

SB PROP @ ARL \$ARLP030
ARLP030 Propagation de K7RA

ZCZC AP30
QST de W1AW
Propagation Forecast Bulletin 30 ARLP030
>From Tad Cook, K7RA
Seattle, WA July 25, 2014
To all radio amateurs

SB PROP ARL ARLP030
ARLP030 Propagation de K7RA

Last Thursday (July 17) had no sunspots at all, a sobering reminder of how weak this solar cycle is. We have to go way back to August 14, 2011 to find the last spotless day, and there was only one other day with no sunspots in 2011, on January 27.

On July 18 two new sunspot regions emerged, but the sunspot number was only 26. Two days later, on Sunday July 20 the sunspot number was just 17, and another new sunspot group emerged. On Tuesday two new sunspot regions appeared with a sunspot number of 40, and the next day, July 23, the sunspot number was 55 and another new one emerged.

Solar flux ranged from a low of 86.1 on July 19 to a high of 99.1 on July 23. Outside of those seven days, on July 24 the solar flux was 104, and the sunspot number remained at 55.

Average daily sunspot numbers from July 17 to 23 were only 25.9, down from 96.9 in the previous seven day period. Average daily solar flux dropped nearly 41 points to 90.3.

Predicted solar flux for the near term is 110, 115 and 125 on July 25 to 27, 140, 155 and 170 on July 28 to 30, then 185, 170, and 155 on July 31 through August 2, 150 on August 3 to 5, then 145, 140, 135 and 125 on August 6 to 9, 120, 115 and 110 on August 10 to 12, 105 on August 13 and 14, then dropping down to 85 on August 18, and rising to 150 on August 29.

Planetary A index was quiet over the past week, and is predicted at 8 on July 25 and 26, 5 on July 27 and 28, 12 and 10 on July 29 and 30, 5 on July 31 through August 4, 8 on August 5 and 6, 5 on August 7 to 9, 8 on August 10 and 11, then 5 on August 12 to 16, 8 on August 17 and 18, 5 on August 19 and 20, then 10 and 8 on August 21 and 22.

F.K. Janda, OK1HH says to expect mostly quiet geomagnetic conditions July 25 and 26, quiet to unsettled July 27, quiet July 28, quiet to unsettled July 29, quiet July 30 and 31, quiet to unsettled August 1, quiet on August 2, quiet to active August 3, quiet to unsettled August 4 to 7, quiet August 8, quiet to active August 9, active to disturbed August 10, quiet to active August 11, quiet August 12 to 15, mostly quiet August 16, quiet to unsettled August 17, mostly quiet August 18, quiet August 19, quiet to active August 20 and active to disturbed August 21.

Lots of comments this week asking where the sunspots have gone, such as this L.A. Times article, at <http://www.latimes.com/science/sciencenow/la-sci-sn-the-sun-goes-eerily-quiet-20140718->

story.html

No sunspots? Sky and Telescope recommends

observing faculae:

<http://www.skyandtelescope.com/astronomy-news/observing-news/how-to-see-solar-faculae-072320143/> .

Thanks to W9WS and TI3/W7RI

Southgate Amateur Radio Club has a video with recordings of aurora communications on 2 meters in Europe ten years ago today, July 25, 2004. You can watch it at

http://www.southgatearc.org/news/2014/july/sunspot_652_vhf_aurora_in_belgium.htm .

Ray Soifer, W2RS of Green Valley, Arizona continued comments from last week about six meter propagation:

"Chordal hop Es seems as plausible an explanation as any for my July 5 SSB QSO with EA8DBM, but there's a second chapter to this tale: my CW QSO the following day, at 1447Z. Two such openings on successive days? Maybe that's why it's the Magic Band: magicians don't reveal their tricks.

Most people who don't live out here (DM41) don't realize how rare transatlantic propagation is for us this far southwest in the absence of F2. In 5 years on the band from this QTH, I've heard (and worked) only two such stations beyond the Caribbean: CU2JT on June 24, 2010, and these two QSOs with Alex. I have worked 47 states (all but DE, AK and HI) on CW and/or SSB, but Europe doesn't come easy."

TI3/W7RI made some comments about propagation in Costa Rica:

"Here in the lower latitudes, we're seeing the expected downward trend in propagation due to the current sunspot lull. Propagation on 10 meters has been spotty at best - typical of what is normally seen at a solar minimum, and the daily 15 meter openings have been starting later in the morning, the mid-day break lasting longer, and the band closing earlier in the evening.

Even 20 meters has been rather spartan, and closing completely a few hours after sunset on some days - normally, it's open around the clock here. Not a huge surprise, given that the 304a index is the lowest I have seen it since the last solar minimum - and occasionally even lower than it was during much of that time.

Six meters hasn't seen a single opening from here in Costa Rica into the States in over a month, just the occasional, brief opening into the Leeward Islands from time to time, sometimes just after sunrise - probably Es. Europe, from here in Central America, remains a dream for this season, nothing so far. Usually, we've had several good openings by this part of the season, but not this year."

And Pete Corp, K2ARM also reported on 6 meters on July 23:

"Propagation finally came through for my area in the Northeast. I worked 3 more countries plus more stations in other countries I have worked before. The 6 meter CW portion was all signals from Europe, great operators. It sure looked like F2 but it couldn't be has to be E2."

On July 21 Pete wrote, "Tad, that was very good information on the cycles and the days with no sun spots and even though the HF bands are poor now and the SFI is only 89, 6 meters opened to Europe this morning and even I worked 2 new countries. It seems like E skip during the summer can happen most anytime and my records for the

last 3 years show good openings every 5 or 6 days. Today I could copy 10 or more Europeans but could only work the two."

For more information concerning radio propagation, see the ARRL Technical Information Service 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 July 17 through 23 were 0, 26, 27, 17, 16, 40, and 55, with a mean of 25.9. 10.7 cm flux was 88.6, 88.5, 86.1, 87.1, 90.1, 92.6, and 99.1, with a mean of 90.3. Estimated planetary A indices were 5, 3, 3, 3, 5, 5, and 6, with a mean of 4.3. Estimated mid-latitude A indices were 6, 4, 3, 4, 5, 6, and 7, with a mean of 5.

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