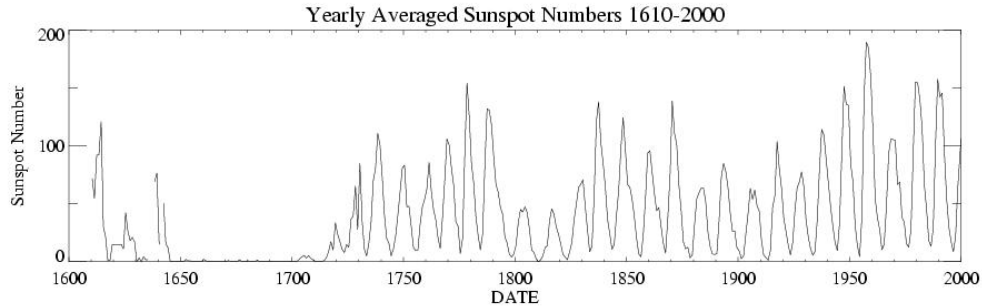


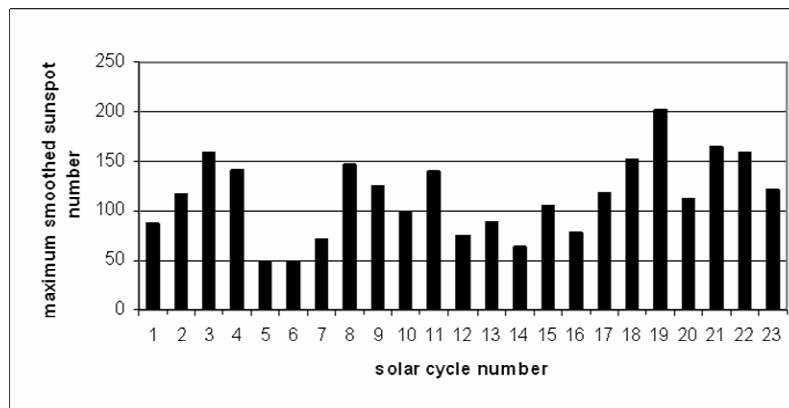
A Look at All Twenty Three Solar Cycles

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Although we've observed sunspots for several thousand years, it wasn't until the middle of the 18th century that Hendrick Schwabe discovered that sunspots come and go in roughly 11-year cycles. Shortly after Schwabe's discovery, Rudolph Wolf devised a mathematical expression that created a common standard to count sunspots, resulting in data for 23 solar cycles. A form of that data is plotted in the figure below.



If you're wondering why Cycle 19 doesn't reach 201 (which was its maximum smoothed sunspot number), note that what is plotted is the yearly averaged sunspot numbers – not the maximum smoothed sunspot numbers. You can see the long-term cyclic nature of sunspot cycles in this plot. But let's plot the maximum smoothed sunspot number of each cycle – it will make this cyclic nature a bit more obvious.



One observation from this data is that there have been three long-term periods of higher sunspot activity and two long-term periods of lower sunspot activity.

A second observation from the data is that we have lived through the highest period of the three higher periods. How fortuitous it was that radio came along at the beginning of this highest period.

A third observation is that we appear to be headed for another long-term period of lower solar activity. Although what Cycle 24 will do is still debated, I believe that scientists will have a single consensus for Cycle 25 – it will be low, followed by several more low ones.

Of course the past history of the Sun may not be a good predictor of future activity (sounds like the caveat for investing in the stock market, doesn't it?). Not only don't we fully understand the solar cycle process, we only have a couple hundred years of data for a process that has likely been going on for thousands or millions of years – a small sample size indeed.

The moral here is that if you're going after any awards on the higher bands (10m DXCC, for example) you may want to hit those bands really hard during Cycle 24. It may be very tough if you wait until Cycle 25.