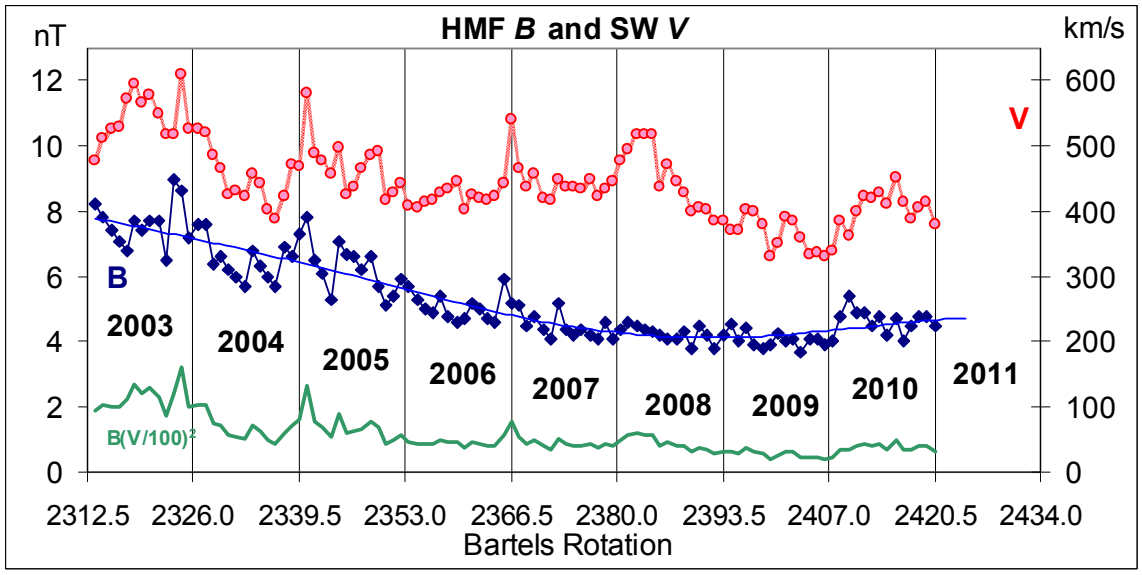
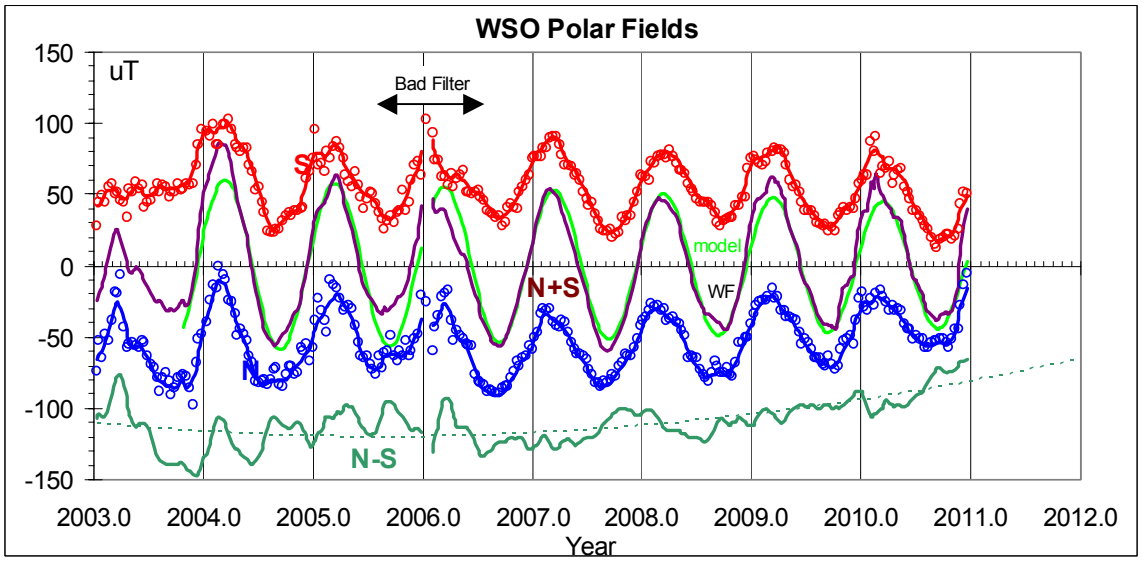
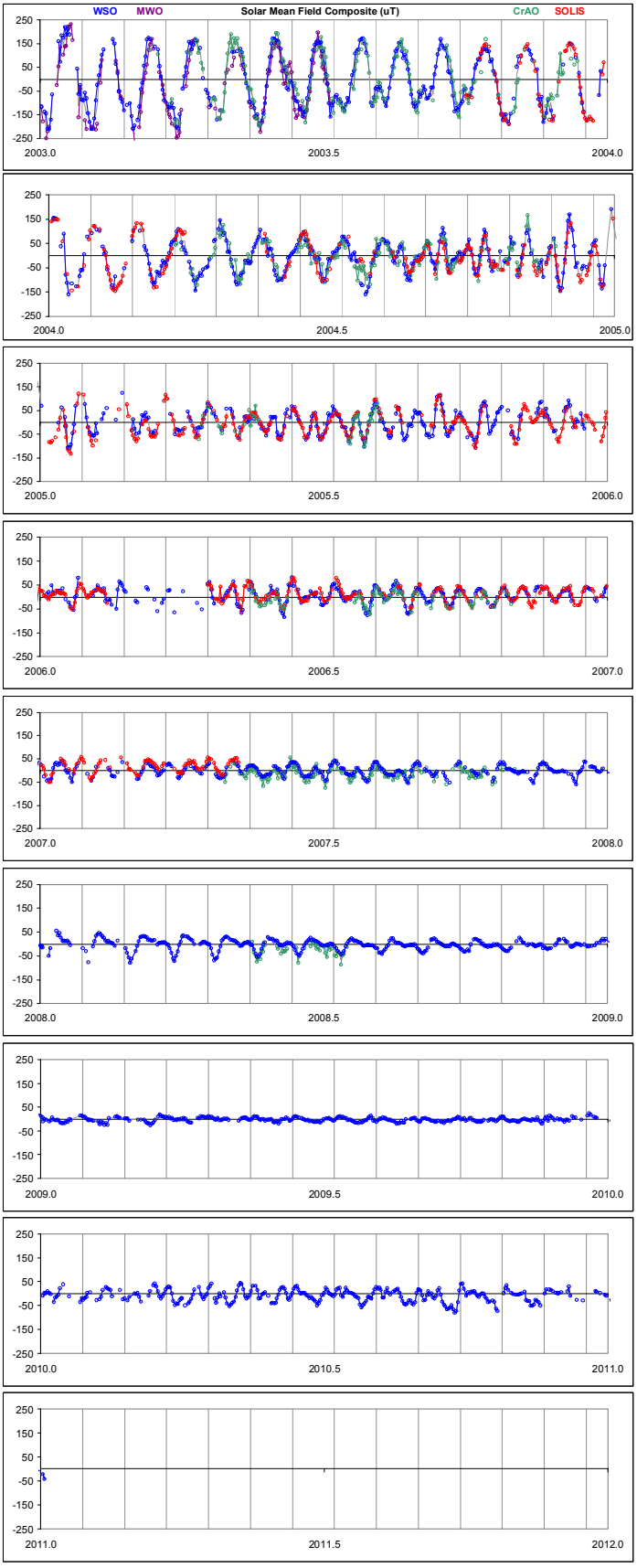


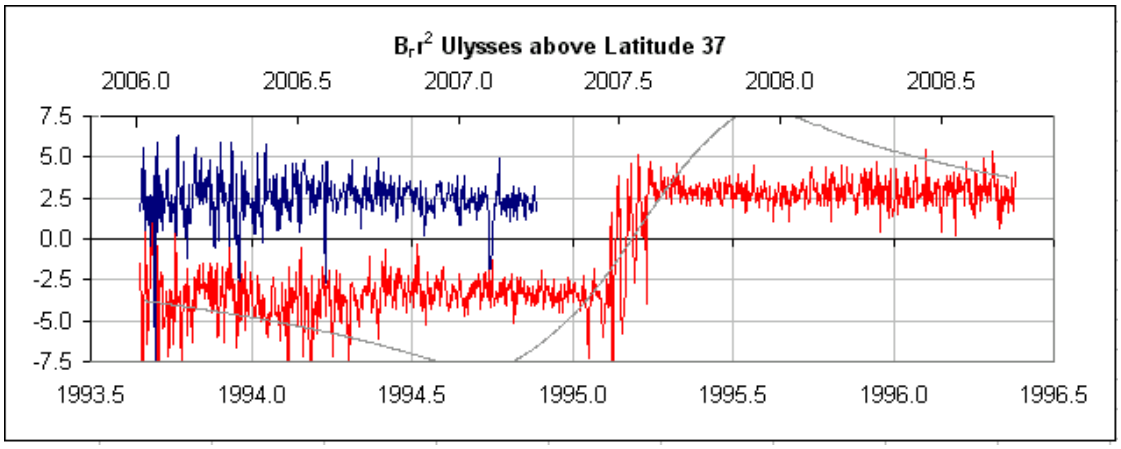
Bartels rotation averages of Interplanetary Magnetic Field Strength, B nT, and Solar Wind Speed, V km/s for the last seven years. Least squares trend lines are shown. The green curve shows a measure of geomagnetic activity calculated from BV^2.



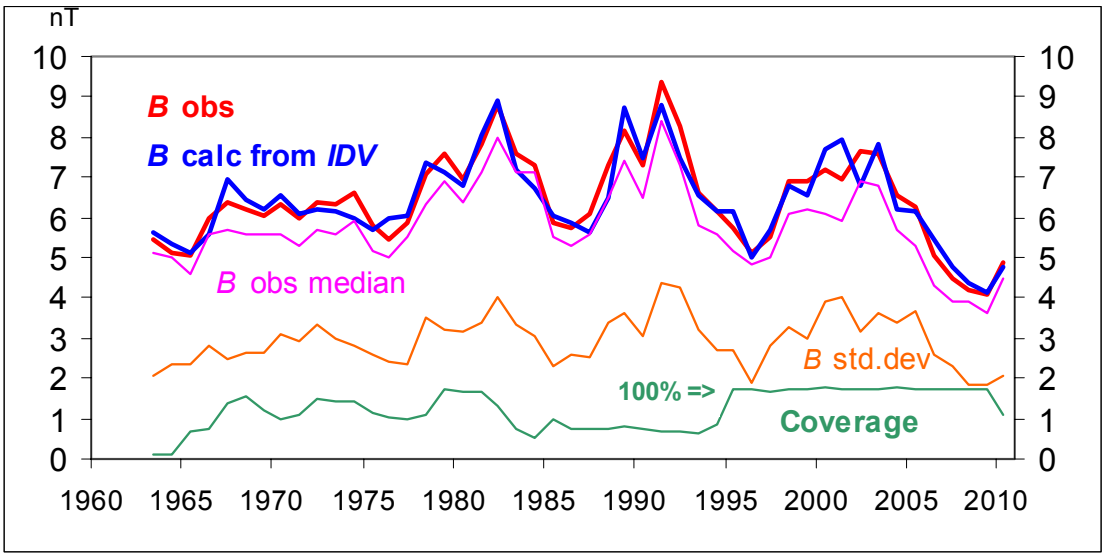
The solar Polar Fields measured at the Wilcox Solar Observatory. The sum (N+S) shows the annual modulation [green curve = calculated from model], while the difference (N-S) is a measure of the dipole moment. The plot shows the field smoothed over one rotation, but plotted every 10 days. The "gap" in early 2006 is due to very bad weather at Stanford. The scatter and weakening polar fields from summer 2005 to summer 2006 are due to a weakening green-light filter causing increased noise-level The reduced polar fields [WF] late summer 2008 is due to scattered light due to the thousands of wildfires in California.


WSO
MWO
Solar Mean Field Composite (uT)
CrAO
SOLIS
250
150
50
-50
-150
-250
2003.0
2003.5
2004.0
2004.5
2005.0
2005.5
2006.0
2006.5
2007.0
2007.5
2008.0
2008.5
2009.0
2009.5
2010.0
2010.5
2011.0
2011.5
2012.0

The Mean Field of the solar disk reduced to the SOLIS scale (which is 1.86 times WSO). The MF is a good proxy for the IMF near the Earth 4.5 days later.

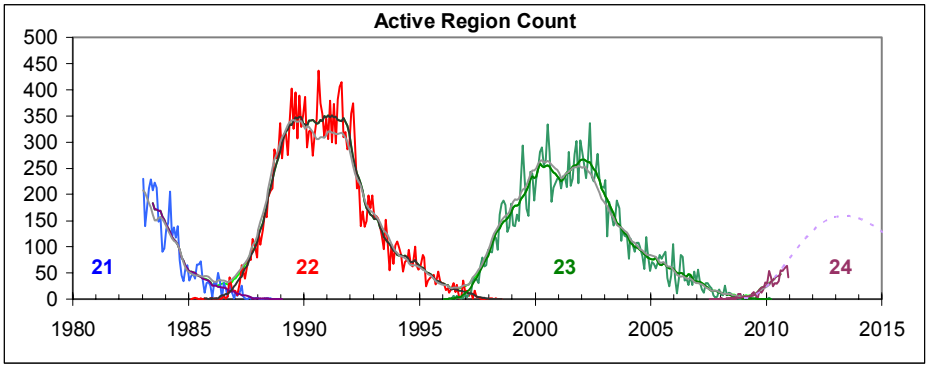


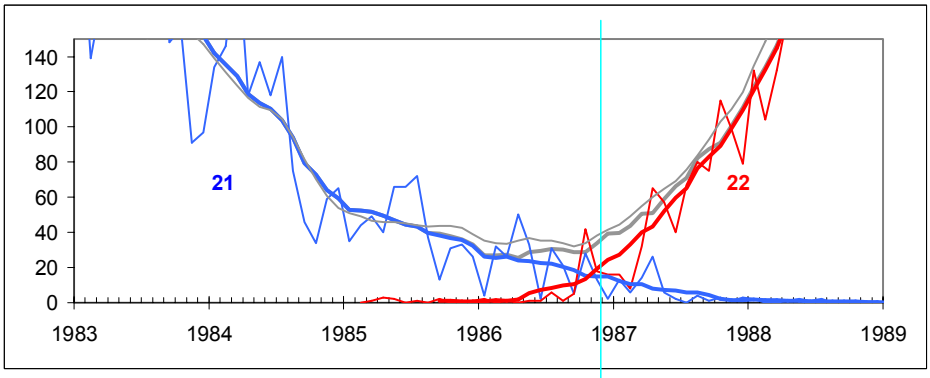
Radial component of IMF measured by Ulysses spacecraft normalized to distance of 1 AU. Recent data (dark blue) compared to data from last minimum (red).

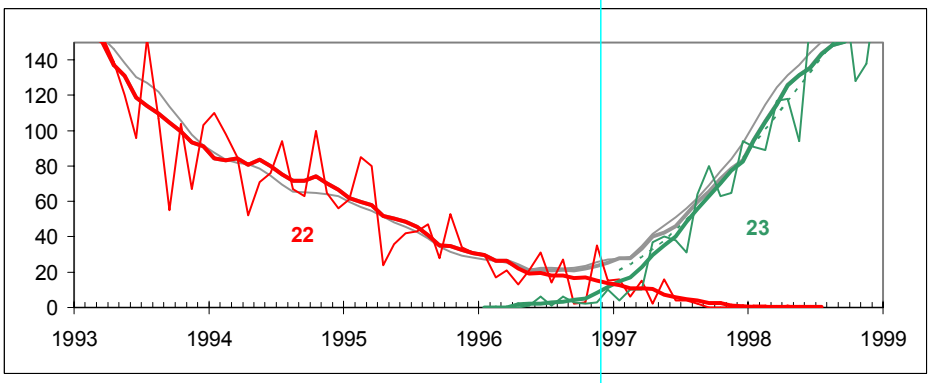


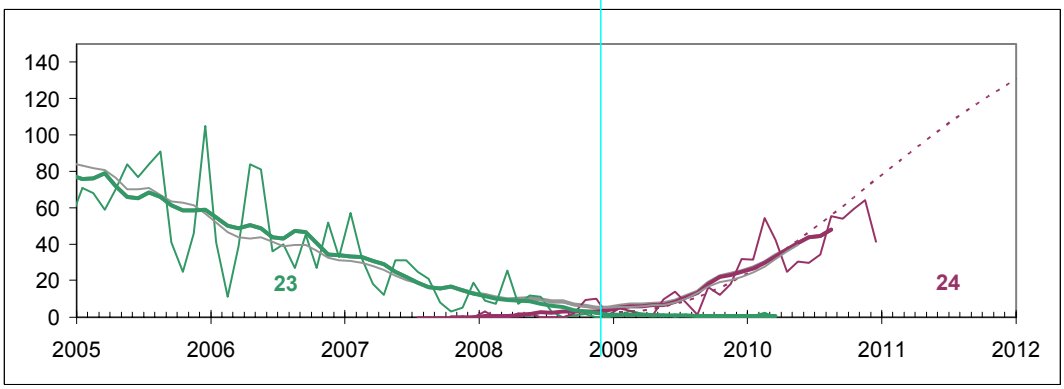
Observed (red) and calculated from *IDV* (blue) yearly averages of IMF strength *B*.

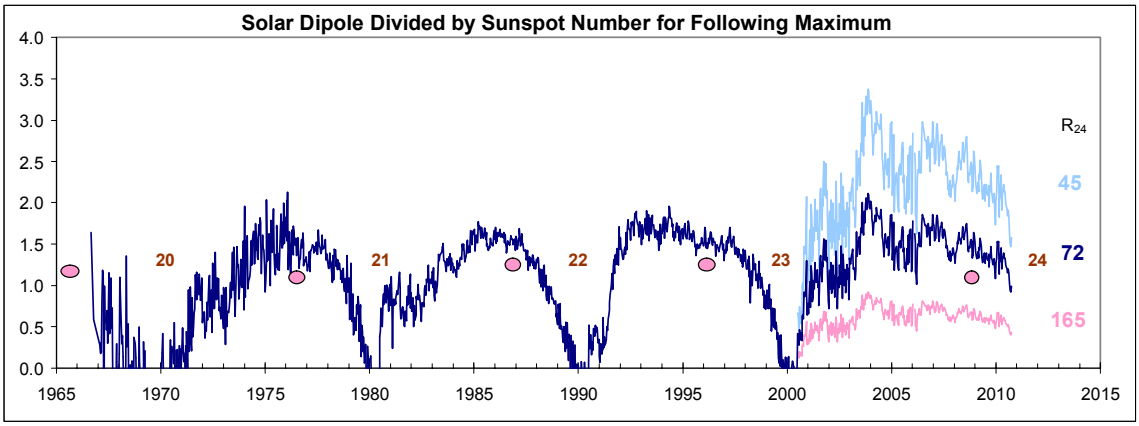
Next page: Count of 'active regions with spots' for the past few cycles. The count is really a count of days in each full month the region was visible [and no more than 70 degrees from central meridian] and then summed for every region. Yearly smoothed values are also shown as the 'smoother' curves. Different cycles are coded with a different color. The detailed figures show the transitions between cycles. Note that cycle 24 has just barely (but certainly) begun.


Active Region Count
500
450
400
350
300
250
200
150
100
50
0
1980
1985
1990
1995
2000
2005
2010
2015
21
22
23
24

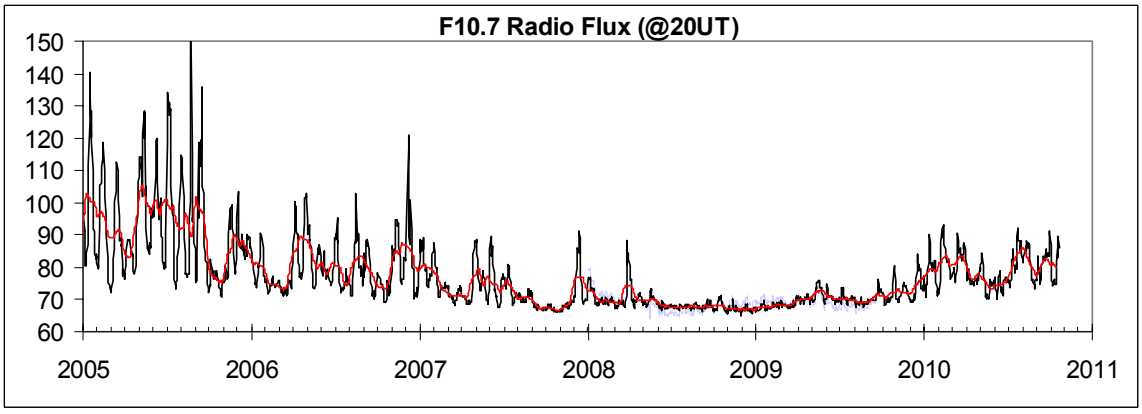

140
120
100
80
60
40
20
0
1983
1984
1985
1986
1987
1988
1989
21
22


140
120
100
80
60
40
20
0
1993
1994
1995
1996
1997
1998
1999
22
23

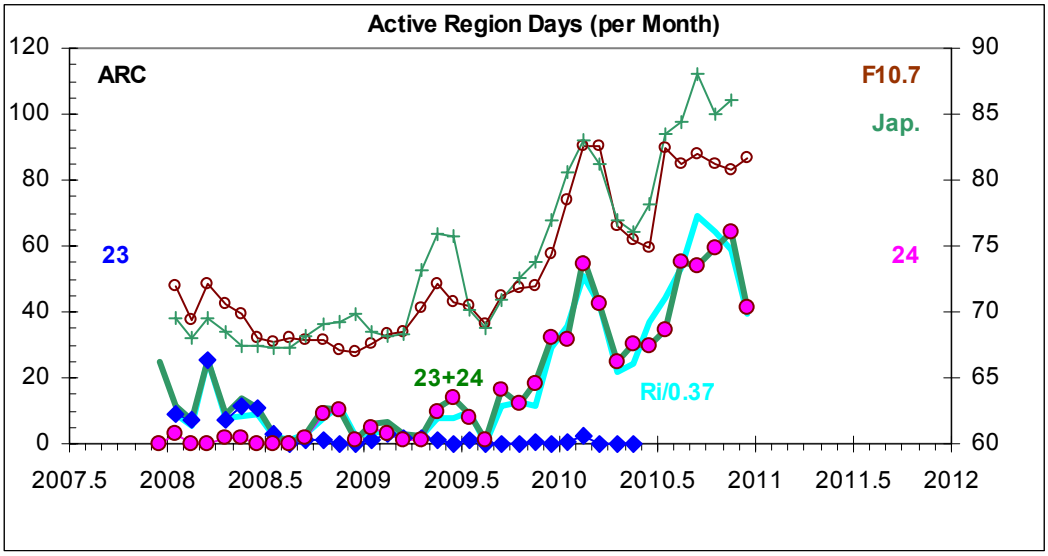

140
120
100
80
60
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
23
24



As a measure of the solar polar field we take the absolute difference between the North and South polar fields in the WSO standard 3' aperture, using MWO averaged into the WSO aperture and scaled to fit WSO [for 1976-1982] before the start of the WSO observations. A 'polar field cycle' can be defined from one reversal to the next [roughly from solar maximum to the next solar maximum]. The 'run' of the polar field values from each polar cycle is then divided by the 'size' [Rmax] of the next sunspot cycle If the polar fields were controlling Rmax, this procedure would make all the so normalized polar cycles look alike. The above plot shows the normalized polar cycles in dark blue. For the latest polar cycle [from 2000 to 2013] we don't know Rmax for cycle 24, so we divide by representative guesses [45, light blue; 72, dark blue; 165, pink]. Our prediction [72] would be the divisor that makes the latest polar cycle most like the other ones.



Daily values of the F10.7 cm radio flux at 20 UT.



The number of days per month where a NOAA numbered region was on the disk within 70 degrees of Central Meridian, separately for cycle 23 [blue] and cycle 24 [pink]. A minimum in December 2008 is suggested. The brown symbols show the F10.7 radio flux [right-hand scale].

The data on these pages will be updated about every few weeks.