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Climate Stats: Update

Sunspot Count Continues Low

The SS count for February was 26.1, which compares to 25.8 for January. The recent low was 18.9 in December. The high for Solar Cycle 24 was 146.1 in February 2014. The peak for SC 23 was 244.1 in July 2000.

Solar physicists have been expecting a significant decline in solar activity and the decline is the most distinctive since the early 1900s. On the bigger picture, it could extend into another Grand Solar Minimum.

It's been long understood that Solar Minimums have been associated with cooling trends and the Little Ice Age is the last outstanding example. This reached its coolest in the late 1600s and is considered to have ended in the mid 1800s. The Modern Warm Period relates to unusually high solar activity in the mid part of the 1900s.

Originally, it was assumed that the overall energy output from the sun was constant. Satellite measure records minor variation, not enough to explain changes in the Earth's climate. Changes in the orbits within the solar system have been long accepted. More recently, the work on cosmic rays forcing cloud formation is becoming more widely accepted. Lower electro-magnetic fields surrounding the Earth during declining solar allows more rays through. This generates more cloud formation and consequent cooling. This has been demonstrated in the lab and observed "up there".

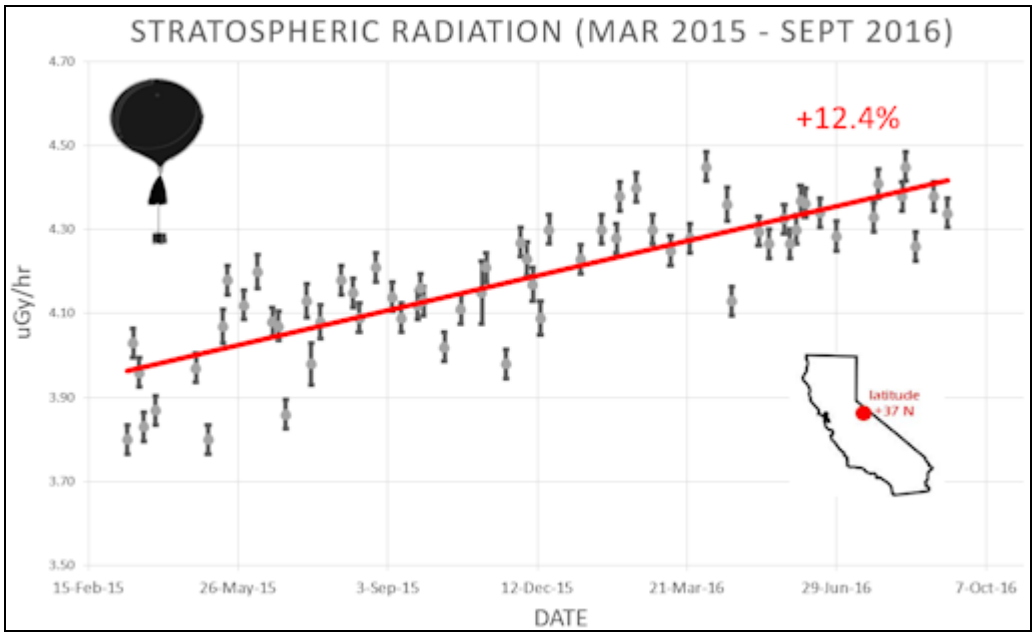
Throughout the record of temperature change, the amount of atmospheric CO2 has followed significant climate changes by some 400 to 800 years.

Spotless Days

The ultimate feature of declining solar activity are days with no sunspots.

March 4th recorded a zero day, making the count for 2017 twelve days or 19%. Last year's numbers were 32 days or 9%. For 2009 the numbers were 260 days or 71%.

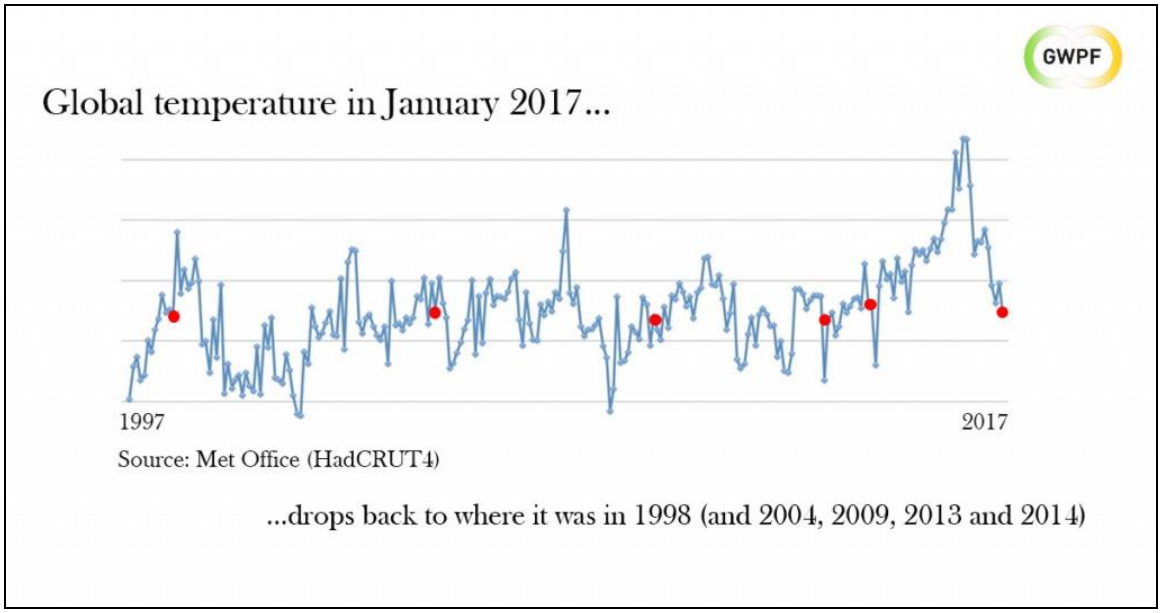
Cosmic Radiation



Source: SpaceWeather.com

- During a Solar Minimum, more cosmic energy gets through to the atmosphere.
- This prompts increasing cloud cover.
- Which reflects the sun's energy to space, which forces cooling.

Satellite Temp: Posting for January



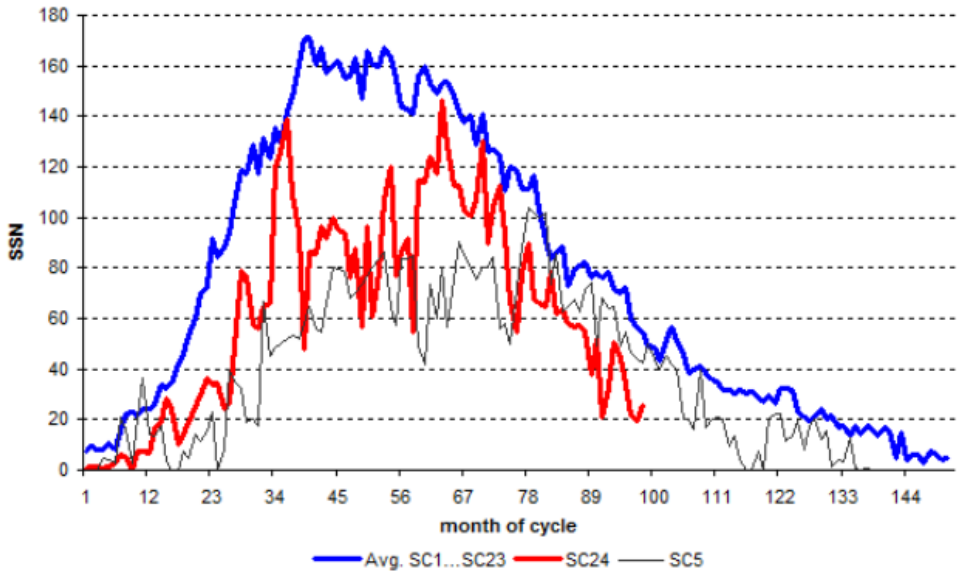


Figure 1: The monthly activity of solar cycle 24 since December 2008 (red) compared to the mean solar cycles 1-23 (blue) and the very similar SC 5 (black).