

Mtgs Fri 6:30 June 24 & July 22  
at the MCL Cafeteria in Kettering

June/July2016

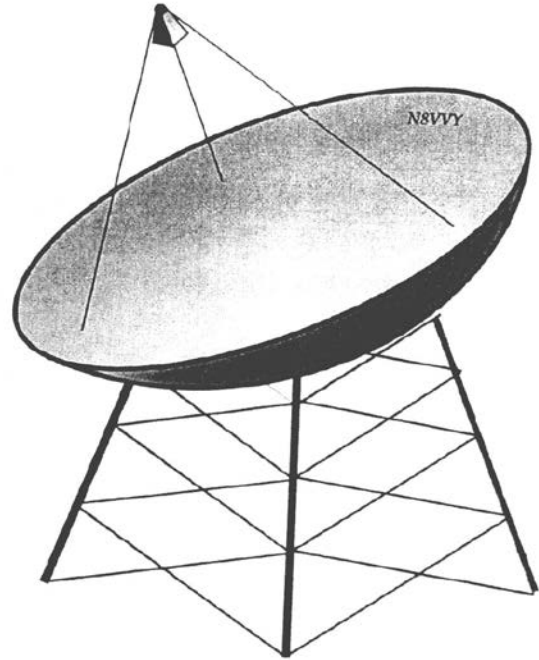
# ANOMALOUS PROPAGATION

Newsletter: *The Midwest VHF/UHF Society*

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Beacons: 1296.079 **W8KSE** EM79ur Dayton, OH---- 2W to Big Wheel at 800' AGL.

Listen for the **K9AYA Beacons** at EM79qk, 2W @ 10,368.000 MHz  
both are copied by K4TO daily. 1W @ 5,760.000 MHz

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UPCOMING EVENTS: June Mtg 24 June

July Mtg. 22 July

August Picnic and Measurements at Daun's place: August 27, 2016

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## De N8ZM:

I know it's my usual complaint, but it is already a month since Hamvention! Where did the time go? Oh, wait. I took a three week vacation and I've been back for a week trying to recover. And help my siblings deal with my nearly 99 years old Mom's health concerns. Haven't had time to even think much about playing with the trinkets I picked up at Dayton or at Sea-Pac. Maybe later this week?

About Sea-Pac. It is a very nice Hamfest, now going on 35 years old, that is held in the scenic village of Seaside, OR. They actually have a very nice convention center there as it is a popular attraction for such events as the ocean is just 3 blocks away and there are a lot of tourist-y shops and great restaurants. They typically draw about 2500 people and it is also the ARRL Pacific Northwest Section convention so there are a lot of ARRL PNW Section people involved. It is all held indoors with the commercial vendors and flea market sellers packed into the building. There were several vendors who are not regulars at Dayton so it was interesting to see what they had to sell.

They also put on a very nice banquet with excellent food (of course you only want to eat salmon out there). They had the new ARRL President. Rick Roderick, speak briefly, and the main speaker was Nancy Rabel Hall, who is a NASA engineer and ham who works at NASA Glenn. She has quite a resume and is an excellent speaker with several good stories to tell. Ironic that I had to drive to the west coast to hear a talk from an active Ohio ham from Cleveland!

I have a couple of friends who live near there and was able to get some good face time with them too! So it was worth driving 5-6 days each way to get there and back. Saw some Dyna-mite scenery too. Well, once we got past Nebraska.

So if you happen to be near Portland, OR, the first weekend of June some year, try to make it out to Seaside and Sea-Pac. End of travelogue.

It appears that Hamvention went off quite smoothly this year, and I hope all of you were able to attend and got to tell your stories at the last meeting. As I was cooped up in the Prize booth all weekend, I don't really have anything to tell, but maybe by meeting time this Friday I'll remember something to bore you with.

There are lots of other things to discuss this month, so come to the meeting to find out what they are!

See you on the 24<sup>th</sup> at the MCL.

de N8ZM.

## An Old Gem

On page 6 we are reprinting an issue from the 12 page "VHF News" edited and published by Bill McNatt, W9NFK from Franklin Park, Illinois. Jim, WB8VSU, found it, he stumbled on these while ordering a couple of the antennas on the WA5VJB site: <http://www.wa5vjb.com/newsletter.html> . It makes for interesting reading.

This issue is 66 years old from July of 1950. I was still bootlegging at the time, got my 1rst Liz in 1951. The 2m array depicted was quite popular in those days, I built one with 12 elements, from steel, all welded together.

There is only page 1 in our printed newsletter, however, the electronic version contains the entire newsletter.

[Gerd]

## This and That. 6+7-16

**Green Car.** I spotted a green car in the parking lot and thought to myself, it just looks like a giant frog. Looking at the license plate it read: “trefrog”. A tree frog, of course, is a very tiny frog. [Gerd]

**Cough Medicine.** Military assault rifles are designed to kill a lot of people in very little time, yet these “weapons of mass destruction” are as easy to buy as cough medicine. [N.Y.T]

**NASA.** It's only a coincidence that "nasa" in Hebrew means "to go up." [L.M. Boyd]

**"Aggravate"** used to mean "to make heavy." [L.M. Boyd]

**Now you know.** If you don't know where you're going, chances are you will end up somewhere else. [Yogi Berra]

**World.** If the world were perfect, it would not be!  
And: The future ain't what it used to be. [Yogi Berra]

**Work.** “One never notices what has been done; one can only see what remains to be done.” [Marie Curie]

**Subject.** “There is no subject so old that something new cannot be said about it.” [Fyodor Dostoyevsky]

**“Political Language** is designed to make lies sound truthful and murder respectable, and to give an appearance of solidity to pure wind.” [George Orwell]

**“Do the Best** you can until you know better. Then, when you know better, do better!” [Maya Angelou]

**Problems.** “The problem is not there are problems. The problem is expecting otherwise and thinking that having problems is a problem.” [Theodore Isaac Rubin]

**Connections.** “Creativity is just connecting things.” [Steve Jobs]

**Instinct.** “It is impossible to overlook the extent to which civilisation is built upon a renunciation of instinct.” [Sigmund Freud]

**Electric Car.** In Norway, a country of 5 million people, 50,000 already have an “Electric” and the government hopes this number increases that by the year 2025 combustion powered vehicles can be banned from the roads. [from an article by Thigs Beckers]

**ARLP022 Propagation de K7RA, Tad Cook  
For May 27, 2016**

.....the average daily solar flux was 97, down 3.4 points from the previous week's average of 100.4.

Planetary A index average was 7.1, down 2.8 points from 9.9, and average daily mid-latitude A index was 7, down 3.9 points from 10.9.

We should continue to see this overall decline in solar activity for at least the next four years. Compared to past cycles, this one is considerably weaker. But I wouldn't worry much about some reports in the media suggesting we face several future solar cycles that would be very weak. Although astrophysicists know much more about the sun than in the past, and have far better tools and resources for monitoring day-to-day activity, the record so far shows that long range forecasts have varied all over the place, and have not proved consistent or true.

Remember Mausumi Dikpati? She was the scientist who predicted that the current solar cycle (24) would be huge and record breaking, at least compared to the previous four solar cycles. It did not turn out the way we hoped. We might consider the same for more pessimistic forecasts in popular news media.

**Halogen Lamp, from Wikipedia**

also known as a **tungsten halogen**, **quartz-halogen** or **quartz iodine lamp**, is an [incandescent lamp](#) that has a small amount of a [halogen](#) such as [iodine](#) or [bromine](#) added. The combination of the halogen gas and the [tungsten](#) filament produces a **halogen cycle** chemical reaction which redeposits evaporated tungsten back onto the filament, increasing its life and maintaining the clarity of the envelope. Because of this, a halogen lamp can be operated at a higher temperature than a standard gas-filled lamp of similar power and operating life, producing light of a higher [luminous efficacy](#) and [color temperature](#). The small size of halogen lamps permits their use in compact optical systems for projectors and illumination.



## **Harvesting. [Gerd]**

Harvesting, a new word, Madison Avenue has come up with to sell you “thin air”. It sounds like you are getting something for nothing. But in plain English it means zapping energy from the transmitters that supply the cell phones and the wifi, making reception of those services a gamble. I have noticed that cell phone contacts are sounding poorly.(overly compressed). This is because the providers are fighting for customers offering a cheap rate through cramming more calls, and using the most efficient but lowest grade voice code that will do. Of course it sounds terrible and is hard to understand. But the customer can “charge” his gadget through “Harvesting.”.

Actually, and that was a long time ago, there was a case in Germany, where people having small garden plots in the shadow of a super broadcast station (like WLW) would string a wire and light a small incandescent bulb on a warm summer night. So a law was passed to outlaw this and the transmitter had to have a large plot of land fenced in!

What you pick up now are really tiny scraps of energy, and the satisfaction you get from “harvesting” is mostly in your head.

## **Changing a Watch Battery. [Gerd]**

Recently there were two articles on button cells, which are used in small portable devices. They give you some insight of what you run into if you need them as a replacement or for a new design. You also know that prices for such cells are in the \$5+ range. Then most people wouldn't know how to change a cell in a wristwatch. So often they are just going to a store that sells batteries and/or watches to have it done.

If you do it yourself, take a magnifying glass and look on the back of the watch you might find the type of battery required for replacement. As it turned out there are so many different shapes and sizes, it makes your head spin. Usually there are several different designations that will fit your need. The difference might be the capacity of the cell and or the longevity or just a different brand.

Next pop off the back cover using a kitchen knife (be careful). (Sometimes a small screwdriver will do, in that case the back of the watch will have a notch for that.) Now the button cell is exposed and can be taken out. The type is printed on one side, if you did not find it on the back of your watch already. Wipe the cell clean and measure the voltage, if it is still good, there is a chance that a poor contact might be the problem. Then good cleaning and reinserting the battery might get the watch going again. If not, you need to get a replacement cell.



## How to Separate Your TV from the Power line for Lightning Protection.

The picture explains how to do it, use an old Ferrite core to wind this elaborate looking power cord on it. This in essence separates the TV from spikes that could be produced during lightning. Of course, other ferrites and configurations could be used. I use a handful of the usual toroids and just regular twin power cord for my protection. Now, don't forget to protect your TV from the outside, that is, unplug the antenna down lead and place it away from the TV. A push-on adapter is best suitable for this.

The idea and the picture is from my friend Klaus, DL7DU. It has kept his TV alive when all his neighbors lost theirs one time when lightning hit their TVs in a row of houses together in one long unit.



### In the Beginning

Thomas Edison demonstrated his first incandescent light bulb on Dec. 31st in 1879. Edison didn't invent the light bulb — incandescent lights had been around for almost 40 years — but he was the first to come up with a practical, long-burning design. He realized he was on the right track by the end of October, when he tested a carbonized filament inside a glass vacuum bulb, which produced a light that burned for more than 13 hours. He kept fiddling with it and modifying it, and each version burned a little bit longer than the one before it; by the time he was ready to reveal it to the public, his bulb was burning for 40 hours.

After 14 months of testing, 1,200 experiments, and \$40,000, he was finally ready for his first public demonstration. He hung strings of lights inside his lab in Menlo Park, New Jersey, and switched them on and off repeatedly, to the awe and delight of his 3,000 spectators. He said, "We will make electricity so cheap that only the rich will burn candles."

DEVOTED SOLELY TO

AMATEUR RADIO



# THE NEWS

EDITED AND PUBLISHED BY: Bill McNatt, W9NFK, FRANKLIN PARK, ILLINOIS

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## **W5VY-W8WXV, 1200 MILES ON 144 MC!**

- \* W9FVJ - W5ERD FIRST ILLINOIS TO TEXAS CONTACT ON 2 METERS, JUNE 25. PAGE 6.
- \* W9FVJ - W5ML FIRST ILLINOIS TO LOUISIANA CONTACT ON TWO, JUNE 25. PAGE 6.
- \* W4HHK - W5HTZ FIRST TENNESSEE TO OKLAHOMA CONTACT ON TWO, JUNE 25. PAGE 7.
- \* W5JTI - W5OBU/4 FIRST MISSISSIPPI TO ALABAMA CONTACT ON TWO! JUNE 19.
- \* W5JTI - W5MW/5 FIRST MISSISSIPPI - OKLAHOMA CONTACT ON TWO, JUNE 17.
- \* W9UIA - W5ERD FIRST INDIANA TO TEXAS CONTACT ON TWO METERS, JUNE 25.
- \* W5ONS, VICTORIA, TEX. HEARD BY W7LFX, TUCSON, ARIZ. JUNE 24. PAGE 6.

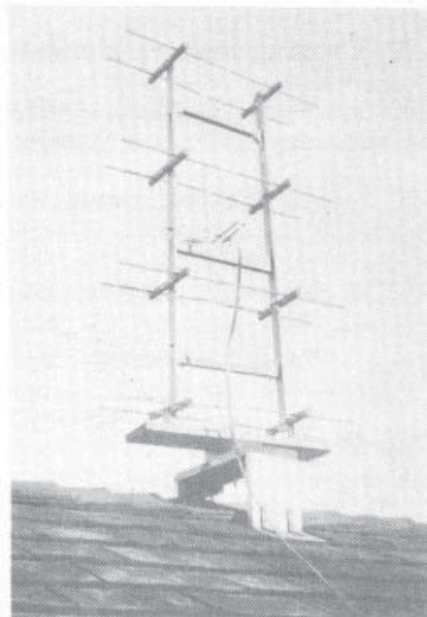
TWO METERS, LAST MONTH . . .

1200 miles on Two! The exact distance, is being calculated, but it should be obvious that W8WXV and W5VY really wrapped up the record, nailed it in a box and put sealing wax on it for a time. The big event occurred on June 24, at about 11:10AM EST.

In Shiloh, Ohio, northwest of Mansfield, Al Burson was listening on 6 for W8CMS and NQD, whom he schedules crossband, occasionally. Finding 6 open, somewhat, Al tuned to W5VY, about whom he had been reading in our June issue as being active on 2. Pat, W5VY, was telling a W3 that he was going to 2, so W8WXV fired up the 2-meter rig. In the meantime, W5VY announced his 2-meter frequency, 144.360, which is also W8WXV's frequency!

When first heard at W8WXV, W5VY's c.w. CQ was S7; W8WXV answered three times before W5VY came back with an S5 report, VY then being very weak. W8WXV replied with a report and his QTH, stood by and heard W5VY return S7 on fone. After signing, W8WXV listened on the frequency until 11:30, at which time W5VY was heard very loud, calling CQ three or four times.

W8WXV reports the 6 meter opening was poor, hearing only a few W5s, with no real short skip. It's a condition observed many times, but never before tied in with 2-meter propagation. Al reports hearing solar static peaking S4 on two, beaming on the sun, the two weeks period prior to June 24. On June 23, W8WXV observed Aurora for  $3\frac{1}{2}$  hours, but worked only W3QKI and W9EHX.



THE 16-ELEMENT, 434 MC. ARRAY  
AT W0WGZ

W8WXV now has 14 states, 7 call areas, plus VE3, on Two. The station consists of an 829B final, 75 watts, a 45° corner reflector, 12 db gain antenna, 45 feet high. The receiver is a crystal-controlled converter using 2 6J4 r.f. stages. "Looks OK on noise generator," says W8WXV.

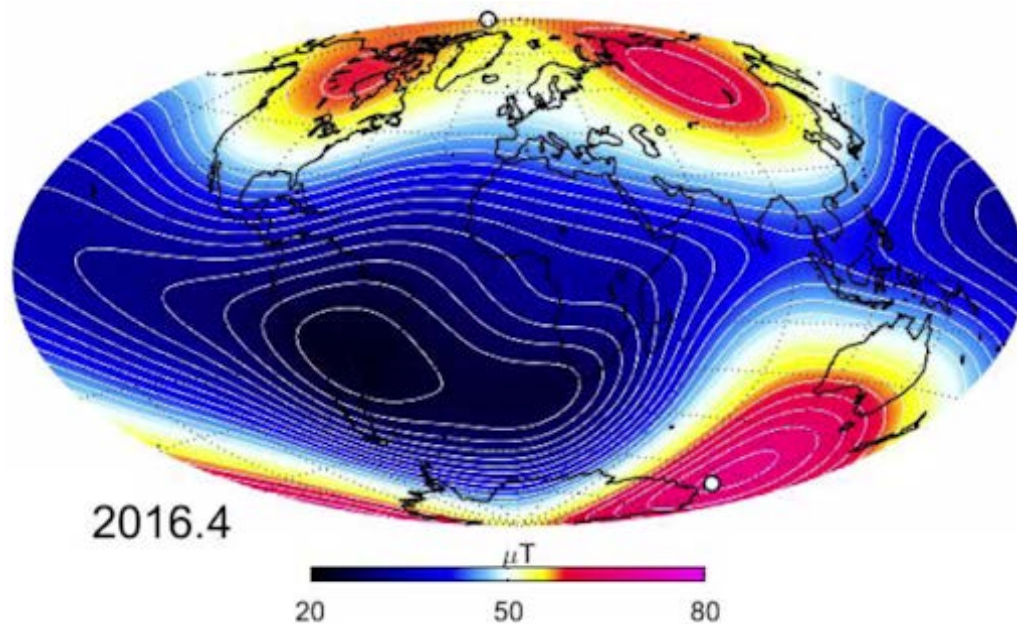
Pat, W5VY, was running 1 kilowatt input to the final, and used a 4-over-4 element array. Pat confirmed the contact: W8WXV, 10:09AM CST, June 24th.

Congratulations on a fine job! This record will stand for some time, we believe, because of the odds against the occurrence of similar or better con-  
(Continued on Page 6.)



**EARTH'S MAGNETIC FIELD IS CHANGING:** Anyone watching a compass needle point steadily north might suppose that Earth's magnetic field is a constant. It's not. Researchers have long known that changes are afoot. The north magnetic pole routinely moves, as much as 40 km/yr, causing compass needles to drift over time. Moreover, the global magnetic field has weakened 10% since the 19th century.

A [new study](#) by the European Space Agency's constellation of Swarm satellites reveals that changes may be happening even faster than previously thought. In this map, blue depicts where Earth's magnetic field is weak and red shows regions where it is strong:



Data from Swarm, combined with observations from the CHAMP and Ørsted satellites, show clearly that the field has weakened by about 3.5% at high latitudes over North America, while it has strengthened about 2% over Asia. The region where the field is at its weakest – the South Atlantic Anomaly – has moved steadily westward and weakened further by about 2%. These changes have occurred over the relatively brief period between 1999 and mid-2016.

Earth's magnetic field protects us from solar storms and cosmic rays. Less magnetism means more radiation can penetrate our planet's atmosphere. Indeed, high altitude balloons launched by Spaceweather.com routinely detect [increasing levels of cosmic rays](#) over California. Perhaps the ebbing magnetic field over North America contributes to that trend.

As remarkable as these changes sound, they're mild compared to what Earth's magnetic field has done in the past. Sometimes the field completely flips, with north and the south poles swapping places. Such reversals, recorded in the magnetism of ancient rocks, are unpredictable. They come at irregular intervals averaging about 300,000 years; the last one was 780,000 years ago. Are we overdue for another? No one knows.

Swarm is a trio of satellites equipped with vector magnetometers capable of sensing Earth's magnetic field all the way from orbital altitudes down to the edge of our planet's core. The constellation is expected to continue operations at least until 2017, and possibly beyond, so stay tuned for updates.

## Hamvention 2016

By Gerd, WB8IFM  
Dayton, OH, Tue, 24 May-2016

Another Hamvention (H.V.) has come and gone. It was my 52<sup>nd</sup>! I still remember my first one in 1964. The H. V. was moving that year from downtown to the Hara Arena. On Friday night, after work, we drove right up and parked the car next to the entrance of the Silver Arena. There were a few dealers setting up booths, we had free coffee and dough-nuts, the typical type reception for any bigger event in the Us at the time.

Checking in to "Will Call" on Thursday afternoon, right away there were a lot more envelopes with tickets. Two large boxes with No10 envelopes stacked side-wise, so more could be accommodated! There were not that many pickups though. However, the sale of tickets never stopped for long. Here you could still buy the ticket for the pre H.V. price of \$20. A bus ticket was available for \$ 8.- Something I learned: that ticket is valid: Fri/Sat/Sun for the Hara buss AND all other Dayton bus lines! Maybe we should have a map and a schedule for the Dayton buses!

The next morning, just prior to opening (9 o'clock) the entrance hall was packed with people, buying and picking up tickets from will call or waiting for the gate to open up the exhibits. A short time later, observing the surging crowd coming in and streaming through the Silver Arena I was reminded, a crowd that you can only see, when it's training hard and the flea market crowd joins the inside visitors. But clearly there was no rain and the flea market had opened earlier.

It will be a while before we get an accurate count but it sure looks it might exceed the 20k number by a couple of thousands. The one article in the newspaper mentioned 25k.

Later on I made a sweep through the flea market, and although I have seen the flea market before, I was again impressed by the magnitude and at the same time tortured to make a decision which part to choose and take a closer look. I had with me Frank Good in a wheelchair and the row we picked had lot's of potholes... I tell you: murder for the little wheels up front. A number of times some helpful, strong hams helped push us out!

I was looking for an antique Hallicrafter's speaker. A friend, who is collecting old equipment needed one to complete a set-up. Eventually we spotted such a speaker, but it was not the right type! In my humble opinion, we should try to have a few categories like "Antique radio", "Measuring & Testing equipment" "Components, connectors, small antennas" etc. And, of course, we would need "Miscellaneous", or "all else". ( Hi )

I was very frugal this time: I only bought one book, a Power/SWR meter a handful of button cells and two ferrite toroids.

Mostly, I met a lot of old friends, many from overseas and they were often close to my age and easy to communicate with. So often now I get into the situation where young people don't listen and old people forget. In that respect our Friday night QCWA Eyeball meeting wads really super. Lacking the numbers for a full fledged banquet, we had changed the venue to just assembling in the hotel lounge for a couple of hours. This time there were 18 of us from all over the US, and Canada!

Checking the prize board, I noticed a ticket number in the 23 thousand range and I thought using some algorithm, the winning ticket numbers could give us some idea about attendance as well.

The WX held up, it was not too hot or cold and when it rained it was not too hard. I forgot, was it Friday or Saturday night! I like to close with one last thought: getting out of HARA Arena Saturday night was murder!