

Vaughan, 111015 - Shifting Sun-Earth-Moon Harmonies, Beats, & Biases WUWT blog & comments

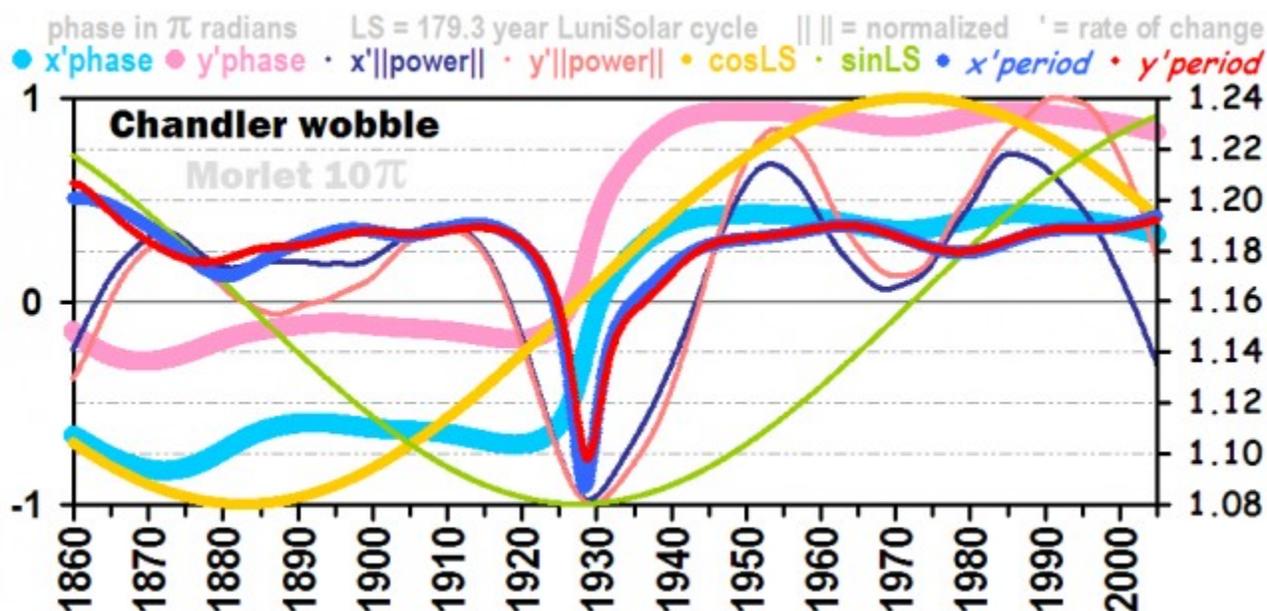
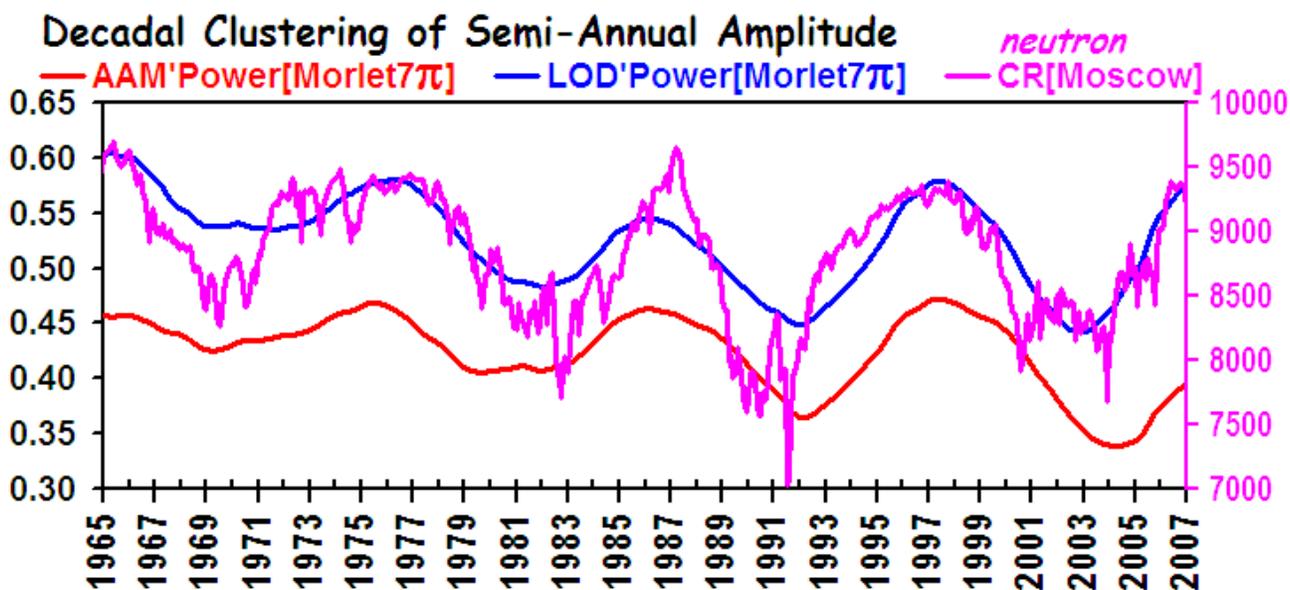
<http://wattsupwiththat.com/2011/10/15/shifting-sun-earth-moon-harmonies-beats-biases>

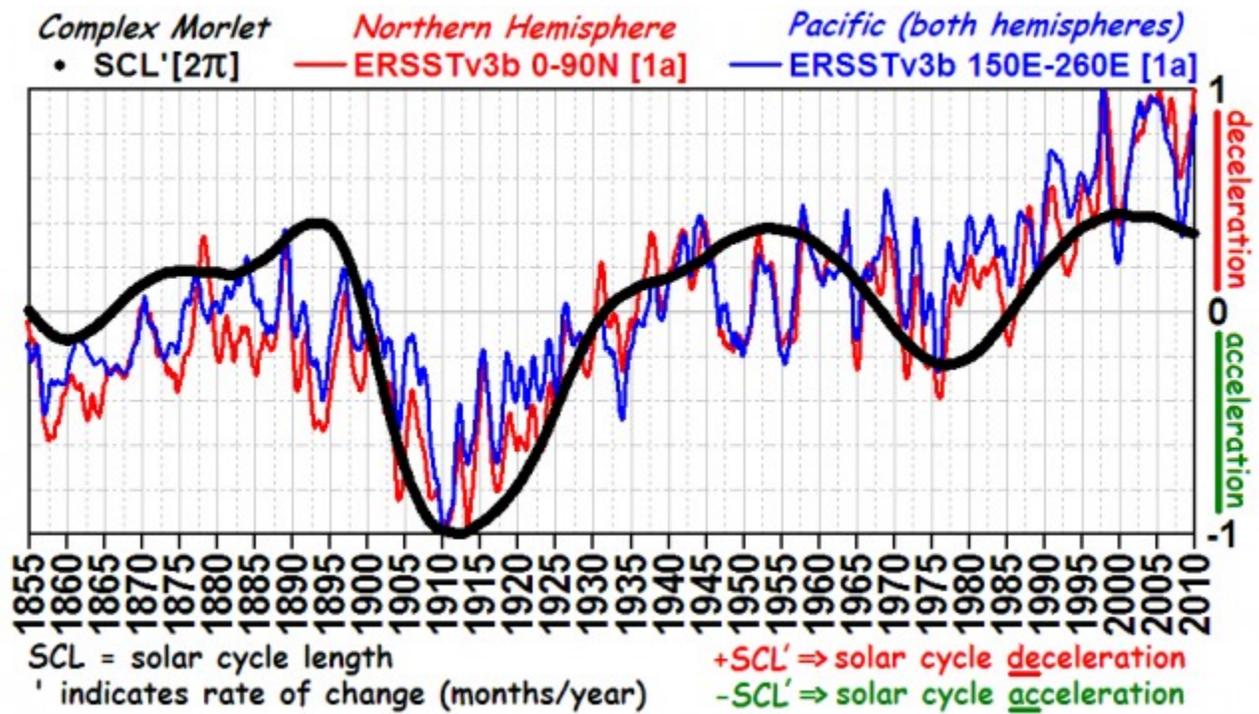
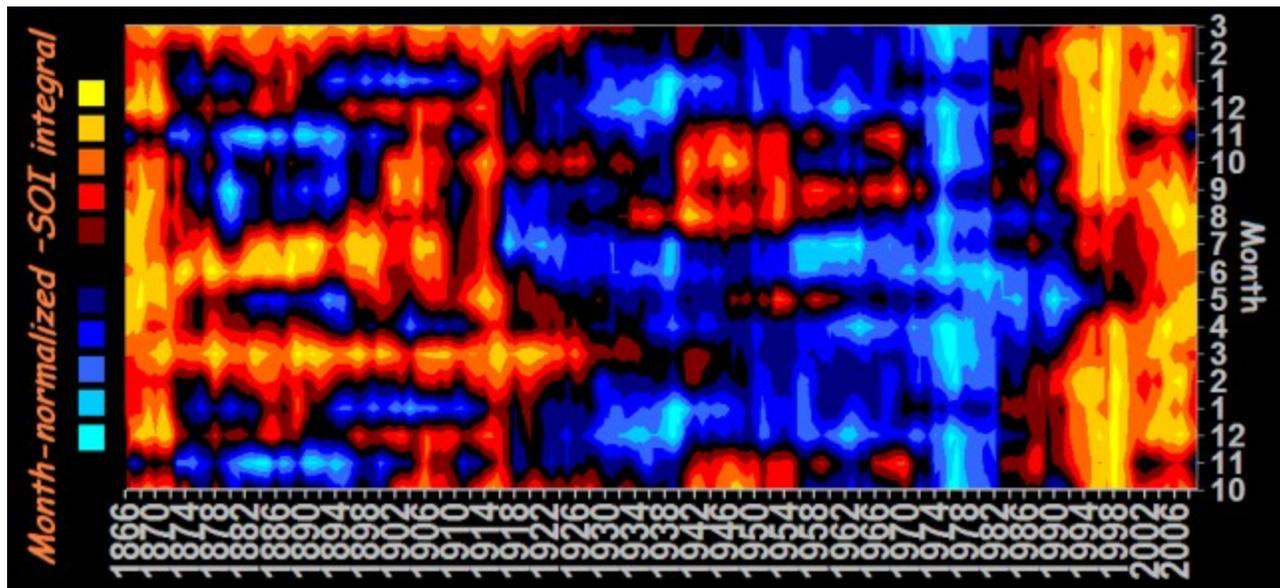
Shifting Sun-Earth-Moon Harmonies, Beats, & Biases

Posted on [October 15, 2011](#) by [Anthony Watts](#)

Paul L. Vaughan, M.Sc. – October 2011

This post has no introduction, per the author's request, start with the graphs. A PDF of a more complete paper is linked at the end. – Anthony





Motivation

One purpose of this article is to direct the attention of sensible observers to a serious oversight in the mainstream quest for understanding of multidecadal solar-terrestrial relations (section I).

Another is to ask the community to start thinking carefully about what can be learned from rotating multivariate lunisolar spatiotemporal phase relations shared by Earth Orientation Parameters (EOP) and terrestrial climate records, while seizing the same opportunity to highlight critical omissions in “classic” works on alleged solar-barycentric terrestrial influences (section II).

These data exploration notes are volunteered in support of ongoing publicly collaborative multidisciplinary research.

Audience

The diverse audiences addressed might not be the ones preferred by some readers. Addressing rotates priority across a spectrum of functional numeracy & orientation.

Format

Volunteer time & resources are limited, so presentation is skeletal & informal.

Conclusion

The majority of recent multidecadal terrestrial variability is due to *natural* spatiotemporal aliasing of differential solar pulse-position by terrestrial topology over basic terrestrial cycles including the year.

It's *not* the deviation of solar cycle frequency from average solar cycle frequency that's of practical significance *from a terrestrial perspective*. Earth, the receiver, has no clock locked to the average solar cycle length, so the pulse-position modulation is *differential*.

These *observations* depend on *neither* the success nor failure of CERN's CLOUD experiment.

Details

Vaughan, P.L. (2011). Shifting Sun-Earth-Moon Harmonies, Beats, & Biases.

[Vaughn Sun-Earth-Moon Harmonies Beats Biases](#) (1MB 25pp PDF)

Best Regards to All,

Paul L. Vaughan, M.Sc.

<http://wattsupwiththat.com/2011/10/15/shifting-sun-earth-moon-harmonies-beats-biases>

Responses to *Shifting Sun-Earth-Moon Harmonies, Beats, & Biases*

174 17Oct11 22:47

189 18Oct11 21:55

1. [Brent Hargreaves](#) says:

[October 15, 2011 at 2:04 pm](#)

Well, that's a relief. For a while I was getting worried about rotating multivariate lunisolar spatiotemporal phase relations.

2. [Bob Zirg](#) says:

[October 15, 2011 at 2:06 pm](#)

The pdf file may be a great piece of work – I'll never know. The introduction was an awful load of jargon and multi-syllable gibberish.

3. [jorgekafkazar](#) says:

[October 15, 2011 at 2:07 pm](#)

Wiggle matching, never my favorite. This is, on the other hand, wiggle matching over a long term. Morlets don't thrill me, I'm not 100% sure how or why they are derived, what mathematical jiggery-pokery is involved in them, nor what they do to confidence intervals and the like. I always associate morlets with "The Time Machine." It's common to run data through a "Ronco Math-o-Matic" and get something out the other end that looks nifty but has little significance. Let's see if this has legs. With a 155 year data span, I sure hope so. Only 2.5 major cycles, but still might be useful.

4. [michael hammer](#) says:

[October 15, 2011 at 2:09 pm](#)

Paul;

This site is not exclusively or even dominantly the domain of what ever discipline you article relates to. Your paper is full of labels and acronms which you do not define nor do you seem to explain what the whole thing is about. Phases such as "rotating multivariate lunisolar spatiotemporal phase relations" would make any buzz phrase generator proud.

Regrettably, what I am suggesting is that though your article may be very worthwhile it is largely incomprehensible (at least to me). If you want to promote discussion and thought please give more explanation and use simpler language.

5. [crosspatch](#) says:

[October 15, 2011 at 2:19 pm](#)

I am hoping this is a high level introduction to a more detailed piece by piece discussion. As presented, it makes little sense to me. It is sort of like being hit by a seven course Italian dinner shot out of a cannon at me. I hope the plan is to go back and look at each course as it was loaded into that cannon.

6. [Les Johnson](#) says:

[October 15, 2011 at 2:26 pm](#)

Gotta agree with the previous posters. I have no information in this that I can make an informed decision on. The graphs have no explanation of the acronyms. I don't have the raw data. I don't have the methodology.

Fail, until I get some coherent explanations. Its gibberish right now.

7. [Leif Svalgaard](#) says:

[October 15, 2011 at 2:34 pm](#)

rotating multivariate lunisolar spatiotemporal phase relations
mumbo-jumbo

8. [EFS_Junior](#) says:

[October 15, 2011 at 2:35 pm](#)

I have never seen, before now, a more complete "paper" of pure gibberish.

I have never seen, before now, such a butchering of the english language.

I know what to do with this "paper" get it published in E&E.

An infinite number of monkeys with an infinite number of typewriter and what do you get?

Contrarian blog pseudoscience.

.

9. [Jon R. Salmi](#) says:

[October 15, 2011 at 2:36 pm](#)

As dense as this article is; I wouldn't mind seeing articles on orientation parameters, tidal variations in length-of-day, variations in atmospheric angular momentum, etc. and their relationship to climate variation, expressed in intelligible terms for the educated layman.

10. [Baa Humbug](#) says:

[October 15, 2011 at 2:39 pm](#)

Anthony do you have this in English? Google translate doesn't seem to work on it.

11. [Ian H](#) says:

[October 15, 2011 at 2:41 pm](#)

The diverse audiences addressed might not be the ones preferred by some readers.
Addressing rotates priority across a spectrum of functional numeracy & orientation.

does addressing also rotate priority across a spectrum of grammatical & vocabulary?

Clear simple language is the best way to communicate a complex idea. Sadly many people seem to think that scientific publication requires you to use "BIG WORDS" to be taken seriously.

12. [Stephen Wilde](#) says:

[October 15, 2011 at 2:41 pm](#)

There are no doubt lots of 'beats' and 'resonances' in the climate system from a multitude of internal system factors but what is the point of trying to isolate them all ?

I can't even tell whether Paul has successfully done so because the language is so personal to him that I cannot follow the logic.

What we want to know is whether the composite outcome which presumably resulted in the climate swings from MWP to LIA to date has been in any significant manner disrupted by human activity.

Does this article help ?

13. *Orkneygal* says:

[October 15, 2011 at 2:46 pm](#)

Paul-

“rotating multivariate lunisolar spatiotemporal phase relations”?

Did you mean-

“statistical analysis involving two or more variable quantities, including both time and space factors, and based upon sequences of Chinese calendars, in search of periodic variations”

Or am I missing something blindingly simple here?

14. *Taras* says:

[October 15, 2011 at 2:47 pm](#)

CQ CQ CQ Willis Eschenbach. Dear OM, we need your help at QTH WUWT. Heavy interference in communication between QTH sun – earth – moon and readers at QTH WUWT. TX.

15. *Anthony Watts* says:

[October 15, 2011 at 2:49 pm](#)

For the record, I asked for an introduction and was told the post is “as is”. While I consider that unfortunate, perhaps the author will take note of the issues raised above and clarify the terms and the method. Reading the PDF reveals a bit more info, and I suggest people do that.

16. *Me* says:

[October 15, 2011 at 2:54 pm](#)

crosspatch says:

October 15, 2011 at 2:19 pm

I am hoping this is a high level introduction to a more detailed piece by piece discussion. As presented, it makes little sense to me. It is sort of like being hit by a seven course Italian dinner shot out of a cannon at me. I hope the plan is to go back and look at each course as it was loaded into that cannon.

It is sort of like being hit by a seven course Italian dinner shot out of a cannon at me.

Stop saying that about me, I’ve never been shot at by a seven course Italian dinner out of a cannon, but it makes little sense to me is correct. :lol:

17. *Richards in Vancouver* says:

[October 15, 2011 at 3:03 pm](#)

Aw, you guys. Can’t you handle a simple concept like “rotating multivariate lunisolar spatiotemporal phase relations”?

Look at it another way. This is simply a delta of the moving average of least-squares, derived from the spatio/temporal interface of the SFA component.

Got it now? Sheesh!

18. *Les Johnson* says:

[October 15, 2011 at 3:03 pm](#)

Anthony: I read the PDF. It didn't help. I can see a correlation in the graphs, but until I know what the underlying data is, and the methodology, it is still gibberish.

19. *Les Johnson* says:

[October 15, 2011 at 3:08 pm](#)

For what it is worth, this looks a lot like an engineer talking to a non-engineer. Blindingly simple to the engineer, and exceedingly complex and opaque to the non-engineer.

20. *Rational Debate* says:

[October 15, 2011 at 3:12 pm](#)

reply to: Baa Humbug says: October 15, 2011 at 2:39 pm, who said:

Anthony do you have this in English? Google translate doesn't seem to work on it.

Ok, this one ought to get the quote of the week – it sure got me grinning!

Baa, I do believe you are on to something – Google translate needs to incorporate “science” as one of the languages it recognizes and translates!! It would have to have three user option selections: “science literate, but this is not my area,” “bright, but never learned much science,” and “clueless.” Result complexity and terminology to be based on the user selection. Perhaps they need to add a fourth button “conspiracy theorists, fanatics, paranoid types.” That selection might just return “you'd never believe the truth anyhow,” or similar. Only those types wouldn't use the button, because they'd be sure it would result in all sorts of horrible things. :-p That 4th button would be rather like the new iPhone 4s Siri replies, which can help you hide bodies and just figure out all sorts of things – now that's user friendly!

<http://dvice.com/archives/2011/10/iphone-4s-siri.php> (<— it really is funny, and apparently real, check out this article about it!)

If Google was REALLY smart about it, they would manage to make it not only translate science, but also detect and explain when & why something is pseudo-science. {VBG} Unfortunately, what would be more likely is a super-whamo-dyne 1984 doublethink module than a real science/pseudo-science translator.

But we can dream. :0)

21. *DirkH* says:

[October 15, 2011 at 3:15 pm](#)

Fascinating.

22. *climatereason* says:

[October 15, 2011 at 3:20 pm](#)

I think you need to read the last couple of paragraphs of the pdf in order to find what the author is asking. This is way beyond my expertise and the paper is written in a very dense manner with numerous phrases that aren't in everyday technical use, but hopefully Paul will come and explain what this is all about, as he has gone to a lot of effort.

Alternatively, perhaps a few people will read the last few paragraphs of the pdf and interpret its meaning for the rest of us.

tonyb

23. *Paul Westhaver* says:

[October 15, 2011 at 3:21 pm](#)

It might be worthwhile to normalize all of the plots to one timescale. You have done this nearly completely but I would like the Decal Clustering plot put on a 1850 to 2010 scale.

If there is no data from 1850 to 1965 the leave it blank.

24. *Paul Westhaver* says:

[October 15, 2011 at 3:22 pm](#)

decadal sorry

25. *Janice* says:

[October 15, 2011 at 3:24 pm](#)

The Chandler Wobble is entertaining. It is down in the noise, as far as most tidal effects are concerned, but they started measuring it back in 1890. I would think that one of the more interesting correlations would be how earthquakes effect the Chandler Wobble, as we know that the latest Japanese earthquake and tsunami actually shifted the inclination of the earth. And, as pointed out, since the Northern Hemisphere is rather continent-heavy, we do have that discontinuity between north and south. However, has it been considered that about half of the earth, on one side, is water, stretching from pole to pole? So we not only have the north being continent-heavy, we also have one quarter of the planet being continent-heavy.

26. *George E. Smith*; says:

[October 15, 2011 at 3:29 pm](#)

Read the thing; read it twice more; no help.

On this subject I plead complete and total ignorance. The Library of Congress is the World's largest repository (suppository too) of information about stuff of which I also plead complete and utter ignorance.

So I'm here to learn along with many others.

27. *O2BNAZ* says:

[October 15, 2011 at 3:31 pm](#)

Thank god, I thought I was an idiot...

28. *William A Blackwell* says:

[October 15, 2011 at 3:32 pm](#)

Uh, practical jokes are ALWAYS funny.....to the originator. Or is it a job application screening device for literacy?

29. *Ed Dahlgren* says:

[October 15, 2011 at 3:39 pm](#)

Rotating Multivariate Lunisolar Spatiotemporal Phase Relations needs some more words, ones starting with vowels, to make an easier-to-pronounce acronym. How would you say RMLSPR? ReMLiSPoRe? RoMuLuS PR? RaMaLhaSaPuRa? Tough one.

30. *Malcolm* says:

[October 15, 2011 at 3:45 pm](#)

Total garbage.

31. *Bob* says:

[October 15, 2011 at 3:45 pm](#)

My apologies to the author, but does this article have something to do with the run up to Halloween? My clue is in the PDF where I learn, “1. Lunar Draconic Month = 27.212221 days (time between node-crossings in same direction)”.

I have no clue what the point of the article is. This should be a lesson that decent introductions are necessary, no matter who the intended audience may be. Mr Vaughan may be the best scientist since Jim Hansen, or the worst since Hansen. I may never know.

32. *Janice* says:

[October 15, 2011 at 3:46 pm](#)

Mr. Vaughn, have you considered that your oscillations may be a way of proving string theory? If you are seeing variations in gravity, caused by the sums of various oscillations, which are manifested as sunspots and weather patterns, this may be a way of proving a physics theory.

33. *kwik* says:

[October 15, 2011 at 3:48 pm](#)

It looks like a Spatial Phase shifted Sun induced Tourette syndrom.

34. *Charlie A* says:

[October 15, 2011 at 3:51 pm](#)

Many of the acronyms and more info on what is being plotted can be found in <http://wattsupwiththat.com/2010/12/23/confirmation-of-solar-forcing-of-the-semi-annual-variation-of-length-of-day/>

I’m attempting to figure out whether this is all just random garbage.

#1 appears to be a non-technical, general comment about the target audience:

“Audience. The diverse audiences addressed might not be the ones preferred by some readers. Addressing rotates priority across a spectrum of functional numeracy & orientation.”

Can you clarify this statement? What is being addressed? What is rotating?

While this statement is not central to the hypothesis, it has in common with most of the following prose the characteristics of 1) sounds very elegant until you try to understand it, and 2) I can’t figure out what in the world it means.

35. *Charlie A* says:

[October 15, 2011 at 3:55 pm](#)

Uggg. Editing problems. Please ignore comment above

Many of the acronyms and more info on what is being plotted can be found in <http://wattsupwiththat.com/2010/12/23/confirmation-of-solar-forcing-of-the-semi-annual-variation-of-length-of-day/>

I’m attempting to figure out whether there is something of value in the article or if it is all just random garbage.

Perhaps looking into one of his general, non-technical statements will help me calibrate on Mr. Vaughan’s communication method.

He writes : “Audience. The diverse audiences addressed might not be the ones preferred by

some readers. Addressing rotates priority across a spectrum of functional numeracy & orientation.”

Can you clarify this statement? What is being addressed? What is rotating?

While this statement is not central to the hypothesis, it has in common with most of the following prose the characteristics of 1) sounds very elegant until I try to understand it, and 2) I can't figure out what in the world it means.

36. *Robert Morris* says:

[October 15, 2011 at 3:57 pm](#)

Praise sandwich:-

I really like the colors. The Chandler Wobble ones are THE best.

Incomprehensible dissertation is incomprehensible.

The colours are really nice. Definatly use them again.

37. *Septic Matthew* says:

[October 15, 2011 at 4:00 pm](#)

Sorry to pile on, but the exposition was too terse. It would be helpful if the author defined all acronyms, and filled in the logic and data analysis between graphs. The graphs need much more clear and complete labels.

Another is to ask the community to start thinking carefully about what can be learned from rotating multivariate lunisolar spatiotemporal phase relations shared by Earth Orientation Parameters (EOP) and terrestrial climate records, while seizing the same opportunity to highlight critical omissions in “classic” works on alleged solar-barycentric terrestrial influences (section II).

That's not necessarily gibberish, and the author did make clear in part that he was addressing differences between northern and southern hemispheres throughout the year (spatiotemporal.) It certainly needs to be expanded. A whole lot of simple active declarative sentences would help. What other people call a narration: of the events purportedly represented by the graphs, and of the logic stringing the beginning, middle, end, and other parts, together. There is bound to be a journal, perhaps one of the Annual Reviews, that would like a paper uniting all those disparate papers together.

For expository purposes, none of the quantities should be represented with more significant figures than are supported by data.

38. *Roy Weiler* says:

[October 15, 2011 at 4:01 pm](#)

Wow! This paper is brilliant! /sarc

Actually there are a lot of pretty graphs, but the text does little to help the interpretation of said graphs.

Going to need some help with this one, Paul Vaughan.

Roy Weiler

39. *commieBob* says:

[October 15, 2011 at 4:03 pm](#)

Les Johnson says:

October 15, 2011 at 3:08 pm

For what it is worth, this looks a lot like a engineer talking to a non-engineer. Blinding simple to the engineer, and exceedingly complex and opaque to the non-engineer.

If a student handed in such a thing to me, that student would get a very long lecture. It is essential that engineering communication be absolutely clear and unambiguous. People have to actually understand what an engineer says or writes.

My latest mantra: "A doctor can kill only one person at a time. An engineer can kill thousands."

40. *paulsnz* says:

[October 15, 2011 at 4:04 pm](#)

The correct explanation for the Wobble is the reactions between Solids and Liquids.. Wait for next months answer.. As Spock would say "Fascinating!"

41. *co2fan* says:

[October 15, 2011 at 4:04 pm](#)

Whatever this is, it is a hell of a lot better than taking the chaotic data the climate hands us and extrapolate linearly. (Hey Hansen, are you listening, you rich moron?).

Hal

42. *Paul Westhaver* says:

[October 15, 2011 at 4:07 pm](#)

Paul Vaughn, I don't understand everything that you have here but I'm pretty good at pattern and signal analysis. Would you please explain the graph on the bottom of page 2 of the PDF. In particular the abbreviations and units for the northern and southern hemisphere plots.

You plot says that there is a relationship between the rate of change in the length of the solar cycle and the other two plots.

Please explain.

43. *Janice* says:

[October 15, 2011 at 4:09 pm](#)

I missed the tie-in to the Mayan calendar the first time through. Since they were basing their calendar on simple observation, I think it is quite right to say this was right in front of our eyes the whole time (as in most of recorded history), and we didn't see it.

It would make sense that the gas giants are the ones with the primary harmonics (though of course the sun would have the dominant harmonic). Something composed of gas would "ring" much easier than something composed of solids, in addition to being more homogenized.

Thanks for your paper, Mr. Vaughn. It helped me to understand some basics that I have wondered about. Glad that you expanded your research from Earth to the Solar System.

44. *dwright* says:

[October 15, 2011 at 4:10 pm](#)

Word soup is on the menu and all I brought was my meat and potatoes science fork. No thanks, going back to poking fun at the hippies.

45. *Taras* says:

[October 15, 2011 at 4:14 pm](#)

Taras at 2:47pm

Anthony Watts at 2:49 pm

Anthony, I am not blaming you for this post. At Watts Up With That, after reading an article that is difficult to understand, I follow very simple rule: when in doubt, read all comments. This time it did not work.

Joseph Thoma

46. *Paul Westhaver* says:

[October 15, 2011 at 4:14 pm](#)

Paul Vaugh,

In the Month normalized SOI- Integral plot, why did you plot 18 months on the vertical axis,

47. *Mark ro* says:

[October 15, 2011 at 4:14 pm](#)

RE: William A Blackwell says: "Or is it a job application screening device for literacy?"

Close, see: <http://www.oakdenehollins.co.uk/european-uk-policy.php>

48. *Mike McMillan* says:

[October 15, 2011 at 4:19 pm](#)

Brent Hargreaves says: *October 15, 2011 at 2:04 pm*

Well, that's a relief. For a while I was getting worried about rotating multivariate lunisolar spatiotemporal phase relations.

That's what marriage counselors are for.

49. *Lucy Skywalker* says:

[October 15, 2011 at 4:20 pm](#)

It's like the Rosetta Stone. No doubt Paul this work is the key to the hieroglyphics of climate science. I am very sure that the heavenly cycles correlate with climate on Earth, modulated by the inertia of the oceans and landmasses. I trust Courtillot. But we still need some help in understanding and I'm sure you'd find that if you did this, help would return to you vis-a-vis the lack of time/funds you state.

Are you on the autistic spectrum?

I checked all the acronyms [here](#) and they do all figure. The differentials (rates of change) are easy to miss eg LOD' vis-a-vis LOD (Length Of Day), Paul, wouldn't a delta sign be more familiar?

50. *u.k.(us)* says:

[October 15, 2011 at 4:22 pm](#)

I knew it all the time, and now it has been proven

;))

51. *a jones* says:

[October 15, 2011 at 4:27 pm](#)

But what a tongue! and oh what brains! were in that parrots head.

It took two men to understand one half the words he said.

Know how they felt after taking a look at this.

Kindest Regards

52. [Noblesse Oblige](#) says:

[October 15, 2011 at 4:27 pm](#)

Suggest sending to Walter Munk at UCSD; he is author of “Rotation of the Earth,” the classic on the subject of the Chandler Wobble, length of day, unforced nutations and all that kind of thing. These matters come up in detrending sea level rise data which has attracted much attention.

53. [u.k.\(us\)](#) says:

[October 15, 2011 at 4:30 pm](#)

If nothing else, it sure brought out your lurkers :)

54. [AJB](#) says:

[October 15, 2011 at 4:33 pm](#)

Spray that again Sam?

55. [Carl Bussjaeger](#) says:

[October 15, 2011 at 4:37 pm](#)

I honestly can't tell if Vaughn is right or not. Or funny. I can't even tell for sure what he's claiming. If his sanity isn't in doubt, then mine most assuredly is.

56. [ClimateForAll](#) says:

[October 15, 2011 at 4:40 pm](#)

In the broadest terms it seems that the magnetosphere may be described as a resistive – and therefore dissipative – element in an electrical circuit...

-Leif Svalgaard 1973

If the internet had been around in '73, I wonder if the usual suspects of that 'time' would have been as harsh and critical of your work as some of you are right now of this work.

I didn't become involved in the skeptical movement just to watch one ultra-elitist scientific regime be replaced by another.

Looking beyond the technical jargon and questionable graphs, there may lie some evidence of a trend that could benefit our understanding of climatology.

But some of you would rather just be dismissive and negatively profile Paul L. Vaughan.

Way to go gentlemen!

57. [DJ](#) says:

[October 15, 2011 at 4:41 pm](#)

Amazing to think that all that Earth-Sun-Moon moon stuff is trumped by a .03% atmospheric gas component.

Truly amazing.

58. [David Spurgeon](#) says:

[October 15, 2011 at 4:45 pm](#)

“rotating multivariate lunisolar spatiotemporal phase relations” = turning many times in a moon/sun context, added to and incorporated with a space and time

[space/time] aspect, in a relationship which is in phases or reiterations [repeated].
Quite simple really

59. [ozzieostrich](#) says:

[October 15, 2011 at 4:46 pm](#)

I am uneducated, and therefore reading a scientific paper might be beyond me. Even so, the phrase seems to indicate to me that the the author is looking at the sorts of effects that can be seen in the fact that the Moon rotates at the same rate as it revolves around the Earth – which indicates that the Moon and the Earth, at least, appear to be locked in a particular rotating univariate LuniTerra spatio temporal phase relation.

I believe there are other bodies in the Solar system with the “phase locked rotate/revolve” relationship.

Now, if you throw Sol in, things become rather more complicated. Does this make sense?

The Moon’s effects are obvious, the Sun’s less so. However, if the climate is indeed a chaotic system (dynamical etc.), by definition, an infinitesimally small change in input can have a vast effect to the final output. Is the author trying to examine if this is indeed the truth?

If so, I think some of the laughing and derisory comments may demonstrate the tolerance and scientific approach of the commenters.

On the other hand, the author may be a complete lunatic, or practical joker. I certainly don’t have the education to know.

Thanks.

60. [Jesse](#) says:

[October 15, 2011 at 5:26 pm](#)

Why use complicated words when simple ones are much more effective. Maybe Paul is onto something or maybe he’s not. If he is, he needs to explain it in words that everyone can understand.

61. [Rational Debate](#) says:

[October 15, 2011 at 5:27 pm](#)

re: David Spurgeon says: October 15, 2011 at 4:45 pm

“rotating multivariate lunisolar spatiotemporal phase relations” =
turning many times in a moon/sun context, added to and incorporated with a space and time [space/time] aspect, in a relationship which is in phases or reiterations [repeated].
Quite simple really

David, are you secretly working on that Google Translate Science module? If so, you’re off to a great start! If not, perhaps offer them the service, or create a webpage for it yourself!

In retrospect I should probably note that my earlier post wasn’t meant to in any way denigrate the paper – I haven’t read it yet, and besides, I doubt I know enough about that subject area to say anyhow. I was just tickled by the suggestion that Google Translate ought to be able to handle science as a foreign language. Something that would be awfully difficult to actually create if not impossible, particularly considering term definition overlap/differences between different disciplines.... but wouldn’t something like that be sweet? Then that spawned thoughts

of some of the really awful science papers I've seen at times, with clear logical flaws (gee, if a highly concentrated herbal preparation kills sperm in a test tube, then eating that herb must reduce male fertility! rrrr-i-i-i-ght), or conclusions that go so grossly beyond the experimental design or observational data set as to be ludicrous, or what's becoming my pet peeve & as noted by someone else above, where results are one or more orders of magnitude smaller than the measurement methods can detect... and so on. All of which immediately suggests that if we have a 'detect and translate science as a foreign language' module, we similarly need a 'detect and translate, e.g., primarily explain the flaws, of pseudo-science.

None of which relates directly to the actual article here, and wasn't meant to reflect in any way on it...but I couldn't resist posting — Translate Science as a Foreign Language — was just too funny to me!! (my keyboard is very happy that I didn't happen to be drinking coffee when I read that comment)

62. *Ninderthana* says:

[October 15, 2011 at 5:35 pm](#)

All that most of the posters to this blog are doing is highlighting their profound ignorance. Yes, Paul Vaughan's work is very difficult to follow. It has to be picked through very carefully and very slowly in order to try and make sense of the links and associations that he is trying to illuminate and highlight. The complexity comes about because Paul is trying to explain, as best he can, a very complex topic. His use of what we see as "convoluted English" is his attempt to be as precise as possible about what he is talking about. Unfortunately, it does detract from the very important message that he is trying to get across.

Make no bones about it, what he is saying is of critical importance as it shows that there very real external influences upon the Earth's climate system. What Paul is trying to highlight is that the reason we do not see the effects of these external drivers is that we are using the wrong tools to carry out our observations and analysis and we are looking for the wrong tell-tale signals and markers of this link.

I believe that his first (or masthead) plot tries to highlight the stark reality of the Solar-Terrestrial link. In this plot you have the cosmic-ray flux received here at the Earth [a known indicator of the general level of solar magnetic activity] varying in lock-step unison with rate of change in the Earth's rotation rate [a indicator of the rate of momentum transfer between the solid Earth and the atmosphere]. I do not know of any other plot that so clearly raises the possibility that external factors [e.g. solar magnetic activity] play an important role in influence the earth's climate.

In addition, I believe that Paul is saying that we might not be able to see the direct impact of the external drivers on climate since the long term periodicities and cycles that are seen in the Earth's atmosphere may be distinctly different from periodicities and cycles of the drivers themselves (e.g. the length of the solar cycle). He highlights the fact that periodicities and cycles of the external drives interact with a complex atmospheric/ocean climate system which has it own natural resonances and periodicities (e.g. the annual seasonal cycles). He tries to point out that unless we take into account the nature of the coupling between these two systems (i.e. the Earth's climate and the external drivers) then we will continue misunderstand and misinterpret the observational evidence that supports this link.

63. *Werner Brozek* says:

[October 15, 2011 at 5:45 pm](#)

For more on parts of this topic, see <http://www.john-daly.com/sun-enso/sun-enso.htm>

A few sentences from #6, first paragraph: “The contribution of the sun’s orbital angular momentum to its total angular momentum is not negligible. It reaches 25 percent of the spin momentum. The orbital angular momentum can increase or decrease forty-fold within a few years. Thus it is conceivable that these variations are related to varying phenomena in the sun’s activity.”....”The four giant planets, which regulate the sun’s motion, carry more than 99 percent of the angular momentum in the solar system, while the sun is confined to less than 1 percent. So there is enough angular momentum that can be transferred from the outer planets to the revolving sun and eventually to the spinning sun.”

64.*Davidmhoffer* says:

[October 15, 2011 at 5:53 pm](#)

Anthony,

Might I suggest you get in touch with TonyB?

He and I were involved in a thread on another blog along with Ernst Beck about CO2 levels in the 1920 to 1950 range when there was a brief period of warming followed by cooling that led to the 1970’s ice age scare. Ernst Beck launched into one of his tirades and angrily suggested that his critics didn’t understand that there was a “lunar phase reversal” that began in 1929. Even I as one of Beck’s supporters had to think that perhaps he was as looney as his critics claimed. In private correspondence however he calmed down and explained. TonyB later sent me a paper that I MIGHT still have around that actually studied and explained what Beck called “lunar phase reversal” and which Paul Vaughn is (I think) trying to explain in this article.

The principle Beck was referring to was that the moon’s orbit is elliptical, and also that the plane of the orbit has a “wobble” to it. So, sometimes perihelion occurs well north of the equator, and sometimes well south. The paper studied various wave and “wavelet” cycles of the ocean that were caused by the various fluctuations in gravity from earth’s elliptical orbit and varying plane around the sun, the moon’s elliptical orbit and varying plane around the earth, and increasingly lesser wavelets that corresponded to Jupiter’s orbit and other smaller planets.

Sure enough, all the wavelets “converged” smack dab on 1929 which was the year that the moon’s orbit hit a minimum from both an elliptical orbit and from the plane of the orbit compared to the earth’s axis (or maybe it was a maximum?) In any event, that was the phenomenon that Beck was referring to. As best as I can make out the graphs and explanation from Vaughn’s article, it seems to me that he is talking about the same thing.

Maybe.

I think.

Paul, I’m very interested in what you’re trying to do here, but not even someone studying the precise same thing as you are is going to be able to understand all the graphs and explanations unless you define the terms and units and sources of data. Lots of people would like to help you with whatever it is you are trying to show, but even for PhD’s in physics, your explanation is nearly Sanskrit.

65.*Doug in Seattle* says:

[October 15, 2011 at 5:57 pm](#)

Crosspatch you evil man!

It is sort of like being hit by a seven course Italian dinner shot out of a cannon at me. I hope the plan is to go back and look at each course as it was loaded into that cannon.

66.*noaprogrammer* says:

[October 15, 2011 at 6:00 pm](#)

All you have to do is solve the Three-body Problem.

67.*Stephen Wilde* says:

[October 15, 2011 at 6:22 pm](#)

The more I look at this the more I think Paul is actually making some pretty simple points but setting them out in language so obtuse that it obscures his meaning.

Essentially he is just saying that there are multiple overlapping cycles or oscillations within the climate system that change in amplitude and interact with each other in varying combinations over time and in variable locations.

He links that to the various changing components of the system and notes correlations and then pronounces that something has been overlooked by the climate community that deserves more detailed consideration.

My problem then is that it is hardly news that some correlations do apparently arise from a consideration of factors such as length of day, movement of the solar system barycentre, changes in solar cycle length, the oceans and atmosphere swishing about and deforming to various degrees and the interacting gravitational effects of sun, moon and planets.

The article then begs the question as to how meaningful such correlations are and how well (if at all) they can be used for predictive purposes.

So reluctantly I come to the conclusion that this is just a very mundane restatement of stuff we already know dressed up in impenetrable language to make it sound more significant and/or 'original' than it really is.

Unless, Paul, you can restate at least some of it in much clearer and simpler terms to bring out something new that you are bringing to the table.

Prove me wrong, please.

68.*LazyTeenager* says:

[October 15, 2011 at 6:28 pm](#)

Scientists use really big words that I don't understand and so people think scientist are important and they get a lot of respect.

So I will use lots of really big words and I will get a lot of respect too and people will think I am really important.

[NOTE: LT - the best advice I can give you is just be a contributor. Snark and obfuscation don't cut it, no matter which "side" you are on. You have the capability to be a serious contributor. As we say here... Capice? -REP]

69.*Jeff D* says:

[October 15, 2011 at 6:30 pm](#)

?

70.*Kohl* says:

[October 15, 2011 at 6:44 pm](#)

Jeff D says:

October 15, 2011 at 6:30 pm

?

And every additional comment I can make is superfluous.

71.R. Gates says:

[October 15, 2011 at 6:59 pm](#)

3 possibilities:

- 1) Paul Vaughan is a genius and we are all relative dunces.
- 2) Paul Vaughan is a very bored creator of practical jokes.
- 3) Paul Vaughan should potentially seek some professional advice (note: I'm not specifying what kind).

Any one of these possibilities leaves me without further comment.

72.[savethesharks](#) says:

[October 15, 2011 at 7:18 pm](#)

R. Gates says:

October 15, 2011 at 6:59 pm

3 possibilities:

- 1) Paul Vaughan is a genius and we are all relative dunces.
- 2) Paul Vaughan is a very bored creator of practical jokes.
- 3) Paul Vaughan should potentially seek some professional advice (note: I'm not specifying what kind).

Any one of these possibilities leaves me without further comment.

=====

You..."without further comment"??

Well then I support all three!!

Chris
Norfolk, VA, USA

73.[savethesharks](#) says:

[October 15, 2011 at 7:29 pm](#)

Give Paul a break. Geez.

As long as Leif calls it "mumbo jumbo"....I am constrained to listen to the mumbo jumbo even harder [and try to understand it]. I do that with respect for one of the most prodigious intellects on things solar [Leif], the world has ever known.

But that does not excuse the stonewalling from the "conventioneers" and the pseudo-Establishment groupthink exhibited on here.

Beyond that, I agree with Lucy Skywalker's remarks....which [as always] are very prescient.

Chris
Norfolk, VA, USA

74.Ninderthana says:

[October 15, 2011 at 7:34 pm](#)

Stephen Wilde wrote: Prove me wrong, please.

We already have Stephen. However, you are going to have to wait till my paper is published in

2012.

75.*renminbi* says:

[October 15, 2011 at 7:43 pm](#)

Has Alan Sokal adopted another pen name?

76.*Paul Vaughan* says:

[October 15, 2011 at 8:10 pm](#)

Credit: Climatology animations have been assembled using JRA-25 Atlas [<http://ds.data.jma.go.jp/gmd/jra/atlas/eng/atlas-tope.htm>] images. JRA-25 long-term reanalysis is a collaboration of Japan Meteorological Agency (JMA) & Central Research Institute of Electric Power Industry (CRIEPI).

AnimPolarWind200hPa

<http://i52.tinypic.com/cuqyt.png>

AnimWind200hPa

<http://i52.tinypic.com/zoamog.png>

AnimWindZonal

<http://i51.tinypic.com/34xouhx.png>

AnimMSLP

<http://i54.tinypic.com/swg11c.png>

AnimVerticalVelocity

<http://i54.tinypic.com/2ch4x28.png>

AnimOmega700hPa

<http://i53.tinypic.com/28tvqt1.png>

AnimHeating

<http://i55.tinypic.com/317jchy.png>

AnimWaterVaporFlux_

(column integrated water vapor flux with their convergence)

<http://i51.tinypic.com/126fc77.png>

AnimWind850hPa_

<http://i52.tinypic.com/nlo3dw.png>

AnimPolarWind850hPa

<http://i54.tinypic.com/29vlc0x.png>

Anim2mT

<http://i55.tinypic.com/dr75s7.png>

AnimPrecipitableWater

<http://i52.tinypic.com/9r3pt2.png>

AnimCloudLow

<http://i52.tinypic.com/auw1s0.png>

AnimWind550K

<http://i56.tinypic.com/14t0kns.png>

AnimNetSurfSolRad

<http://i53.tinypic.com/2r5pw9k.png>

AnimNetSurfHeatFlux

<http://oi54.tinypic.com/334teyt.jpg>

AnimTempZonal

<http://i56.tinypic.com/1441k5d.png>

Regards.

77. *DavidMhoffer* says:

[October 15, 2011 at 8:12 pm](#)

I couldn't find the precise paper that TonyB sent me a long time ago, but here's one that's worth a read that uses morlet waves and Chandler cycle to understand how variations in the lunar orbit affect tides and climate.

<http://www.klimarealistene.com/web-content/Bibliografi/Yndestad2006Lunar%20nodal%20cycles%20Arctic.pdf>

The various data sets all identify wavelet cycles of about 6, 18, 55, and 74 years driven by variations in earth and lunar orbits, and do so via a variety of methods from a variety of locations. The terminology is strikingly similar to what Paul Vaughn uses, and my read of his article suggests he is talking about the same or a closely related topic.

Paul ~ a simple "yes" or "no" response to the above would help immensely.

78. *Baa Humbug* says:

[October 15, 2011 at 8:20 pm](#)

Putting all snipes and jokes aside, having read the paper and tried to understand it to the best of my ability, the below analogy is the best I can think of at this time to reduce Paul Vaughans paper to a level that I can understand. (High school drop-out level)

ANALOGY:

Take a tray of say 2ft by 1ft dimension. Fill it to an inch with water. Now holding the tray in both hands, start swirling the water in a smooth uniform pattern. Pretty soon the sloshing of the water will settle to a smooth swirling motion.

Now place a few heavy objects of different sizes and shapes at the bottom of the tray (continents). Re-commence the swirling action. The patterns of motions of the water will be different due to the placement of the heavy objects, but none the less will again settle into a smooth swirling motion.

In the above analogy, our arms provide the power that cause the swirling motion in the tray. Now replace the tray with Earth, replace our arms with the Moon and the Sun, add the complexity of an atmosphere and a spheroid tray, describe it all with complex physics and you have Paul Vaughans (what I accept to be) excellent paper.

79. *vigilantfish* says:

[October 15, 2011 at 8:23 pm](#)

Paul,

I've been looking at those animations you've posted here but they raise a question. One sees patterns as the animations loop – but do these animations reflect annual changes seen year after year, or are they simply animations of cycles occurring over the course of a single year? I would definitely find the former far more significant.

80. *Steve in SC* says:

[October 15, 2011 at 8:25 pm](#)

Leif Svalgaard says:

October 15, 2011 at 2:34 pm

*rotating multivariate lunisolar spatiotemporal phase relations
mumbo-jumbo*

Biorhythms Leif Biorhythms.

And some of it even rectal linear.

81. *Leif Svalgaard* says:

[October 15, 2011 at 8:27 pm](#)

savethesharks says:

October 15, 2011 at 7:29 pm

As long as Leif calls it “mumbo jumbo”....I am constrained to listen to the mumbo jumbo even harder [and try to understand it].

As far as I can tell [and it is hard because of the obtuse jargon-laden language] there is nothing new in any of this. Just old stuff dressed up to look impressive, but the dressing has the opposite effect. The trick is to present findings in understandable language. Richard Feynman was the master of this. *There* is a standard to emulate.

82. *earthdog* says:

[October 15, 2011 at 8:29 pm](#)

AR

AR

AR OM

AS 1 PSE for clarification K K

83. *Craig in Oshkosh, WI* says:

[October 15, 2011 at 9:15 pm](#)

I really like the graphs. They're purty.

84. *davidmhoffer* says:

[October 15, 2011 at 9:27 pm](#)

Paul Vaughn

The diverse audiences addressed might not be the ones preferred by some readers. Addressing rotates priority across a spectrum of functional numeracy & orientation.>>>

and from the pdf

In layman's terms:

It was right in front of their noses, but no one thought to bring the microscope into focus. Sounds ridiculously silly, yes, but this is literally analogous to what happened.>>>

and

Disbelief, denial, ignorance, &/or mistrust of the sheer simplicity of what was overlooked may continue to be the dominating mainstream reaction>>>

and

those

lacking deep conceptual understanding of the role of aggregation criteria in summaries of spatiotemporal pattern may never possess sufficiently lucid cognizance of the potential to misinterpret spatial phase reversals as temporal evolution.>>>

Sorry Paul, but as they say on this blog from time to time... FAIL!

You've presented a bunch of multi-syllable words with no reference frame, graphs with no explanation of the variables or the data shown, cryptic references to how simple it all is, and anyone who doesn't understand must be stupid? As Leif said, I see new here! Whatever it is you are trying to spark as discussion, you can't get there by writing an article with nothing but jargon and undefined variables and the excuse that you don't have the time to produce a proper explanation. If it was simple it wouldn't sound like a made up bunch of terms, and if it is complex then it needs explanations of the math, definitions of the variables, the methodology, and so on.

Pick one.

But don't invite participation and then suggest anyone who doesn't understand is suffering genetic cranial sub-development resulting in methodologically insufficient cognizance capacity coupled with impaired linguistic processing functions that preclude high functioning comprehension.

You can just call me stupid. Less words, straight to the point.

85.*jorgekafkazar* says:

[October 15, 2011 at 9:44 pm](#)

Robert Morris says: "...*Incomprehensible dissertation is incomprehensible...*"

Robert, I shall have to report you immediately to the Department of Redundancy Department.

86.*SSam* says:

[October 15, 2011 at 10:05 pm](#)

And I thought I was a loon for applying kludged together target motion analysis techniques on noise artifacts in a tremor signal for a volcano.

It doesn't make me less the loon, but I feel better about myself now.

87.*davidmhoffer* says:

[October 15, 2011 at 10:07 pm](#)

Robert, I shall have to report you immediately to the Department of Redundancy Department.>>>

They seem very slow to correct redundancies. I've been complaining about the use of "AC Current" for decades. I asked what sense it made to call it "Alternating Current Current" and they responded that is was in the que right after DC Current (Direct Current Current).

88.*Robert Morris* says:

[October 15, 2011 at 10:26 pm](#)

Jeez fellas, its an internet meme! Along the lines of obvious troll is obvious.

89.*Baa Humbug* says:

[October 15, 2011 at 10:47 pm](#)

davidmhoffer says:

October 15, 2011 at 10:07 pm

I asked what sense it made to call it “Alternating Current Current” and they responded that is was in the que right after DC Current (Direct Current Current).

I suppose we could correctly refer to them as A Current and D Current, but then we’d be confusing them with ‘a current’ and ‘the current’.
I’m guessing this is the current consensus.

90. [Richard Holle](#) says:

[October 15, 2011 at 11:21 pm](#)

Paul,

Thanks for the refresher on the annual solar declinational effects, I have been leaving out of my hypothesis on Lunar declinational tides and solar wind interactions with the planets as a method of forecasting the weather based on four repeats of the inner planet harmonics. The use of the entire 179.2 year pattern would show the evolution of the phase transitions as they merge with the outer planet tidal, gravitational and electromagnetic effects of the interactions between all of the bodies of the solar system. Currently I need to derive algorithms for the interfering effects of the outer planets Synod conjunctions to eliminate false positives for precipitations from past cycles of outer planet Synod conjunctions not repeated this cycle, and their concurrent warmer temperature surges.

What you have outlined here is the culmination of your many years of consideration of these interactions in augment to the SSB hypothesis put forth by others, in an attempt to leave your insights in full view of the knowing after you shuffle out of these mortal coils. I have set up my web site in the same vain but the language is much more layman oriented and step by step connections between what many others have added to piecing together the puzzle that is Science. Paul’s post with the animated annual links is the 96th post captured onto my site of similar glimpses into the connected insights of others, and a couple by myself on how this all comes together, there are still some gaps and pieces missing from the puzzle but I keep putting them in the box as I find them.

<http://research.aerology.com/natural-processes/solar-system-dynamics/>

Much more of the direct work on discovering the SSB interactions with climate can also be found

<http://tallbloke.wordpress.com/category/climate/>

tallbloke’s workshop where open minds and new ideas are kicked around daily on the road to;

<http://research.aerology.com/natural-processes/science-post-cagw/>

There has been some progress in prediction of long range weather based on the repeating patterns of the solar/lunar 27.32 day solar magnetic rotation being synched to the declinational movement of the Moon, and hence the atmospheric tides responsible for the meridional flow surges seen in global circulation patterns, many past researchers.

<http://research.aerology.com/supporting-research/leroux-marcel-lunar-declinational-tides/>

<http://research.aerology.com/supporting-research/atmospheric-tides/>

27.3-day and 13.6-day atmospheric tide LI GuoQing1† & ZONG HaiFeng

What Paul has done here is to show the distilled essence of his many years of work and the opinion of others as precisely as he can. My self I ramble a lot repeating things multiple times as I work out the bugs with each reiteration. Language is a tool to be used for best effect,

flamboyance is a distraction like foam on a beer.

91.*rbateman* says:

[October 15, 2011 at 11:27 pm](#)

As I was reading through the paper, I kept thinking to myself that this is what Piers Corbyn does (lunisolar). Sure enough, up pops Piers name.

I do get what Paul is doing: identifying all the frequencies that exist on Earth and in the Solar System as a whole. How they act on the various bodies orbital wobbles and then spin motion. One of the important things treated is Length of Day (LOD). Giving a link (if it holds up) between changes in the LOD to orbital resonances, wobbles, etc. Then from LOD to ocean cycles.

Needs more reading time.

Would be better to sort out if presented as a multi-part series. Start out at the Solar System orbital level and proceed on down the ladder.

92.*Robert of Ottawa* says:

[October 15, 2011 at 11:29 pm](#)

I also think a little explanation would be in order.

93.*AusieDan* says:

[October 15, 2011 at 11:29 pm](#)

This appears to be a serious paper which a number of people commenting on here can understand. It may be right or mistaken, but deserves careful study, which is what I intend to do.

From the comments it may tie in with a subject which I am currently researching, which on face value is far away from climate.

However, if the sun, moon, planets and stars do really have profound impacts, then there may well be strong causal relationships.

And – NO. I am not studying astrology, but the nature of the cycles that so obviously occur in financial markets.

94.*rbateman* says:

[October 15, 2011 at 11:32 pm](#)

There's plenty in that paper. It needs to be more sequential and presented in parts (series).

From orbital resonances/wobbles to LOD (length of day) /spin to ocean cycles to

95.*Pål Brekke* says:

[October 15, 2011 at 11:49 pm](#)

This article just published looks at natural variability:

<http://www.sciencedirect.com/science/article/pii/S0921818111001457>

96.*Bernie McCune* says:

[October 15, 2011 at 11:54 pm](#)

There is so much here and presented in a fashion that is hard to follow. I suspect that I might make something out of it if I followed all the leads and dug into it very carefully but I also suspect that my laziness will preclude that outcome. It may be, as some have noted, that it has all been shown before but I don't think it has all been fully explained anywhere yet. This attempt may turn out to be at least a partial explanation.

One example of this limited explanation is the Chandler Period (roughly a 14 month wobble in

the earth's pole position). I worked at an Observatory in Japan that was part of the ILO (International Latitude Observatory) network of world wide observatories that were started in the late 1800's after Chandler discovered this phenomenon. Over a long period of time they had been watching latitude shifts as indicated by a mostly sinusoidal movement (about 14 month period) of zenith stars. The wobble is generally a circular rotation of the pole that is several meters in diameter. In the 1970s and 80s when I was on site at the Mizusawa Japan Observatory, this small cadre of worldwide scientists were trying to discover the reason for this wobble and were looking at a wide variety of geophysical drivers. Ocean and atmospheric tides and circulation. Movement of the earth's magma. Lunar-earth tidal effects on both the earth and ocean. Short term rotation rates noted in the length of day (LOD) were considered. And so on. A few years ago I read that a JPL scientist had discovered the "cause" of the wobble as a pressure variation in the bottom of the Pacific ocean basin. I am not sure that really helps explain it to me very much. My question then becomes where did THAT variation come from? Another interesting fact is that there has also been a connection between the Chandler period and polar tidal activity.

Personally, I have noted a 60 year temperature cycle in New Mexico surface temperature data over about 120 years that seems to be related to the PDO. Both the Chandler period and this 60 year cycle are "real" in that they require no special filters or other mathematical manipulation to observe the cycles. The data simply shows them. I understand the reluctance of some folks in putting much faith in some of these cycles but until someone fully explains what really is causing the clearly observed PDO cycles as well as some of these other obvious natural cycles, I don't think it is wise to simply ignore them. In my opinion, more power to those who honestly try to connect and clarify them.

Bernie

97. *Ronaldo* says:

[October 16, 2011 at 12:12 am](#)

Let's not be too quick to poke fun. It's not that long ago that the solar experts were instantly dismissive of any significant impact of solar activity on climate——— and then along came UV.

I suggest a period of quiet reflection might be needed before complete rejection of the work, I am not well enough informed to decide whether the work is valid or not and from the number and speed of the responses, nor are most of the commenters.

Congratulations Anthony for bringing this work to a wide audience, I hope that there are enough commenters who able to judge its worth – if any- and possibly translate the implications for people like me.

98. *Richard111* says:

[October 16, 2011 at 12:53 am](#)

""Paul Vaughan says:

October 15, 2011 at 8:10 pm

Credit: Climatology animations have been assembled using JRA-25 Atlas [<http://ds.data.jma.go.jp/gmd/jra/atlas/eng/atlas-tope.htm>] images. JRA-25 long-term reanalysis is a collaboration of Japan Meteorological Agency (JMA) & Central Research Institute of Electric Power Industry (CRIEPI).""""

WOW! Now I see a glimmer of light! Many thanks.

Just spent half an hour looking at global cloud cover :-)

http://ds.data.jma.go.jp/gmd/jra/atlas/eng/indexe_surface14.htm

99. *Martin Brumby* says:

[October 16, 2011 at 1:24 am](#)

I think we need to cut Paul some slack.

He isn't suggesting we change the basis of the world's energy NOW and hugely increasing energy costs.

He isn't an advocate from WorldWildliesFund or Greenpiss or Fiends of the Earth.

His prospects of putting the bread on the table and keeping a nice, comfortable job with an index-linked pension by publishing this here look pretty thin.

Some of the most intelligent commenters on WUWT are (at least) reserving judgement.

Yes, it isn't very 'user friendly'. No, I can't understand much of it.

Maybe it is genius, maybe garbage.

But as a very basic hypothesis, it is at least worth considering whether "Shifting Sun-Earth-Moon Harmonies, Beats, & Biases" have a major effect on climate. I'm sure as hell that anthropogenic CO2 emissions don't!

100. *Myrrh* says:

[October 16, 2011 at 1:37 am](#)

Lucy Skywalker says:

October 15, 2011 at 4:20 pm

It's like the Rosetta Stone. No doubt Paul this work is the key to the hieroglyphics of climate science. I am very sure that the heavenly cycles correlate with climate on Earth, modulated by the inertia of the oceans and landmasses. I trust Courtillot. But we still need some help in understanding and I'm sure you'd find that if you did this, help would return to you vis-a-vis the lack of time/funds you state.

After several posts with helpful clues my interest certainly piqued. My knowledge doesn't go any further than effects of the Moon on tides around the globe and a bit about the ancient cycles such as the Maya and the Hindu, the latter already having calculated these to even trillions of years, while the Mayan leaving them hanging.

I checked all the acronyms here and they do all figure. The differentials (rates of change) are easy to miss eg LOD' vis-a-vis LOD (Length Of Day), Paul, wouldn't a delta sign be more familiar?

Oh no, please, no. No more deltas nor acronymns even spelled out without simple English explanation of what they represent.. :)

..what is he saying, Lucy?

"Careful consideration of how & why the mainstream unacceptably overlooked the razingly plain simplicity might help educators determine what adjustments to education

systems are necessary to prevent such unconscionably blind failures in the future.

The 2

primary rotten functional numeracy roots of the collectively-compromising

comprehension-bottleneck appear to be (1) severely inadequate common knowledge of cycle & phase relation fundamentals and (2) widespread mainstream failure to fundamentally differentiate marginal spatial & temporal distributions from joint spatiotemporal distributions [spatiotemporal version of Simpson's Paradox].

In layman's terms:

It was right in front of their noses, but no one thought to bring the microscope into focus.

Sounds ridiculously silly, yes, but this is literally analogous to what happened. Disbelief, denial, ignorance, &/or mistrust of the sheer simplicity of what was overlooked

may continue to be the dominating mainstream reaction in both the short & medium terms. For those who don't understand that complex (as in complex numbers, not as in complicated) resonators have adjustments analogous not only to magnification but also focal length, acceptance of the finding may be postponed indefinitely. Similarly, those lacking deep conceptual understanding of the role of aggregation criteria in summaries of spatiotemporal pattern may never possess sufficiently lucid cognizance of the potential to misinterpret spatial phase reversals as temporal evolution."

What is it they didn't see?

101. *Gareth Phillips* says:

[October 16, 2011 at 2:38 am](#)

I have no idea what it means, but the sound of the words are pure poetry. Frank Zappa and Shakespeare would have been proud.

102. *Grimwig* says:

[October 16, 2011 at 2:40 am](#)

I have a nasty hunch this may be a complex spoof aimed to discredit WUWT.

103. *Richard Holle* says:

[October 16, 2011 at 2:47 am](#)

Try downloading and viewing several years of these movies...

<http://agora.ex.nii.ac.jp/digital-typhoon/archive/monthly/>

If you look at movies that are 18 years apart they will look amazingly similar, the actual lap time of the repeating sequence is 6558 days or about 16.5 days over 18 years, in case you can view it frame by frame.

104. *Louis Hissink* says:

[October 16, 2011 at 2:49 am](#)

I suspect that an electrical engineer might spot a few familiar relationships in Paul's graphs – which basically suggests explanations might be forthcoming if the plasma model was assumed, rather than the standard one.

105. *Richard Holle* says:

[October 16, 2011 at 2:53 am](#)

Correction 6558 days is 16.5 days less than 18 years, calculator screen is hard to see in the dark.

106.*Myrrh* says:

[October 16, 2011 at 3:19 am](#)

Sorry, should be close italics after “Oh no, please, no. No more deltas nor acronymns even spelled out without simple English explanation of what they represent.. :)”

107.*EO Peter* says:

[October 16, 2011 at 3:46 am](#)

ClimateForAll said:

“I didn’t become involved in the skeptical movement just to watch one ultra-elitist scientific regime be replaced by another.”

Very good point!

For sure Mr. Vaughan is not proficient at communication, maybe english is not his primary language? The choice of words sometime strongly suggest it is the case. Not everyone is born gifted w/t communication skill, some must produce considerable effort just to attain acceptable level. Feedback from communication competent people is the key & all must start somewhere! Personally I’ve been severally & regularly beaten by the redaction peoples tasked at “finishing” my text, & yes I know, there is still plenty of “mistreatment” required on me... This is the process required for self improvement.

However I consider it is very inappropriate when this process goes to such low like competing for the best Sadistic derision... We have a good exemple here why the scientific elite is so closed & opaque; there is no chance whatsoever for the candid & inexperienced writer to progress toward anything. The most funny part of it is the fact that this is not enforced by the elitist themself but most of the time by mindless drones not even aware for whom they work for! In fact many sound exactly like the warmista “clique” or any other propaganda machine; Destroy the adversary using demonization, ridiculization, fallacy... Please leave the “hockey team” where it belong, on ice!

Ok now trying to execute `rant_mode(FALSE)`;

Mr. Vaughan, I have no opinion on the content as this is not my field but find it highly interesting, however the article is not even at a level I would qualify as Draft (far from it). Maybe ‘brain storming’ better describe it, but still it seem to me it is not geared toward helping cognitive function for other peoples. A complete rewrite seem required & this time I suggest that you put the effort required for clarity & consistency. I understand it is advertized as a skeletal presentation w/t declared goal to attract attention on the subject, but it is not good to also attract attention to bad quality presentation. It is tempting to think it is better to direct effort to “pure” research activity instead of doing the dull & laborious paperwork composition & Powerpoint things, but after all what is the end result (deliverable) of research activity? Answer: Utilizable knowledge. Utilizable in this context mean also communicable. The problem is once attention has been attracted the spotlight are directed at you & the audience has expectation for a good representation within a reasonable time span. If the show is of insuficient quality or not done in time, your effort will be rewarded w/t a negative reputation & next time you ask for attention, you might end up being ignored.

Moreover, avoid those big assemblage of cryptic words, remember that most technically oriented mind are not necessarily genius grasping complex abstraction in the blink of an eye, but mostly of moderate intelligence BUT gifted w/t a highly structured way at thinking &

storing concepts. Wonder why engineering schools put most of the effort at hammering analytical skill & methods into brain of students. The analogy in software is “spaghetti coding” vs structured programming, ever programmed in ‘C’? Ever heard of the KISS paradigm? Not following this principle possibly send the message: “I can make very complex things just to show you all that I love to demonstrate how intelligent I am!”. Lots of commenters before me seem to have interpreted it this ways, probably causing also some negative emotional responses.

You advertise a M.Sc. grade, I’m quite certain that if this is authentic, you can deliver something under a much better form than that. Since it seem now that approximation of a fonctionnal peer review are only possible in the blogosphere, it would be reasonable to invest sufficient effort & ressource when posting such presentation, even when advertised as informal.

As said before, I consider the topic very interesting & look forward to read more on the subject.

@Lucy Skywalker

Great exemple of what ‘open mind’ is, something that is missing in many PhD!

@davidmhoffer

Great exemple of what ‘pushing for things to move forward’ is, something that is missing in many peoples!

108. *wayne Job* says:

[October 16, 2011 at 3:59 am](#)

I think maybe perhaps this convoluted language is talking about a harmonic relationship with the other balls in the sky and a phase shift in the harmonics. The music of the spheres may give us some new insight into our little blue ball. Mr Vaughan needs to give us some more information in English, and data, that explains more openly what he is trying to communicate.

109. *A. C. Osborn* says:

[October 16, 2011 at 4:21 am](#)

As Richard Holle says this fits in well with the work being done on the Tallbloke’s Talkshop. I have been following it (not necessarily understanding it) with fascination. They are attempting to do some real science there as I am sure lots of other non conventional Climate Scientists are doing.

110. *LevelGaze* says:

[October 16, 2011 at 5:07 am](#)

Anyone else reminded of Alan Sokal?

111. *A. C. Osborn* says:

[October 16, 2011 at 5:07 am](#)

Having scanned Paul’s PDF document, plus a few comments by knowledgable posters, I now understand what he is saying, not the science or maths behind it, but the general slant of his work.

It also re-inforces my statement about others doing similar work when you see the number of papers he references as back ground information.

112. *WillR* says:

[October 16, 2011 at 5:43 am](#)

I think that engineer with experience in the mathematics of oscillators, filters and harmonics — with knowledge of SSB and the like might find it easier to follow the ideas than most. The math is not that bad for those types. The language is “overly concise” because of the jargon — but it can be followed.

Recall that most of this work could be duplicated by observation — that’s the author’s point.

Pull the data — recreate the maps and what do you get?

113. *Janice* says:

[October 16, 2011 at 6:38 am](#)

Mr. Vaughn, is it possible that the Pacific ocean floor could be considered, simplistically, to be similar to the head of a drum? The analogy is, of course, not completely true, since there is that discontinuity in the southern hemisphere. However, I was thinking about tidal forces causing changes of temperature, and was also considering that we are able to use standing waves to create localized areas of heating or cooling. Thus, if the Pacific ocean floor were considered to be similar to the head of a drum, then oscillations of that ocean floor could cause standing waves in the water, which could cause localized heating or cooling. I would surmise that, rather than being at a certain depth, it would be more like a thick slice of water being affected. Thus, depth readings of temperature at a particular location would not be pertinent, but temperatures taken through a region perpendicular to the affect might show it. Considering the massive weight of water being affected, small thermal changes could lead to a fairly large net affect. Another thought would be, if these standing waves are what cause some of the ocean currents which have been charted. Small changes in temperature could be driving what are effectively large pumps.

114. *John Brookes* says:

[October 16, 2011 at 6:54 am](#)

“I have a nasty hunch this may be a complex spoof aimed to discredit WUWT.”

Ditto. There are two possibilities. The post may be a very terse and completely unexplained explanation of something. Or, its a spoof.

What is that internet law about not being able to tell the difference between send-ups and the real thing?

115. *Pyromancer76* says:

[October 16, 2011 at 7:11 am](#)

I wonder at the “devasting critiques” of so many of WUWT readers of Vaughn’s summary attempt. Maybe Leif says “mumbo-jumbo”, but we don’t know the cause(s) of nothin’ — PDO, AMO, varying solar cycles, Bond events, glacials, interglacials, and so many more (except possibly Svenmark’s theories, IMHO). Until we do, what is the problem of the author’s attempt to call our attention in a more careful way to all the external impingements on our hometown in relationship to the many unknown interactions of our own water, atmosphere, land, ice, magma, rotation, and travels? I am glad Anthony provided this opportunity for a perspective on harmonies and beats. I hope our biases don’t get in the way of a more serious consideration. And yes, Paul, your readers are helping you think about explaining the ideas to us in more depth. Charity, please.

116. *Leif Svalgaard* says:

[October 16, 2011 at 7:20 am](#)

Here is an example of a clear presentation

http://lasp.colorado.edu/sorce/news/2011ScienceMeeting/docs/presentations/1k_DudokdeWit_coherecy_final.pdf

117.*EFS_Junior* says:

[October 16, 2011 at 7:22 am](#)

So I did something that I always do, I Googled;

planetary motions and climate

and I got this;

Discovery of the Century: True Planetary Motions and Rhythmic Climatic Changes

<http://www.ereleases.com/pr/discovery-century-true-planetary-motions-rhythmic-climatic-44849>

and earlier I got this;

The Wind Is Blowing, The Earth Is Rotating

http://www.innovations-report.com/html/reports/earth_sciences/report-40760.html

So now I'm trying to find a name for this pseudoscientific field of study.

Is it astrology?

Is it planetoclimatology?

Is it planetocycloclimatology?

Is it planetoharmoniccycloclimatology?

Is it solarsystemisticusharmoniccycloclimatology?

118.*NetDr* says:

[October 16, 2011 at 7:51 am](#)

Mike Mann wrote:

OSCILLATORY SPATIOTEMPORAL SIGNAL
DETECTION IN CLIMATE STUDIES:
DOMAIN APPROACH
A MULTIPLE-TAPER SPECTRAL
DOMAIN APPROACH

In order to properly assess the potential impact of forcings external to the climate system (e.g., possible anthropogenic enhanced greenhouse forcing), it is essential that we understand the background of natural climate variability on which external influences may be superimposed.

Atmosphere-ocean-cryosphere interactions include many feedbacks that have time scales of years and longer. These feedbacks can, in principle, lead to irregular, but roughly cyclic, low-frequency climate variations (perhaps the most well-known example of which is the El Nifio/Southern Oscillation or "ENSO"). If we can separate, in historical and proxy climate data, large-scale oscillatory, interannual and longer-period climate "signals" from the "background" climate variability, (1) it becomes easier to distinguish natural climate fluctuations from presumed anthropogenic or

other external (e.g., solar) effects; (2) dynamical mechanisms potentially inferred from these signals provide a means of validating numerical climate models; and (3) these signals can themselves potentially be used for long-range climatic forecasting.

What he is trying to say in layman's terms is that we have to subtract natural variation from the climate data to determine how much effect mankind has made.

I am surprised he understands this concept.

119. *TimC* says:

[October 16, 2011 at 7:52 am](#)

Have we (that is, humanity) accurately tied down what caused the recent ~100ky regular cycles of glaciations in the quaternary, or can we predict with accuracy when the next glaciation will occur?

Until we do perhaps it would be wise to keep an open mind on this solar-planetary theory. However (for myself) I would rather start by having a proper explanation for the really big climatic variations (such as the glaciation cycles) before considering the (probably more subtle) multi-decadal ones.

120. *Don Monfort* says:

[October 16, 2011 at 7:54 am](#)

Didn't read it. I will wait for the movie.

121. *ecliptic* says:

[October 16, 2011 at 7:54 am](#)

Orbital dynamics affect every body in our solar system, and it's likely that subtle gravitational forces from beyond our system also have an effect which varies as we rotate around the Milky Way. Consider the ecliptic plane of the Milky Way for instance: where are we in relation to this central plane of the galaxy? If you consider the long-term gravitational results in re: the rings of Saturn you can see how gravity + time has flattened the rocks into a series of rings which are exactly the gravitational ecliptic plane of Saturn. Now take this concept orders of magnitude larger and apply it to the Milky Way. Isn't it highly probable that our galaxy is also slowly forming a flat disk of planetary debris at it's ecliptic? Shouldn't that ecliptic plane be surrounded by a region of increased space dust? Wouldn't that "wall of rocks" in space be either "above" or "below" the location of our solar system? Wouldn't our system "Sol" be oscillating over a period above and below and above and below that ecliptic plane? Shouldn't the "wall of rocks and dust" have a significant gravitational effect on our system Sol? Are we currently "above" or "below" the ecliptic? Before you answer that question consider that "scientists" used to claim the Milky Way galaxy has four "arms" but more recently say it has two "arms"... so they really don't have a clue about even the basic shape of the Milky way. I concur with the theory that what the Mayans somehow knew was the cycle of our system Sol crossing the ecliptic of the Milky Way. This guaranteed certainty is remarkably absent from any discussion about various cycles and their interaction. I applaud any true scientist who attempts to bring together the many many cycles into a more comprehensive view of our universe.

122. *TomT* says:

[October 16, 2011 at 8:16 am](#)

I don't know if I'm more confused by your graphs or by rotating multivariate lunisolar

spatiotemporal phase relations” At any rate most papers I can make some sense of this is mess.

123. *Claude Harvey* says:

[October 16, 2011 at 8:48 am](#)

This piece was a test. Those of you who understood the author’s message should seek psychiatric treatment without delay. When the Aardvarkian jim-jam reaches a critical frequency, catastrophic resonance within the lopsidian cranial hemisphere is likely to occur. That make ‘yo head hurt something awful.

124. *Janice* says:

[October 16, 2011 at 8:58 am](#)

Myrrh “What is it they didn’t see?”

Perhaps seeing is the wrong verb here. Can you see the wind? If there are particulates being blown by the wind, you can see those, but you can’t see the wind itself. You can see the effects of the wind, you can feel the change of pressure on your skin, you can hear the wind as it moves over objects. Beyond that, even if you observe all of this, what is wind? What creates and sustains it? Two simple answers are: The rotation of the earth on its axis, and the effect of high and low pressure points in the atmosphere.

So it is with harmonics on a very very large scale. You can see some of the effects, which are quite simple. But this goes beyond just seeing the harmonics. Think about the structure of the solar system, and the harmonics that seem to be basic to the system. Why are they basic? Is it perhaps because these harmonics are part and parcel of the structure, where you cannot have one without the other? Do the harmonics define the system, or the system define the harmonics? It would appear to me that the harmonics are defining the system, the ordering of the planets, the ordering of moons about the planets.

Now, we can see the effect of the harmonics (who can see the wind?). But what is actually transferring these effects? We think of harmonics as being sound, but that isn’t the medium here. So the transfer medium has to be a fundamental force. It can’t be photons, so that leaves gravity as the fundamental force which transfers the effects. Which means, we have local gravitational anomalies causing the harmonics, much like ripples on the surface of water when you put your finger in and wiggle it. The centers of gravity of the sun, planets and moons are all oscillating. But, as a series of oscillators, they all are trying to synchronize the oscillations.

Rather than not seeing this effect, it may be poetic to say that we just didn’t hear it correctly.

125. *John G* says:

[October 16, 2011 at 8:59 am](#)

Am I misremembering or did Anthony jump ugly all over some fellow for pushing the effects of barycentric solar system cycles as the explanation for climate change? I seem to remember the subject being banned or maybe it was just the poster banned from posting the subject. If I’m not misremembering could this be a stealth effort to reintroduce the subject through a very pretty multihued graphic lens and obtuse language? Maybe it was just the barycentric aspect that was forbidden or maybe I’m just plain wrong. No matter this article seems unnecessarily and perhaps stealthily vague.

126. *Jeff Id* says:

[October 16, 2011 at 9:03 am](#)

ouch..

127.*mizimi* says:

[October 16, 2011 at 9:16 am](#)

I have read Paul's essay several times and cannot decide if it is translated (by Google) into english, or if his mother tongue is something other than english. Textually there are some outstanding anomalies in the way he expresses himself which suggests certain comments have been inserted into a (machine) translated text.

Nonetheless, it seems that he is postulating that the effects of a variety of oscillating gravitic fields

impact our climate in a substantial way, and that we need to better understand them if we are to understand what drives our climate. There is an excellent paper here

-<http://icesjms.oxfordjournals.org/content/63/3/401.full>

which details exactly the kind of thing Paul alludes to.....how the moon nodal cycles affect ice content and distribution in the Arctic oceans and thus our climate.

I would echo the comments above....however good your ideas are, if you cannot communicate them effectively they are lost to the rest of us.

128.*Bernie McCune* says:

[October 16, 2011 at 9:44 am](#)

The important part of this exercise of course is to clearly communicate these new ideas but one other notion needs to be considered. That is that insight and truth are out there and as we all know they often come from some of the weirdest places and in the most unusual ways. It is very dangerous to our understanding not to at least attempt to look at some of these unusual ideas before we file them away – on the top shelf or the trash bin. Perhaps we need to slow our knee jerk reaction to laugh because there are SO many examples of one or a few rouge scientists being beaten up by even their own scientific peers and then being vindicated in the end (theory of plate tectonics just one example).

Bernie

129.*Septic Matthew* says:

[October 16, 2011 at 9:47 am](#)

DavidMHoffer:

Maybe.

I think.

Just so.

It could be an insightful synthesis of much published work; it could be a trite assembly of a bunch of already known stuff; it could be a totally confused mishmash of unrelated stuff; it could contain a profound misunderstanding of some important publications. These and more are compatible with the presentation as it is.

130.*rbateman* says:

[October 16, 2011 at 9:50 am](#)

TimC says:

October 16, 2011 at 7:52 am

Have we (that is, humanity) accurately tied down what caused the recent ~100ky regular cycles of glaciations in the quaternary, or can we predict with accuracy when the next glaciation will occur?

Good question. How about having a look at the combined Vostok and EPIC-A ice core record and tell me what you see?

<http://www.robertb.darkhorizons.org/TempGr/Vostok.JPG>

I see repeating patterns of 2 waves that are either

1.) Pulled apart into 2 lower waves

2.) Added together that produce 1 giant wave (w/ a Younger Dryas type dip after the 1st peak.) Doesn't look to me, from the patterns, that we have more than 1,000-2000 years left before the climate is in full plunge to the next Ice Age.

If we are already started downslope to the next glacial, then the next Little Ice Age will be the worst yet.

But, you are correct in wondering about one very important analysis that is currently represented by a near vacuum of debate. I'd chalk that up to 20 years of AGW monopoly.

131.kim;) says:

[October 16, 2011 at 9:52 am](#)

Mr. Vaughan,

I read your PDF.

I think what it was presenting your argument / case that there is enough evidence to warrant further study of how planetary oscillations / seasons can influence climate?

If that be the case you are making, I totally agree.

IMO, it has more evidence and could be much more revealing than that of the molestation of tree rings.

:) Maybe, you should apply for economic stimulus grants before Mr Mann uses / gets them all? :)

132.Schitzree says:

[October 16, 2011 at 10:44 am](#)

Oh my god, I love it. Rotating multivariate lunisolar spatiotemporal phase relations! That's even better than Supercalifragilisticexpialidocious!

133.Bob Tisdale says:

[October 16, 2011 at 10:55 am](#)

Pyromancer76 says: "I wonder at the 'devastating critiques' of so many of WUWT readers of Vaughn's summary attempt. Maybe Leif says 'mumbo-jumbo', but we don't know the cause(s) of nothin' — PDO, AMO..."

The PDO is an aftereffect of ENSO and variations in North Pacific Sea Level Pressure, and the AMO is supposed to result from variations in meridional overturning circulation, though ENSO, Sea Level Pressure, and variations in dust from the Sahara also impact North Atlantic SST anomalies. .

134.Myrrh says:

[October 16, 2011 at 1:09 pm](#)

Janice says:

October 16, 2011 at 8:58 am

Myrrh "What is it they didn't see?"

So it is with harmonics on a very very large scale. You can see some of the effects, which are

quite simple. But this goes beyond just seeing the harmonics. Think about the structure of the solar system, and the harmonics that seem to be basic to the system. Why are they basic? Is it perhaps because these harmonics are part and parcel of the structure, where you cannot have one without the other? Do the harmonics define the system, or the system define the harmonics? It would appear to me that the harmonics are defining the system, the ordering of the planets, the ordering of moons about the planets.

Now, we can see the effect of the harmonics (who can see the wind?). But what is actually transferring these effects? We think of harmonics as being sound, but that isn't the medium here. So the transfer medium has to be a fundamental force. It can't be photons, so that leaves gravity as the fundamental force which transfers the effects. Which means, we have local gravitational anomalies causing the harmonics, much like ripples on the surface of water when you put your finger in and wiggle it. The centers of gravity of the sun, planets and moons are all oscillating. But, as a series of oscillators, they all are trying to synchronize the oscillations.

Thank you Janice, that's a lot clearer now. So this could then have an impact not just on the surface of the Earth, but internal? I'm thinking more of the longer changes to Earth's magnetic field rather than ocean volcanic activity.

Rather than not seeing this effect, it may be poetic to say that we just didn't hear it correctly.

The music of the spheres..? <http://www.skyscript.co.uk/kepler.html>

135. Janice says:

[October 16, 2011 at 1:12 pm](#)

Bernie McCune says: " . . . one or a few rouge scientists . . . "

Are those the ones with red faces?

136. Werner Brozek says:

[October 16, 2011 at 1:28 pm](#)

The following may be of interest from:

http://scienceandpublicpolicy.org/reprint/seven_theories.html

The following is from page 23 of this document:

[SNIP: Sorry, Werner, but that topic is one of the few that Anthony does not permit at WUWT. You can check the policy [here](#). -REP]

137. Peter Plail says:

[October 16, 2011 at 1:56 pm](#)

I found this useful in order to explain where Paul is coming from found in

<http://www.examiner.com/environmental-policy-in-national/solar-lunar-amplification-magnetic-process-related-to-volcanos> by Kirtland Griffin (Environmental Policy Examiner) March 9, 2010

"Last year I formed a discussion group called "It's the Sun". The primary candidates were scientists who either had an interest in the Sun or who had an expertise in solar phenomena including other astronomical bodies as necessary. As I saw it, there were a number of possible theories out there and combining this vast store of ideas into a discussion group could be very productive. The theory was simple. Bring a group of individuals together, each with a piece of the puzzle, and see what fits with others' pet ideas. Trouble was there was little discussion at first and I wondered if it was going to fly. Well I am happy to say things are moving along

briskly. Piers Corbyn, of Weather Action.com, posted one of his news releases a while ago. Paul Vaughn who describes himself as an Ecologist with a BSc (biology / math-stats), MSc (applied stats / natural climate variations, former mountain guide & park supervisor, independent climate science auditor who supplemented his education with courses in engineering, forestry and physical geography, currently resides in the Vancouver, British Columbia area. He had a few comments, suggestions and a lot of interest. Piers didn't respond immediately so Paul started making graphs and tried to answer his own questions. His interest, and a basis of Piers work is the "Solar-Lunar-Amplification-Magnetic process or "SLAM". As the name implies, the value is comprised of characteristics of the Sun, the Moon and an Amplified resultant Magnetic effect that is one of the tools that Paul feels Piers uses in his predictions."

There is more on that site.

138.*Baa Humbug* says:

[October 16, 2011 at 1:59 pm](#)

Janice says:

October 16, 2011 at 1:12 pm

Bernie McCune says: " . . . one or a few rouge scientists . . . "

Are those the ones with red faces?

No, they're the new celebrity scientists with lipstick on their collar :)

139.*Dave Springer* says:

[October 16, 2011 at 2:35 pm](#)

This article brought to you by:

http://www.erikandanna.com/humor/bullshit_generator.htm

140.*Paul Vaughan* says:

[October 16, 2011 at 2:58 pm](#)

When I was contracted (& paid) to teach and research at publicly-funded universities, I had the freedom to restructure most or all of most days. This luxury facilitated operations on the *corollary* of the Pareto Principle and I attained 70% good-to-excellent ratings from my online Stats students, who were mostly social science students, many with considerable math anxiety.

I presently work in a private sector environment that affords far less flexibility. I'm firmly committed to the company. It needs my attention today. Volunteer work needs to fit around core responsibilities that protect access to vital necessities.

I'll be reading the comments above, but the next window of opportunity I'll have to comment at a level beyond the Pareto Principle is at least 5 days out.

:

As I expected, the comments are informative. Please keep them coming. Thank you.

:

I had hoped to have time to iteratively rewrite section I.7 a few more times before release, but I could delay no longer as I need to get on to other things. I'll share some of the notes here now. Digesting the following is prep for understanding Le Mouël, J.-L.; Blanter, E.; Shnirman, M.; & Courtillot, V. (2010) and the *simple* implications [asymmetrically leveraged multidecadal aliasing = <http://wattsupwiththat.files.wordpress.com/2011/10/vaughn4.png>].

Most implicitly & unquestioningly equate neutron count rate with cosmic ray flux. Please be careful with such uncritical thinking.

The atmosphere is thinner (*vertical distance* between pressure levels) at the poles:

http://ds.data.jma.go.jp/gmd/jra/atlas/isobar-1/zw200_ANN.png

The annual thermal insolation tide alternately puffs up opposite poles:

http://ds.data.jma.go.jp/gmd/jra/atlas/isobar-1/zw200_JAN.png

http://ds.data.jma.go.jp/gmd/jra/atlas/isobar-1/zw200_JUL.png

Where the GPH isolines are tightly packed, there are strong jets:

AnimPolarWind200hPa: <http://i52.tinypic.com/cuqyt.png>

AnimWind200hPa: <http://i52.tinypic.com/zoamog.png>

AnimWindZonal: <http://i51.tinypic.com/34xouhx.png>

AnimWind550K: <http://i56.tinypic.com/14t0kns.png>

Gradient steepness is a function of *absolute* temperature contrast. For those who want to understand: *Stop thinking in anomalies* and look at the fractal geometry of *absolute temperature gradients*.

Anim2mT: <http://i55.tinypic.com/dr75s7.png>

AnimTempZonal: <http://i56.tinypic.com/1441k5d.png>

Near the surface, *friction* influences circulatory pattern:

AnimWind850hPa_: <http://i52.tinypic.com/nlo3dw.png>

AnimPolarWind850hPa: <http://i54.tinypic.com/29vlc0x.png>

Suggestion for everyone:

Take a look at the first few google hits for “**thermal wind**“:

e.g.:

1. Thermal Wind

http://en.wikipedia.org/wiki/Thermal_wind

—

“Jet Stream

A horizontal temperature gradient exists while moving North-South along a meridian because the curvature of the Earth allows for more solar heating at the equator than at the poles. This creates a westerly geostrophic wind pattern to form in the mid-latitudes. Because thermal wind causes an increase in wind velocity with height, the westerly pattern increases in intensity up until the tropopause, creating a strong wind current known as the jet stream. The Northern and Southern Hemispheres exhibit similar jet stream patterns in the mid-latitudes.

Using the same Thermal Wind argument, the strongest part of the jet stream should be in proximity where temperature gradients are the largest. Due to the setup of the continents in the North America, largest temperature contrasts are observed on the east coast of North America (boundary between Canadian cold air mass and the Gulf Stream/warmer Atlantic) and Eurasia (boundary between the boreal winter monsoon/Siberian cold air mass and the warm Pacific). Indeed, the strongest part of the boreal winter Northern Hemisphere jet is observed over east coast of North America and Eurasia as well. Since stronger vertical shear promotes baroclinic instability, so the most rapid development of extratropical cyclones (so called bombs) is also observed along the east coast of North America and Eurasia.

A similar argument can be applied to the Southern Hemisphere. The lack of continents in the Southern Hemisphere should lead to a more constant jet with longitude (i.e. a more zonally

symmetric jet), and that is indeed the case in observations.”

—=

2. What is the thermal wind?

<http://www.theweatherprediction.com/habyhints2/407/>

—=

“The first word in the term is thermal. Thermal as you may have guessed deals with temperature. The thermal wind is set up by a change in temperature over a change in distance. When thinking of how the thermal wind sets up think of the polar jet stream. To the north of the polar jet stream the air is cold. Since the air is cold the thickness values (and heights) are lower since cold air is more dense. To the south of the polar jet stream the air is warm. Since air is warm the thickness values are higher since warm air is less dense. A north to south temperature gradient is set up and the height values slope over this distance. When height values slope (think of height contours close together on upper level charts) the pressure gradient force is put into action. It is the Pressure Gradient Force that causes the wind to blow. Whether it is the jet stream, a mid-latitude cyclone or a sea breeze it is the change in temperature over distance that sets the wind in motion. The thermal wind occurs above the boundary layer since friction is not an influence on altering the wind direction aloft.

The wind direction in association with the jet stream generally travels from west to east. This is because the Pressure Gradient Force moves air from higher heights toward lower heights and the Coriolis deflection deflects the air to the right of the path of motion in the Northern Hemisphere. Thus, air moving from south toward north is deflected to the east due to Earth’s rotation. [...]

The thermal wind flow parallel to thickness lines. Remember that thickness is a function of temperature. [...]

The magnitude of the wind will be a function of how strong the temperature gradient is. When the height contours or thickness values of packed close together then the wind will be strong.

[...] The thermal wind can be thought of as a steering influence for the direction and magnitude that storms move.

[...] the thermal wind is a wind that flow parallel to the temperature gradient in the troposphere. The thermal wind explains the magnitude and direction the wind will take when a temperature change occurs over a horizontal distance.”

—=

3. Thickness and Thermal Wind

<http://www.aos.wisc.edu/~aalopez/aos101/wk12.html>

—=

“Summary of the Thickness and Wind presentation [<http://www.aos.wisc.edu/~aalopez/aos101/wk12/ThermalWind.ppt>]:

- Cold air is more dense, therefore thinner
- Warm air is less dense, therefore thicker
- Temperature is the only factor that changes the thickness of a layer
- When you have a temperature contrast, you create height variations for a layer
- Height variation create a pressure gradient
- Pressure gradient creates a PGF [pressure gradient force]
- The change in the Geostrophic Wind is directly proportional to the horizontal temperature gradient

This is the Thermal (temperature) Wind relationship”

—=

4. Fronts and the Thermal Wind Equation – Narrowing the Jet Stream

<http://www.mit.edu/~predawn/jetstream/thermalwind.html>

—=

“One can combine the equations for the geostrophic wind and the hydrostatic balance as discussed in previous sections to obtain the Thermal Wind Equation as shown below. The thermal wind equation states that the change in wind speed with height (here expressed in pressure coordinates) is equal to the $(-R/f)$ times the change in temperature across the front on a constant pressure surface, divided by the pressure. The most important concept from these relations, is that the steep temperature gradients created by the fronts generate winds to satisfy this thermal wind equation, proportional to the strength of the front. The winds are geostrophic and flow along the constant pressure isobars around both poles [2].”

“The effects of these polar fronts are two fold: they concentrate the west to east geostrophic flow at the frontal boundaries where the large temperature gradients induce large thermal winds. Secondly, they also increase the flow with altitude, creating the very fast Jet Stream at high levels around 250mb. [...] The strong, high altitude wind centers indicate the location of the Jet Stream!”

—=

Thermal wind patterns are symmetric across neither basins nor hemispheres. Asymmetric ocean-continent contrast introduces Simpson’s Paradox into aggregations.

In some fields, the scale, shape, & orientation -dependent aggregation paradox goes by other terms, like “modifiable areal unit problem”, but that concept needs extension to include a vertical axis & time.

Bob Tisdale: Thanks for your articles on GS, IPWP, KOE, & SPCZ.

Has everyone noticed the locations of strongest semi-annual amplitude?

AnimWind200hPa: <http://i52.tinypic.com/zoamog.png>

AnimWind850hPa_: <http://i52.tinypic.com/nlo3dw.png>

Some times/places are more efficient at absorbing or bleeding heat:

AnimNetSurfHeatFlux: <http://oi54.tinypic.com/334teyt.jpg>

AnimHeating: <http://i55.tinypic.com/317jchy.png>

Ignoring circulation isn’t an option.

Notice how northern zonal summaries in particular overlook the importance of asymmetric jet-deflecting spatial patterns: 10-70N 200hPa zonal wind (highlights westerlies):

http://ds.data.jma.go.jp/gmd/jra/atlas/timesrs/u_glb.png

The distribution of continents on Earth is a source of *more than one* type of asymmetry. A refresher on the different types of symmetry appears needed by many commenters as a prerequisite to ever being able to get a handle on natural aliasing:

<http://en.wikipedia.org/wiki/Symmetry>

Pay more attention to circulation & asymmetrically-leveraged pattern-aliasing:

a) reflection [meridional - trans-equatorial].

b) rotation [zonal - trans-basin] (translation on cylindrical projections).

It’s not just north-south reflection asymmetry. It’s also west-east rotation asymmetry (translation asymmetry on cylindrical projections).

The combination of asymmetries results in a higher multivariate fractal dimension for the northern hemisphere. Natural upscale spatiotemporal aliasing is inevitable due to low heat-capacity leverage.

However, the Northern & Pacific wave is riding on the more stable Southern one (loosely speaking, for economy of words). I'm willing to tentatively *speculate* that 30S-90S SST has been related to the integral of solar activity in recent times – (to re-emphasize: the preceding is *speculation*). In contrast, I'm past speculation (into assertion) about the Northern & Pacific wave [<http://wattsupwiththat.files.wordpress.com/2011/10/vaughn4.png>] (differential solar-pulse position modulation, which should *not* be confused with an integral), but until the topology of interannual variability is revealed publicly, it's clear that few will acknowledge the nature of dominant multidecadal variations.

That discussion is probably years, if not decades, off in the future, but *part* of the interannual picture is already crystal clear, since it's reducible to the temporal dimension (from 4D spatiotemporal):

This climatology [<http://i51.tinypic.com/34xouhx.png>] animates the annual zonal wind cycle. It doesn't emphasize interannual variability. For comparison: The QBO is discernable to the trained [<http://ds.data.jma.go.jp/gmd/jra/atlas/timesrs/QBOraw.png>] eye in this animation [<http://ugamp.nerc.ac.uk/hot/ajh/qboanim.gif>].

“[...] with little direct change in globally averaged temperature.”

<http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo1282.html>

They should understand that due to north-south ocean-continent reflection asymmetry and west-east ocean-continent rotation asymmetry (*translation* asymmetry on *cylindrical* projections) this is *not* possible.

While it appears (from their attention to the westerlies) that they are *starting* to try to understand the seminal paper referenced here [<http://wattsupwiththat.com/2010/12/23/confirmation-of-solar-forcing-of-the-semi-annual-variation-of-length-of-day/>], it's clear they have *not* yet realized the *simple implications* [<http://wattsupwiththat.files.wordpress.com/2011/10/vaughn4.png>] for natural multiscale aliasing & aggregation.

““The key point is that this effect is a change in the circulation, moving air from one place to another, which is why some places get cold and others get warm,” said Adam Scaife, one of the researchers on the paper, who heads the UK Met Office’s Seasonal to Decadal Prediction team. “It’s a jigsaw puzzle, and when you average it up over the globe, there is no effect on global temperatures,” he told BBC News.”

<http://www.bbc.co.uk/news/science-environment-15199065>

Adam’s got the latter part wrong. Probably his statement is unconsciously conditioned on the wrong variable. More than one type of asymmetry *guarantees* natural spatiotemporally-heterogeneous *leveraging* of statistical summaries.

It’s interesting to note that Scaife appears to be parroting the jigsaw analogy introduced by Piers Corbyn:

“[...] *THIS* holds that solar-magnetic-particle effects and Lunar modulations *DRIVE* the whole world’s weather and climate machine – like a 4 dimensional cosmic jig-saw [...] Solving the solar-lunar-terrestrial cosmic jigsaw [...] Once pieces of a jig-saw start to join up the whole takes on new meaning. Our work is game-changing – a new paradigm in sun-earth relations,

weather and climate is beginning.” – WeatherActionNews2011No17

Indeed, there’s nothing critical riding on the CERN CLOUD experiment. We already have the info we need from Atmospheric Angular Momentum & Earth Orientation Parameter records.

2 last things for today:

1. There’s a spatiotemporal pattern reference I want to share, but neither I nor a generous librarian have been able to track the article down. It was a beautifully concise article assigned for reading & discussion in a directed studies course on advanced landscape ecology a few decades ago. The paper fundamentally transformed the way I conceptually organize perception of spatiotemporal information, something I never would have imagined possible beforehand. I recall that many students struggled (many even failed) to grasp the perceptual framework & paradigm. The framework has not yet been cemented into curricula. (Presentation by the professor was ad hoc. With tremendously lucid awareness, he was throwing together scattered material that had not yet been consolidated.) I will offer an update if/when possible.

2. Of course the other area where readers could use help is with wavelets. And that would require, as a prerequisite, a refresher on complex numbers. As one commenter put it, there are layers of background needed (the analogy was to a 7 course meal). Unfortunately, grossly deficient Western math education systems have not provided us with a common enough functional numeracy background to expedite communications. We all share the blame for this, along with the collective impacts. The sensible option is to attempt to take responsibility, patiently.

Regards.

141. *Dave Springer* says:

[October 16, 2011 at 3:06 pm](#)

@davidmhoffer

“Sure enough, all the wavelets “converged” smack dab on 1929 which was the year that the moon’s orbit hit a minimum from both an elliptical orbit and from the plane of the orbit compared to the earth’s axis (or maybe it was a maximum?) In any event, that was the phenomenon that Beck was referring to.”

Wow. This was also the year stock market crashed, the year of the 1st Academy Awards for Films, the year the Museum of Modern Art opened in NYC, and the year the Peruvian Air Force was created.

Coincidence? I think not!!!!!!

Keep up the good work.

142. *Dave Springer* says:

[October 16, 2011 at 3:20 pm](#)

Paul Vaughan says:

October 16, 2011 at 2:58 pm

I think I’m learning to speak your language. Let me translate.

“When I was contracted (& paid) to teach and research at publicly-funded universities, I had the freedom to restructure most or all of most days.”

There’s no accountability in taxpayer funded jobs so I did whatever I felt like doing.

“This luxury facilitated operations on the corollary of the Pareto Principle and I attained 70% good-to-excellent ratings from my online Stats students, who were mostly social science students, many with considerable math anxiety.”

I taught humanities so my students were pretty much morons who couldn't find their own ass with both hands to say nothing of being able to assess my acumen as an instructor.

“I presently work in a private sector environment that affords far less flexibility.”

I have a real job now.

“I'm firmly committed to the company.”

They'll show me the door if I don't perform.

“It needs my attention today.”

My boss noticed me spending too much time in the loo.

“Volunteer work needs to fit around core responsibilities that protect access to vital necessities.”

I have to spend 8 hours a day at a job I hate in order to pay the mortgage and put food on the table.

143. *John* says:

[October 16, 2011 at 3:43 pm](#)

TimC says:

October 16, 2011 at 7:52 am

Have we (that is, humanity) accurately tied down what caused the recent ~100ky regular cycles of glaciations in the quaternary, or can we predict with accuracy when the next glaciation will occur? ...

Since it is quite evident from a careful and extensive search that physicists and engineers with specific and differing expertise areas can't even agree on the physics of climate, it seems unlikely that we really do understand what drives the 100,000 year cycle of glacial epochs. There are theories out there that are reasonable and generally seem to account for most of the data, but ...

The only conclusion I have been able to reach is that regardless of the mathematical and scientific expertise behind most “scientific” opinions offered regarding how climate works, and where it is headed, those opinions are by and large formed by received opinion acquired during specialist training. If that sentence reads like something Mr. Vaughan might have written, sorry.

144. *Dave Springer* says:

[October 16, 2011 at 3:47 pm](#)

Janice: Rather than not seeing this effect, it may be poetic to say that we just didn't hear it correctly.

Myrrh: The music of the spheres..? <http://www.skyscript.co.uk/kepler.html>

Einstein: “There are people who say there is no God, but what makes me really angry is that they quote me for support of such views. What separates me from most so-called atheists is a feeling of utter humility toward the unattainable secrets of the harmony of the cosmos. The fanatical atheists are like slaves who are still feeling the weight of their chains which they have thrown off after hard struggle. They are creatures who — in their grudge against traditional religion as the ‘opium of the masses’ — cannot hear the music of the spheres.’

Springer: Einstein is spinning in his grave over Myrrh not understanding that visible light can raise the temperature of ordinary matter. It doesn't appear that Myrrh can hear the music of the spheres either.

145.*u.k.(us)* says:

[October 16, 2011 at 4:16 pm](#)

It's all about presentation.

Taking the time to spell things out, while tedious, will hold the attention of new readers long enough gain some comprehension.

Then, of course, reason will be re-awakened.

146.*Bernie McCune* says:

[October 16, 2011 at 4:55 pm](#)

A pox on late night posts – slight shift of a “u” – rogue as in mischievous (or maybe wayward) with me with rouge on my face (or something red?).

Bernie

147.*iron brian* says:

[October 16, 2011 at 5:05 pm](#)

<Addressing rotates priority across a spectrum of functional numeracy & orientation.

maybe "something for / from everyone", like Esperanto.

Co-incidental meditation.

bb

148.*Janice* says:

[October 16, 2011 at 5:07 pm](#)

Bernie, you allowed us to have some fun, and we are appreciative of that. I am very careful to find all my typos . . . about two minutes after I hit Post Comment.

149.*Claude Harvey* says:

[October 16, 2011 at 5:54 pm](#)

Bob Tisdale says:

October 16, 2011 at 10:55 am

“The PDO is an aftereffect of ENSO and variations in North Pacific Sea Level Pressure, and the AMO is supposed to result from variations in meridional overturning circulation, though ENSO, Sea Level Pressure, and variations in dust from the Sahara also impact North Atlantic SST anomalies.” .

Jeese, Bob! Here we have ordinary mortals trying to untangle a written Gregorian knot and you throw this one in the pot? My head hurts and it's your fault.

150.*Baa Humbug* says:

[October 16, 2011 at 6:54 pm](#)

@Paul Vaughan

Thanks for the clarification post. Might it not been better to delay the article until you had the time to respond to questions? Never the less the 5 day wait will be worth it.

@Dave Springer

What's up you ar\$e today? Particularly negative and mischievous.

151. *DavidMHoffer* says:

[October 16, 2011 at 9:04 pm](#)

Paul Vaughan;

Thanks for the additional detail. Don't know that I can offer you anything approaching the assistance you seek, but boy did I learn a lot reading through that!

152. *TimC* says:

[October 16, 2011 at 9:13 pm](#)

Rbateman says: "Doesn't look to me, from the patterns, that we have more than 1,000-2000 years left before the climate is in full plunge to the next Ice Age".

Looks that way to me too, as the interglacials at the 0°C level seem never to last more than ~14k years, and we've already been at that level for 12k years. Brrr – don't fancy having a mile-high ice sheet just north of Watford, again!

However my point was more that until we truly understand what mechanism causes these glaciations it's a little difficult to comment on this subtle solar-planetary theory – or the latest rather spooky offering from Paul Vaughan, above.

153. *wakeupmaggy* says:

[October 16, 2011 at 9:37 pm](#)

A few years ago, before I found WUWT for my most basic sanity needs, I was reading Solarcycle24.com, and came across barycentrism as a measurable concept. I had always thought the sun stayed in a pivotal point, heh, that's when I became an AGW skeptic. Gotta love those oscillations and harmonics, no choir works without them. My playful time is spent watching YouTube videos of chaotic pendulums and harmonics. I'm a believer, in complex chaos, and find it just beautiful. I get it Paul Vaughan, even if I can't do the math, you help us see that it's out there.

154. *DavidMHoffer* says:

[October 16, 2011 at 9:46 pm](#)

Dave Springer;

Wow. This was also the year stock market crashed, the year of the 1st Academy Awards for Films, the year the Museum of Modern Art opened in NYC, and the year the Peruvian Air Force was created.

Coincidence? I think not!!!!!!

Keep up the good work.>>>

I could pick any year in history and with a bit of work you could come up with an equally ridiculous list of things that also happened that year and make a sarcastic comment suggesting that it proved nothing.

For the uninformed, there was a period of unusual warming and then cooling in the temperature record from (depending upon which specific record you are looking at) started in the 1920's, peaked in the 1940's, and was followed by a cooling period that continue on into the 1970's:

<http://data.giss.nasa.gov/gistemp/graphs/>

This period coincides with an increase and subsequent decrease in CO2 as reconstructed by Ernst Beck from thousands of measurements taken by other scientists over the years before data with high accuracy and confidence was available from sites such as Manua Loa which began measuring CO2 in 1959. You can see Ernst Beck's reconstruction of CO2 levels at this link,

with the “bubble” of increased CO₂ (followed by a decrease) in nearly the exact same timeframe:

<http://www.biokurs.de/eike/daten/berlin30507/berlin9e.htm>

Beck’s theory was that the warmer temperatures caused outgassing of CO₂ rather than the other way around. He believed also that when the cooling period set in, colder water temperatures resulted in higher rates of absorption of CO₂ into the oceans, and that increased growth of vegetation due to the higher temperatures may also have extracted some amount of CO₂ from the atmosphere. Beck was adamantly opposed by mainstream scientists, even skeptics and lukewarmers. I believe if you search for articles on WUWT by Ferdinand Englebeen, you’ll find he makes strong arguments against Beck’s theory on the grounds that the temperature change wasn’t large enough to cause the amount of outgassing that would be required to increase CO₂ levels that much, and that Beck’s estimates are not supported by the ice core data. Beck was in the process of writing an in depth analysis of the accuracy of the ice core data to show that it was flawed, but died before he could complete it.

I corresponded with Ernst Beck on a number of topics, and learned a great deal from him. I drew to his attention the fact that the “divergence problem”, the now famous proxy data that suddenly ceased tracking actual temperatures in the period starting around 1950 (depending upon which specific proxy data one is looking at, some of them didn’t suffer “divergence” until a decade or so later).

Given the precipitous drop in CO₂ levels that started in 1950 or so, it is logical to suggest that this in turn may have stunted the growth of the various proxies which went from growing in a CO₂ rich environment to a CO₂ starved environment in a very short time period. It seems likely also that if the driving factor in the CO₂ levels was uptake by cooling oceans, it is very possible that the CO₂ levels did not fall uniformly across the globe. Also, some species of plants are more sensitive to CO₂ levels than others.

While Ferdinand Englebeen and others have firm ground to stand upon in refuting Beck’s data and theories, the coincidence of “temperature bubble” plus “CO₂ bubble” plus the fact that the divergence problem begins just as that period ends, suggests to me that Beck’s theory and analysis may have some merit.

When Beck popped off about “lunar phase reversals” I and many other of his supporters thought he had truly lost it. Based on additional discussions, and if you read through the paper I linked to, it turned out that Beck’s poor choice of words had merit nonetheless. The fact that the moon’s orbit variations result in the moon’s distance from earth moving from a minimum to a maximum and back again can have no other effect than to change the height of the tides the moon produces. Keeping in mind the vast amount of water the moon sets in motion from a tidal perspective, it makes sense that, while it happens on a slower time scale, the moon’s orbit changes from being inclined high above the equator when at maximum distance to well below the equator and back again. The same would be true of minimum orbital distances. Shifting that amount of water from northern hemisphere to southern and back again ought to have some effect on climate, one would think.

If you read the paper I linked to, you will see that the authors used Morelet wave analysis on ice core data, temperature data, and several other data sets that all exhibited the approximate 6.5, 18, 55 and 74 year cycles associated with the moon’s orbital variations. That all of these cycles converged and reversed direction (for example, the moon reaching either a minimum or maximum distance and then starting to move the other way) in the late 1920’s suggests that our

climatology is indeed tied in some manner to the moon's orbital variations, and Beck's poorly worded "lunar phase reversal" has merit from the perspective of both the physics and the supporting Morelet analysis from multiple data sources.

So Dave Springer, you may put your sarcasm aside, and rest assured that when I suggest a correlation has merit, I do so with just cause.

155. [Sparks](#) says:

[October 16, 2011 at 9:57 pm](#)

Seriously! Using the terminology of "rotating multivariate lunisolar spatiotemporal phase relations shared by Earth Orientation Parameters (EOP) and terrestrial climate records" isn't going to achieve the 'purpose' set out in (section I)

The terminology used sounds more intimidating than what it is, Put simply, If I were to research the position of the Earth and the moon with terrestrial tidal records and hope to point out a serious oversight in mainstream Understanding, I wouldn't begin by introducing it as;

'Super Galactic' multivariate terrestrial Spatiotemporal hydrographic tidal displacements under Equatorial mean (apogee/perigee) for the lunital interval differentials over dominant semidiurnal component relations.

I'd keep that, for a bit of light humor in some long overly-complex paper very few people would dare to pick up knowingly to spend weeks with a head-ache reading it thoroughly.

And I'd title the paper;

'The joy of using Statistical techniques in understanding the lunar tidal forces and what its apparent global impact **could be** on the degrading spectrum of color being emitted by a dewdrop falling from a blade of grass within the wavelength of 520-565 nanometers during spring.

. Instant Classic!!

Maybe it should be made as simple as possible. But not simpler. if it "is to direct the attention of sensible observers to a serious oversight in the mainstream Understanding" but that would probably take the fun out of the whole superficiality of looking incredibly intelligent over simply explaining a point using hard evidence.

Understanding the Solar System Barycenter would be a good place to start for anyone interested in Multidecadal solar-terrestrial correlations.

Here's an Interesting site I found for beginners with a down-loadable program.

"Although it is convenient to think of the Sun as the stationary anchor of our solar system, it actually moves as the planets tug on it, causing it to orbit the solar system's barycenter. The Sun never strays too far from the solar system barycenter. The barycenter is often outside the photosphere of the Sun, but never outside the Sun's corona."

Site: <http://www.orbitsimulator.com/gravity/articles/ssbarycenter.html>

156. [dscott](#) says:

[October 16, 2011 at 10:24 pm](#)

I was under the impression that the moon's orbit influences/modifies/modulates the path of the jet stream. Can you confirm this? If this is the case then there should be a regular periodic wave superimposed on the temperature and precip. data. As with any group of rotating sources, a (sine) wave pattern is created each with an individual harmonic that at times subtracts or adds to main wave, i.e. rotation of earth (24 hr->day/night), rotation of sun (25 day TSI variability), orbit of earth (365.25 days & distance->insolation), orbit of sun (barycenter location w/in solar

system and therefore distance from sun-> insolation), orbit of moon (28 day->jet stream) and obliquity of earth (+-23.5 degree-> day/night length), and some more I may not know. The secondary ones such as the PDO, AMO are also superimposed on the wave.

Now has anyone sought to create a model of wave harmonics to see if these influences reasonably approximate the observed monthly/weekly/daily temperature swings? IF so, what was the result?

157.[aposticon \(@aposticon\)](#) says:
[October 16, 2011 at 10:52 pm](#)



158.[Paul Vaughan](#) says:
[October 17, 2011 at 6:20 am](#)

[@dscott](#) (October 16, 2011 at 10:24 pm)

You absolutely cannot ignore the spatial dimensions.

The leading confusion in the climate discussion at present is more a sampling theoretic problem than a physics problem. In layman's terms: If you flash the strobe in a different way, you see a different pattern.

The notion that mere temporal waves can be superposed to recreate geophysical series is fundamentally misconceived, except in special cases where signals are globally aliased or integrated. For example:

http://wattsupwiththat.files.wordpress.com/2011/04/vaughn_lod2_fig4a.png . [Elaboration: <http://wattsupwiththat.com/2011/04/10/solar-terrestrial-lunisolar-components-of-rate-of-change-of-length-of-day/>].

Regards.

159. *Paul Vaughan* says:

[October 17, 2011 at 6:49 am](#)

@jorgekafkazar (October 15, 2011 at 2:07 pm)

Wavelets are far simpler than you think.

In fact, they're dead simple. Unfortunately, there's no wavelet tutorial written at an accessible level (to my knowledge). If contracted to do so, I could make wavelets simple for a lay audience. More fundamentally, there's no good reason why all citizens aren't supplied with a firm handle on wavelet analysis by the mainstream education system. That's part of what I was getting at on p.10. Given the severely deficient math education systems we have in the West, the myth that wavelets are complicated will no doubt live on much longer than it should *in the West*. I'm not opposed to volunteering a tutorial on wavelets, but I won't have the time to do it properly any time soon.

Regards.

160. *Paul Vaughan* says:

[October 17, 2011 at 7:04 am](#)

@Paul Westhaver (October 15, 2011 at 4:07 pm)

If you pop ERSST into a google search, you'll have answered your own question in a second. Tip: You may find the KNMI Climate Explorer website useful if you decide to investigate independently. (Google also finds that no problem.)

If you need further assistance, please feel welcome to inquire and I'll respond when time permits.

Regards.

161. *John-X* says:

[October 17, 2011 at 7:06 am](#)

For anyone interested, NOAA monitors AAM (Atmospheric Angular Momentum): Total, Relative, Tendency, and various torque components:

<http://www.esrl.noaa.gov/psd/map/clim/aam.90day.total.shtml>

162. *Leif Svalgaard* says:

[October 17, 2011 at 7:16 am](#)

Paul Vaughan says:

October 17, 2011 at 6:20 am

The notion that mere temporal waves can be superposed to recreate geophysical series is fundamentally misconceived, except in special cases where signals are globally aliased or integrated.

Yet the data you work with have no spatial dimension [and you do not analyze in the spatial domain - all your X-axes are in time]. LOD, TSI, Global temp, etc are all global.

163. *Jeff Larson* says:

[October 17, 2011 at 7:19 am](#)

There was a classic computer science book "The Structure and Interpretation of Computer Programs" which had an excellent style for building understanding of complex topics. First, an oversimplified explanation would be offered, followed by "well that isn't quite right" and a

more complete explanation, repeated until the complexity was fully explained. I've heard it said that one cannot understand what he doesn't already almost know.

164. *Tim Clark* says:

[October 17, 2011 at 8:35 am](#)

“Bob Tisdale says:

The PDO is an aftereffect of ENSO and variations in North Pacific Sea Level Pressure, and the AMO is supposed to result from variations in meridional overturning circulation, though ENSO, Sea Level Pressure, and variations in dust from the Sahara also impact North Atlantic SST anomalies.”

Bob, you always post this stuff like this. You state these facts as supposedly causative mechanisms, but they are associations only. They can be used in a theory, but not to predict anything.

165. *Myrrh* says:

[October 17, 2011 at 9:00 am](#)

Dave Springer says:

October 16, 2011 at 3:47 pm

Springer: Einstein is spinning in his grave over Myrrh not understanding that visible light can raise the temperature of ordinary matter.

And just how does it do this? Take it here: <http://wattsupwiththat.com/2011/10/09/spencer-finds-the-big-picture-on-cloud-feedback/#comment-768630>

More music of the spheres: <http://www.telegraph.co.uk/science/space/7840201/Music-of-the-sun-recorded-by-scientists.html>

166. *D. J. Hawkins* says:

[October 17, 2011 at 11:25 am](#)

Les Johnson says:

October 15, 2011 at 3:08 pm

For what it is worth, this looks a lot like an engineer talking to a non-engineer.

Blindingly simple to the engineer, and exceedingly complex and opaque to the non-engineer.

I **am** an engineer and it's utterly opaque to me as well. FWIW, no engineer of my acquaintance talks like this. We're opaque using much simpler language ;-).

167. *Lucy Skywalker* says:

[October 17, 2011 at 11:47 am](#)

Paul if you'll do a tutorial on wavelets that's comprehensible to us here, I'll forward \$50.

I think that analysis of complex cycles to demonstrate constituents is vital to Climate Science, and will help demystify the stuff that current policy here says we cannot discuss – no doubt because discussion devolves too much into incomprehensible rants between believers and nonbelievers, while lacking adequate input of balanced evidence in simple layman's language.

We see lone flares like the work of Bart over at Climate Audit. The Russians are on to the case. And [Ole Humlum and co-workers have just issued a paper](#) that also seems to support the importance of wavelets. From the Abstract

...Our main focus is on identifying the character (timing, period, amplitude) of such recurrent natural climate variations, but we also comment on the likely physical explanations for some of the identified cyclic climate variations. The causes of millennial climate changes remain poorly understood, and this issue remains important for understanding causes for natural climate variability over decadal- and decennial time scales. We argue that Fourier and wavelet approaches like ours may contribute towards improved understanding of the role of such recurrent natural climate variations in the future climate development.

168. [Norman Page](#) says:

[October 17, 2011 at 12:29 pm](#)

Basically – Paul is merely stating the blindingly obvious and pointing at the fundamental problem with and source of the failure of the IPCC analyses. Paul’s main point is that it is not possible to estimate the contribution of anthropogenic CO2 unless we first understand the sources and range of natural variability. The relative importance at any time of the natural forcings and feedbacks are seen by deconvolving the contribution of all the various relevant data time series without a-priori assumptions of possible importance. This can really only be done by looking at the fourier power spectrum of the various time series for possible correlations (check eg <http://www.fel.duke.edu/~scafetta/pdf/scafetta-JSTP2.pdf>) and then doing maximum entropy special analysis and morlet wavelet analysis to see at what times various factors are the principal components of climate change in time and space. There is a good summary of the maths needed in appendix A in William Burroughs book “Weather cycles real or Imaginary” 2nd Ed 2003. By this standard ,the approach and assumptions of the IPCC models are simple to the point of stupidity or outright deception.

Look at the forcings on which most of the Models were built

<http://www.ipcc.ch/graphics/ar4-wg1/jpg/fig-2-20.jpg>

All the effects on climate of changes in solar activity caused by the movement of the sun re the barycenter or of the lunar metonic cycle or of the GCR – cloud ;EUV – ozone ;CME frequency, solar wind strength variability. solar magnetic field strength secular changes, LOD ,Changing earth magnetic field strength . QBO etc etc are simply ignored and all subsumed under Solar TSI.

The IPCC modelers need to scrap their whole system and start again from scratch instead of making the odd ad hoc patch or the epicycle variety of fix.

Obviously Paul’s presentation can be made much clearer – a glossary of acronyms under each figure and a brief introduction to wavlet analysis would help a lot.

However ,in general, his approach will inevitably be the wave (let) of the future.

169. [Tenuc](#) says:

[October 17, 2011 at 12:55 pm](#)

Janice says:

October 16, 2011 at 8:58 am

“...But what is actually transferring these effects? We think of harmonics as being sound, but that isn’t the medium here. So the transfer medium has to be a fundamental force. **It can’t be photons**, so that leaves gravity as the fundamental force,,,

Oh but **it can** be photons which, alongside gravity, force the orbits of the planets we observe. All we need to do is give real mass, size and spin to the ubiquitous photon, which works as a real repulsive bombardment field in the exact opposite direction to the apparent pull of the

acceleration of gravity.

Without the energy of the myriad of photons hitting our planet every second we would quickly be living on a deep frozen popsicle!

170. [Leif Svalgaard](#) says:

[October 17, 2011 at 1:35 pm](#)

Norman Page says:

October 17, 2011 at 12:29 pm

Basically – Paul is merely stating the blindingly obvious and pointing at the fundamental problem with and source of the failure of the IPCC analyses. Paul’s main point is that it is not possible to estimate the contribution of anthropogenic CO2 unless we first understand the sources and range of natural variability.

However, you don’t get that understanding just by correlating everything you can think of with everything else. For each element of the natural variability you must specify what physical mechanism causes that particular element [and if there is enough energy and coupling available], only then have you gained understanding and can remove the element from the equation. When you have done that with all the elements, what is left is possibly anthropogenic [although it could be an overlooked natural cause]. Not to defend IPCC to much, but they *did* look at all the elements they thought were energetically feasible.

171. [Leif Svalgaard](#) says:

[October 17, 2011 at 1:40 pm](#)

Tenuc says:

October 17, 2011 at 12:55 pm

All we need to do is give real mass, size and spin to the ubiquitous photon

You cannot give the photon what it doesn’t have [it does already have spin 1] and the photons do not force the orbits of the planets.

172. [Leif Svalgaard](#) says:

[October 17, 2011 at 1:44 pm](#)

Leif Svalgaard says:

October 17, 2011 at 1:35 pm

When you have done that with all the elements, what is left is possibly anthropogenic

And there *are* already anthropogenic elements, e.g. the UHI and land use.

173. [Norman Page](#) says:

[October 17, 2011 at 2:09 pm](#)

@ Leif 1.35

I think a good empirical correlation comes first – that then stimulates the necessary thought about possible physical mechanisms and links to provide a physical understanding. You don’t start from an assumed mechanism and an equation.

The IPCC modelers simply assumed that they knew all the elements that were energetically feasible. They exhibited an enormous capacity for ignoring the obvious – eg its cooler on the shade than in the sun and a convenient lack of curiosity.

After all their stated mission was not to investigate the roots of climate change but to investigate the anthropogenic contribution.

However after you have the empirical correlation I entirely agree with your statement

“For each element of the natural variability you must specify what physical mechanism causes that particular element [and if there is enough energy and coupling available], only then have

you gained understanding and can remove the element from the equation. When you have done that with all the elements, what is left is possibly anthropogenic [although it could be an overlooked natural cause]. “

174. *George E. Smith*; says:

[October 17, 2011 at 6:16 pm](#)

Tenuc says:

October 17, 2011 at 12:55 pm

Janice says:

October 16, 2011 at 8:58 am

“...But what is actually transferring these effects? We think of harmonics as being sound, but that isn't the medium here. So the transfer medium has to be a fundamental force. It can't be photons, so that leaves gravity as the fundamental force,,

Oh but it can be photons which, alongside gravity, force the orbits of the planets we observe. All we need to do is give real mass, size and spin to the ubiquitous photon, which works as a real repulsive bombardment field in the exact opposite direction to the apparent pull of the acceleration of gravity. “””””

Well I didn't think there could be more than one person at WUWT making up their own avant garde Physics; but evidently there are others. You should form a club.

There are so many sources of reliable presentations of fundamental Physics, that anybody who wants to learn it can access information from the very people who discovered the physics in the first place. If you can learn about electro-magnetism from James Clarke Maxwell himself, or Atomic Physics from Max Born; why waste your time with [dubdubdub.flybynitephysics.com](#)

175. *Janice* says:

[October 17, 2011 at 7:34 pm](#)

George E. Smith; says: “There are so many sources of reliable presentations of fundamental Physics, that anybody who wants to learn it can access information from the very people who discovered the physics in the first place. If you can learn about electro-magnetism from James Clarke Maxwell himself, or Atomic Physics from Max Born; why waste your time with [dubdubdub.flybynitephysics.com](#)”

True, Maxwell and Born are good for studying classical physics, but that does leave out quantum mechanics, eh? And quantum mechanics bottomed out about in the 60's, which is where string theory rears its somewhat ugly head. With something like ten equations (minimum) that need to be solved simultaneously, using a unique form of mathematics, to describe the ten dimensions that our universe is made up of. Or eleven, according to some theorists. And then we'll take strings and make branes (possibly ten dimensional) out of them. And there is absolutely no way to do an experiment, because there isn't enough energy in the whole universe to do the experiment which could possibly prove string theory.

Therefore, there might possibly be an alternate way of proving string theory, which is through indirect observation of physical phenomenon which can only exist if string theory is true. And if strings and gravity can be shown to have combined physical manifestations, then that would prove string theory and possibly lead to a true unification equation for all four of the fundamental forces. Therefore, the harmonics and spacings between bodies in a solar system actually are relevant, since gravity is such a weak force and it takes something like a solar system size to take gravitational forces out of the noise

of the other fundamental forces.

But this is all over at dubdubdub.flybynitephysics.com, right?

- [Bill Howell](#) says:

[October 17, 2011 at 7:38 pm](#)

Great post again, Paul. The comprehensive processing of a broad range of data, the results, and the explanations of the mathematical techniques are impressive and thought-provoking, as are your questions. It's a solid addition to your previous posts from Nov-Dec, then in the spring,

As with many others, it's going to take some time for me to adapt to the techniques you've, assuming that I can find sufficient time to get into them, one step at a time.

A couple of points/questions are of special interest to me (at first thought – other items will probably bubble up with time). There is NO need to answer, there's lots of time for me to mull these over on occasion:

- How the contribution from “ocean sloshing” (a slang term – but NOT referring to circulation, which brings other connotations) might compare to the presumed shifting of the Earth's shells.
- The phase change around 1929 (and several other comments) seem reminiscent of historical and geological references to the possibility that strong, rapid changes in the Earth's axis/ crustal movements may have occurred in the recent past (in particular 12 ky BP, 1500 BC and 700 BC, very approximately).
- Explanations of torsional effects at a distance within the solar system, especially if related to physical processes that are not the typical $1/r^2$ relationship, but perhaps even approaching first or zero order relations.
- Geomagnetic and cosmic ray manifestations of what?

I also enjoyed many of the posts, including (not exhaustively):

62. Ninderthana: October 15, 2011 at 5:35 pm personal interpretation

63. Werner Brozek: October 15, 2011 at 5:45 pm angular momentum in the solar system

64. davidmhoffer: October 15, 2011 at 5:53 pm Ernst Beck historical comments about 1929 reversal

77. davidmhoffer: October 15, 2011 at 8:12 pm morlets, Chandler, lunar orbit tides & climate

90. Richard Holle: October 15, 2011 at 11:21 pm <http://research.aerology.com/natural-processes/solar-system-dynamics/> – I'll have to look at this later..

91. rbateman: October 15, 2011 at 11:27 pm reminder of Piers Corbyn..

93. AusieDan: October 15, 2011 at 11:29 pm financial market reference (Harry S. Dent?)

96. Bernie McCune: October 15, 2011 at 11:54 pm Chandler R&D experience

121. ecliptic: October 16, 2011 at 7:54 am historical cycles

137. Peter Plails: October 16, 2011 at 1:56 pm past Corbyn & Vaughan postings

140. Paul Vaughan: October 16, 2011 at 2:58 pm further details and explanations

154. davidmhoffer: October 16, 2011 at 9:46 pm further details and explanations

157. aposticon: October 16, 2011 at 10:52 pm pendulum waves – fun video I'd seen before

Anyways, I'll only be able to look at this post once a week or so. Luckily, “persistence” is a great strength of sites (like WUWT) for those of us who can only occasionally get to the material. Thanks to Anthony Watts for accommodating work like this...

- [Leif Svalgaard](#) says:

[October 17, 2011 at 8:16 pm](#)

Norman Page says:

October 17, 2011 at 2:09 pm

I think a good empirical correlation comes first

If you fish around long enough and look at enough things there will be correlations just be chance. None of the correlations examined are 'good'. And for the ones that some think are good mechanisms must be found. There are enough claimed 'good' correlations to go around. Begin to look for mechanisms for those. As Paul would say: "Tip: check if there is a coupling and if there is enough energy available".

- *Paul Vaughan* says:

[October 17, 2011 at 8:50 pm](#)

@Richard Holle (October 15, 2011 at 11:21 pm) "*many years of work*"

Started in late November 2007. Easily found the 6.4 year framework right away (in local weather records) and wanted to understand.

"Richard Gross (NASA EOP expert) was the first to suggest a redirection of my focus from the solar system to lunisolar cycles. Physicist Piers Corbyn (WeatherAction.com) efficiently pointed directly at specific lunisolar cycles. Physicist Ian Wilson highlighted hierarchically-historic solar system shaping of lunisolar cycles. Their collective influence demystified coincidences (bottom-panel) on the following graph: [...]" – p.16

- *Richard Holle* says:

[October 17, 2011 at 9:33 pm](#)

Watch what happens when we have a Synod conjunction with Jupiter on 10-29-2011 when the moon is maximum south declination. There should be a larger than usual meridional surge of warm moisture coming off of the equator into the mid-latitudes having some intense interaction with the Mobil Polar Highs that will be forming the other half of the lunar tidal bulges in both hemispheres.

These patterns are what got me interested in wanting to understand WTF was going on, back in 1983.

- *Paul Vaughan* says:

[October 17, 2011 at 10:13 pm](#)

@Baa Humbug (October 16, 2011 at 6:54 pm) "*Might it not been better to delay the article until you had the time to respond to questions?*"

Can't imagine when such a time will ever again arise. Those days are in the rear view mirror.

-

@Bill Howell (October 17, 2011 at 7:38 pm)

Thanks for stopping by Bill. Good to 'see' you. Much appreciated.

- *Paul Vaughan* says:

[October 18, 2011 at 6:34 am](#)

Peter Plail (October 16, 2011 at 1:56 pm) "*[...] Magnetic process [...] [...] Magnetic effect that is one of the tools that Paul feels Piers uses in his predictions.*"

Some kind of misunderstanding/misinterpretation.

(Tip: Ask Piers for his views on Svensmark.)

-

Louis Hissink (October 16, 2011 at 2:49 am) "*I suspect that an electrical engineer might spot a few familiar relationships in Paul's graphs – which basically suggests explanations might be forthcoming if the plasma model was assumed, rather than the standard one.*"

Beware confounding.

“The majority of recent multidecadal terrestrial variability is due to natural spatiotemporal aliasing of differential solar pulse-position by terrestrial topology over basic terrestrial cycles including the year.” – p.10

Note that temperature is not singled out. Geomagnetic aa index shows the same patterns. Beware confounding. Bear in mind parallel processes also affected by lunisolar cycles (e.g. QBO) & solar cycle acceleration/deceleration. (And don't forget the year!! [Too much anomaly-think...])

The mainstream confusion is due to the spatiotemporal version of Simpson's Paradox. Models that are “physically correct” by *current* mainstream standards are at best a topological distortion of reality since they make *false* assumptions about the spatiotemporal framework.

No amount of “physics” [especially today's] can compensate for such fundamental misconception. They've *misinterpreted* the data. Hence the spectacular logjam on the river of mainstream enlightenment. Might as well call it **Simpson's Logjam**.

The mainstream **NEEDS** help from spatiotemporal aggregation experts.

- *Paul Vaughan* says:

[October 18, 2011 at 6:50 am](#)

@John G (October 16, 2011 at 8:59 am)

If you think I'm pushing a barycentric theory, you might want to consider the possibility that you've interpreted the message backwards.

Your comment reminds me of a similar misunderstanding in an earlier discussion where a commenter thought I was pushing the idea that LOD drives terrestrial climate.

- *Leif Svalgaard* says:

[October 18, 2011 at 7:21 am](#)

Paul Vaughan says:

October 18, 2011 at 6:34 am

The mainstream NEEDS help from spatiotemporal aggregation experts.

Nonsense

Paul Vaughan says:

October 18, 2011 at 6:50 am

Your comment reminds me of a similar misunderstanding in an earlier discussion where a commenter thought I was pushing the idea that LOD drives terrestrial climate.

All those misunderstandings stem from your inability to communicate.

- *E.M.Smith* says:

[October 18, 2011 at 10:37 am](#)

@davidmhoffer:

FWIW, I looked at the impact or potentials for impact from the way the circumpolar current gets shot through a jet where Antarctic Peninsula and S. America come together.

Your post makes me wonder if that's a key point for the lunar tidal cycle having an impact.

As the N/S tidal swing makes the depth at that 'jet' vary, there ought to be an increase / decrease cycle in the amount of cold water shot up the West coast of South America (the excess that doesn't fit through the 'jet' constriction). There could also be other places where there are secondary effects (like the tendency for the 'jet' to stir the S. Atlantic into a spin).

It's all a 'thought of the moment' hypothetical... but an interesting thought of the moment.

We've got the potential driver (lunar position), the visible effect (N. / S. Hemispheric tide variation with the long cycle lunar shifts) and the potential amplifier (Drake's Passage).

Might be interesting to look for correlations between the temperature of the ocean off of Chile and lunar cycling... and maybe check the depth / velocity profile at Drakes Passage for similar cycling.

Wonder if anyone has a grant for that... I've always wanted to see Patagonia ;-)

<http://chiefio.wordpress.com/2010/12/22/drakes-passage/>

FWIW, I've not read the detailed article yet. The posting was enough to fill my buffers for a few days. My interpretation of what I **think** the article is representing, in as concise (and thus more wrong) terms as I can make it, would be:

The first chart is Atmospheric Angular Momentum, vs Length of Day vs Neutron Flux. But done as "morlet wavelet power". That is, given a varying function where is the power in it located. See:

http://en.wikipedia.org/wiki/Morlet_wavelet

for an over view. It's just a way to find 'where is the bulk of the action' in something that's a bit chaotic.

So that chart shows that the Air is moving in sync with the Length of Day (i.e. changes in the earth rotation rate) that are in sync with solar changes (via the proxy of cosmic rays).

I've looked at some of the LOD changes vs solar changes correlation before, and looked at a variety of potential causes (including some rather brain bruising looks at the potential for Spin Orbital Coupling at a macro level between planets and sun). What this chart shows is a very clean correlation of the powers and motions. Hard to make that go away... or ignore it.

In short, it argues that "The Sun Rules, CO2 Drools..." and the author makes a case that we can't know what the CO2 contribution might be until the other effects are accounted.

The Chandler Wobble chart will need a bit more thinking. For now, it looks like it is at least showing a spike in position right on top of the 1930's Dust Bowl and drought / heat spike. I think the rest of it is saying "solar / lunar positions influenced or at least correlated with it". More of a 'sun and moon rule the earth' evidence.

Looking at it a bit more, the 179.3 year yellow lunisolar cycle CosLS line is, I think, the "punch line". It shows a nice long period cycle that directly overlays the cold 1800s into the warmer present, and is now 'rolling over' into a new drop. There is a minor dip in x and y period rate of change right on top of the 'cold 70s' and I'd take that whole mix to mean that the CosLS dominates longer term, but a change of 'rate of change of period' can have a 'blip' introduction. The conclusion from this would be that with CosLS headed down for many decades, we're headed into significant cold (and any 'blip' on top of that would be a 'year without a summer' in the north...) That x' power and y' power are now plunging in a downtrending CosLS is "bad news". IFF I've interpreted this correctly. Mechanism? The Chandler Wobble changes how much the earth is tilted toward the sun and can easily have an impact on arctic temperatures and AO state (that drives Russia and Canada into frozen or warms them from time to time) and via them, can make the rest of us quite cold too. AO is the Arctic Oscillation:

http://www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/ao.shtml In essence, the position of the north pole matters and the Chandler Wobble changes it. The Chandler Wobble has a strong connection to the lunisolar position cycle. Sun and Moon rule, CO2 drools, when it comes to weather and climate impacts (accepting for the moment the broken definition of climate as '30 year average of weather'). Also changes is wobble might slop the oceans around.

The 'colored carpet' graph is showing SOI Southern Oscillation Index of ocean state vs time.

<http://www.cgd.ucar.edu/cas/catalog/climind/soi.html>

With what looks like a clear oscillation in state in sync with the 'cold' period in the 1960s-1970s and the warm period recently. It looks to me like there might be a decade or two lag between the state change and impacts on average land temps, but that would take a bit more 'think time' to evaluate. What's clear is an ocean oscillation driving in sync with temperature cycles (and, via the prior graph of AMO, in sync with the lunar solar positions...)

The final graph shows a near identity between ocean temps (all of them, in two sets) and the "solar cycle acceleration". Done as Morlets, it's comparing the power at a point in time in the ocean changes to the power at a point in time in the solar cycle changes and finding that "they all go together when they go".

The net conclusion is that you must now show how CO₂, as driver of climate, is able to run backwards into controlling the power and position of the sun and the moon... Or accept that the sun and moon changes are driving climate changes. Possibly via changes in the earth wobble and rotation rates.

At least, that's my interpretation of it.

I think it's interesting work, but would really benefit from a 'de-jargon preprocessor' ... Maybe then we could check the assumptions and the reasoning that connects that to the conclusions.

- wayne says:

[October 18, 2011 at 12:32 pm](#)

Paul Vaughan:

I haven't been through all of the comments yet (time limited) but many who are criticizing your work clear know not what they are looking at. On a first pass over you PDF it is clear that this has to do with a very special area of gravitational interplay between the gravitational fields of the eight major planets and the sun and moon.

I would ask one thing of you though, could you also supply a brief summary description of the equations you are using such as (PP being planetary period) $(PP1*PP2)/(PP1+PP2)$ and other equations you use over and over through your work. I and others don't have the time to take a course on harmonics right now but would love to look a bit deeper in your contentions. Some links would do. Keep it light at this point.

It is well known that the current periods of the planets has much to do with these tiny gravitational tugs between each other over billions of years as periods and for sure probably has it's imprints on each planet's climate cycles.

Please try to explain a bit more on what Morlet analysis is, assuming 2π , or 10π , this has to do with complete rotation interval harmonics of influence but I have never delved into elliptic harmonics at this depth though have spent quite a bit of time in the past with gravity in solar system simulations. Supplying this would greatly help many here understand just what you are saying within without being experts in this area.

Also, when you show a graph oscillating between 1 and -1 can you also give some indication of the scale?

Keep it up.

-wayne

- *George E. Smith*; says:

[October 18, 2011 at 12:32 pm](#)

“”””” Janice says:

October 17, 2011 at 7:34 pm

George E. Smith; says: “There are so many sources of reliable presentations of fundamental Physics, that anybody who wants to learn it can access information from the very people who discovered the physics in the first place. If you can learn about electro-magnetism from James Clarke Maxwell himself, or Atomic Physics from Max Born; why waste your time with dubdubdub.flybynitephysics.com”

True, Maxwell and Born are good for studying classical physics, but that does leave out quantum mechanics, eh? And quantum mechanics bottomed out about in the 60's, which is where string theory rears its somewhat ugly head “””””

Well Janice, now you have me totally bamboozled; so I went back and reread my original post, and I am still totally bamboozled.

Could you please point out for me, just where in my post I excluded Quantum Mechanics; or for that matter String Theory, or anything else.

Well I suppose it is reasonable to presume that perhaps I was suggesting the exclusion of dubdubdub.flybynightphysics.com, although I never did that either; just asked why waste one's time on it.

As for string theory, I had a very interesting discussion about that, with another Physicist over a beer, and some Kobe beef sandwiches, at a home barbecue. Well we also discussed parallel or multi-verses. Mind you he's far more knowledgeable than me on Physics; he has one of those Nobel Physics Prize things, that some scientists get; and his is one of the real ones; not like that of our energy Czar, who got his for something somebody else discovered decades earlier; but politics intervened; well like the Einstein situation all over.

But I digress, this Nobellist observed that the more unprovable ones claims are, the more absurdly exotic they can be.

As for me, “string” theory strikes out on the first pitch. Anything that wiggles, can't be fundamental, since it must be made up of more primitive things that can move relative to each other.

Quarks might be fundamental, and this chap knows quite a bit about those; maybe more than anybody else.

But do tell where I offed Quantum Mechanics.

- *Agile Aspect* says:

[October 18, 2011 at 3:22 pm](#)

No introduction?

Okay, then that leaves the mathematics.

Since there are infinite number of wavelet representations, I'm always curious as to why you choose the Grossmann-Morlet wavelet for your time-frequency wavelet or packet?

For instance, why did you choose a wavelet with fix basis instead of one with an adaptive basis? Is the entropy of the signal constant?

If one looks at the form of the Grossmann-Morlet wavelet, it's essentially the FFT of a gaussian.

If one assumes the signal is not 2π periodic, then the FFT which is will respond as if there was abrupt

change in the signal.

I also noticed one of the references in the PDF was a reference to M. Mann regarding his use of wavelets. It appears Mann and company are using Slepian wavelets and SVD.

Would you care to comment on how their use of Slepian wavelets and SVD relates to your use of the Grossmann-Morlet wavelet?

Have you posted the code for your version of the Grossmann-Morlet wavelet?

Note, Mann and company do provide a decent introduction to the wavelets they're using. You could learn a great deal regarding presentation from that paper.

And where are the spatio-temporal results?

- *Lazarus* says:

[October 18, 2011 at 6:26 pm](#)

A practical joke – surely?

Even if somehow it actually makes sense to some boffin somewhere what is clear from the comments is that Watts certainly hasn't got a clue any more than the rest of us. He must have been told it was something that supported the 'skeptical' position and cast doubt on 'the consensus' and just went with it.

It also confirms that he doesn't have a clue about science in general and just posts things that he assumes confirm his biases.

- *Smokey* says:

[October 18, 2011 at 6:34 pm](#)

Lazarus,

It is you who hasn't got a clue. Anthony Watts didn't write this article.

Why don't you submit an article – written by you. Based on your obvious lack of comprehension, I'm sure it would be fun and easy to deconstruct.

DavidMHoffer says:

[October 18, 2011 at 6:59 pm](#)

E.M. Smith;

As the N/S tidal swing makes the depth at that 'jet' vary, there ought to be an increase / decrease cycle in the amount of cold water shot up the West coast of South America (the excess that doesn't fit through the 'jet' constriction). There could also be other places where there are secondary effects (like the tendency for the 'jet' to stir the S. Atlantic into a spin). >>>

Beck was on the same page in regard to the above, but he was looking at it from the perspective of CO2 concentrations. As the momentum (for lack of a better term) of the water is changed by the moon's orbital phases, areas of large spinning tracts of water would be created which in turn would play havoc with downwelling and upwelling. Beck shared with me that he had identified several areas on earth where this could be demonstrated to occur. One was in the North Atlantic but the "big ones" were south hemisphere, but I don't think he specified where. His point was that not only would that result in changes regarding how water currents redistribute heat, but also that the amount of CO2 absorption (in areas of cold water) but also outgassing as cold (CO2 rich) water is moved to warmer areas causing it to outgas CO2.

Beck was pretty confident of this being a driving force of both temp variations and CO2 variations and was corresponding in depth with a colleague (never said who) that was doing further research. Beck's

own focus was the ice core data which he believed exhibits a 200 year resolution rather than a 30 year. Incidentally, if you break the GISS temp record down by latitude, the warming bubble in the 1930's is MUCH more pronounced in the SH than the NH. Given the much larger percentage of water surface in the SH, and constriction points like the one you mentioned, any change in the moon's orbital phases would in theory be much more pronounced in the SH. Given the correlation with the temp record, that appears to support both Beck and Vaughn (if we're interpreting Vaughn correctly).

- *dauidmhoffer* says:

[October 18, 2011 at 7:19 pm](#)

Paul Vaughn;

If you think I'm pushing a barycentric theory, you might want to consider the possibility that you've interpreted the message backwards.>>>

Is it just impossible for you to respond with something as simple as what you ARE pushing? If you put the same amount of effort into answering questions as you do in explaining that you don't have time to, and actually answered some straightforwardly instead of snark like the comment above, you might find the results rather positive.

<http://wattsupwiththat.com/2011/10/15/shifting-sun-earth-moon-harmonies-beats-biases>
enddoc