plus the position of Neptune—you can include the position of Uranus, too, if you need to be very exact). But a much more subtle prediction involves predicting something that no one even knows is predictable—or even variable. That would be the angle 55 degrees. Although they don't admit it in their article, we can see that the angle can't be the same for the Jupiter/Saturn conjunction as the Jupiter/Neptune conjunction. All we have to do is return to the simple math. The angle for the blue band must be found using the equation  $[1 + 1/3.5 + y]$ , while the angle for the red band must be  $[1 + 1/2.6 + z]$ , where  $z$  is the influence from an opposing Saturn. Therefore, in most cases, we would expect the red band to arrive at a slightly higher angle than the blue band. The Jupiter/Neptune conjunction gives us a baseline of 68 degrees where the Jupiter/Saturn conjunction gave us a baseline of 63 degrees. To get the Jupiter/Neptune conjunction down to 55 degrees, Saturn has to quite near opposition to their conjunction. If Saturn is at full opposition, the equation gives us 1.09 instead of 1.12, which would give us an angle of 53.6 degrees. But in most positions for Saturn, that equation will give us angles above 55 degrees.

---

---

In this section, I will go ahead and show exactly how to predict the cycles as well, for those who don't really follow me. To get us into this problem, we will go back to 2000, when the blue band was appearing at 55 degrees south. If we study the video closely, we see the blue band hitting maximum a bit before 2000, possibly in 1999. It is hard to tell on the internet. Some might use that to argue against my analysis, but it just means we have left Uranus out of the mix. Remember, my theory is that the band hits maximum when the four Jovians are at a maximum. Well, that maximum probably won't be exactly when Jupiter conjoins with Saturn or Neptune. It must be *near* that time, but we

wouldn't expect it to be exactly at that time. I haven't yet checked the charts of Uranus, but I will predict that Uranus was in a position in that period to pull the maximum back a few months from 2000 to late 1999. Take a beat while I search on that.

Jupiter and Uranus last conjoined in 2010-11, and they are on a 27.5 year cycle. Therefore in 1997, Uranus was in opposition to Jupiter. This puts Uranus at about 90 degrees in 2004, and at about 45 degrees from opposition in 2000. So in 2000, we find both Neptune and Uranus near opposition from the conjoining Jupiter/Saturn. In 1999, Uranus is even nearer opposition, so that helps us a bit. The closer Uranus is to the line, the better (see below). But we have to look at where Neptune is in 1999 compared to 2000. We found above that Neptune was near 90 degrees in 1999, which helps us a lot. In that position, Neptune is at a minimum in the mix, so we can't be at a maximum in 1999. This explains why 1999 is just the beginning of the band. The band increases in strength and width in 2000, and that is because at that time Jupiter, Saturn and Uranus are all conjoining, and Neptune is also approaching the line. So the mix stays near a maximum until Jupiter and Saturn separate.

If your head is spinning from all that, let me gloss it for you. To find a maximum charge effect like this, we have to calculate when all four Jovians are nearest to being lined up. We can do that one of two ways: track the great conjunction of Jupiter/Saturn or track the great conjunction of Jupiter/Neptune. If we are tracking Jupiter/Saturn as our first pointer, then once we have them in line, we look where Neptune is. If he is near 90 degrees, we probably won't have a maximum there, because he won't be adding anything to the mix. The same applies if we are tracking Jupiter/Neptune first. If Saturn is at 90 degrees to them, we won't have a maximum. The maximum is found when all four big planets are fairly near the line. Since Uranus is about half the effect of Saturn or Neptune, in most cycles he can be just about anywhere, but the other planets must be near the line to create a maximum.

In the same way, the cycle maximum in 2020 will be determined by tracking not only the great conjunction of Jupiter/Saturn, but of Neptune and Uranus as well. So where will Neptune and Uranus be in December of 2020, during the conjunction of Jupiter/Saturn? Uranus hits opposition in 2024. In about 2018 he will be at 90 degrees. So in 2020 he will be about 60 degrees from opposition. Neptune is much more important again, because in this coming cycle he will be near conjunction like Saturn. The Jupiter/Neptune conjunction will be in 2022, so Neptune will be less than 2 years away from his conjunction in 2020. Therefore, we would expect the next maximum to be when the Jupiter/Saturn/Neptune trio is at a maximum, all being near conjunction. Since this is the case, we would expect the cycle peak to be *past* December 2020, sometime in the year 2021. Or, the first of two main peaks may be in early 2021, but the middle of the cycle peak will be well past that.

The NASA article ends with this:

"People make their predictions for when this solar cycle will end and the next one will start," said Leamon. "Sometime in 2019 or 2020, some people will be proved right and others wrong."

I suppose the start of the cycle is a minimum, so we won't concern ourselves with predicting that. I will only predict the maximum. The full maximum won't occur until 2021, since the approaching Neptune will help the Jupiter/Saturn conjunction. [N. B. When I say maximum, I mean the band maximum we are analyzing, not the Solar spot maximum or minimum. See below for more on this.] Let's do the math to prove it. In 2020, Neptune will be at about 45 degrees from conjunction, which will give him a strength of .27. Since Jupiter/Saturn will stack at 1.286, the trio will have a strength of 1.56. If we wait a couple of years and bring Neptune into full conjunction, he and Jupiter will stack at 1.385. But Saturn will have moved on. At that time, Saturn will be about 30 degrees away, giving it a



strength of .247. So that will give us an even bigger maximum [1.63] than the 2020 maximum of Jupiter/Saturn. So let us find one more number, at the midway point of those two maxima. Let us put both planets about 15 degrees from Jupiter. That gives us a total of 1.647. Since that is the largest number we have found, that will indicate the true maximum. Without doing all the calculations, I would estimate that to happen around September of 2021.

Notice this means I am predicting a cycle peak like we saw in 1958, where the highest peak is in the middle.

So not only can I predict a delayed maximum, I can predict a very long maximum—as both Saturn and then Neptune pass through their conjunctions with Jupiter. The highest point of the maximum won't arrive until many months after the first reports of it, and the cycle will remain in this strange extended maximum for about three years.

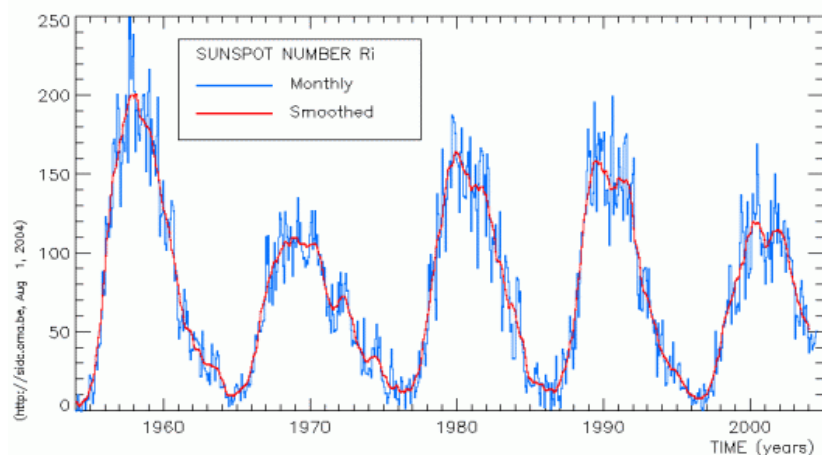
Which does give me a way to predict the next minimum. According to my analysis, the next minimum should be *before* 2019. Since I only need to predict 2018 to beat the mainstream prediction, that is what I will do here.

**Addendum 2020:** My prediction of the next minimum turned out to be right. Although the mainstream is still misdirecting, Cycle 24 ended in about April of 2018. It then spent over a year and a half near zero. However, my analysis of next maximum was oversimplified, and I now think I only got the first part of it right. The alignments of Jupiter with Saturn and Neptune in 2021-22 will indeed cause the big rise in those years, but [the dance is more complex than that](#). Once we bring in alignment to the Core as well, fitting planetary alignments over that, we find that the early JS and JN alignments are too square to the Core to produce a maximum. Maximum in Cycle 25 will be due to all four big planets aligning to the Core and to one another, with SN and JU being the largest players in producing the actual maximum in around 2027.

---

---

*Addendum, September 23, 2014.* A couple of readers were fascinated by this paper, but not convinced by my one “hindcast” for 2000. Although I was able to show how the positions of the four planets caused the band maximum in that year, I was told I needed to apply my math to more than one hindcast. Since I had to agree with them, I have returned to give you more.



That chart gives us maxima at 2000, 1990, 1980, 1969, and 1958. But we have to recognize this is a Sun spot maximum, not a band maximum like I was tracking above. However, the two do seem to match pretty well. My analysis above tracked the maximum effect of the band, as it appears in the newest video release from NASA (see first link), so I will continue match that analysis with the numbers that follow.

As we get into these new cycles, you will see that there is one thing that hasn't come up yet in my analysis. By chance, it didn't come up in my analysis of either 1999 or 2021. In both those cases, Jupiter and Saturn were in great conjunction, making the analysis pretty simple. When in conjunction, it is easy to see why their charge fields would stack. But, as you are about to see, their charge fields will also stack when they are in opposition. They don't need to be in conjunction in this particular problem, *they only need to be in a line*. I hope you noticed that in passing as we made the calculations above, but if you didn't, don't beat yourself up. It didn't raise its head too high. It is best I came back to do these other cycles, since the mechanics needs to be made crystal clear. I will be forced to clarify the mechanics for you here.

If you have read my papers on [Bode's Law](#) and [Axial Tilt](#), you will remember we were tracking the fields of the Jovians at they met at the Earth (or a given planet). But here, we are tracking the fields all the way back to the Sun. So there is a crucial difference. If we are tracking the charge field of Jupiter and Saturn to the Earth, for instance, and the two big planets are in opposition, they cannot stack at the Earth. Obviously, this is because the Sun is in the way. If Saturn is on the far side of the Sun, its charge cannot get to the Earth. Its returning charge goes to the Sun, not the Earth. So opposition creates a stacking minimum in that case. But here, the charge is going to the Sun regardless of whether we are in conjunction or opposition (or anywhere in between). It is not the opposition that matters, it is the *angles* that matter. Since this is a magnetic effect we are tracking here, angles are everything. As I already said above, the minimum stacking of planetary fields is when one planet is orthogonal to another. In other words, when one planet is 90 degrees from the other. In that case, the charge fields cannot stack. But when the planets are in opposition, they can stack just as well as in conjunction. Yes, we would expect them to stack in a slightly different way (which I will discuss below), but since our charge *densities* are at a maximum, the magnetic reconnection should also be at a maximum.

Since charge is real photons, and since the magnetic effect we are tracking is the real spin on these photons, opposition would be expected to cause a maximum spin meeting. The only question is, what will be the *outcome* of that spin meeting? In some cases, we would expect a spin cancellation. In fact, if the Sun weren't there and the charge of Jupiter was meeting the charge of Saturn head-on from opposite directions, we *would* expect a spin cancellation. But since the Sun processes all this charge, we have to take that into account.

How does the Sun process it? From above, you have already seen that the magnetic reconnection is happening here at lower levels, beneath the corona. So the incoming field is meeting the Sun's emitted field pretty much head-on. But we have to look even more closely. Let's follow the charge of Jupiter as it returns to the Sun. It will be following charge paths already set by the charge out, so it will travel in a fairly structured way, returning to the Sun near the Solar equator. Once this charge reaches the Sun, it can do one of (at least) three things. If the charge is far enough from the Solar equator, it may be pulled out into one of the two polar vortices, going into the Solar poles. If it doesn't, it will continue on into the Sun directly. Some fraction of this charge will interact with the corona, as we have seen, creating reconnection and brightness. The rest will continue on down to interact with the Sun's body proper. There it will create the effects we are studying in this paper.

Now, if Jupiter and Saturn are conjoining, their photons will stack, being indistinguishable at the Sun. If Jupiter and Saturn are in opposition, the Sun will read one set of photons as opposite to the other. In other words, if the Sun reads Jupiter's photons as up, it will read Saturn's photons as down. Saturn's photons will be antiphotons *relative to Jupiter's*. This is simply due to direction of linear motion. In conjunction, the photons were both traveling the same direction, so if they bumped, their spins would stack. When in opposition, the photons—although still spinning the same direction—are now moving in opposite directions. So if they bump, their spins oppose. We saw how this explained the band color flip above, because that effect was a magnetic field effect. But in this case, we are looking only at field strength, which is a matter of photon density, not photon spin. In opposition, Saturn has the same *number* of photons regardless. And if the planets are aligned, those field densities will add.

You will say, “I see what you mean, but shouldn't they add at 90 degrees as well?” Well, they do add in once sense, since the Sun receives them no matter what. But they don't add into the calculations we are doing because they aren't in a position to join any *line* of charge. To create a magnetic effect, you first have to create an electrical one, which means your charge photons have to be creating long lines somehow. Once the conduction begins, the magnetic effect will kick in, but not until then. Therefore, when we have these photons coming in from 90 degrees, they have no way to join the main line of charge we are tracking in the first place. No component of their linear motion is in that line, so there is no way for them to join the conducted charge stream, you see. They can join other charge streams, as we will see below. For instance, if two planets are both at 90 degrees *and* in opposition to one another, they can create a secondary charge stream that strongly interferes with the first. But when we are looking at photons, two orthogonal charge streams simply pass one another by, regardless of field density.

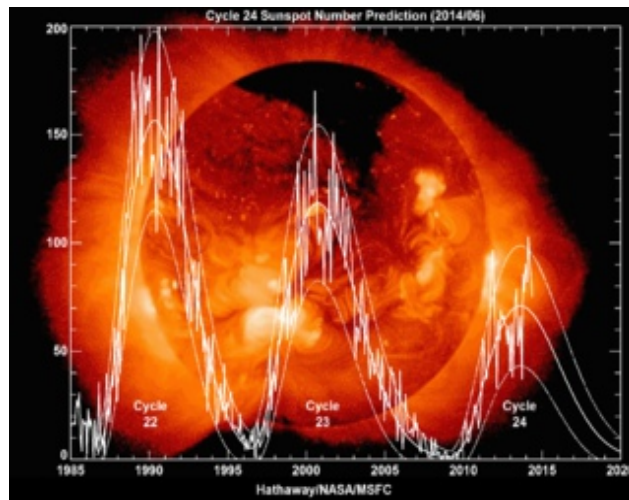
Therefore, opposition is just as good as conjunction in this Solar cycle dance. With that in mind, we will look first at 1990. I said Jupiter was the primary factor, so we start by finding out where Jupiter was relative to Saturn and Neptune in 1990. Jupiter and Saturn were at conjunction in 2000, which puts them near opposition in 1990. Saturn and Neptune were conjoining in 1989, which puts all three near the main line in 1990. Those two things solve this immediately, without even consulting the position of Uranus. The three big planets are all nearly lined up, which will cause a maximum no matter where Uranus is in that year.

The minor fall after 1990 is caused by the separation of Saturn and Neptune, but we get a second (lesser) rise right after that during 1991. Why? Because Uranus is moving into line with Neptune and Neptune is now in direct opposition to Jupiter. This second maximum is a bit smaller because it involves Uranus instead of Saturn. Uranus is only about 56% as large as Saturn.

For the same reason, the maximum doesn't last until 1993, although that is when Uranus and Neptune come together fully. Although the influence of Neptune is strong, the alignment of Neptune and Uranus isn't nearly as important as other alignments. It is the alignments of the big three that normally determine the maxima. Besides, in 1993 both Neptune and Uranus aren't near the line, and Saturn also isn't, so the line must fall sharply. After that, all three planets are heading toward 90 degrees relative to Jupiter, which gives us the minimum we see at 1996.

Next, let us move up to the current Solar cycle, which is actually the strangest one we have seen in a long time—being both small and late.

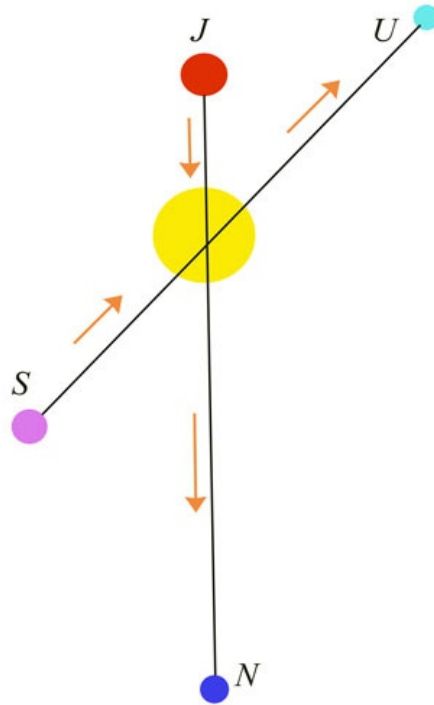
Study the chart to see all the anomalies in this cycle.



Can I explain any or all of them with my Jovian alignment? We saw the first peak in about 2012, giving us an extra long cycle 23. As you saw above, I have predicted a short cycle 24, so I need to show the cause of this, both in cycle 23 and 24. If we study the graph, we find the last minimum stretching all the way out to 2009, although by then Neptune was in line with Jupiter. Normally, that would be an initial indication of a maximum, not a minimum. However, this time we have something interesting going on, which happens to prove my theory. In 2008-9, *both* Saturn and Uranus are far from the line of Jupiter/Neptune, which is why we have a minimum despite the position of Neptune. *And*, notably, 2008-9 is also when Saturn and Uranus *align to one another in opposition*. At that time, Uranus was about two years from conjunction with Jupiter and Saturn was about two years from opposition. This long conjunction of Saturn and Uranus works to nullify the possible maximum caused by the alignment of Jupiter/Neptune.

Why? Well, as we have seen, it is important that Saturn and Uranus *aren't* at 90 here. If they were at 90, they would sum to zero relative to the main line, but they couldn't possibly *interfere* with Jupiter/Neptune. As I said above, orthogonal charge streams don't interact. The Saturn/Uranus opposition is actually interfering with the Jupiter/Neptune alignment, so they can't be at 90.

The clue here is that Uranus is nearing Jupiter and Saturn is nearing Neptune. This creates a sort of X in the field:



If we give the charge stream an overall direction, obviously it will flow mainly from larger planet to smaller, as I have drawn the orange arrows. Well, you can see that the opposition of Saturn/Uranus has set up a stream that opposes the stream from Jupiter to Neptune. Or, a component of it does. This is what is happening in the years 2008-9.

That brings us to another fine point of my charge analysis that hasn't yet come up. When a planet is at 90 degrees to the main line, does its charge go to zero in the calculation, or does it go negative? Well, normally it goes to zero, since charge at 90 can't add to the main line. But when we have these oppositions set up as in 2008-9, the charge in the calculation can go negative. Instead of just charge nullification, we get charge interference. Although we are hitting some rather advanced theory, I think the mechanics here is clear. It isn't that any of this is difficult, it just requires a bit of digging.

This may be a good time to point out again why the mainstream won't look at this kind of mechanics in the celestial field: it *looks* too much like astrology, so they won't allow themselves to theorize like this. Although everything I have done is strictly mechanical, with strong roots in historical and current data, these planetary influences still veer very far into the fields astronomers have left to astrologers. Since the charge field has been buried from the time of Newton, mainstream physicists have not wanted to believe that celestial bodies can influence one another in this way. The only "physical" influence they have been taught is the gravity field, or perhaps the Lagrangian; and since they don't realize both the gravity field and the Lagrangian have always contained the charge field (and have been unified), they could not do what I am doing.

But back to the current cycle. In late 2010 Saturn was near opposition to Jupiter, which gave us another chance at maximum: but by then Neptune was going to 90. Finally, in 2010-11, Uranus lined up with Jupiter, giving us a third chance for maximum, depending on the positions of Saturn and Neptune. But Saturn and Neptune are opposing one another in line, and are close to 90 relative to Uranus/Jupiter. So we still can't have a strong rise until Saturn and Neptune un-align in 2012.

The fact that the alignment of Jupiter/Uranus is determining this maximum in 2012 is what has made it strange and small. In 2012, we finally hit our first peak of the cycle, and that is when Uranus is still near the line, Saturn is near the line, and Neptune is moving toward it again. Although none are strictly aligned with Jupiter, this near alignment of all four planets is about the best we are going to get in this weak cycle.

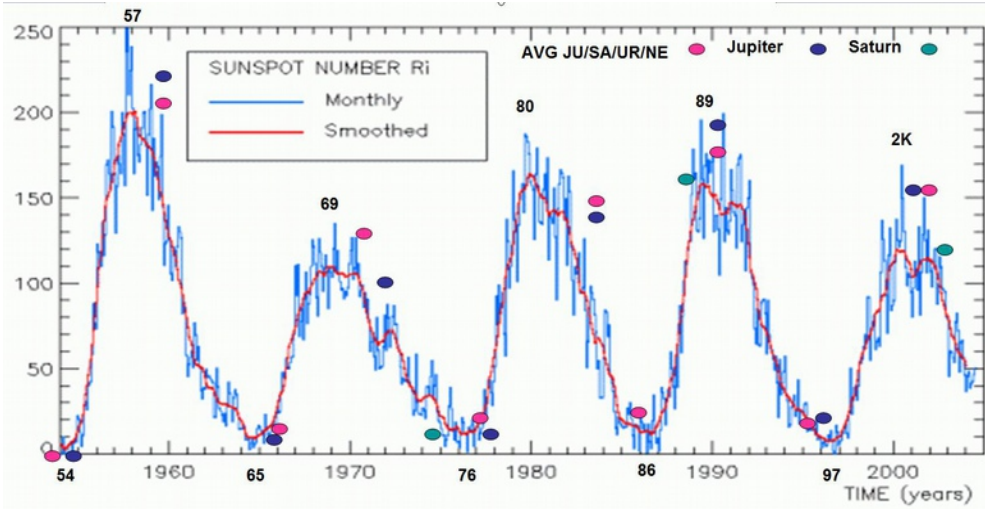
Saturn is now (late 2014) moving toward 90, so we are moving toward a minimum. But we are not moving very positively toward it even this late in the cycle, since Neptune is going to opposition. This will stretch the peak of cycle 24, pushing it well into 2015. The slope of the graph won't really start to drop strongly until after Neptune moves off the line. This will cause a pretty precipitous drop from 2015 to 2018. In 2018, Saturn will be at about 45, Neptune will be at about 90, and Uranus will be at 90. So you can see easily the cause of the minimum there.

Finally, let us look at the strange double peak of this cycle, which is backward to the normal double peak. In most double peaks, the first is larger than the second; but this time we see the reverse. The mini-peak in 2014 was greater than that of 2012. Why? If I can answer that, I should have convinced just about everyone my theory is—at least roughly—correct. In 2014, Saturn was pretty far off the line, so showing a strong peak looks difficult. However, we do see Neptune at opposition, which—in such a weak cycle—gives us a chance. The fact that Saturn is not at 90 helps, since that planet is still more than a year away from 90. Uranus will decide it. In 2014, Uranus is four years past conjunction with Jupiter, which means it is about 50 degrees away. But since Saturn and Uranus are neither in opposition nor conjunction with one another, they don't stack as they did in 2008-9. This allows the Jupiter/Neptune alignment to create a weak peak, one that is a little larger than the 2012 peak when no planets were strictly aligned.

To prove that, we actually have to do some trig. Assuming Neptune and Jupiter do hit full alignment this time, we get a stacked charge of 1.385. Uranus at 50° gives us .1. Saturn at about 72° is a strength of about .1, which gives us a total of 1.585. To compare that to 2012, we find Uranus at 15°, which gives a strength of .156. Saturn at 20° gives us .269. Neptune at 76° is .093. Giving us a total of about 1.518. This shows why the 2014 peak is higher than the 2012 peak.

**February 2020:** [I can now match Solar Cycles](#) present, past and future by tracking planetary alignments to the Galactic Core as well as among themselves. At the time of this 2014 paper, I did not realize the importance of the Galactic Core line, but it sets the main Cycle pattern. The planetary alignments then fit in over that baseline. It took me over five years to completely crack the cause of the Solar Cycles, but I have finally done it at last.

**Addendum May 2, 2017:** A reader just sent me a couple of diagrams confirming my analysis in this paper. He tracked the declination cycles of the big four planets against sunspot activity over the past 116 years in two charts, finding an almost perfect correlation:



### Annual Sunspot No. 1900 - 2016

