

SB PROP @ ARL \$ARLP013
ARLP013 Propagation de K7RA

ZCZC AP13
QST de W1AW
Propagation Forecast Bulletin 13 ARLP013
>From Tad Cook, K7RA
Seattle, WA March 27, 2015
To all radio amateurs

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Sunspot numbers and solar flux both rose this week. Average daily sunspot numbers from March 19 to 25 were up 24.8 points to 83.9, compared to the previous seven day period. Average daily solar flux rose from 117.5 to 122.4.

Average planetary A index dropped from 29.4 to 19.4, although conditions continued to be active. March 22 and 23 had planetary A index numbers at 24 and 21, but there was nothing like the number 117 on March 17, a huge, huge level for the A index.

We saw one new sunspot region on March 19, two on March 21, three on March 22 and three more on March 23, another new one on March 24 and yet another two days later on Thursday, March 26.

Predicted solar flux is 135 on March 27 to 30, 145 on March 31 and April 1, 140 on April 2 and 3, 130 on April 4 and 5, 125 on April 6 to 8, 120 on April 9 and 10, 115 on April 11 to 19, 120 on April 20, 115 on April 21, 120 on April 22 and 23, and 125 on April 24 to 27.

The forecast for the next few days changed dramatically from Wednesday night's flux prediction, which had flux values at 150 on March 27 and 28, 145 on March 29 and 30 and ran in the ARRL Letter. As of Thursday night (March 26) the predicted value for all four of those days sank to 135.

On March 25 the predicted planetary A index for March 26 was 8, which turned out to be precisely correct. The latest A index prediction shows 15 on March 27, 25 on March 28 and 29, then 15, 10 and 5 on March 30 through April 1, 12 on April 2 to 4, 5 on April 5 and 6, 8 on April 7 and 8, 5 on April 9 to 11, then 15 and 30 on April 12 and 13, 20 on April 14 to 16, 15 on April 17, 20 on April 18 and 19, then 12, 5 and 15 on April 20 to 22, and 25 on April 23 and 24.

Petr Kolman, OK1MGW of the Czech Propagation Interest Group, predicts geomagnetic conditions should be quiet to unsettled March 27, active to disturbed March 28 and 29, quiet to unsettled March 30 through April 2, quiet to active April 3, quiet to unsettled April 4 and 5, quiet on April 6, mostly quiet April 7 to 10, quiet to unsettled April 11 and 12, active to disturbed April 13 to 16, quiet to unsettled April 17, quiet to active April 18 and 19, and mostly quiet April 20 to 22. You can see that the geomagnetic conditions are all over the place, with many active periods. This is typical after the solar cycle passes its peak, which for cycle 24 was about a year ago. You can see the peaks in the smoothed (averaged over a whole year) sunspot numbers and solar flux in tabular form on pages 14 and 15 at <http://legacy-www.swpc.noaa.gov/weekly/pdf/prf2062.pdf> It looks like sunspot numbers peaked around March through May 2014 and solar flux around May through July of the same year.

The word "Legacy" in the above URL reminds us that these weekly publications are moving to <ftp://ftp.swpc.noaa.gov/pub/warehouse/> where you select the year of interest (in this case 2015, of course) in the folder names toward the bottom of the page, then the

WeeklyPDF folder. 2015 began with prf2053.

John Burgoon, KC9TUI of Bloomington, Indiana wrote about his trip to Florida, which coincided with the huge geomagnetic upsets of over a week ago.

On March 23, John wrote, "Last week I went on vacation to Amelia Island, Florida, happily toting my new 17 meter mobile home brew system. I had a carefully tuned dipole and a single vertical whip. By the time we drove down, settled in, and finally got to the point that I could set up on the beach, I could not hear much at all. On Monday morning I heard a few signals, but no contacts. On Tuesday March 17th all I heard was the background hiss of my radio. I set up again on Thursday afternoon (19th) and again did not hear anyone. Not a single contact. That's the breaks sometimes.

Next time I'll have more equipment, as I am currently building radios for 40 meters, 20 meters, and 10 meters."

Check out John's bio on QRZ.com, and see what he is doing lately with his homebrew projects.

Don't forget, the CQ World Wide WPX SSB Contest is this weekend, March 28 and 29, and the CW weekend is the last weekend in April. The cool thing about this contest is that every prefix worked is a multiplier. So if your call begins with KQ4, that is a separate multiplier from a call starting with WS1. You may have a rare prefix, or even a unique one in the contest, making you sought after like DX even though you are right here at home in the United States.

See <http://www.cqwp.com/> for details.

For more information concerning radio propagation, see the ARRL Technical Information Service at <http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/wlaw-bulletins-archive-propagation>. More good information and tutorials on propagation are at <http://k9la.us/>.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrl.org/bulletins>.

Sunspot numbers for March 19 through 25 were 71, 27, 40, 88, 119, 127, and 115, with a mean of 83.9. 10.7 cm flux was 109.3, 112.7, 113.6, 122.4, 128.1, 133, and 137.8, with a mean of 122.4. Estimated planetary A indices were 28, 24, 14, 24, 21, 12, and 13, with a mean of 19.4. Estimated mid-latitude A indices were 19, 18, 12, 16, 16, 9, and 10, with a mean of 14.3.

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