CQ Chatter

Volume B8•Issue #7 Wood County Amateur Radio Club AUGUST 2007
P. O. Box 534,Bowling Green, OH 43402 http://wcarc.bgsu.edu

President/Vice President	K8NEA/K8OVO	Duane Ashbaucher /Don Buehrer
Secretary	KG8FH	Jeff Halsey
Treasurer	WD8JWJ	Bill Wilkins

July Breakfast Includes Foxhunt

The July breakfast meeting was held as usual at Couzin's restaurant in Grand Rapids. Estimated attendance was about 12 persons. The day was enlivened by the foxhunt that was held afterwards. After breakfast, Phil, W8PSK, transformed himself into the fox and set up his lair at Otsego Park. As an added incentive, a $10 gift certificate was offered for the winner. The first prize was won by Brett, KC8UMN, with Bob, WB8NQW, a close second. The Club thanks Phil for his contribution towards making this event a successful one. ■

The Sunspot Low What Does It Mean For You?

by Kurt Feldmesser (member RSGB Radiation Studies Committee)

Propagation of HF Radio Signals- High Frequency (or short wave) radio signals can travel much further than line-of-sight by reflecting (actually refracting) from layers of gas, hundreds of kilometers above the Earth's surface. The signals bounce off these layers, or regions, because the gases are ionized by the sun's rays. Because of this, their effectiveness depends on the time of day and the time of year. The daytime and summer months are better

WCARC Weekly Net:
Tuesdays at 2130
147.18 & 444.475 MHz

Next Meeting

MONDAY, AUGUST 13
TIME: 7:30 PM
PLACE: Sheriff's Training Room, Dunbridge and Gypsy Lane. Social time preceding.

Elmer's Corner

Antenna Safety

Summer is when many radio amateurs perform work on their antennas. A lot of clubs will rally around members' projects to assist with raising antennas and towers. PLEASE keep safety as your number one priority when performing this kind of work.

Watch out for overhead power lines and other dangerous situations. Care should also be taken not to strain backs and muscles attempting to lift heavy loads. Heat can be another danger to some people when working outdoors. Remember to hydrate and rest when necessary.

The ARRL Technical Information Service (TIS) has information on antenna and tower safety at:

WCARC Net Check-ins

Jul 3- K8NEA (NCS), K8OVO, WB8NQW, WD8JWJ, WB8VUL, K3RC, N1RB, KG8FH, W8PSK, K8RZP, KD8JHQ, KD8AVT, KC8GSY Guy. (13)

Jul 10- WB8NQW (NCS), WD8JWJ, K8OVO, W8PSK, K8BBK, WD8ICP, WD8LEI, KG8FH, WB8VUL, K8RZP, N8QMV, KC8UMN (13)

Jul 17- WB8NQW(NCS), N8QMV, W8PSK, KG8FH, W8GGS, WB8VUL, K8BBK, K8OVO, KB3PJO, KC8AKF (10)

elmer ---continued

http://www.arrl.org/tis/info/pdf/0106091.pdf

Playing it safe today means that you will have a chance to come out to play tomorrow. ■

August Hamfests

Aug 4 Voice of Alladin ARC 8 am
Alladin Shrine Center, Columbus, OH. Contact Jim, KB8KPJ, (614) 846-7790.
e-mail: **kb8kpj@cs.com**

Aug 11 NWO ARC 8 am
Fair Radio Sales, Lima, OH. Contact Gary, K8FRS, (419) 223-2196.
e-mail: **k8frs@fairradio.org**
URL: **www.nwoarc.org**

Aug 19 Lapeer Co. ARC 8 am
Lapeer Center Building, Lapeer, MI. Contact Bill, KD8VP, (810) 797-5329.
e-mail: **kd8vp@arrl.net**

Brain Teasers

1. Which sideband is commonly used for 20 m phone operation?
a. upper **b.** lower
c. amplitude compandored **d.** double

2. Why is the single sideband mode of voice transmission used more frequently than amplitude modulation (am) on the hf amateur bands?
a. single sideband transmissions use less spectrum space
b. single side- band transmissions are more power efficient
c. no carrier is transmitted with a single sideband transmission
d. all of the above

3. What is the PEP output from a transmitter if an oscilloscope measure 200 volts peak-to-peak across a 50 ohm resistor connected to the transmitter output
a. 100 W **b.** 200 W **c.** 400 W **d.**1000 W

sunspots ---continued

for the higher frequencies (say, above 1OMHZ) and nighttime and winter are better for the lower frequencies.

Propagation of VHF Radio Signals-VHF signals (above 30 MHz) are less affected by solar activity although at 5O MHz very long distant propagation can occur at a sunspot maxima. Periodically, solar flares on the sun release streams of high energy particles. These particles create auroras (curtains of ionized gas) in polar regions of the earth. An aurora can propagate VHF signals over long distances for periods of a few hours at a time.

What Are Sunspots? Sunspots are areas of the sun which are less hot (about 3000

Brain Teasers answers: 1-a, 2-d, 3-a

August Contests

The full contest lineup for the month of August includes the following:

July 28-29	*1200 to 1200 Z*	80 m to 10 m
RSGB Islands on the Air		**all modes**
Aug 4-5	*1800 to 1800 Z*	above 1.5 m
ARRL UHF 'test		**all modes**
Aug 4-5	*0001 to 2359 Z*	10 m
10-10 Int'l Summer 'test		**all modes**
Aug 4-5	*1800 to 0600 Z*	80 m to 10 m
North America QSO Party		**CW**
Aug 11-12	*0000 to 2359 Z*	80 m to 10 m
WAE DX 'test		**CW**
Aug 11-12	*1600 to 2359 Z*	160 m to 70 cm
Maryland/DC QSO Party		**all modes**
Aug 18-19	*1800 to 0600 Z*	80 m to 10 m
North America QSO Party		**SB**
Aug 18-20	*2000 to 0200 Z*	80 m to 2 m
New Jersey QSO Party		**all modes**
Aug 25-26	*0700 to 2200 Z*	160 m to 10 m
Hawaii QSO Party		**all modes**
Aug 25-26	*1600 to 0400 Z*	80 m to 10 m
Ohio QSO Party		**all mode**

sunspots ---continued

degrees C) than the rest of the sun's surface (about 6000 degrees C) and therefore appear dark. They produce intense radiation which make the ionosphere reflect radio signals. The spots last from a few days to a month or two and the quantity of sunspots is directly related to the effectiveness of the ionosphere reflecting short-wave signals as can be seen from the graph in Figure 2.(top line - sunspot count; bottom line - effectiveness of ionosphere).

How To View Sunspots Safely- IMPORTANT WARNING: Never look at the sun directly through a telescope or binoculars, even with a dark filter added. This can cause permanent severe damage to your eyes! The safe way to look at the sun is by projection. Put a pin hole in a piece of thick cardboard. The image of the sun is then projected onto a piece of white paper. Sunspots should be clearly visible using this method. You can make an "elegant version" of this scheme but putting a large cardboard box (with a pin hole on one side and a white sheet of paper pasted on the other inside surface. After the box is over your head and your eyes dilate (in about 3 minutes), you will see a fantastic, bright image of the sun.

Where Do They Come From? Sun-

WCARC
2 m/440 Net Control Roster
Net meets every Tuesday at 2130

Jul	**31**	**K8OVO**
Aug	**7**	**WD8ICP**
Aug	**14**	**N8QMV**
Aug	**21**	**WB8NQW**
Aug	**28**	**N1RB**
Sep	**4**	**K8OVO**
Sep	**11**	**WD8ICP**

DON'T FORGET!!
10 METER INFORMAL NET
SUNDAYS, at 8:30 pm
on 28.335 MHz

Ohio QSO Party

The 2007 running of the Ohio QSO Party will be Saturday, August 25. It goes from noon to midnight, EDT. Activity will be on the HF bands, 10 through 80 meters, CW and SSB.

Stations inside Ohio can work anyone, anywhere. Stations outside of Ohio (anywhere in the world, and yes, we do get entrants from Europe) can only work stations in Ohio -- so we Buckeyes are the hunted, not the hunters for a change!

There are numerous awards (certificates and plaques) available -- including a club competition. To date, these are the sponsored plaques, available to the top scorers in each category:

Ohio Single Operator High Power
Ohio Single Operator Low Power
Ohio Single Operator QRP
Ohio Single Operator Phone
Out of State Single Operator High Power
Out of State Single Operator Low Power
Out of State Single Operator QRP
Single Operator DX
Ohio Multi Operator
Ohio Mobile
Ohio Club
YL

The OQP Organizing Committee is hoping that Ohio hams are making plans to be active, whether from home, camp or mobile in the Ohio countryside. The OQP Committee's annual goal is to have all 88 counties on the air. There will be plenty of activity for all 12 hours. Operate for a short time or the whole contest period -- whatever suits your time budget.

Full details are on the official OQP web site: http://www.oqp.us.

Past scores, a "Quick Start Guide" to the OQP, logging software information, paper forms and operating aids, and a regularly updated page showing planned activity, county by county, are all there for you.

For the latest OQP information, there is also an e-mail reflector. You can sign up for it on the OQP Web Site.

If you have any questions, they may be directed to:

af8a@arrl.net or jimk8mr@aol.com.

We hope you'll join in the fun of the 2007 Ohio QSO Party, Saturday August 25!

sunspots ---continued

spots have been observed and recorded for three centuries, ever since Galileo (1564 -1642) turned the newly invented telescope towards the sky.

In the nineteenth century Dr Rudolf Wolf of the Zurich Observatory corresponded with a number of astronomers forming a network of solar observers. This helped to maintain their records even when the weather made observation impossible in some areas.

The sunspot count tended to depend on the size of the astronomer's telescope (in other words, how big an instrument he could afford) and this resulted in some rivalry and disagreement as to the 'true' number. In order to get over this problem, Dr Wolf multiplied all counts by a factor which took telescope size into account and allowed a figure of 10 times for spot 'groups'. The system is still in use.

Among this network of observers, a German apothecary, called Heinrich Samuel Schwabe, made meticulous observa-

tions of the sun for the best part of twenty years and at the end of that time, in 1843, announced that sunspot numbers peaked every ten years.

The effect of this announcement was electrifying. Hundreds of records of past observations were dug up and graphs plotted to see if Schwabe's findings held true. Figure 1 shows that graph brought up to date. We now accept eleven years as the average time between peaks.

You may ask how does radio fit into all that? Well, it's like this: When Marconi transmitted his famous three dots across the Atlantic from Cornwall, England, to Newfoundland, Canada, in 1901, he proved that radio waves could do something that light waves could not<MDASH>go around the curvature of the Earth. Radio Amateurs, some twenty years later, proved that short waves were even better for that task than the long waves all professionals were using at that time. Because of this, Amateurs have frequency allocations throughout the short-wave spectrum.

However, one snag with short-waves soon became apparent. Short radio waves rely upon reflection in the ionosphere where the air is extremely thin. Because of this thinness, the ionosphere is strongly influenced by the energy reaching it from the sun. Daylight and darkness have a great effect on this gas, and the time of year affects how much solar energy can reach the ionosphere. Charged atomic particles, ejected by the sun in the "solar wind" can cause magnetic "storms" in the ionosphere. High intensity ultraviolet and X-ray radiation from solar flares can totally block all short-wave communication for perhaps half an hour on the sunlit side of the Earth. This is known as a Dellinger Fade-out. Luckily, flares can also cause parts of the ionosphere temporarily to reflect signals above 1OO MHz which would not normally be reflected. This is an effect known as aurora.

It is not surprising that the effectiveness of the ionosphere as a "mirror in the sky" follows the sunspot number in its eleven year cycle. Since the early thirties of this century, the ionosphere observatory have measured the effectiveness of the ionosphere as a reflector of radio waves, by measuring its height and maximum usable frequency (MUF). ■

FOR SALE

Yaesu 897-D transceiver (w/ 60 Meters) & two Yaesu internal FNB78 batteries w/Yaesu CD24 battery charger--$700 takes it all!

Yaesu 817-ND (w/ 60 Meters, YF122C Collins 500Hz CW filter & Peg Leg tilt-stand kit--$475.

SGC 230 auto antenna tuner, 200 W max, $250.

Kenwood AT 130 antenna tuner, $100

OHR WM2 QRP wattmeter--best made. $75.

MFJ 264 dummy load, HF-UHF, to 1.5 KW, $25.

Logickey K-3 contest keyer. $75

Palstar AT1KM antenna tuner. $275

Rigblaster Plus rig to soundcard interface, $100.

LDG AT-200Pro Memory tuner, 5-250 watts, 160-6 Meters, $150.

TPS 11 switching power supply, 11 amps. $50

Astron RS-7a power supply, 5 amps. $50.

Contact: Mark Paley, K8LD, Cell: **419.494.3429**

WOOD COUNTY ARC
P.O.BOX 534
BOWLING GREEN, OH
43402