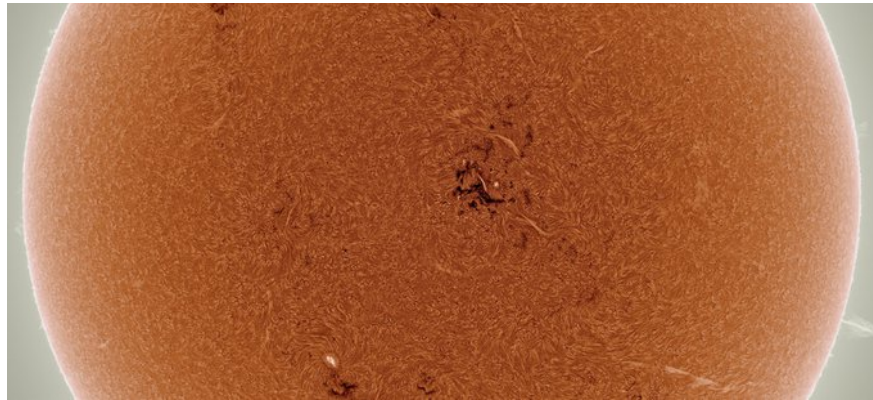


# SOLAR CYCLES:

## MILES *v.* MAINSTREAM



by Steven Oostdijk

10 Mar 2020-1 Dec 2020, the Netherlands

*Paper started in March comparing cycle 25 predictions, updated in Nov for Jup/Sat conjunction.*

Now that [Miles has detailed his prediction for solar cycle 25](#) [1] and the sun's weather has exploded into life since last month (I am writing end of November 2020 now), I thought it would be both entertaining and informative to compare Miles' predictions to mainstream predictions. There are many of them, even if you just do a quick search. It will also be a good open battle between taxpayer-funded studies versus Miles' theories, where we can see real results playing out over the coming years and decades.

If Miles' predictions prove to be correct (and they already are), it means we can safely leave the mainstream behind their paywall-protected sandboxes while we continue Miles' work to rewrite legacy physics into something that might actually be useful for humanity.

[We can start at Wikipedia](#), where we find a list of predictions for solar cycle 25. It is a travesty that Miles is not included on that list since he started working on [cycle 25 predictions in 2014](#), publishing them freely on the web without paywall, including a detailed explanation of the mechanical model and complete calculations (which I assisted him in 2020). His articles on this come up on any Internet search, very highly listed. Most of the other papers that are referenced cannot be read by the average Wiki readers as they are behind a \$35/paper paywall (I think that actually violates Wiki policy to only accept publicly accessible sources, but then Wiki is mostly entrenched scholars talking to themselves these days). Perhaps we can look at Google Scholar for them... but that is also no help. Both of these platforms started as a promise to promote public access to scientific information but seem to have degenerated into marketing blurbs for paywall-protected papers. Yet another racketeering scam using public funding for selling their wares. Anyhow, it took me some effort to find sources not behind a paywall that give the

background information on the other competitors here, but a full list is at the bottom of this paper in the reference section.

In this paper we will:

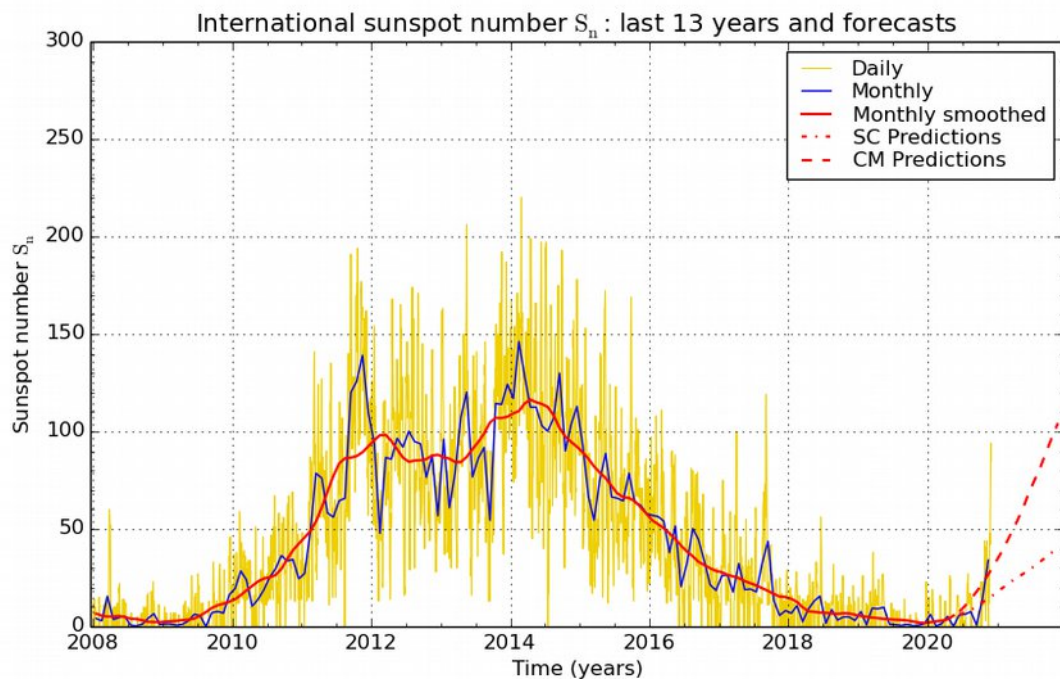
- review past accuracy of predictions for solar cycle 24,
- compare the current predictions for solar cycle 25, now including Miles
- check these against the actual results for 2020
- explain the activity peak of the last weeks

### What is being compared?

- Mainstream: solar dynamo, description + pictures
- Miles: charge field model – sun is recycling charge coming from the galactic core, channeling of this stream by (large) planets as they return charge => pictures of solar system orientation and charge flow recycling through sun and planets.

### When did cycle 25 start? Comparison for 2020

The Silso graph reveals many things:



SILSO graphics (<http://sidc.be/silso>) Royal Observatory of Belgium 2020 December 1

Yellow line is the actual data, blue and red lines are massaged data. Red line is data smoothed over an entire year—that is how far they have to go to pretend their imaginary dynamo is running smoothly.

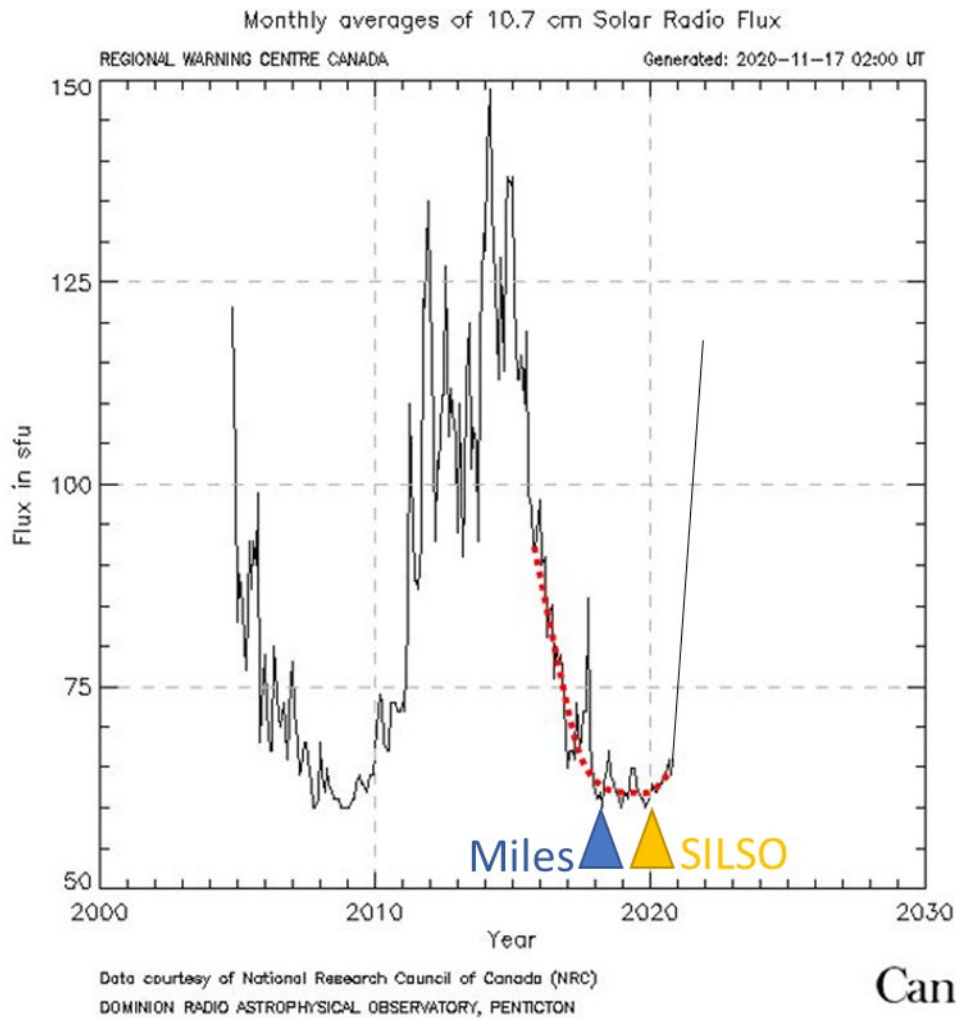
Looking into the future on the graph, the dotted lines are the scientists' multiple "predictions", which of course can be fitted to virtually any curve. You will say the CM prediction looks pretty good. What is that? It stands for "combined method", but it isn't really a prediction at all, as you see, since it is based on the current spike. That graph has the Nov. 29, 2020 spike on it, so the CM "prediction" isn't really a prediction, it is just an extrapolation. They admit that at Silso, in the fact that it is gotten by a **regression** technique. That technique is an extrapolation, not a prediction based on some theory.

Miles: Notice that if we follow either the yellow or blue lines, the cycle had already hit zero by about February 2018. It remained at zero for another 2.5 years, with minor fluctuations. The mainstream uses the red line to determine solar minimum, but you can see they have fudged the red line to suit themselves there. Anyone can see that, given the yellow line at the beginning of 2018, they have drawn the red line way too high. The red line is above most of the actual data, which is not smoothing, it is cheating. Likewise, given the yellow line of all of 2019, they have drawn both the blue lines and red lines too low. Look at the blue line pushed down to zero for most of the year, with almost the entire yellow line above it. There are no values below zero here, so that blue line can't be in the right place, can it? Neither can the red line, which again has most of the yellow line above it. So we know without further study that both the monthly and monthly smoothed data has been finessed. This graph has been faked. To say it another way: a good smoothed line would **smooth** the data, not raise or lower it. Hence the definition of the word "smooth".

These red and blue lines were finessed to prove that the solar minimum was in the second half of 2019. Several sites are pegging minimum at November 2019 (see Solen.info). All this to answer my prediction from 2014 that minimum would come in 2018. If you average the data in the correct way, and draw your lines in the right place, IT DID. Besides, my prediction concerned when solar activity would *first* hit minimum, not when some line smoothed and fudged over an entire year hit minimum.

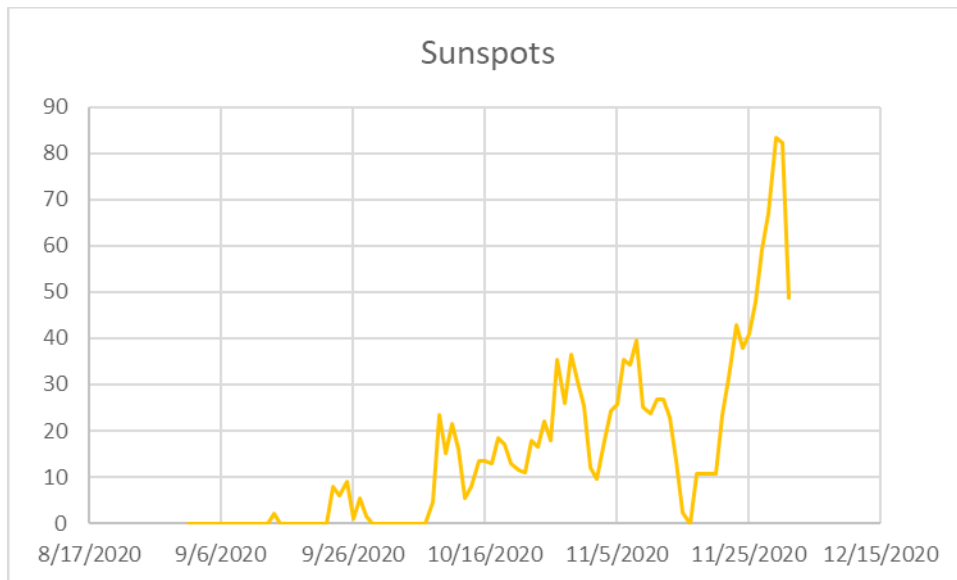
To see better what I mean, let us admit solar activity has been near-zero for 2.5 years. So the question then becomes, is solar minimum when it first hits a minimum value, when it leaves a minimum value, or somewhere in between? In other words, does that 2.5 year period belong with cycle 24 or cycle 25? As it turns out, the answer is not determined by smoothed lines or averages. It is determined by polarity, as the mainstream admits. Mainstream scientists were admitting back in 2017 that the polarity was already reversing, and that reversal had been completed by 2018. Therefore, the answer is that solar minimum should be located on the cusp of that polarity change. Which was back in 2018. But since that proved I was right, all those admissions from 2017 have been buried and memoryholed. No one wants you to remember that mainstream scientists themselves were admitting in 2018 that cycle 24 was over.

To show this, we can also look at flux instead of sunspots:



Miles puts minimum in the early part of 2018, while the mainstream puts it at the end of 2019. Miles has argued that once cycle 24 bottomed out, it was over, with any subsequent spikes belonging to the next cycle. Given that graph, you can see the sense of that. The downcycle is always of some duration, so it is almost arbitrary whether you give those zeros back or forward. However, there is no denying that solar minimum *started* back in 2018. No minima after that are lower than that minimum. To define solar minimum as when it ends is sort of perverse, isn't it? That is why flux is a better indicator of minimum than spots. Spots can't go below zero, so it is hard to compare one zero to another. But with flux we can compare minima more easily, since they are nowhere near zero.

### The last quarter of 2020 activity peak



This is the actual sunspot count of the last months (averaged over Arab/EU/US reporting stations). Solar flux has also seen a huge upswing in that time, going from about 66 to near 120. As you can see, a peak of activity has been building up from early October until end of November. Coincidence? A dynamo demolishing its bearings? No, it is what Miles predicted: the first of the six peaks of cycle 25 caused by [a Jupiter/Saturn conjunction](#) in December 2020.



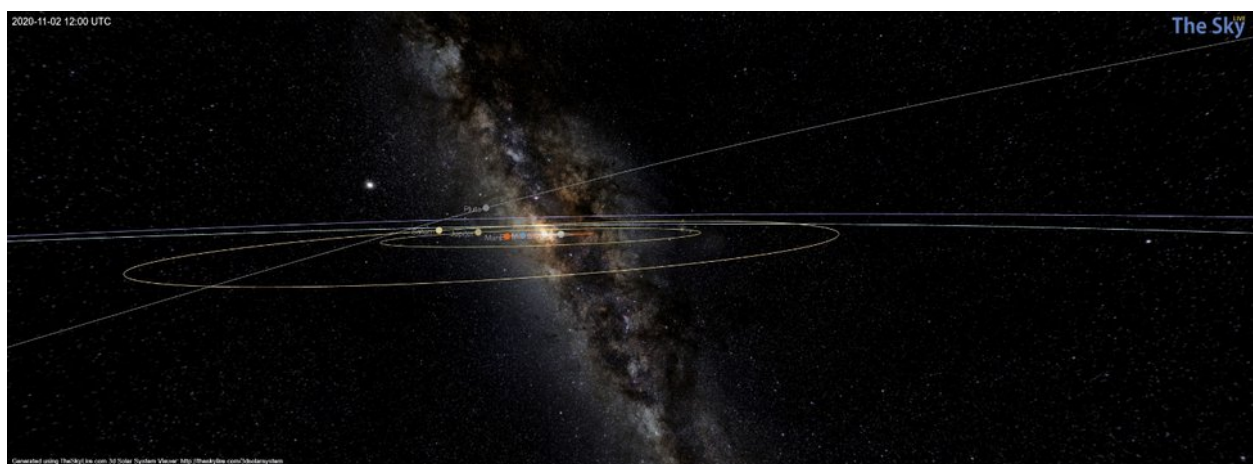
**Jupiter and Saturn seen from the sun on Nov 2 2020 using 1 degree field of view**

From the sun's point of view, the closest conjunction happened on Nov 2<sup>nd</sup>. From Earth's PoV

that conjunction will be Dec 21<sup>st</sup> (be prepared for some funny weather events that or the next day). I remind you that the mainstream can predict nothing concerning a peak at the Jup-Sat conjunction, since they insist that planetary alignments are astrology and have nothing to do with solar cycles. This all but proves Miles' model without further argument. Having a huge peak right now when Jupiter and Saturn are aligning is like a stake through the hearts of the mainstream.

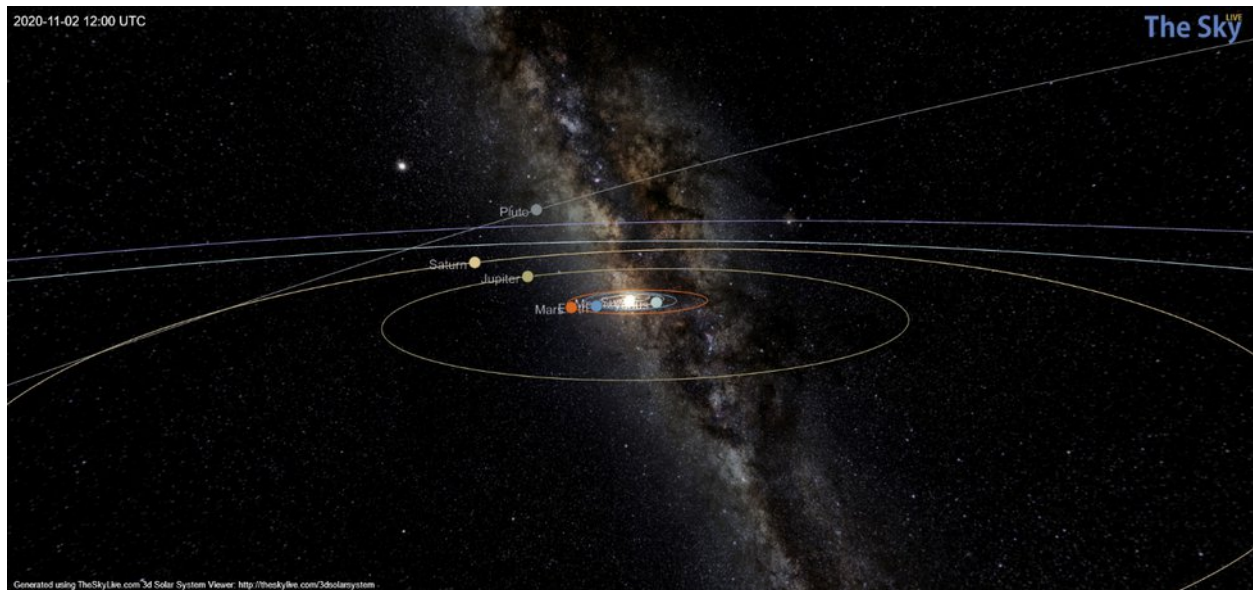
Flux shot up 13 points from Nov. 2 to Nov. 8, in response not only to that conjunction, but in response to an inner alignment of the four planets—which were pointing directly at the Galactic Core. By Nov. 15 both spots and flux had tanked again, as the inner alignment failed. On the 29<sup>th</sup>, flux went all the way up to 116, as the Earth aligned to Uranus, Venus, and the Core. Miles' prediction earlier this year was based on a 1st-order model that ignored inner planet alignments, but we are seeing how important they are for numbers here on Earth.

The current peak at first seems even higher than Miles predicted. He said ~50, since the largest planets were pretty square to the core—minimizing their impact—but I think their effect is boosted a bit by the position of Pluto, which is currently close to the Jup/Sat line. He also didn't take into account inner planet alignments (Mercury, Venus, Earth, Mars), and we have seen those causing marked boosts to the numbers on a day-to-day timescale. It also seems to me that although he tried to create an actual data graph (see below), rather than a smoothed one—so that he could indicate many minor peaks—given he was creating that graph by collating previous smoothed data curves he couldn't really claim to arrive at a *daily* data graph. It would have to be smoothed somewhat, if only by averaging some number of days together. In other words, his peaks are labelled at months, not days, so to be fair we would have to average a bit. We can't take a daily number by itself, since the sine waves I supplied him with earlier this year didn't have any daily numbers on them. So his guess of 50 may not be that wrong at all. Miles: yes, my graph is meant to match a monthly graph, with only short-term averaging. So we can't compare the big daily spikes we are seeing now to it. We have to compare my number 50 to a monthly. And my number 50 is for December, so we don't have an average for that yet.



Viewpoint sun lined up with galactic core at Nov 2d.





## Conclusion

Everything Miles predicted wrt sunspot progression has come to pass in the last six years. To show this, I have updated the Wiki table of predictions to include those of Miles:

Source	Date	Model used	Cycle 24 minimum	Cycle max	Cycle start	Cycle end
<a href="#">Thompson, M.J. et al.[4]</a>	Aug-14	Classic solar dynamo: "The detailed mechanism of the solar dynamo is not known and is the subject of current research."			Q4 2019	
<a href="#">Zharkova, V. et al.[9] (Northumbria U.)</a>	Oct-14	Solar Background Magnetic Field Variations		80% of cycle 24		
<a href="#">Upton, L.A. and Hathaway, D.H.[6] (Solar Observatories Group, Stanford)</a>	Dec-18	Advection Flux Transport (AFT) Model		95% of cycle 24	Late 2020 – Early 2021	
<a href="#">Xu, J.C. et al.[10] (Chinese Academy of Sciences)</a>	Aug-18	Estimation based on characteristics of cycles 10-23.		152.2–184.8 (2024)	Oct-20	
<a href="#">Bhowmik, P. et al.[5] (IISER Kolkata)</a>	Dec-18	Magnetic field evolution models: "multiple forecasts were made for the current solar cycle 24 with little consensus and two solar dynamo-based forecasts for cycle 24 differed significantly from each other".		109–139 (2023–2025)	2020	after 2031
<a href="#">Ozguc, A. et al.[11] (Harvard U-ty)</a>	Dec-18	Empirical dynamical modelling (chaos theory)	March-19	154±12 (2023.2±1.1)		
<a href="#">NOAA / SSRC[12] (the "60 experts")</a>	Apr-19	Consensus among 60 researchers	somewhere between July 2019 and Sep 2020	95–130 (between 2023–2026)	mid-2019 – late 2020	
NASA <sup>[8]</sup>	Jun-19	Unknown		30–50% lower than Cycle 24 (peak 2025)	2020	
<a href="#">NOAA / SSRC (update)[13]</a>	Dec-19	Consensus among 60 researchers		115(±10) in July 2025(±8m)	April 2020 (±6m)	2033
<a href="#">Miles Mathis</a>	Oct-14	Large planets disturbing charge channels between sun and galactic core, and sun and other planets	June-18	160% of cycle 24 Double peak: 190 (2023.1), 130 (2025.1), 240 (2027.1);	2018	2032

Review of the models used:

### “Classic Solar Dynamo”

“Classic” is a vain attempt to give this theory a bit of legitimacy by reason of seniority. This is a model that has not changed since 1918, and to believe it you will have to believe the following:

- The plasma inside the Sun can bend itself such that it spontaneously forms a dynamo that generates a steady magnetic field.

- Since the energy dissipates for a million reasons, e.g. it radiates away, it dissipates away through ohmic decay, etc..., you will also have to believe that gravitational contraction and radioactivity provide exactly the right amount of energy to sustain the dynamo for the last few billion years. Even though everything in our skies is allegedly explained by coincidence, these coincidences happen to be perfectly fine-tuned to sustain everything as it is. Common sense would suggest there must be balances at play, but balance is not a mathematical model, and none of the current math explains anything.
- In short, this is a theory with no content. We aren't told the mechanism for short-term changes, since those changes require not only changes in Solar output, but the *production of the cycles*. Why is plasma or radioactivity on an 11-year cycle? No good answer is forthcoming.
- Now you understand why so many people have a full-time job toying with these assumptions and models: it takes a lot of hemming and hawing to convince anyone a theory is being advanced here. Luckily for us there are also some people that put great effort in observations, allowing us to compare mainstream theories and predictions against real data.

Let's read what our friends at NASA have to say about it:

*"It is widely **believed** that the Sun's magnetic field is generated by a magnetic dynamo within the Sun. The fact that the Sun's magnetic field changes dramatically over the course of just a few years, and the fact that it changes in a cyclical manner **indicates** that the magnetic field continues to be generated within the Sun. A successful model for the solar dynamo must explain several observations:*

- 1) the 11-year period of the sunspot cycle,*
- 2) the equator-ward drift of the active latitude as seen in the butterfly diagram,*
- 3) Hale's polarity law and the 22-year magnetic cycle,*
- 4) Joy's law for the observed tilt of sunspot groups and,*
- 5) the reversal of the polar magnetic fields near the time of cycle maximum as seen in the magnetic butterfly diagram."*

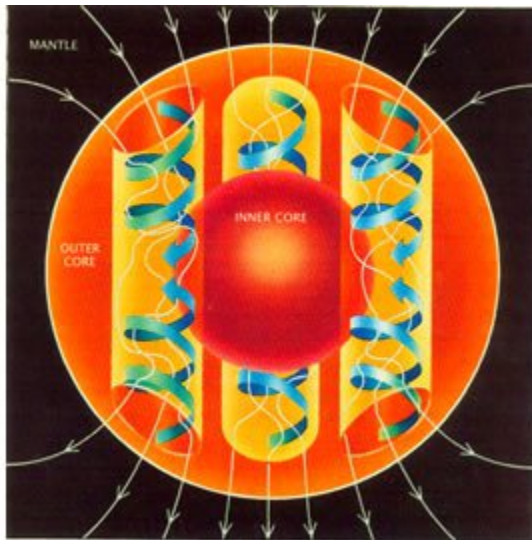
The Wiki page on it is painfully empty, but notice what NASA just said. *The fact that it changes in a cyclical manner **indicates** that the magnetic field continues to be generated within the Sun.* Did you laugh out loud at that? I did. The cycles themselves indicate a cause in the Sun? The data itself proves their dynamo model, without further explanation? Hilarious. They hope you will forget to ask them this question: what **exactly** in the cyclical manner indicates a magnetic field from the Sun as its cause? Answer: exactly nothing.

Let's see how Miles and the "united experts" answer this validity test:



Observation	Miles explanation	United experts explanation
11 year period of the cycle	Jupiter orbital cycle is main driver of disturbance on the charge channel from galactic core to sun (large planets recycling adds inverted photons to the charge stream to the sun)	Internal magnetic cycle. 11 year period is arbitrary.
Equator-ward drift of the active latitude in the butterfly diagram	Relative position of Jupiter, Saturn and Neptune	-
Hale's polarity law and 22-year magnetic cycle	Jupiter + Saturn cycle (average ~19 years)	-
Joy's law for the observed tilt of sunspot groups	Relative position of the planets	-
Reversal of polar magnetic field near time of cycle maximum as seen in magnetic butterfly diagram	Relative position of Saturn, Jupiter, and Neptune, with conjunctions and oppositions causing reversals.	-

Let's pause to study this dynamo theory a little more closely. It is based on the earlier terrestrial dynamo theory:

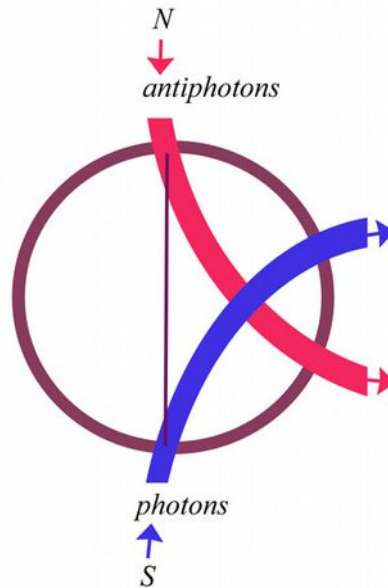


Yes, this is a current diagram of the Earth's alleged dynamo. It is not from the 18<sup>th</sup> century. It assumes that spiraling iron streams provide exactly the right amount of heat energy to prevent decay of the Earth's magnetic field. And yes, that was "iron", not ion.

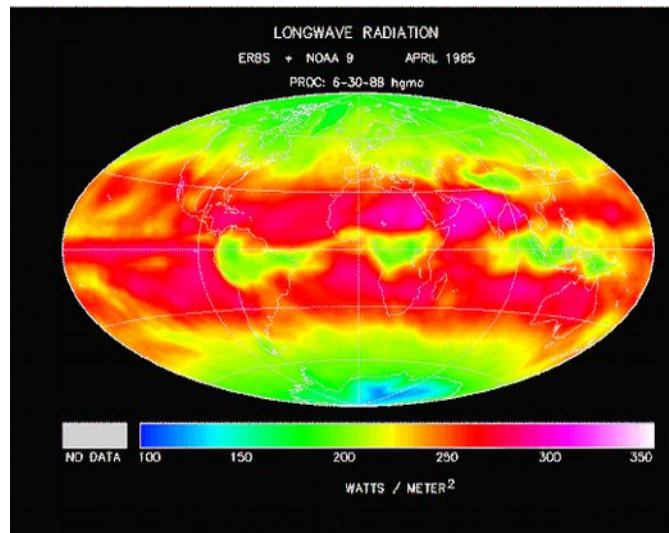
**From Wiki: Earth's dynamo:** "At the dawn of the 21st century, numerical modeling of the Earth's magnetic field has not been successfully demonstrated, but appears to be in reach." Does it really?

But why would the spirals be vertical like that, in a sphere? Why not horizontal? Why not spoked? Why not in the shape of a turtle? Again, Miles has already blown this model to shreds

in [his paper on the Earth's core](#). He proves that this dynamo model is completely unnecessary, since the Earth is recycling charge coming to it from the Sun. And the recycling path is not from north to south, as here, but from both poles to the equator, as here:



Once you realize that, you can see that the dynamo model doesn't make any sense, since it doesn't even match the known magnetic field of the Earth. You can't create a polar field and reversed magnetism (+/-) with vertical columns inside a sphere. It is the height of absurdity. How do you create this



from the dynamo model above? You will say that is longwave radiation, so how about this?

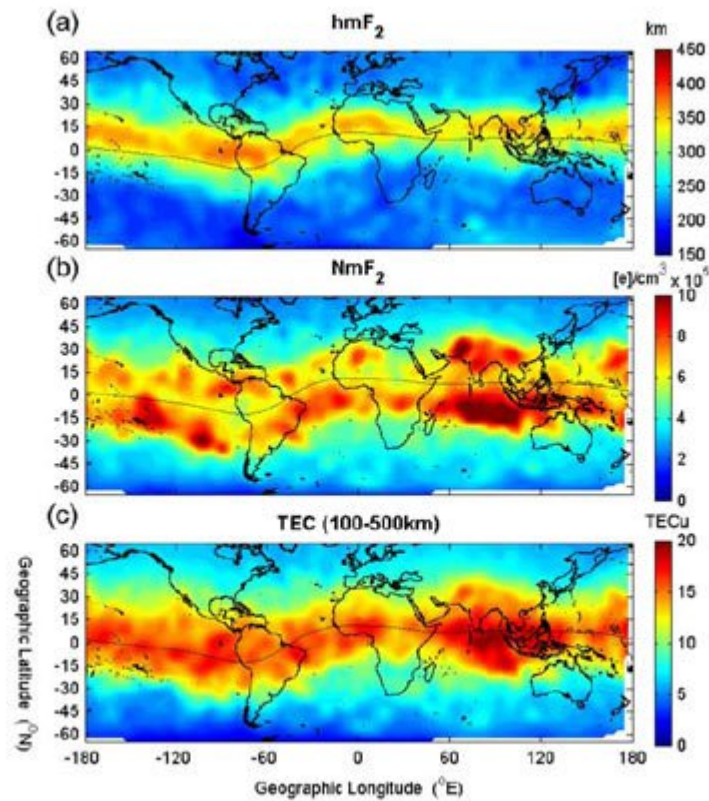
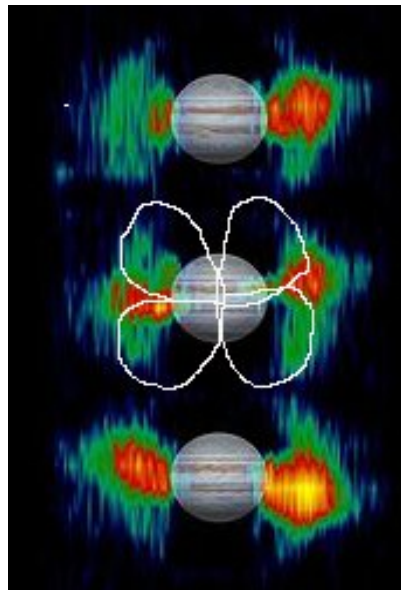


Figure 2. Ionospheric maps in (a) peak altitude ( $hmF_2$ ), (b) peak density ( $NmF_2$ ), and (c) total electron content (TEC) integrated between 100–500 km altitude range at global constant local time at 1200 LT.

How do you get equatorial bands from vertical tubes? Or how about Jupiter's radiation belts?



Maximum radiation streaming out from the equator. How does the dynamo model explain that?

The sun's dynamo is a variation on the earth's, but it is even more infantile:

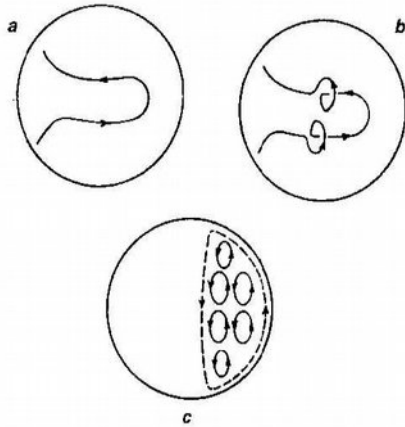
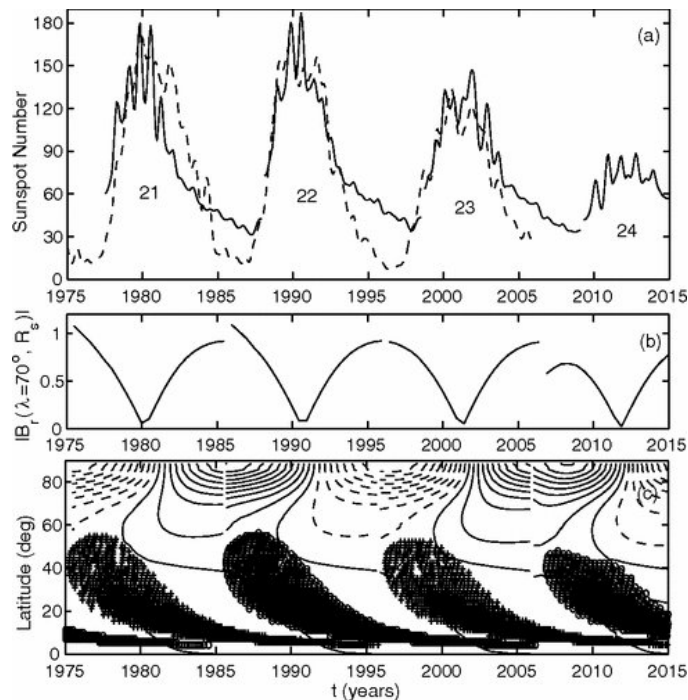


Figure 7: Different stages of the dynamo process. See text for explanation.

rotation to produce a toroidal component. Parker (1955b) pointed out that the uprising hot plasma blobs in the convection zone would rotate, as they rise, because of the Coriolis force of solar rotation (just like cyclones in the Earth's atmosphere) and such helically moving plasma blobs would twist the toroidal field shown in Figure 7a to produce magnetic loops in the poloidal plane as shown in Figure 7b. Keeping in mind that the toroidal field has opposite directions in the two hemispheres and helical motions of convective turbulence should also have opposite helicities in the two hemispheres, we conclude that the poloidal loops in both hemispheres should have the same sense as indicated in Figure 7c.

Rotating plasma blobs? You have to be kidding me. Besides, Miles has also destroyed this [ridiculous Coriolis model](#), with little circles drawn on the surface. The Coriolis Effect can't possibly create those, since it is simply an outcome of spherical spin. Smaller circles like that, like the ones we see in hurricanes, can only be caused by charge recycling. The same charge recycling that is causing the solar cycles as it moves through the solar system.

**Prediction of Cycle 24 with the solar dynamo model (2007):**



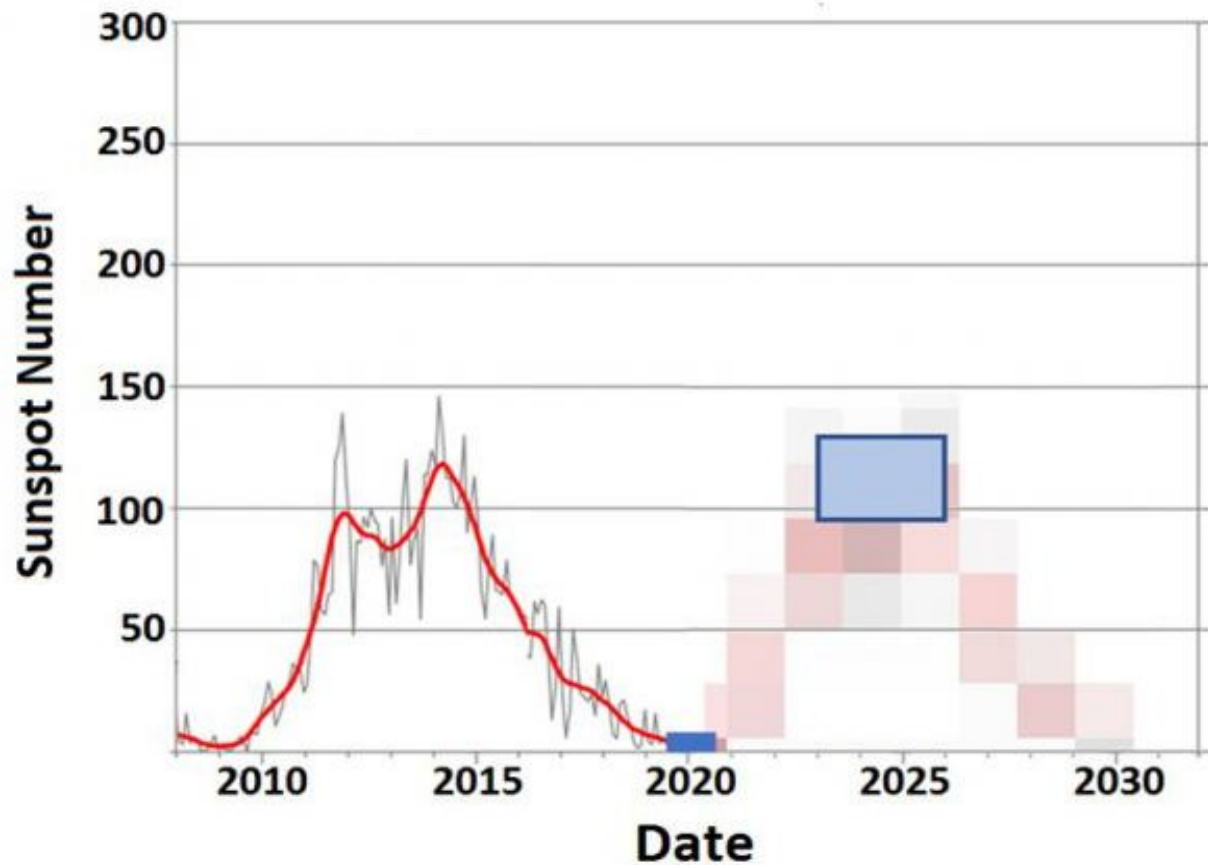
As you see, this model predicted a peak of around 90 in 2012, which does not look too bad if history would really have stopped in 2012, except it didn't and there was a second peak around 150 in 2014, which is quite far away from the 75 number that their model predicted.

Even worse was the prediction of NASA, via David Hathaway and Robert Wilson, which Miles mentioned in his [paper of Dec. 2019](#). This was the premier theory at the time, promoted from many places. Based on a Geomagnetic extrapolation model, they predicted cycle 24 would be the most active in 400 years. It was actually the least active in a long time, so they couldn't have been more wrong if they had tried. It was claimed to have a 94% correlation (which is a less spectacular fail than a Sigma 5, I guess), but failed anyway. This is because it wasn't based on any physical theory, just being a wild crunching of past data. The US election just proved that doesn't work.

### Silso prediction of Solar Cycle 25 23 April 2019

An international panel of experts coordinated by NOAA and NASA, to which WDC-SILSO contributed, released a preliminary forecast for Solar Cycle 25 on April 5, 2019. Based on a compilation of more than 60 forecasts published by various teams using a wide range of methods, the panel reached a consensus indicating that cycle 25 will most likely peak between **2023** and **2026** at a maximum sunspot number between **95** and **130**. This prediction is now given in the scale of sunspot number Version 2. Therefore, solar cycle 25 will be similar to cycle 24, which peaked at **116** in April 2014. They are giving themselves a three-year spread on maximum, and not bothering to predict first and second peaks.





The minimum between cycle 24 and cycle 25 is predicted to occur between **July 2019** and **September 2020**. Given the previous minimum in December 2008, this corresponds to a duration for cycle 24 between 10.6 and 11.75 years. This thus also means that the activity is expected to decline further over the coming months [written in March]. Miles: notice they are predicting minimum only three months before the fact (April 2019). Not much of a prediction. Especially since minimum *had already occurred* a year before this prediction.

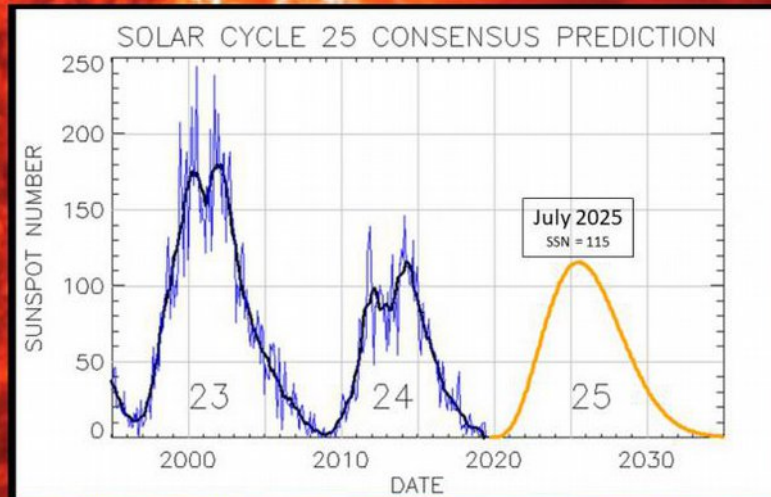
A more detailed explanation can be found [here](#).

Update Dec-19:



## Solar Cycle 25 Forecast Update

- Released December 9<sup>th</sup>, 2019 -

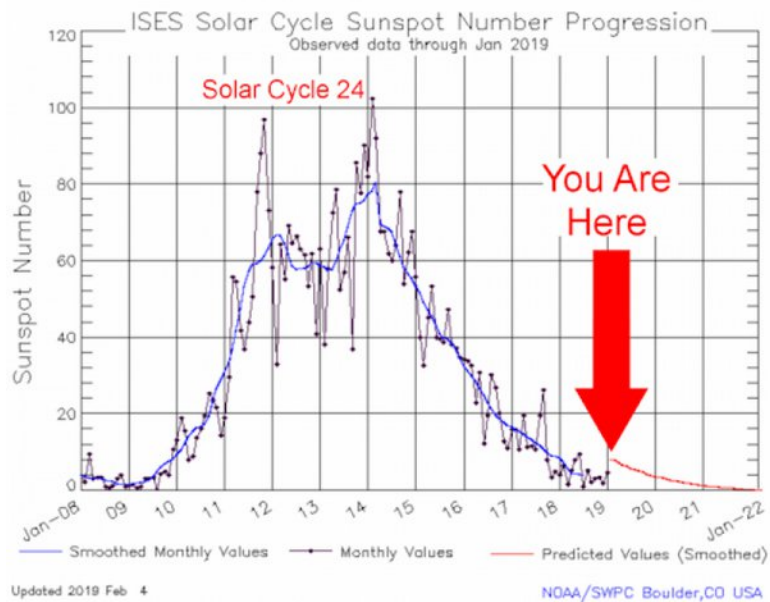


**Solar Cycle 25 will have a peak SSN of 115 ( $\pm 10$ ) in July 2025**  
**Solar Cycle 24/25 minimum will occur in April, 2020 ( $\pm 6$  months)**

So we now have a firm-up, with 2026 being the peak, but only one peak being indicated. The size is still like cycle 24.

## Farmers Almanac

Source: NOAA/SWPC (Oct 2019):



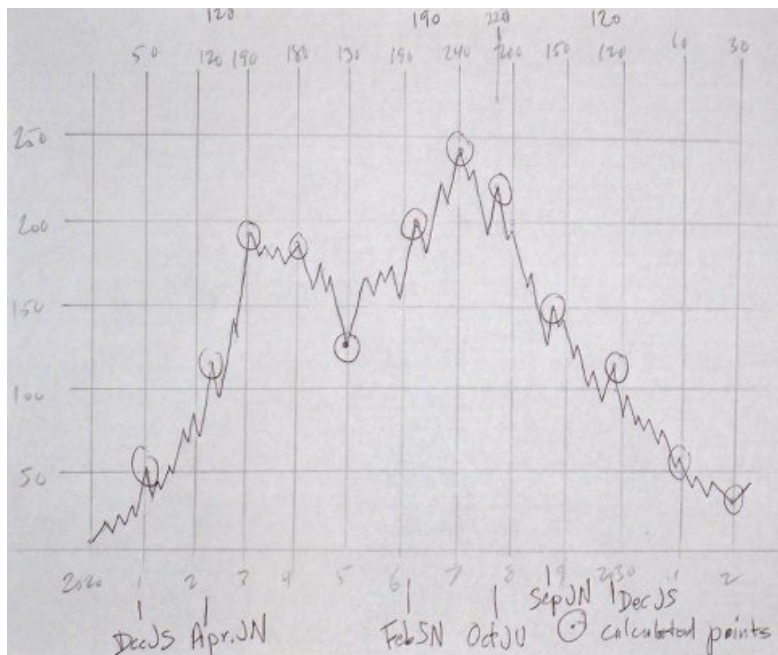
Notice something odd here? The NOAA/SWPC data is not identical to the SILSO data above, it is only 75% of that number. This has to do with using the "Boulder Sunspot Number" which is

about 25% lower than the “International Sunspot Number” coming from Belgium. See <https://spaceweather.com/glossary/sunspotnumber.html> or <https://www.aavso.org/zurich-classification-system-sunspot-groups> for the detailed explanation.

The official number comes from SIDC (<http://sidc.oma.be/index.php3>) in Belgium.

Also notice that in October 2019 they were apparently predicting solar minimum would stretch out until Jan 2022. That entire red line is completely wrong. **Miles: plus, that graph has recently changed. I printed it in my paper of Dec. 2019, and the red line went out to Jan 2023.**

## Miles Mathis prediction cycle 25

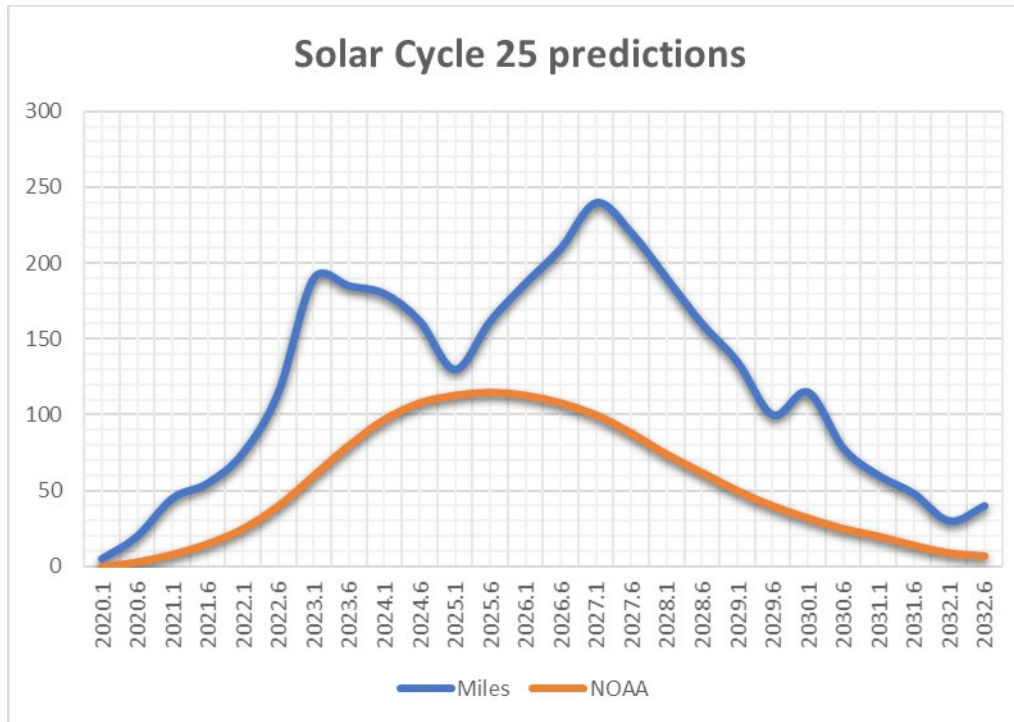


### Model comparison:

Classic dynamo has only assumptions, the mechanics are a guess, it is hopelessly outdated, too complex and endlessly manipulatable, but I guess that explains its popularity amongst astronomic researchers. The number of assumptions that have been verified: 0.

Miles' model is new and in-progress and is only 2D and 1<sup>st</sup>-order, but even so it is two orders of magnitude more accurate than the dynamo fantasies as it contains actual mechanics. Notice that he has pegged his spikes to six separate planetary conjunctions, and given us **twelve** calculated points, based on combined planetary angles at the time. His graph is meant to be a monthly graph, not a smoothed or daily, so you have to compare his 240 maximum to cycle 24's 148, not its 116 smoothed. Making his prediction about 62% above the last cycle peak. That would be equivalent to about a 188 smoothed.

### Comparison NOAA/NASA vs Miles Mathis



How are we doing today? Well, as you can see for yourself, Miles is already beating the pants off NOAA. Miles may be fractionally too low for the Nov. 29 spike, but NOAA has us still at near-zero. Which puts Miles around 45 points closer already. This is because Miles predicted the Jup-Sat conjunction would cause a first minor peak, and of course NOAA did not. NOAA and the rest of the mainstream must be sweating bullets already, since we haven't even entered 2021 and we are already at half their maximum. Miles: Steven is comparing a rough average of my monthly graph to their yearly graph, I think, so the comparison isn't completely accurate, but at this point in the cycle it doesn't matter much. They are way off regardless.

Miles: I am going to predict that the mainstream begins adjusting their predictions upwards immediately. What do you think?

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[1] <http://milesmathis.com/goody.pdf>

[2] <https://phys.org/news/2020-10-solar-sun.html>

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[https://www.researchgate.net/publication/6331332\\_Predicting\\_Solar\\_Cycle\\_24\\_With\\_a\\_Solar\\_Dynamo\\_Model](https://www.researchgate.net/publication/6331332_Predicting_Solar_Cycle_24_With_a_Solar_Dynamo_Model)

Predicting Solar Cycle 24 With a Solar Dynamo Model

Arnab Rai Choudhuri, Piyali Chatterjee, and Jie Jiang

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