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ARLP025 Propagation de K7RA

ZCZC AP25
QST de W1AW
Propagation Forecast Bulletin 25 ARLP025
>From Tad Cook, K7RA
Seattle, WA June 20, 2014
To all radio amateurs

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The daily sunspot number rose dramatically this week on June 13 when it increased to 276, but two days later it was back below 100. The resulting weekly average for June 12-18 (141) was actually down 2.3 points from the previous seven days. Average daily solar flux was down 11.7 points to 134.7.

Predicted solar flux has weakened lately, and for the near term flux values are predicted at 105 on June 20-22, 100 on June 23-24, back to 105 on June 25-27, 120 on June 28 through July 6, 115 on July 7-12, and peaking at 130 on July 13-19. ARRL Field Day is June 28-29, when predicted flux values are 120. This is the highest predicted flux value for those two days since May 25, when it was also 120.

Predicted planetary A index is 5 on June 20-21, 8 on June 22, 5 on June 23-25, 8 on June 26, 5 on June 27 through July 10, 8 on July 11, 5 on July 12, then 10, 8, 8 on July 13-15, 5 on July 16-21 and 8 on July 22-23.

OK1HH predicts geomagnetic conditions will be quiet to unsettled June 20, mostly quiet June 21, quiet to unsettled June 22, mostly quiet June 23, quiet to unsettled June 24-25, quiet to active June 26, active to disturbed June 27, quiet June 28-30, quiet to active July 1, quiet July 2-3, mostly quiet July 4-5, active to disturbed July 6, quiet to active July 7-8, quiet July 9, mostly quiet July 10, quiet to unsettled July 11, quiet July 12, quiet to unsettled July 13, quiet to active July 14-15, and active to disturbed July 16.

Scott Bidstrup, TI3/W7RI shared an article from Scientific American by Clara Moskowitz, positing that perhaps the current solar cycle is not so terribly weak, but that we've become accustomed to stronger cycles in the second half of the twentieth century:

http://www.scientificamerican.com/podcast/episode/strange-solar-cycle/

Scott also shared some observations on June 16 about recent on-air conditions from his location in Costa Rica. Scott writes, "Sadly, propagation here in the low latitudes has really been in the doldrums over the last week or so. 10 meters has barely been open on the good days, and so little PSK activity, I've given up on it on 10 and have been spending more time on 15 and even 20 lately - conditions not unlike the last solar minimum. Even the 10 meter FM repeaters, normally a daily phenomenon here, have been weak or absent. On looking at the data this morning, I see the 304a index is declining again, back down to only 14 points above the typical solar minimum. Except for two small regions, as I write this, there's

nothing at all on the STEREO B image showing what's about to rotate into view on the solar disk.

"The lower solar activity has greatly improved gray line DXing on 75 meters, though, and HP3AK and W9UCW have been having a grand time working VKs, ZLs and the odd JA now and again every morning at their local sunrise - for about the last week, the best DXing conditions in a really long time. Sadly, the atmospheric noise has been pretty high lately too, approaching the seasonal maximum here, so that's tempered the fun a bit. HP3AK did manage to complete a contact with a VK on 160m, about a week ago.

"6 meters has been all but dead since I last wrote; one brief opening between Costa Rica and the Leeward Islands several days ago, and that's been about it - KP4EIT was heard for about 20 minutes and an HI8 beacon for about half an hour, neither were ever strong enough to work. I did hear some mixed SSB on 50.110 for about a minute once last week. That's been about it. It's all been frustrating enough to make me want to go to work on that EME array I've been threatening for years.

"73 from sunny and warm (76 deg F) Costa Rica, Scott Bidstrup, TI3/W7RI."

Scott mentioned the 304a index, which is referenced on Scott's page at http://www.bidstrup.com/w7ri-hf-radio-propagation.htm . To paraphrase, "The 304A Index is the relative strength of total solar ultraviolet radiation at a wavelength of 304 angstroms, emitted primarily by ionized helium in the sun's photosphere. It is solar radiation in this frequency band that is directly responsible for about half of all the ionization of the F2 layer, the ionosphere layer of greatest significance to us."

Ted Leaf notes that his call is K6HI, not K8HI as reported in last week's bulletin. I thought I'd messed up, but then noted that the email I was referencing was signed K8HI. At any rate, he is on the west coast of Hawaii, the Big Island, and not to be confused with KH6HI, who is on Oahu, also in the state of Hawaii. Is everything clear?

This weekend is the All Asian DX CW Contest. For details, see https://www.jarl.org/English/4_Library/A-4-3_Contests/2014AA_rule.htm .

And of course, ARRL Field Day, easily the most popular on-air activity, is next weekend!

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 June 12 through 18 were 196, 276, 159, 80, 81, 87, and 108, with a mean of 141. 10.7 cm flux was 174.5, 152.7, 143.5, 130.2, 116.8, 114.3, and 110.8, with a mean of 134.7. Estimated planetary A indices were 4, 5, 8, 5, 5, 8, and 16, with a mean of 7.3. Estimated mid-latitude A indices were 5, 6, 8, 9, 7, 9, and 13, with a mean of 8.1.
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