



The Feedline

Solar Cycle 24 Begins!

(From a NOAA press release dated January 4, 2008)

A new 11-year cycle of heightened solar activity, bringing with it increased risks for power grids, critical military, civilian and airline communications, GPS signals and even cell phones and ATM transactions, showed signs it was on its way late yesterday when the cycle's first sunspot appeared in the sun's Northern Hemisphere, NOAA scientists said.

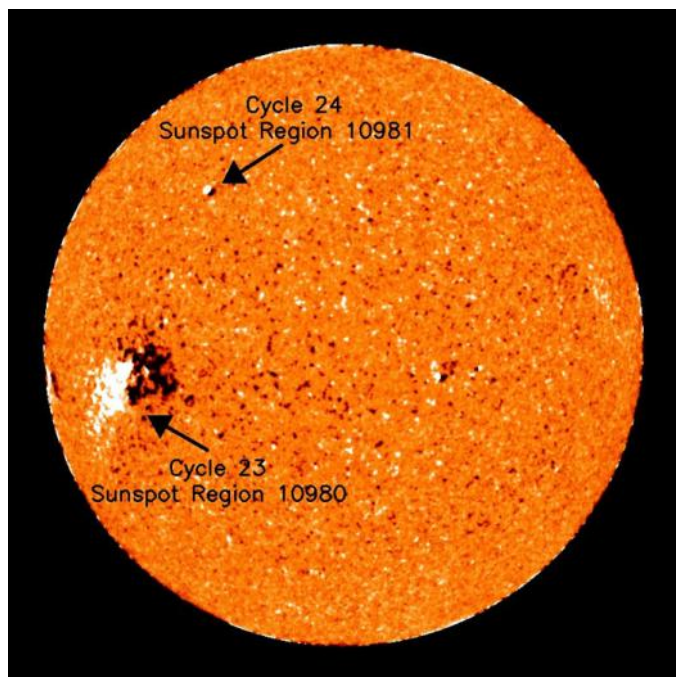
"This sunspot is like the first robin of spring," said solar physicist Douglas Biesecker of [NOAA's Space Weather Prediction Center](#). "In this case, it's an early omen of solar storms that will gradually increase over the next few years."

A sunspot is an area of highly organized magnetic activity on the surface of the sun. The new 11-year cycle, called Solar Cycle 24, is expected to build gradually, with the number of sunspots and solar storms reaching a maximum by 2011 or 2012, though devastating storms can occur at any time.

Last April, in coordination with an international panel of solar experts, NOAA issued a [forecast](#) that Solar Cycle 24 would start in March 2008, plus or minus six months. The panel was evenly split between those predicting a strong or weak cycle. Both camps agree that the sooner the new cycle takes over the waning previous cycle, the more likely

that it will be a strong season with many sunspots and major storms, said Biesecker. Many more sunspots with Solar Cycle 24 traits must emerge before scientists consider the new cycle dominant, with the potential for more frequent storms.

The new sunspot, identified as #10,981, is the latest visible spot to appear since NOAA began numbering them on Janu-



ary 5, 1972. Its high-latitude location at 27 degrees North, and its negative polarity leading to the right in the Northern Hemisphere are clear-cut signs of a new solar cycle, according to NOAA experts. The first active regions and sunspots of a new solar cycle can emerge at high latitudes while those from the previous cycle continue to form closer to the equator.

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Dates to Remember:

Feb 11 – Membership Meeting

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Repeaters — K4CO

147.255+ and 444.350+ Edgewood (PL 123.0), 147.375+ Walton, 146.895+ Highland Heights
The 147.255 repeater is a linked Echolink node, accessible via N4IJS-R.

Nets

N. KY. Amateur Club Net: Tuesdays, 7:30 PM on the 147.255 repeater

—WEB Site—

<http://www.k4co.org>

Membership meetings on the **2nd Monday** at 7:30 PM, Turkeyfoot Middle School, 3230 Turkeyfoot Rd in Edgewood

Board meetings: TBA

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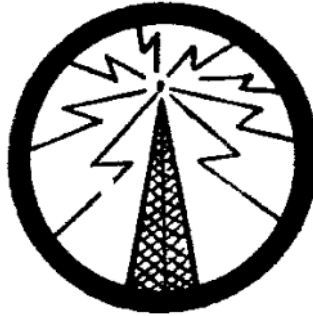
Top of the Tower

Fellow Hams:

It is with a small sense of relief that I write this month's message. I am handing the torch off to Dann KI4AVO. He and I have worked closely together these past two years. Our club is in good and capable hands. While I'll not have the duties of being club president, my responsibilities to you my fellow club members does not end on a calendar date, but when the various jobs and projects are completed.

Greg KG4ZTG and Don AJ4DK are good men. Each has much to bring to our club. I'm looking forward to their leadership.

I learned from Mike KB4VKS a wise way of saying thank you. Basically, if I were to try and thank everyone who has helped me, I would leave someone out, so thanks to all. But I must single some folks out.



Of course, Dann KI4AVO. Robert N4IJS, Mark AI4BJ and Greg W2ORO. I have treasured our times together and our conversations. Thank you to all.

It's the beginning of the year - time for planning. We'll need our typical volunteers for Field Day and Paddlefest. We'll be reserving the field day location soon. Are you able to help with field day?

One last point - we are an amateur radio club. We communicate. We form relationships both verbally over the air and physically when we get together. Each one of us has a story. Thank you for sharing your story with me over the past few years. Let us take time to be a part of each other's story this coming year.

See you Monday the 14th.

73, Tony AI4IP

December Net Report

If you are interested in helping the club out and expanding your Amateur Radio skill set, please take a turn at running one of our weekly nets! This is a great way to hone your radio, net control, and message handling skills in a friendly environment. If you are interested, please contact Robert Kluck, N4IJS, at (859) 426-5588 or n4ijs@insightbb.com.

DATE	NCS	CHECKINS	TIME (MINS)	TRAFFIC
12/04/07	AJ4DK (Don)	7	23	0
12/11/07	KB4VKS (Mike)	5	25	0
12/18/07	N4IJS (Robert)	5	21	0
12/25/07	No net			
TOTALS		17	69	0

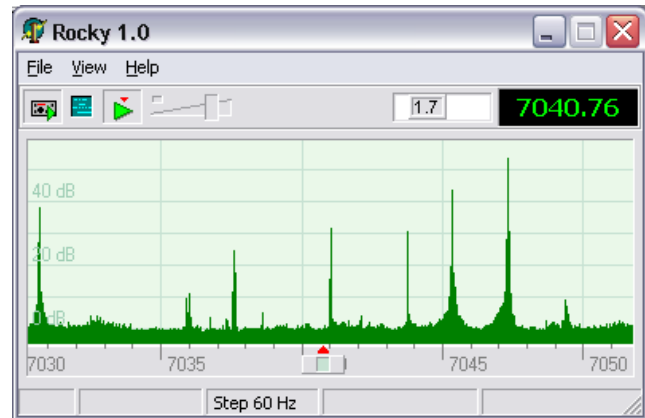
Mark's Mutterings

Redefining Radio

Shortly before Christmas, I received an email from Robert Kluck, N4IJS, asking if I had ever experimented with [software defined radio](#). I replied that I had not, but his inquiry set me to doing a bit of Googling on the subject, and what I found knocked my socks off! Of course, I had heard of SDR, but I had assumed that it was a fairly narrow niche in our hobby that was being pursued by a small number of hams with very specialized programming skills. The truth is that thousands of hams with only modest technical skills are now exploring this interesting new architecture, and I now include myself among them.

How does SDR work? Well, the basic idea is to digitize the received signal by using an analog-to-digital (A/D) converter, and perform the filtering and demodulation on a computer using special software. Affordable A/D converters such as the ones found on PC sound cards only operate at audio frequencies, and typically have bandwidths of 48 or 96 kHz. This means that the RF input signal must first be downconverted using a circuit called a quadrature sampling detector (QSD). The QSD has two identical outputs called I and Q that are 90 degrees out of phase. These signals are fed to the stereo line-in of a PC's sound card, where the software takes over, and things get interesting.

It's important to remember that it's not just a single signal that is being fed to the PC, but a 48 or 96-kHz swath of the band in question. The key feature of most SDR programs is a spectrum display that shows all signals within this range. Above right is a screenshot from [Rocky](#), a popular (and free) SDR program. The coolest feature is that you simply have to click on the signal that interests you, and the program immediately "tunes" that signal in and demodulates it. Depending on the package you are using, you might be able to demodulate CW, SSB, AM or PSK signals. If QRM is a problem, you can quickly apply a brick-wall filter as narrow as 20 Hertz! QRN can also be tackled by using sophisti-



cated noise-reduction algorithms.

So what does it take to get started with SDR? In 2005, Tony Parks KB9YIG and Bill Tracey KD5TFD designed the [SoftRock-40](#), a simple SDR receiver kit that sold for less than \$30. More than 800 of these kits were sold. The SoftRock-40 has been [superseded](#) by the SoftRock Lite, a single-band receiver that can be ordered for any band between 160 and 15 meters and sells for a measly \$12, and the SoftRock RXTX, a 1-watt transceiver that is available in single and dual-band versions that sell for between \$30 and \$38. My understanding is that if you want to transmit as well as receive, you need to have two sound cards in your PC.

You don't even have to have any hardware to get a taste of SDR. On the FlexRadio [web site](#), you can download [PowerSDR](#) (Rocky on steroids) as well as pre-recorded audio samples which you can load and listen to just as if you had a real receiver connected. Again, these are not samples of single signals, but samples of 48 kHz of the band that you can tune around in, experiment with filter settings and noise reductions, etc. It's addictive!

Who says that experimentation and technical advances are missing from today's Amateur Radio?

73, Mark, AI4BJ

Images From the NKARC/KD7ARET Annual Christmas Dinner



Photos by Toni Kluck KI4NRG, and Mark Volstad AI4BJ.

I would like to thank Mike Wagoner, KB4VKS, for his help during a family emergency, relaying information from a mobile radio to family members by phone. His professional and courteous manner was noted and appreciated.

Dann Fox, KI4AV0

Weaver's Words

Jim Weaver, K8JE
Great Lakes Division Director, ARRL
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A Poll - I Heard You

In the last issue, I asked for your opinions concerning the publication schedule of the ARRL Letter. Here is what you told me:

- 180 said, "I really don't care if an occasional week is missed."
- 97 said, "I'd prefer the Letter comes out every week, but occasional lapses are no big deal."
- 12 said, "Drop other things at HQ to get the ARRL Letter out every week -- no exceptions."

I appreciate the wishes expressed by each responder. Based upon the responses I believe there is no justification for me to push HQ to expand the publication schedule.



FYI, each issue of the ARRL Letter contains the following statement:

"The ARRL Letter is published Fridays, 50 times each year, by the American Radio Relay League: ARRL--the National Association for Amateur Radio, 225 Main St, Newington, CT 06111; tel 860-594-0200; fax 860-594-0259; <<http://www.arrl.org>>. Joel Harrison, W5ZN, President."

Because Thanksgiving is always on Thursday, there is no Letter each Thanksgiving week. This year, a second exception to publication will be Christmas week. This will still leave us with 51 weeks of publication of the Letter this year. Depending on personnel schedules at HQ, one more issue could be skipped and we would still have the promised 50 issues for 2007. Watch the ARRL Letter for any details.

Thanks to everyone who answered the poll. I appreciate your input. I'm sorry I didn't have time to acknowledge each vote personally.

Region 2 Band plan -- Skepticism persists

To set the stage for the following discussion, you need

to know that some AM operators believe the new IARU Region 2 voluntary band plan will cost them operating privileges. This is true even though the plan is strictly voluntary and the fact that FCC regulations clearly take precedence over any voluntary band plan. Some of these operators accuse ARRL, a member of Region 2 of manipulating the new Region 2 plan in an effort toward abolishing AM and getting Regulation by Bandwidth adopted in the US.

I do not intend to get into a point-counterpoint discussion of this issue; however, I will expand the explanation I put in the last issue of Words. The bottom line still is precisely what I said the last time. ARRL was not involved in developing the Region 2 voluntary band plan, and the new Region 2 band plan has absolutely no relevance to US amateurs.

Fact: The committee I loosely referred to as the band plan committee is properly named the Region 2 HF Committee. This is the group that developed the new voluntary band plan. There was no ARRL involvement with the HF Committee.

Fact: As stated in the Region 2, conference news release, "A new Region 2 band plan for 160--10 meters was adopted, effective January 1, 2008. The new plan is modeled on one adopted previously by IARU Region 1, with regional differences taken into account."

The Region 1 voluntary plan was developed in 2005. It became effective January 2006. This voluntary band plan has had no impact on operations in the US. ARRL is not a member of IARU Region 1 and has no vote in its meetings.

After developing its new voluntary band plan, the Region 2 HF Committee submitted its new voluntary band plan to the Region 2 B/C Committee. This committee forwarded the proposed plan to the plenary session where it was adopted. ARRL Chief Technical Officer Paul Rinaldo, W4RI was secretary to the B committee. He had no vote in its proceedings and merely recorded the Committee's activities.

I assure you that when the Region 2 voluntary band plan

becomes effective January 1, 2008, it will have no effect on US operations -- AM or otherwise. Any changes in operation by US operators will come only if they, themselves, choose to make changes.

As your Director, I repeat that I will actively oppose any effort to curtail AM operating privileges for US amateurs. No such proposal has been introduced by ARRL in the five years I've been on the Board, and I do not expect any one to be forwarded in the future. The fact is that ARRL has been and continues to support any mode of operation that is legal in the US and the operators who use these modes -- AM included.

Now, you know the rest of the story.

For another discussion, see www.arrl.org/news/stories/2007/12/07/100/?nc=1.

Section HF Nets

The following lists HF Section nets in the Great Lakes Division (GLD). Feel free to join one or more of these nets. If you are new to net operation, the best thing to do is to listen until you are familiar with general net practice -- then check in. Net Control will be happy to help anyone learn to become a top-notch operator.

In Kentucky:

KEN - Kentucky Emergency Net; Monday, 3972.5 kHz, 1930 ET.
KYN - Kentucky CW Net; daily, 3596 kHz, 2000 ET.
KSN - Kentucky Slow CW Net; daily, 3579 kHz, 2200 ET daily.

In Michigan:

MACS - Michigan Amateur Communications System; Mon-Sat, 3953 kHz 1100 ET.
MIARPSC - Michigan Amateur Radio Public Service Corps; Sunday, 3932 kHz, 17:00 ET.
UPN - Upper Peninsula Net; Sun-Sat, 3920 KHz, 17:00 ET; Sunday 3921 kHz, 12:00 ET.
MITN - Michigan Traffic Net; Sun-Sat, 3952 kHz, 1800 ET.
QMN - Michigan Net; Sun-Fri, 3563 kHz, 1830 & 2200 ET.
WSSBN - Wolverine Single Sideband Net, 3932 kHz,

1900 ET.

UP-ARES - UP ARES Net; Friday, 3932 kHz, 1930 ET.
GLETN - Great Lakes Emergency and Traffic Net; Sun-Sat, 3932 kHz, 2030 ET.
In Ohio

BNE - Buckeye (Early); Daily, 3577 kHz, 1845 ET.
BNL - Buckeye (Late); Daily, 3577 kHz, 2200 ET.
OSN - Ohio Slow Net; Daily, 3535 kHz, 1810ET.
OSSBN - Ohio Single Side-Band Net; Daily, 3972.5 kHz, 1030 1615 & 1845 ET.

Both Michigan and Ohio are developing digital networks that are in differing states of completion. Anyone interested in these should contact SM Dale Williams, WA8EFK (wa8efk@arrl.org) for Michigan and SM Joe Phillips, K8QOE (k8qoe@arrl.org) for Ohio.

ARRL Offers Customizable Awards

ARRL HQ has just announced the availability of awards that can be purchased to give to special amateurs. The awards are modestly-priced and can be personalized for the recipient. These are suitable to give to a club Amateur of the Year or other award recipient. Go to www.barkerstores.com/arrl and click on Custom Awards. The current selection is somewhat limited. Expect it to be expanded as time goes by.

Congratulations to our Vice Director

Unknown to most members is the fact that GLD Vice Director, Gary Johnston, KI4LA is a history buff. Not only is he a member of the ARRL Board's Historical Committee, but he is the President of the Behringer-Crawford Museum in Covington, KY. The museum re-opened December 1 after being closed for 8-months for a \$2+ million expansion and remodeling. Among his other duties, Gary was primarily responsible for obtaining funding from the Commonwealth of Kentucky that made this possible.

Great job, Gary

Happy 75th Anniversary

I was fortunate to have been able to join SM Dale Williams, WA8EFK and ARRL CEO Dave Sumner, K1ZZ to take part in the December 1 celebration of the Motor



City Radio Club's (W8MRM) 75th Anniversary. It was a great evening with members and guests filling the banquet room at a major restaurant. I was particularly impressed with the high number (14) of past presidents who participated in the evening in spite of bad travel weather.

Similarly, the Hiawatha ARA (K8LOD) in Marquette, MI, also recently celebrated reaching the 75th Anniversary mile post.

Congratulations to each club. Each is strong and active. Each is ARRL Affiliated Clubs. This is a great achievement.

Call Signs Issued

The FCC is issuing KJ4A** 2X3 call signs. The most recent call I've seen for Kentucky is KJ4AUJ. The poor fellow's last name is Weaver. No relation to me, though. KD8HHZ is the most advanced 8-call reported to date. This call was issued to a ham in Saginaw.

Calls that are more alphabetically-advanced certainly have been issued. These have not yet been included in reports I typically see. Even without having seen the latest calls, my original call of WA8COA definitely demonstrates I am an old timer.

Sunny Future

I've never been known for having great insight into the future. The best I can do is to look at events of the past and present, and attempt to anticipate how any trends apparent from these might be used to predict what will come in the days ahead. My take on the future of Amateur Radio during the next several years is that it will grow in significance and importance to the public.

What is the basis for this belief? Here are a few observations that lead me to this conclusion:

1. State and local EMA directors and the Salvation Army (SATERN) have come to credit amateurs publicly with the emergency relief work we are doing.
2. Amateurs are becoming increasingly skilled in providing high-quality emergency communications support to served agencies.
3. There is a modest growth in Amateur Radio licensing in recent months.
4. Youngsters are becoming interested in hamming when it is presented to them properly.

How do these observations fit together? As we continue to make strong, favorable impressions on EMA and Salvation Army, they will talk even more about us. Still more agencies might even begin to talk of our aid to them. This good press will interest still more people in learning what hamming is and how it works. Some of these people will become amateurs.

Regarding youngsters, they, too will be impacted by the positive press. This will be particularly true of youngsters who attend schools that feature ARRL's "Big Project" Amateur Radio program. Big Project schools already have shown that youngsters still buy-in to Amateur Radio when they are shown its relevance to today's life.

Tentative Travel Schedule

A note to program and hamfest/swap schedulers: Gary and I are beginning to look toward the 2008 year to schedule trips. If you would like for either of us to visit your hamfest/swap, meeting or celebration, please let us know as soon as possible. We already have a few requests, some from clubs that we have visited regularly. We are always happy to revisit old friends; however, we also need to visit different places when this is possible. Because of this, I am delaying scheduling additional meetings until after January 1. This will give me an opportunity to view any additional requests before adding visits to my schedule.

As one final point, the cost of gasoline is hitting our travels just as it is yours. Please consider having two or more clubs join together to host Gary or me at a combined meeting. Doing this will help us spend your dues money more efficiently.

I wish you each Happy Hanukah and Holy Ramadan (I'm a little late), and a very Merry Christmas filled with love and joy. All the best in 2008.

Our tentative schedule and significant Great Lakes Division events so far for 2008 are:

- Jan 12: Southwest Ohio Digital Symposium, Middletown, OH - Jim
- Jan 17: Programs & Services Committee, Houston, TX - Jim
- Jan 18-20: Board of Directors Meeting, Houston, TX - Gary & Jim
- Apr 14: PCARS (OH) Meeting - Jim

QSL Card of the Month

Submitted by:

Robert Kluck, N4IJS

Comments:

I was first licensed as a 15 year old on 28-May-1982 as KB4AVR (my Dad was first licensed at that same time as KB4VQ). As a Novice, Morse code (CW) was the only mode that was available to me and, honestly, I loved it! By the time we received our license and had the station operational, it was July. My first contact was on 14-July-1982 with K3SE. But, for whatever reason, I did not send nor receive a QSL card from him. (Oh, how I regret that today!) But, Fred, KA8NWR, was my third contact and my first QSL Card.

When I first started, just like today, there was a thrill involved with making contacts with people from "far away" lands (to me, living in Tennessee, Ohio was a far away land!). There was no Internet nor email, so Ham Radio kept one young kid out of trouble and expanding his world. How many hobbies do you know that can be enjoyed from early childhood (I first started down my Ham path at 10 years old by homebrewing shortwave receivers and listening to AM broadcasts from various nations), shape their careers, and can be enjoyed into

their (I can't believe I am admitting this!) mid-life time and beyond.

If you have a special QSL card you would like to share, submit it to the Feedline editor, along with any comments you would like included.



RADIO KB4AVR Confirming
 our fm 7-14 1982
 at 21.55-2213 UTC
 on 7.133 MHz RST 599
 TRANSCEIVER
 TRANSMITTER YAESU FT101B
 INPUT 40 Watts
 RECEIVER SAME
 ANTENNA Dipole up 16 FT
 REMARKS TKX for fine QSO. MUST get ur address and hope to get u on the air
73. KA8NWR
 PSE QSL TNX
Fairfield Co.

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 Crazy Horse
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