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ARLP003 Propagation de K7RA

ZCZC AP03  
QST de W1AW  
Propagation Forecast Bulletin 3 ARLP003  
>From Tad Cook, K7RA  
Seattle, WA January 16, 2015  
To all radio amateurs

SB PROP ARL ARLP003  
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Sunspot numbers and solar flux rose again this week, while geomagnetic indices were relatively quiet. Average daily sunspot numbers rose from 108.1 in the first week of 2015 to 112.6 in the following seven days. Average daily solar flux rose from 144.7 to 151.3.

Predicted solar flux for the near term is 130 on January 16, 125 on January 17-18, 120 on January 19-20, 115 on January 21-22, 140 on January 23, 130 on January 24-26, 135 on January 27-28, 140 on January 29-30, and 145 on January 31 through February 7. Flux values then peak at 180 on February 11-12, and dip down to 130 on February 20-22.

Predicted planetary A index is 12, 10, 15, 12 and 10 on January 16-20, 8 on January 21-22, then 5, 10 and 18 on January 23-25, and 15, 8, 5, 10 and 12 on January 26-30, 15 on January 31 through February 1, 12, 15 and 12 on February 2-4, 5 on February 5-6 and 10 on February 7-8.

OK1HH sent his predictions for geomagnetic conditions, and believes there will be quiet to unsettled conditions January 16, mostly quiet January 17, quiet to active January 18, quiet January 19, active to disturbed January 20, quiet to active January 21, active to disturbed January 22, mostly quiet January 23, active to disturbed January 24, quiet to active January 25, disturbed January 26, mostly quiet January 27, quiet January 28, active to disturbed January 29 through February 1, quiet to active February 2-3, mostly quiet February 4, quiet February 5, quiet to active February 6-7, and quiet on February 8-11.

NASA has a new assessment of sunspot Cycle 24, updated from November 14. You can read it here:

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

The changes are, on November 14, 2014 they said the smoothed sunspot number was 70 in late 2013, and now on January 14, 2015 that has been revised upward to 72. The new report says the smoothed sunspot number peaked at 81.9 in April 2014. This was the second peak for Cycle 24, the first being 66.9 in February 2012. They noted that double-peaked sunspot cycles are common, but the current cycle is the first in which the second peak was higher than the first.

This is the smallest sunspot cycle since Cycle 14, which peaked at 64.2 in February 1906.

The National Radio Quiet Zone in West Virginia is the setting for an interesting story involving radio astronomy and people who believe they are sensitive to low levels of RF energy. A few hams are mentioned in this piece (KD8KSG, KC0KTW and N8DBN), although not identified by call sign.

<http://www.washingtonian.com/articles/people/the-town-without-wi-fi/>

Green Bank seems to have an unusually large population of amateur radio operators (over 20% of the town's residents, according to the FCC license database), especially for a place in which the FCC allows no radio transmitters.

Of course, perhaps not all of the hams with mailing addresses in Green Bank live in town, but there are 30 amateur radio operators listed in Green Bank (plus one amateur radio club with a club call), and the article says the town's population is only 143.

Most interesting to me is that Diane Schou, one of the first people in the article who moved to Green Bank just to get away from all forms of RF energy is also a licensed ham, KC0KTW. Her call sign from the zero call area suggests she was a ham (General Class) before she moved to Green Bank, which is in the W8 area.

Perhaps she does a lot more listening than transmitting.

Jon Jones, N0JK reports 6 meter E-skip:

"With the geomagnetic field settling down, Es has returned to 6 meters. High geomagnetic activity tends to suppress mid-latitude sporadic-E.

"Es was present in North America on 6 meters Saturday January 10/11 UTC 2200-0240 UTC and again on January 11 from 1300-1700 UTC.

"Double hop Es spotted by WA4NJP EM84 to PJ4VHF at 0031 UTC January 11 and Florida stations worked CE and PY via TEP.

"On Sunday morning WF0N (EM28) and I (EM28) both worked KI4DJG EM82 at 1455z January 11 on 50.135 MHz SSB with strong signals on Es."

Bill Byrom, N5BB sent some resources for improving reception on those longwave 60 KHz WWVB clocks:

<http://ka7oei.blogspot.com/2013/03/getting-atomic-wwvb-clocks-to-work.html>

<http://www.febo.com/time-freq/wwvb/antenna/index.html>

David Moore sent us this link to a video of aurora:

<https://www.youtube.com/watch?v=6PnY8eElWic>

Be sure to set the HD option for this one, and expand the display to fill your screen.

If you would like to make a comment or have a tip for our readers, email the author at, [k7ra@arrl.net](mailto: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 8 through 14 were 101, 125, 146, 133, 111, 93, and 89, with a mean of 112.6. 10.7 cm flux was 157.2, 151.2, 151.9, 153.7, 158.6, 145, and 141.8, with a mean of 151.3. Estimated planetary A indices were 16, 8, 10, 10, 8, 8, and 7, with a mean of 9.6. Estimated mid-latitude A indices were 15, 7, 9, 8, 7, 5, and 5, with a mean of 8.

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