

SB PROP @ ARL \$ARLP002
ARLP002 Propagation de K7RA

ZCZC AP02
QST de W1AW
Propagation Forecast Bulletin 2 ARLP002
>From Tad Cook, K7RA
Seattle, WA January 10, 2014
To all radio amateurs

SB PROP ARL ARLP002
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If you haven't heard, the big geomagnetic storm predicted for yesterday, Thursday, January 9, did not happen. Planetary A index was predicted to be 73 for the day, and instead it was a quiet and stable 10. The planetary A index predicted for today, January 10, is 41. The latest forecast from late Thursday has revised that to 40.

If the planetary A index had reached 73 yesterday, it would have been historic. You have to look way back to December 15, 2006 to find anything stronger.

But this has been an exciting week for Sun watchers. The daily sunspot number reached 245 on January 6, and solar flux was 237.1 on January 8. This may turn out to be a strong second peak for Cycle 24.

The GOES-15 x-ray background flux has also been high, and may be more significant for enhanced HF propagation than a high solar flux.

You can see daily x-ray flux values here:

<http://www.swpc.noaa.gov/ftplib/latest/DSD.txt>

For historical values of x-ray flux, solar flux and sunspot numbers check the links marked DSD.txt:

http://www.swpc.noaa.gov/ftplib/indices/old_indices/

The links marked DGD.txt will give you daily geomagnetic indicators.

The Australian Government Bureau of Meteorology has a brief explanation of x-ray flux at

<http://www.ips.gov.au/Educational/2/1/3>

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Over the past week, average daily sunspot numbers rose more than 80 points to 188.1, and average daily solar flux was up more than 62 points to 201.6.

Predicted solar flux for the next few days has been adjusted downward about 11 points from Wednesday's forecast. The latest prediction has solar flux of 184 on January 10-12, 175 on January 13, 155 on January 14, 150 on January 15-19, 155 on January 20, 160 on January 21-23, and 165 on January 24-26. It then rises to a peak of 190 on January 29 through February 3, and declines to a minimum of 140 on February 12-16 before rising again.

Predicted planetary A index values are 40, 15 and 8 on January 10-12, 5 on January 13-22, 10 on January 23, 8 on January 24, 5 on January 25-27, then 10, 18 and 8 on January 28-30, then 5 again until it hits 12 and 8 on February 6-7.

F.K. Janda, OK1HH has a short prediction for us this week. He sees quiet to unsettled geomagnetic conditions on January 10, quiet to active January 11, quiet to unsettled January 12, and mostly quiet January 13-17.

Mike Stein, WB9NOO of Fort Wayne, Indiana sent an interesting report on a sporadic-E event.

"I am a broadcast engineer at WANE-TV in Fort Wayne, Indiana. Thursday, Jan 2 at noon, we were doing a live report from our remote truck. We were using our IFB transmitter, running 1 watt FM into a quarter-wave whip on 26.35 MHz, which transmits our off air audio to the reporter a few feet away.

"After the newscast I received an e-mail from David E. Crawford in Indian River City, Florida, who had received our signal. He was using a Drake R8 receiver and 170 foot longwire 20 feet above ground.

"He sent us pictures of his equipment and a recording, requesting a QSL card.

"That was certainly exciting on both ends!"

IFB stands for "Interruptible Foldback" or "Interruptible Feedback,"

the low power system that transmits either cues from a director or in this case audio off the air to a news reporter. Intended to travel just a few feet, the signal made a roughly 900 mile trip to Central Florida. Of course, they were using a full watt into a quarter-wave whip, which at 26.35 MHz would be about 8 feet, 10 inches long.

I believe the SWL at the other end is probably KD4WHZ.

Bob Foster, N9BGC of Waverly, Iowa writes: "The best techniques I have found this winter: 1) start high in frequency and work lower; 2) seek out the various beacons; 3) be aware of the LUF (Lowest Useable Frequency) predictions found on the ARRL website. Those techniques resulted in numerous DX contacts. Finally, don't be discouraged if the DX isn't pounding into your shack. I had some very enjoyable domestic QSOs this past week, when the DX was hard to find."

The LUF predictions are in the propagation charts mentioned at the bottom of this bulletin. LUF is shown as a blue line toward the bottom of the charts.

Dennis Condron, K0LGI of Marion, Iowa sent information about monitoring radio signals reflected from meteor trails. He and KB5VL have a lot of material on this at, <http://www.roswellmeteor.com/default.htm> . An interesting description of what they do is at, <http://www.roswellmeteor.com/Receiving%20Meteor%20Reflections%20Using%20DTV%20Transmitters.pdf>

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/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 January 2 through 8 were 133, 162, 178, 225, 245, 196, and 178, with a mean of 188.1. 10.7 cm flux was 160.5, 182.3, 215, 217.5, 203.9, 237.1, and 194.6, with a mean of 201.6. Estimated planetary A indices were 20, 20, 6, 4, 4, 8, and 8, with a mean of 10. Estimated mid-latitude A indices were 15, 7, 6, 4, 4, 7, and 8, with a mean of 7.3.

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