

SB PROP @ ARL \$ARLP052  
ARLP052 Propagation de K7RA

ZCZC AP52  
QST de W1AW  
Propagation Forecast Bulletin 52 ARLP052  
>From Tad Cook, K7RA  
Seattle, WA December 20, 2013  
To all radio amateurs

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Geomagnetic conditions were more stable than expected last weekend, good news for participants in the ARRL 10 Meter Contest. The planetary A index on Friday through Sunday was 3, 16 and 7 and mid-latitude A index was just 3, 10 and 5.

Still, there were some scary moments, such as Saturday night in North America (0035 UTC December 15) when the Australian Space Forecast Centre issued this alert: "INCREASED GEOMAGNETIC ACTIVITY EXPECTED DUE TO CORONAL HOLE HIGH SPEED WIND STREAM FOR 15 DECEMBER 2013."

For the reporting week, Thursday through Wednesday, average daily sunspot numbers rose from 122.1 to 134.4, and average solar flux went from 162.4 to 159.7, compared to the previous period, December 5-11.

The latest prediction from USAF and NOAA has solar flux at 155, 150 and 145 on December 20-22, 140 on December 23-24, then 130 and 135 on December 25-26, 160 on December 27-28, 165 on December 29-31, 170 on January 1-2, 175 on January 3-6, 170 on January 7, then 165 on January 8-10, 160 on January 11 and 150 on January 12-13. Solar flux is expected to decline to a low of 135 on January 18-19, then rise to 175 at the end of January.

This solar flux prediction for the next seven days was revised downward significantly from yesterday's forecast in the ARRL Letter.

Wednesday's forecast for December 20-26 was 160, 155, 150, 150, 155, 150 and 155. The latest forecast (Thursday's) shows predicted flux values of 155, 150, 145, 140, 140, 130 and 135 for those same seven days. The downward revision was 5 points on December 20-22, 10 points on December 23, 15 points on December 24, and 20 points on December 25-26.

The predicted planetary A index is 5 on December 20-24, 8 on December 25-26, then 10 and 8 on December 27-28, 5 on December 29 through January 2, then 10 and 20 on January 3-4, 5 on January 5-9, then 15 and 7 on January 10-11, then 5 after that until a more active period around the end of January.

At <http://www.swpc.noaa.gov/ftpmenu/forecasts/45DF.html> you can get a daily update of these forecasts, and lately the new one has been issued between 2119-2123 UTC. But the December 11 forecast came out at 0755 UTC on December 12, and the December 17 issue at 0051 UTC December 18. In the past (for years now) I don't recall it ever coming out as late as into the next UTC day.

F.K. Janda, OK1HH of the Czech Propagation Interest Group has a shorter than usual geomagnetic forecast this week, perhaps for 12 days of Christmas. He sees quiet conditions December 20-24, mostly quiet December 25, quiet to unsettled December 26, quiet to active December 27, quiet on December 28, mostly quiet December 29, and quiet again on December 30-31. Not the same twelve days as Christmastide or Twelvetide, which actually extend into January, but I thought it had a nice familiar ring to it.

Operators in the ARRL 10 Meter contest last weekend probably saw the best conditions for this event in over a decade, and all the reports sound very happy.

Larry Godek, W00GH of Gilbert, Arizona did not participate this year, but did tune around and listen. Larry reports, "It was wonderfully busy. Signals all over the place and I'd think there will be a lot of good scores reported. You could sure tell that the band was good because the activity on other bands and modes was waaayyyy down! I'm really glad that the band was so good for this contest."

Jeff Hartley, N8II of Shepherdstown, West Virginia reported: "Conditions in this year's 10 meter contest were overall markedly improved from 2012 when the SFI hovered just under 100. Last year I made less than 10 total European QSOs, this year I worked 150 DLs, 61 Gs (not including the other British countries such as 14 GMs), 58 Is, and 52 Fs.

"The contest started without me, but at 0140Z there were still some far western USA stations like AZ in and out and some fairly loud deep South Americans in PY, LU, and CX on TE. The SAs were fairly hard to work and one other local agreed. The Geminids provided some good meteor scatter with active periods exceeding

one minute and some stations like K0TT in MN and W0AIH in WI audible almost all of the time. Meteor scatter was also worked into most of New England and a few 4s in KY, AL, and GA as well as 0s in MO and IA.

"The EU opening Saturday beat me out of bed with strong signals from all over EU already in at 1240Z. Russians were not as loud as in Oct and early November, but I managed to log quite a few in all areas of Russian EU including UA4 and even two very western UA9s in the log.

Conditions were definitely above seasonal norms and the band stayed open to OK/OM/9A/S5 probably at least 90 minutes longer than normal probably due to some EU sporadic-E. Western EU also stayed in much later than normal, truly exceptional. Throughout the contest conditions to the south were very good allowing me to easily work those stations with a Force 12 yagi with 2 el on 10 meters.

Conditions to CA were poor about 95-98 percent of the time when the band could have been open with best conditions as the band opened and again well past sunset when it closed. Skip was as short as ND/SD/KS/TX with CO and the Rocky mountain states being in the sweet spot for best propagation. AZ was the most active state from here with 73 QSOs, 2nd was TX with 61, most worked on Sunday. My CO contacts outnumbered CA 57 to 53, and UT equaled WA with 25. There must have been some destructive solar wind (OH2XX was loud around

20Z) with a lack of KL7s and a late JA opening Saturday, but once 10 opened the JAs had fairly good signals and there was an amazingly late secondary opening from about 0110 until past 0130Z when some big guns could still be worked. I heard NH2T calling someone, but only worked JA, UA0, and KL7 to the northwest Saturday evening.

Several eastern VKs had good signals and were easy to work thru small pile-ups.

"Sunday conditions were pretty typical of an average mid winter day with EU opening about 1235Z, but still some Russians were worked with good conditions in the 13Z hour. A VU2 also called on CW with a solid S7 signal. By 1615Z much of EU was gone completely and just after 1700Z only Iberian peninsula stations (EA/CT) were left.

"Both days the solar activity was high enough to allow many backscatter QSOs out to the edges of the skip zone, but the weak spot was in 5 land. I never worked MS, worked LA only once, and a couple of big gun AR stations were just readable. The best direction was somewhat dependent on where the target station was

beaming, but south was the better choice until late in the day when SW and W took over following the Sun. The JAs came in at a normal time around 2230Z with good signals and were fading but workable at 2330Z.

"Other than almost no sporadic-E and the frustration of missing many west coast stations, conditions could not have been much better. The highest scoring multi-op stations in the USA made over 3000 QSOs and D4C had over 4600 with about 3 hours to go. Next year will probably be way down from this 2nd peak of the cycle, but this current upsurge was poorly predicted, so we will have to wait and see."

Dan Bates, N5TM of Katy, Texas reported, "Yes, 10 meters was insane.

Friday night was strange with band open until late after dark and short hops into Colorado and Nebraska. EU was open early both mornings with strong stations. Good openings the rest of the day to SA and PNW.

"I could hardly find a clear spot to CQ. Settled in on 28.158 and had nice runs."

Dan Eskenazi, K7SS of Seattle, Washington reported: "It was really good! Super fun."

Howard Lester, N7SO of Schuylerville, New York commented, "I had a lot of fun in the 10 meter contest. With the solar flux as high as it was, in just maybe three hours over the course of the two days I worked 27 countries, trying for one of each. Most were in Europe and South America. My antenna is a 140 foot long inverted-V, so who knows what directions it favors. The highlight was working club station WY7SS in the little town of Sundance, Wyoming where, in 1969 during a cross-country trip, I stayed overnight and, at the local gift shop, bought a leather belt with a longhorn buckle, and an agate ring. I wish I still had them."

With an identical call sign suffix, Fred Glenn, K9SO of Palatine, Illinois reported, "I only worked CW, but it was one of the best 'target rich' environments I've ever experienced on 10m. Reminded me of a busy Field Day on 40 meters with signals all across the band at maximum density. Both days saw great conditions into Europe and Northern Africa in the mid morning fading to primarily domestic NA and Caribbean by mid day and early afternoon. Later, we had big signals from some of the big guns in ZL and VK land, and also from Hawaii. Not much participation from those areas, at least on CW, so the QSO point counts contributed from there were

low. Virtually nothing heard from Japan or South Africa on either day.

"I had put up a temporary dipole just for this event and was rewarded with 35 new band-countries and a 37 state count with about 7 hours of 'point and shoot' operating.

"Long live the twin peaks!"

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 December 12 through 18 were 156, 141, 163, 158, 114, 91, and 118, with a mean of 134.4. 10.7 cm flux was 164.8, 163.1, 164.2, 156.2, 154.3, 159, and 156, with a mean of 159.7.

Estimated planetary A indices were 3, 3, 16, 7, 7, 3, and 4, with a mean of 6.1. Estimated mid-latitude A indices were 2, 3, 10, 5, 5, 3, and 3, with a mean of 4.4.

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