

## Sunspotters: Mother Sol is in a Re-run of Twin Peaks 3 6 13



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Twin Peaks - Dale Cooper: (1990)

"Harry, I have no idea where this will lead us, but I have a definite feeling it will be a place both wonderful and strange."

### 1. NASA two Decades later ....

"Something unexpected is happening on the sun. 2013 is supposed to be the year of Solar Max, but solar activity is much lower than expected. At least one leading forecaster expects the sun to rebound with a double-peaked maximum later this year.

The quiet has led some observers to wonder if forecasters missed the mark. Solar physicist Dean Pesnell of the Goddard Space Flight Center has a different explanation:

*“This is solar maximum,” he suggests. “But it looks different from what we expected because it is double peaked.”*

Astronomers have been counting sunspots for centuries, and they have seen that the solar cycle is not perfectly regular. For one thing, the back-and-forth swing in sunspot counts can take anywhere from 10 to 13 years to complete; also, the amplitude of the cycle varies. Some solar maxima are very weak, others very strong.

Pesnell notes yet another complication: “The last two solar maxima, around 1989 and 2001, had not one but two peaks.” Solar activity went up, dipped, then resumed, performing a mini-cycle that lasted about two years.

And he goes on ....somewhat wryly,

*“We may be seeing what happens when you predict **single** amplitude and the Sun responds with a **double peak**,” comments Pesnell.*

Article: [http://science.nasa.gov/science-news/science-at-nasa/2013/01mar\\_twinpeaks/](http://science.nasa.gov/science-news/science-at-nasa/2013/01mar_twinpeaks/)

(Dear Dr. Pesnell I will note your twin peak prediction for review on 1/1/14.)

## 2. Best Solar Video Ever!

The link to the **best video** I have seen explaining both the Twin Peaks and the sunspot cycle ... all in 4 minutes ... [watch in Full Screen](#). Great graphics and solar scenes ....was Spielberg involved?

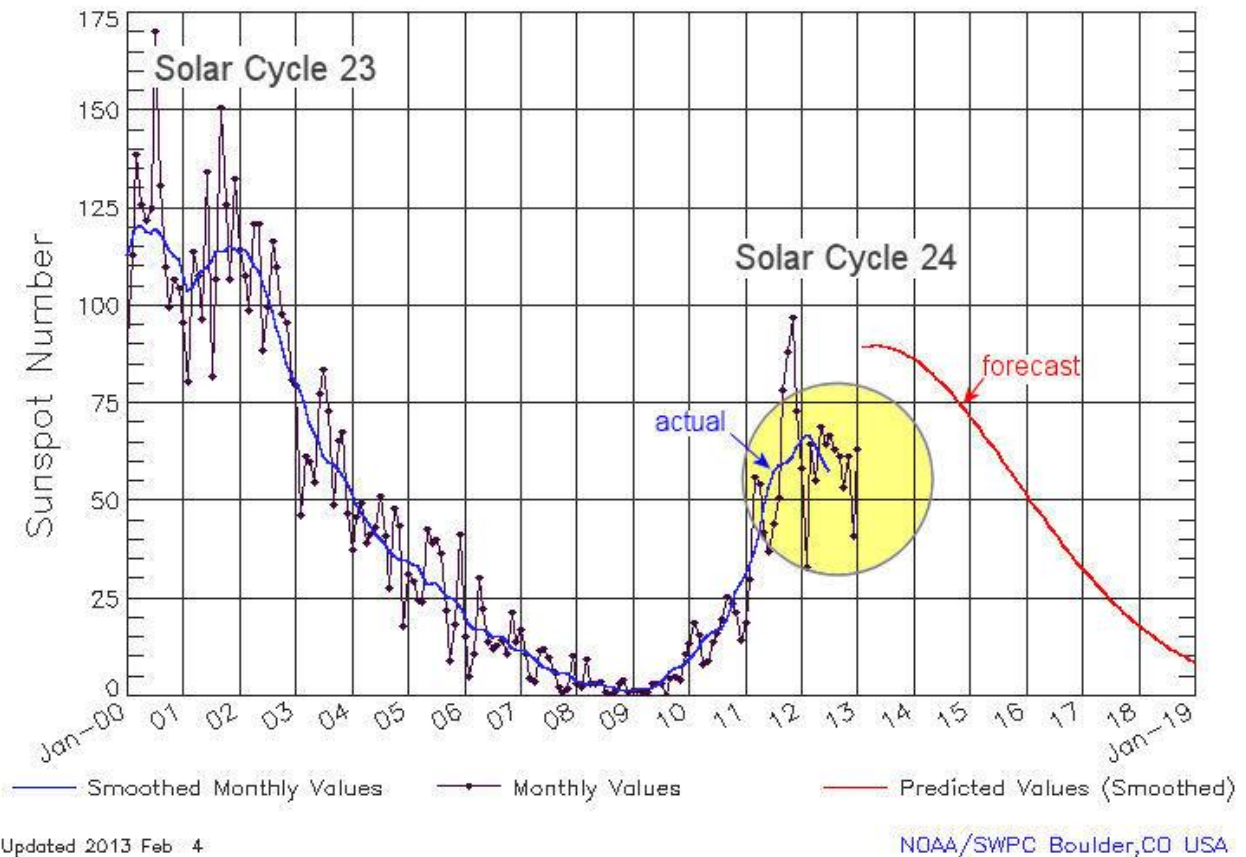
[http://www.youtube.com/watch?feature=player\\_embedded&v=6j4bl57D\\_1U#!](http://www.youtube.com/watch?feature=player_embedded&v=6j4bl57D_1U#!)

## 3. Graph of Cycle 23 & 24

Note that the curve of actual monthly sunspots is not matching the revised, revised, and recently lower revised red forecast curve.

## ISES Solar Cycle Sunspot Number Progression

Observed data through Jan 2013



#### 4. Forecasting the Sun's activity?

"If you can't forecast accurately, forecast frequently." Anon

When I started my solar journey, the initial prediction of Cycle 24 activity by Solar Scientist was "sun shaking".

In 2006 Solar Seers predicted that:

*"The next sunspot cycle will be 30% to 50% stronger than the previous one," she says. If correct, the years ahead could produce a burst of solar activity second only to the historic Solar Max of 1958.* (Mausumi Dikpati NCAR) [156-180 max monthly avg. spots]

Each year after that estimate, solar activity predictions dropped lower, Oct 2008 - 137 max ... and lower ... and lower ... until the most recent prediction is:

### **“Lowest Solar Activity in over 100 years”**

*“We are currently over four years into Cycle 24. The current predicted and observed size makes this the **smallest sunspot cycle since Cycle 14** which had a maximum of 64.2 in **February of 1906.**” (David Hathaway, NASA) (my emphasis)*

Article at <http://tinyurl.com/bmgrw7k>

### **Why it’s Hard to Predict?**

My comments are not to demean the solar scientists, who are doing great work in understanding the sun, solar cycle, and how it affects the solar system and a planet I have some personal interest in ...Third from the Sun.

Solar activity, as we have discussed previously, affects in the short and long term nearly all activities on or near Earth: protective magnetic fields, Van Allen belts, atmosphere, biosphere, climate, and even earthquake activity.

We’ve only been observing and studying the sun under optimum conditions ... in space ... for about four decades. While some research began earlier with V2 rocket launches from 1946-51, only with the launch of Skylab in 1973 did we focus an array of instruments on the sun.

Solar theories, even if imperfect, provide a template to compare observations and facts and to refine and discover what the underlying solar processes are. The progress of science requires making, evaluating, and discarding hypotheses and theories.

“We must conduct research and then accept the results. If they don't stand up to experimentation, Buddha's own words must be rejected.”

— Dalai Lama XIV

**Space buffs only** ... two links... short video of a V2 launch in 1947 and a fascinating 20 minute Army video of the total process of assembly and launching V2s. OSHA would have a hissy fit. Sixty V2 rockets were launched.

Launch <http://youtu.be/i8wWQWfcyeI>

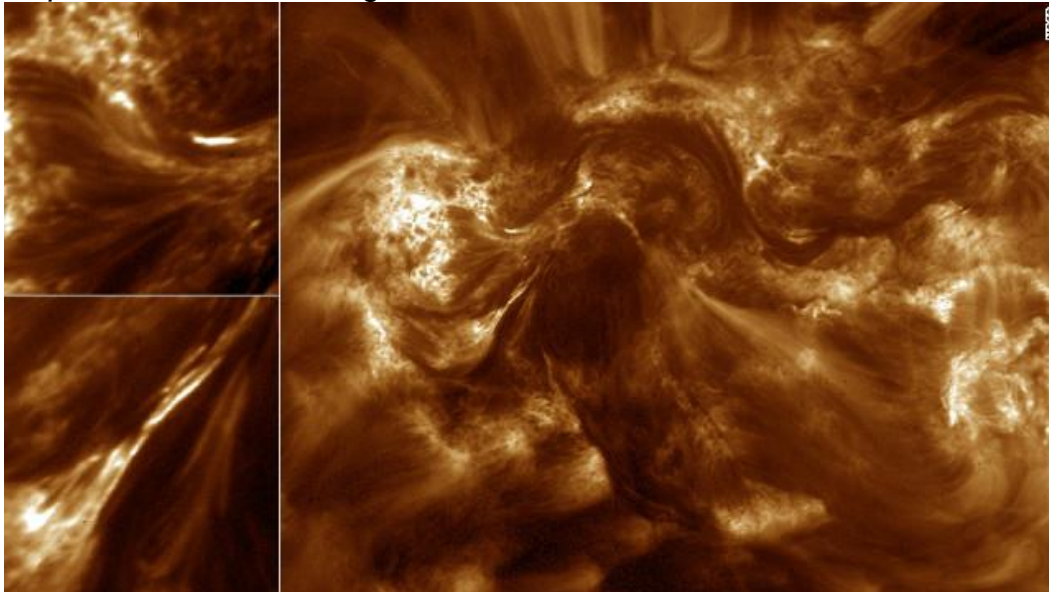
Assembly & Launch <https://www.youtube.com/watch?v=4MC1IzADQc0>

“Out of the vastness of the New Mexico desert may come the miracle of Tomorrow’s Science.”

## 5. Solar “Twist & Shout” Sun’s magnetic braids in fine detail

“University of Central Lancashire's Dr Robert Walsh says new detailed pictures of the Sun will provide vital clues to predicting powerful bursts of radiation which can knock out GPS and communications signals.”

*"For the first time we can see the reconnection and unraveling of the braids within the Sun's outer atmosphere and confirms our theory that this is one of the key processes responsible for the heating of the Sun."*



UK Telegraph video .. Marvelous details

<http://tinyurl.com/alpmt3p>

**Always something “both wonderful and strange” from Mother Sol.**