

# CQ CHATTER

JUNE 2015

VOLUME B15 • ISSUE 4

## WOOD COUNTY AMATEUR RADIO CLUB

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[HTTP://WCARC.BGSU.EDU](http://wcarc.bgsu.edu)

## 2014: Maximum Year for Solar Cycle 24

from *SILSO*

Now that we completed the definitive sunspot numbers for 2014, we can conclude that the maximum of solar cycle 24 was reached in April 2014, with a maximum of the [13-month smoothed sunspot number](#) at 81.8. Since then, solar activity has steadily declined (monthly mean sunspot number now around 40), but remained above 70 over many months, probably indicating that the annual mean for 2014 will also mark a yearly maximum at 78.9. Those values exceed the first peak of activity in cycle 24, which occurred in February 2012 but was short and only reached 66.9.

Therefore, cycle 24 proves to be 30% weaker than the previous solar cycle, which reached 119.7 in July 2000, and thus belongs to the category of moderate cycles, like cycles

12 to 15, which were the norm in the late 19th and early 20th century. Compared to strong cycles, such cycles typically feature a broader maximum, with a 3-year plateau on top of which two or more surges of activity can produce sharp peaks of similar height ([see graphic](#)).

In cycle 24, we indeed observed such a scenario, with two peaks separated by a particularly long plateau, lasting 18 months from early 2012 to mid-2013 ([see graphic](#)). Looking at the hemispheric numbers, we can see that the first peak was actually due to a maximum in the Northern hemisphere in November 2011, while the broader 2014 peak was due to the combination of a maximum in the Southern hemisphere in early 2014 and a slight reversal of the activity decline in the Northern hemisphere. The Southern hemisphere has thus been lagging the Northern hemisphere by about 26 months. This lag isn't new and was already present since cycle 20, i.e. over the last 45 years ([see graphic](#)).

*continued---on p.4*

## NET CHECK INS

**Apr 28 Traffic: 0**

N1RB (NCS)  
K8LL/M  
K8BBK  
WB8NQW  
KD8RNO  
K8OVO  
W8GGS  
W8PSK  
KD8VWU  
N8VNT  
KC8EKT  
KD8WZK (12)

**May 5 Traffic: 0**

K8OVO (NCS)  
KD8WZK  
K8BBK  
KD8RNO  
W8PSK  
WB8NQW  
N8VNT  
N1RB  
KD8NJW  
KD8VWU  
KC8EKT  
K8JU (12)

**May 12 Traffic: 0**

WB8NQW (NCS)  
K8BBK  
W8PSK  
WD8LEI  
KD8RNO  
NM8W  
N1RB  
KD8VWU  
KD8WZK  
K8JU (10)

## BRAIN TEASERS

1. What determines the amount of deviation of an FM signal ?
  - a.) frequency and amplitude of the modulating signal
  - b.) frequency of the modulating signal
  - c.) amplitude of the modulating signal
  - d.) relative phase of the modulating signal and the carrier
2. What is the function of a product detector?
  - a.) detect phase modulated signals
  - b.) demodulate FM signals
  - c.) detect CW and SSB signals
  - d.) combine speech and RF signals
3. What is the impedance of the most commonly used coaxial cable in amateur work?
  - a.) 8 ohms
  - b.) 50 ohms
  - c.) 600 ohms
  - d.) 12 ohms

## June Contests

The contest lineup for the month of June is given below. Please note that the WARC bands (60, 30, 17 and 12 m) are never open to contesting.

<b>Jun 6-7</b>	<i>0600 to 0600 Z</i>	80 m to 10 m
<b>VK (Australia) Shires `test</b>		<b>SSB-CW</b>
<b>Jun 6-7</b>	<i>1600 to 0400 Z</i>	160 m to 10 m
<b>Alabama QSO Party</b>		<b>all modes</b>
<b>Jun 13-14</b>	<i>1200 to 1200 Z</i>	80 m to 10 m
<b>Portugal Day `test</b>		<b>SSB-CW</b>
<b>Jun 13-15</b>	<i>1800 to 0259 Z</i>	6 m and up
<b>ARRL VHF `test</b>		<b>all modes</b>
<b>Jun 20-21</b>	<i>0000 to 2359 Z</i>	160 m to 10 m
<b>All Asian DX `test</b>		<b>CW</b>
<b>Jun 20-21</b>	<i>1600 to 0200 Z</i>	80 m to 10 m
<b>West Virginia QSO Party</b>		<b>all modes</b>
<b>Jun 21</b>	<i>1800 to 2359 Z</i>	80 m to 10 m
<b>Kids Day</b>		<b>SSB</b>
<b>Jun 27-28</b>	<i>1200 to 1200 Z</i>	160 m to 10 m
<b>King of Spain `test</b>		<b>SSB</b>
<b>Jun 27-28</b>	<i>1800 to 2100 Z</i>	160 m to 2 m
<b>ARRL Field Day</b>		<b>all modes</b>

## June Hamfests

**Jun 21 Monroe County RCA. Annual Hamfest.** Monroe County Fairgrounds, Monroe, MI.

web: <http://www.mcrca.org>

2014---from p. 1

As this late maximum comes more than 5 years after the preceding minimum in December 2008, cycle 24 must have now entered its long declining phase, as none of the past observed cycles had longer delays between minimum and maximum. Therefore, the average solar activity should progressively decrease towards a minimum around 2020. However, over the next 2 or 3 years, we can still expect other strong but brief peaks of activity caused by the appearance of a few big complex groups, a typical feature of the late phase of solar cycles. Cycle 24 did not say its last word! ■

## FCC Proposes Amateur Access to 2200 and 630 Meters

from ARRL News

Amateur Radio is poised to gain access to two new bands! The FCC has allocated a new LF band, 135.7 to 137.8 kHz, to the Amateur Service on a secondary basis. Allocation of the 2.1 kHz segment, known as 2200 meters, was in accordance with the *Final Acts* of the 2007 World Radio-communication Conference (WRC-07). The Commission also has proposed a new secondary 630 meter MF allocation at 472 to 479 kHz to Amateur Radio, implementing decisions made at WRC-12. No Amateur Radio operation will be permitted in either band until the

FCC determines, on the basis of comments, the specific Part 97 rules it must frame to permit operation in the new bands. Amateur Radio would share both allocations with unlicensed Part 15 power line carrier (PLC) systems operated by utilities to control the power grid, as well as with other users. In addition, the FCC has raised the secondary Amateur Service allocation at 1900 to 2000 kHz to primary, while providing for continued use by currently unlicensed commercial fishing vessels of radio buoys on the "open sea."

The allocation changes, associated proposed rules, and suggested topics for comment are contained in a 257-page FCC [\*\*Report and Order, Order, and Notice of Proposed Rule-making\*\*](#) addressing three dockets — ET-12-338, ET-15-99, and IB-06-123 — which affect various radio services in addition to the Amateur Service. The FCC released the document on April 27.

With respect to the new LF sliver band at 135.7-137.8 kHz, the FCC concluded that Amateur Radio and PLC systems can coexist there. "Since the Commission last considered this issue, amateurs have successfully operated in the band under experimental licenses without reported PLC interference," the FCC said. "We are also encouraged by the fact that numerous fixed radio navigation beacons, which operate at much higher powers, share spec-

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## WCARC Weekly Net

Tuesdays at

2100 EDST/EST

147.18 MHz 67 Hz PL

Net Control Roster

Jun	2	KD8VWU
Jun	9	N1RB
Jun	16	K80VO
Jun	23	WB8NQW
Jun	30	W8PSK
Jul	7	KD8NJW

## NEXT MEETING

*Business Meeting*

with Mark Bowlus

Monday, June 8

TIME: 7:30 pm/7:00 EB

PLACE: Sheriff's Training  
Room

E. Gypsy Lane and

S. Dunbridge Rd.

Bowling Green, OH

## DON'T FORGET!

**10 meter informal net meets  
Sunday @ 2030 EST/EDST  
on 28.335 MHz**

## Field Day Activities Planned

This year the ARRL Field Day will be held on June 27-28. WCARC activities will be held at the Wood County Historical Museum grounds. Operation begins at 1400 on Saturday afternoon, but the group will begin setting up around noon with special focus on the traditional loop antenna. A potluck/pizza dinner is planned so bring a salad or dessert dish. Your editor will keep you updated via e-mail as the date approaches. Come on out and enjoy meeting your fellow hams and doing a little operating! ■

## NET CHECK INS *continued*

**May 19 Traffic: 0**

**KD8NJW (NCS)**  
**WD8LEI**  
**K8OVO**  
**K8BBK**  
**N8VNT**  
**KC8EKT**  
**WB8NQW**  
**KD8RNO**  
**KD8VWU (9)**

**May 26 Traffic: 0**

**W8PSK (NCS)**  
**KD8WZK**  
**K8BBK**  
**WD8LEI**  
**WB8NQW**  
**K3RC**  
**N8VNT**  
**KD8VWU**  
**N1RB**  
**W8GGS**  
**K8LL (11)**

**FCC---from p. 4**

trum with PLC systems without reported interference."

In 2003 the FCC turned down an ARRL proposal to create a 135.7-137.8 kHz Amateur Radio allocation, after utilities raised fears of a clash between Amateur Radio and PLC systems operating below the AM broadcast band. This time, the FCC said, "It is clear that we will have to establish appropriate requirements for amateur use of the band, if we are to ensure compatibility with PLC systems." WRC-07 set a maximum effective isotropic radiated power (EIRP) limit of 1 W, which is what the FCC is proposing.

The FCC said it "explicitly" rejects the suggestion that it choose one use of the spectrum over the other. "Our objective is to allocate spectrum on a secondary basis to amateur stations in a manner...compatible with existing PLC systems," the FCC said. "However, we also expect to permit amateur operators to make use of the allocation in a manner that is less burdensome and more productive than they are currently afforded under the experimental authorization process."

The Commission said that if it concludes, after considering the record, that Amateur Radio and PLC systems cannot coexist, it would "defer the adoption of service rules, and amateur users will have to continue to use the experimental licensing process to operate in the band." With respect to the proposed 630 meter allocation, the FCC has proposed limiting amateur stations in the US to a maximum 5 W EIRP. In the US, 435-495 kHz is allocated to the Maritime Mobile Service on a primary basis for federal and non-federal use, and to the aeronautical radio navigation service on a secondary basis for federal use.

***continued---on p.7***

**FCC---from p. 6**

The ARRL submitted a *Petition for Rule Making* in 2012 asking the FCC to allocate 472-479 kHz to the Amateur Service on a secondary basis and to amend the Part 97 rules to provide for its use. Several countries, including Canada, already have access to the band. The ARRL has pointed out that during its extensive course of experimentation in the spectrum around 500 kHz, no interference reports have been received.

The FCC said that the "cornerstone" of the technical rules it's proposing for both bands is "physical separation between amateur stations and the transmission lines" carrying PLC signals. "Such a separation, in conjunction with limits on the amateur stations' transmitted EIRP and antenna heights, will enable PLC systems and amateur stations to coexist in these bands," the FCC asserted. "In addition, we propose to limit amateur stations to operations at fixed locations only, to ensure that this separation distance can be maintained reliably."

The FCC said it wants to hear from both PLC system users and radio amateurs regarding technical requirements it would have to put into place to permit both users to operate comfortably and without compromising the PLC systems. The Commission suggested that other requirements might include limits

on antenna height, transmitter power limits, and operating privilege limits based on license class or mode. The ARRL will file comments in the proceeding.

The FCC will accept comments for 60 days following publication of the *Report and Order, Order, and Notice of Proposed Rule-making* in the *Federal Register*. Reply comments would be due 30 days after the comment deadline. ■

## **Free Weather Station Available**

**includes:**

Rain Gauge

Exterior Temperature & Humidity

Anemometer

Wind Direction

Interior Temperature

Interior Humidity

Barometric Pressure

Davis Weather Monitor II:

Wireless Link

RS232 Cable

WeatherLink CD

Requires (1) 9V and (2) LI Batteries required

Has to be removed from gable of garage (4-1/4" lags)

Contact: Rex Klopfenstein-KC8PFP 419-308-8299

## Free Electronics Course

I have a 1955 DeVry Technical Institute, Electronics Course that I acquired last summer and would like to hand off to any interested person. It's about 100 pamphlets. You can have it at no cost. If you're interested email me at [KD8RNO@gmail.com](mailto:KD8RNO@gmail.com).

Lynn Wineland [KD8RNO]



# MONROE HAMFEST

and Computer Show

## Father's Day - June 21, 2015

7:30am to 1:00pm - Set-up 6:30am Presented by:  
The Monroe County Radio Communications Association

### Monroe County Fairgrounds

M-50 at Raisinville Rd. (2 Miles west of Monroe)

FREE PARKING

Indoor Facilities / Trunk Sales  
Computers and Equipment  
Distributors / Hot Food

QSL Card checking by Stan Arnett AC8W

Over Night Camping \$25 (electric included)



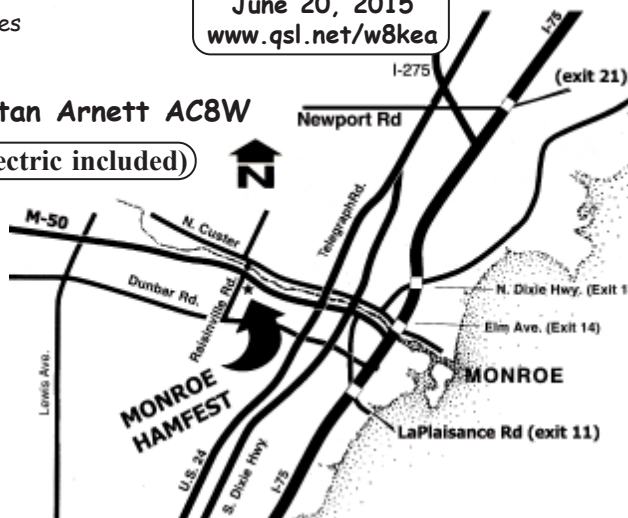
Tables indoor 8': \$15 each, does not include admission ticket. Electric available in all buildings, bring cords.

Trunk 8' Spaces: \$10 each, does not include admission ticket.

Tickets Advance \$6 each, come with 2 stubs for drawings.

Midland Swap  
Midland, MI  
Saturday  
June 20, 2015  
[www.qsl.net/w8kea](http://www.qsl.net/w8kea)

Talk-in  
146.72/12



Ticket, Trunk Sales, & Table Reservations online at: <http://www.mcrca.org>

Mail to: Fred VanDaele KA8EBI, 4 Carl Drive, Monroe, MI 48162, [ka8ebi@yahoo.com](mailto:ka8ebi@yahoo.com)

Name \_\_\_\_\_ Call \_\_\_\_\_ e-mail \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

No. Tickets \_\_\_\_\_ No. Trunk Spaces \_\_\_\_\_ No. of Tables \_\_\_\_\_ Amount Enclosed \_\_\_\_\_

Advance Tickets \$6ea. with 2 stubs / 8 ft Trunk Spaces \$10 ea. / 8 ft Tables \$15 ea.



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**WOOD COUNTY ARC  
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BOWLING GREEN, OH  
43402**

