

SB PROP @ ARL \$ARLP005
ARLP005 Propagation de K7RA

ZCZC AP05
QST de W1AW
Propagation Forecast Bulletin 5 ARLP005
>From Tad Cook, K7RA
Seattle, WA January 31, 2014
To all radio amateurs

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Another week of solar ambiguity, with sunspot numbers down, but solar flux up. Average daily sunspot numbers declined from 113.3 to 101.4, but average daily solar flux moved from 133.4 to 142.9. Both solar flux and sunspot number moved up from January 29-30, solar flux from 156.4 to 160.5, and sunspot number from 96 to 112. It is encouraging to see the X-ray background flux move from the B to the C range over the past 4 days. You can see the daily background flux values at <http://www.swpc.noaa.gov/ftpdirect/latest/DSD.txt> .

The latest prediction has solar flux at 165 and 170 on January 31 and February 1, 175 on February 2-3, 165 on February 4, 160 on February 5-7, then 150, 140 and 135 on February 8-10, 125 on February 11-15, 130 on February 16-20, then 135 and 145 on February 21-22, and 160 on February 23-24.

Predicted planetary A index is 5 on January 31 through February 6, 8 on February 7-8, 5 on February 9-16, 8 on February 17, 5 on February 18-23, then 10, 18 and 8 on February 24-26.

The latest prediction for solar flux and planetary A index is from January 30, when it did something odd. Both forecasts reverted back to exactly the same values as the January 26 forecast after a revision that lasted several days, beginning January 27. You can see the forecasts at <http://www.swpc.noaa.gov/ftpmenu/forecasts/45DF.html> .

OK1HH predicts geomagnetic conditions as quiet on January 31, mostly quiet February 1, quiet to unsettled February 2-3, mostly quiet February 4-5, quiet February 6, mostly quiet February 7, quiet to active February 8, mostly quiet February 9-10, quiet February 11, mostly quiet February 12, quiet February 13-15, quiet to unsettled February 16-18, quiet February 19-20, quiet to unsettled February 21, quiet February 22, there is no prediction for February 23, and quiet to active conditions February 24-25.

We are only missing a single day's data for calculating the 3-month moving average of sunspot numbers, but it looks like it will be around the same value as last month's average, which was 123.7. This figure was only higher way back in the 3-month period ending in

February 2003, which was 128.9. All subsequent values over the past 11 years have been lower. The actual numbers will appear in next week's bulletin.

John Jones, N0JK commented on the report from Scott Bidstrup, T13/W7RI in last week's Propagation Forecast Bulletin, mentioning at "big F2 opening in December."

John says, "Scott was probably referring to the big F2 opening on 6 meters in November. No big F2 openings in December and so far in January. Pickings slim here in Kansas, too. Did have good meteor scatter January 3 for the Quadrantids peak. I worked K5N EL08 on 6 meter SSB via meteors."

Chip Margelli, K7JA reports from Garden Grove, California: "I worked FT5ZM on Sunday night, January 26 at about 6:25 PM local time (0225 UTC January 27) on 10 meters, beaming over Australia. From out here, that is the short path to Amsterdam Island, and because there was no competition from the usual hordes of eastern U.S. stations, it was an easy QSO with 200 Watts and my 7-element OP-DES Yagi. Their signal peaked at S7 on my S-meter at times over the following two hours.

"There used to be a 10-meter beacon on Amsterdam Island, and two solar cycles ago I heard it often."

Jeff Hartley, N8II of Shepherdstown, West Virginia reports: "The FT5ZM DXpedition on Amsterdam Island has been pounding the airwaves since the January 26 and pile ups still seem somewhere between big and enormous whenever they are audible here. My beam heading to there is 94 degrees and distance is 11,113 miles making Amsterdam the most distant DXCC country from here. Their sunrise is just about 2400Z and sunset is about 1420Z per QRZ.com.

"My first two QSOs with FT5ZM were on 20 meters short path and relatively easy. Their signal was about S7-9 at 2200Z Sunday evening and I tried for maybe 10 minutes on 20 CW with no luck. Then a second listen at 0110Z was unbelievable with the CW station pounding in at 15-25 dB over S9 on my 5 element Yagi. I can never remember a signal near the same distance so loud, but the VKs are S9+20 dB at times on 20 at a distance of about 10,500 miles to VK6.

"The 20 meter phone signal was down 10-15 dB from CW, but it was pretty easy to get though the other bands have been tough. I finally was able to log them on 40 through 10 meters. The morning of the January 27 featured very good prop on 10 meters with their signal about S7 here; around 1530Z, I gave up as their 10 meter CW station had faded to below S5. Done for the day? No, a check at 1600 and the signal was back up to peaking S9 and after a bit of a struggle I made it through.

"Despite reasonable but weaker signals than on 10 meters, 12 and 15

meters were impossible for me. On the January 28 the K index was up and propagation on 15 meters and higher was down here. However, their 17 meter phone signal was S7 with some flutter on my simple delta loop and I made it through thanks to the operator's call for NA only.

"Their signal at first on 12 meter phone was inaudible but finally came up to about S4 and thanks to their good operator and not too big of a pile up (due to weak signal) I made it through. The strangest propagation was Wednesday morning on 15 CW. About 1300Z, their signal peaked about S6 beaming 30 degrees, nearly polar with the direct path signal only about S2. Later, they were working NA only on 15 CW at 1545Z peaking then about 50-60 degrees at S8, and I finally made a QSO.

"Their low band signals have varied quite a bit from night to night and I have never heard them above about S5-6. On 40 with the quad loop they have been weak more often than expected. Finally on Thursday evening I made it through on 40 and 30 meters with their signal peaking S7-8 on both bands after their sunrise with the 40 meter contact about 75 minutes after their sunrise. There has been some morning long path propagation on 30 and 20, but activity is limited. It also seems that their best high band signals on 17 through 10 meters are after their sunset, but 15 opens around our sunrise. As I write this note, they are S8 on 20 phone at 0200Z with plenty of callers still.

"Also interesting to note was the very high QRN at summer levels on the low bands the night of January 21 when the temp here was in the teens! The storms of the Atlantic coast farther south caused the racket.

"Propagation was very poor to EU early the first night of the CQWW 160M contest, but HD2A and CE1/K7CA were loud and easy to work with 100W around 0200Z. Family health problems prevented any activity on Saturday evening. Quite a few locals worked over 25 DXCC countries per their reports."

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 January 23 through 29 were 121, 150, 102, 109, 62, 70, and 96, with a mean of 101.4. 10.7 cm flux was 136.3, 135.5, 133.2, 137.9, 143.9, 157.2, and 156.4, with a mean of 142.9.

Estimated planetary A indices were 6, 5, 6, 6, 4, 5, and 7, with a mean of 5.6. Estimated mid-latitude A indices were 5, 3, 3, 3, 3, 3, and 6, with a mean of 3.7.

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