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ARLP010 Propagation de K7RA

ZCZC AP10
QST de W1AW
Propagation Forecast Bulletin 10 ARLP010
>From Tad Cook, K7RA
Seattle, WA March 7, 2014
To all radio amateurs

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Average daily sunspot numbers were up for the recent reporting period (February 27 through March 5) and average daily solar flux decreased slightly, compared to the previous seven days. Average daily sunspot numbers increased nearly 29 points to 202.4, and average daily solar flux was off a little more than four points to 162.9.

The latest predictions for solar flux over the near term have steadily declined over the past ten days. The predicted average solar flux for the ten day period between March 7-16 was 161.5 in the February 25 forecast, 156 in the March 1 outlook, 138.5 on March 3, 135.5 on March 5, and 132 on March 6.

Predicted solar flux is 145 on March 7, 135 and 130 on March 8-9, 125 on March 10-11, 130 on March 12, 135 on March 13-14, 130 on March 15-17, 135 on March 18-20, 145 on March 21, 155 on March 22-24, and peaking at just 160 on March 25-27. It then declines to a low of 120 on April 11-13.

Predicted planetary A index is 5 on March 7, 12 on March 8, 10 on March 9-10, 8 on March 11, and 5 on March 12 through April 4.

F.K. Janda, OK1HH predicts quiet geomagnetic conditions on March 7, mostly quiet March 8-9, quiet to active March 10, quiet to unsettled March 11, mostly quiet March 12, quiet March 13-14, mostly quiet March 15, active to disturbed March 16-17, mostly quiet March 18, active to disturbed March 19, quiet to unsettled March 20-21, quiet to active March 22, quiet March 23-24, quiet to active March 25, quiet March 26, quiet to active March 27, and mostly quiet March 28 through April 1.

NASA has a new prediction for the current solar cycle, slightly revised from a month earlier. The current version updated March 3, 2014 is here:

http://solarscience.msfc.nasa.gov/predict.shtml

The revision is a smoothed sunspot peak of 69 late last summer (2013) from 67 earlier in the same summer in the report a month earlier. These numbers are only recently known because the smoothed sunspot number uses a whole year of data. If activity continues to increase, then it will drag this smoothed maximum further out, perhaps to early this year. But there definitely is a strong second peak happening now, stronger than the first.

The average of daily sunspot numbers for February 2014 was the highest of the current solar cycle at 174.6. In fact, the last time it was higher was the month of September 2002, when it was 206.4.

We've been running our own smoothed 3-month moving average of sunspot numbers, and now that February is over we know the average for the three months centered on January 2014: 138.5. This is also a high for this solar cycle. You may recall that this cycle seemed to have an earlier peak based on this moving average toward the end of 2011, when the averages centered on September through December 2011 were 98.6, 118.8, 118.6 and 110. Compare that to this most recent peak, with these 3 month averages centered on August 2013 through January 2014: 77.4, 91.2, 102.9, 123.7, 123.3, and 138.5 mentioned earlier.

Here is an article from a reliable source noting this second peak is larger than the first, and that this slow cycle may have a much broader peak than earlier cycles:

http://sidc.oma.be/news/240/welcome.html

We got a late report on 6 meter propagation from Fred Honnold, KH7Y, who is on the south side of Hawaii's big island, which of course, is the island of Hawaii.

He sent this a week ago, February 28, after this bulletin was put to bed:

"Good morning from Hawaii. Forgot to send this on Monday to you. Sunday morning (February 23) at about 1830 I worked A45XR and EA8DBM on 6 meters CW. There was a good opening to HK and CE, and at the time my antenna was pointed about 120 degrees. I was calling CQ on 50.105, a W4 answered me and also a very weak signal behind the W4. I worked the 4 and kept hearing A so I thought it might be a AC or something like that, but he came out of the noise and it was A45XR (Oman, at the mouth of the Persian Gulf) a rare catch for me. His signals built to 529 on CW and then he asked for SSB and we made the QSO. Chris, A45XR was using a 30 meter delta loop with very high SWR so he could only run 100 watts. About a half hour later was called by EA8DBM with 559 signals looking the same direction. I talked to Jim, K6MIO about the QSOs and he told me they were TPL, transpolar long path. It really did not make much difference where I pointed the antennas, a pair of 8 elements. A45XR was also in Monday the February 24 and was much stronger as he put his 6 meter delta loop up. He also was in Tuesday morning 0830 very weak. Yesterday was a bust on 6 meters one strong DU and two JAs worked on back scatter looking to VK (245 deg)."

Log into QRZ.com and look at the great location and antennas at KH7Y: http://www.qrz.com/db/KH7Y, and also to http://www.qrz.com/db/A45XR for A45XR and his 30 meter delta loop.

Jon Jones, N0JK notes that on February 27 at 2250 UTC N0LL in EM09 spotted KC0CF in EN32, via aurora on 6 meters.

An article about a solar region circling the Sun three times can be found on the web at:

http://www.spacedaily.com/reports/Coming_Around_Again_Giant_Sunspot_Makes_Third_Trip_Across_the_Sun_999.html .

The Spring Equinox is only two weeks away! Hope for continued high solar activity here at the peak of the cycle. Plenty of great 10 meter propagation is in store.

If you would like to make a comment or have a tip for our readers,

email the author at k7ra@arrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service web page 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/w1aw-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 February 27 through March 5 were 227, 279, 177, 170, 191, 171, and 202, with a mean of 202.4. 10.7 cm flux was 175.7, 170.6, 164.6, 161.3, 161, 158, and 149.1, with a mean of 162.9. Estimated planetary A indices were 24, 13, 7, 5, 7, 8, and 7, with a mean of 10.1. Estimated mid-latitude A indices were 15, 10, 6, 3, 6, 8, and 6, with a mean of 7.7.
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