

# QRZ NEWS

A MONTHLY PUBLICATION OF  
SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB, INC  
PO BOX 1033 - LANCASTER, PA 17608-1033

(Founded June 1960)

AN AFFILIATED SPECIAL SERVICE CLUB OF THE ARRL, INC.

*"Public Service through Communication"*

Website: [www.K3IR.org](http://www.K3IR.org)

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Repeaters: 145.230 - 449.975 - Packet 145.030 - ATV 923.250, FN10se

## April 2009

### Notes from the President

Hey gang, I think spring may finally be here! I'm sure you all have "honey do" lists to contend with. However, don't forget the list of things needed at SPARC. The property is looking much better but there is still some work to be done. The operating building roof needs a permanent repair, the operating position needs some work, and the repeater building needs to have some excess equipment removed. As the weather continues to improve, we will be scheduling some work days.

Don't forget field day will be here before we know it. The dates are June 27 and 28. SPARC will be taking part in field day again this year and again the emphasis will be on fun and fellowship more than running up a score. Come out and enjoy the day. I am issuing a special invitation to those new and aspiring hams to take advantage of this opportunity to get to know us and get to know ham radio. Even unlicensed operators can come out and experience the excitement of ham radio under the supervision of an experienced ham.

The economy looks like it may be improving! SPARC is within \$16,000 of being the sole owners of the Club Site. I am hoping that recycled paper prices will come back to the level that we can at least make a little profit, but we need to find some other sustainable sources of income. Any help would be great!

We also have a quantity of unneeded equipment. I would like to see that equipment sold at a fair price in order to pay down the mortgage. I am still looking for some one to take on the job of selling this equipment on Ebay or similar venue.

73, Harry Bauder – [WA3FFK](http://www.k3ir.org)

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### April Technical Program

Harry Bauder, WA3FFK, will give a presentation on the latest technology used in aircraft black boxes.

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### Coming Events

Tuesday, April 14, 2009 TMI drill 1700 – 2200 local time. RACES volunteers needed, contact [Chris Bunting, K1CWB](http://www.k3ir.org), to volunteer.

Saturday, April 18, 2009, 0800 – 1400, York Spring Hamfest. Brookside Park, 4054 Fox Run Rd. Dover, PA. Getting on microwaves program starts at 1000. EME presentation by W3HMS at 1045.

Sunday, April 19, 2009 MS walk starting at Clipper Stadium. Ham volunteers needed starting at 1030. The walk ends ~1600. See the March issue for details. Contact Rick Watson, [N3SWJ](http://www.k3ir.org) to volunteer.

Saturday, Sunday, April 18 and 19 , 2009  
8-5 Sat, 8-? Sun Exam Dependent

**CLASSROOM INSTRUCTION, DEMOS,  
AND FCC EXAMS NO EXPERIENCE  
REQUIRED**

Hosted By: York County Emergency  
Management Agency

contacts : Ron Small WB2OOB  
[wb2oob@arrl.net](mailto:wb2oob@arrl.net) 717-481-8589 OR Joe Ryan  
KB3POC [arccdv@comcast.net](mailto:arccdv@comcast.net) 570-915-6053

Monday April 27th, 2009, 7:00PM at the  
Lancaster County Public Safety Training  
Center, RACES organization meeting.  
Contact [Chris Bunting, K1CWB](#), for further  
information.

Saturday, May 2, 2009 HEARS (Hospital  
Emergency Amateur Radio Service) drill  
1000 – 1400 local time. Volunteer to assist  
at your local hospital. Contact [Paul Herr,  
KD8WY](#) if you are interested but not  
already signed up.

For detailed HEARS drill information, see  
the April Keystone VHF Club newsletter at  
<http://www.w3hzu.com/>. Click the  
Newsletter link and see page 2 of the April  
issue.

June 13-14, ARRL VHF QSO Party 1400  
local Saturday to 2300 local Sunday. All  
bands 50MHz and up including light. The  
SPARC club site is an excellent operating  
location for VHF/UHF. The grid square is  
FN10se.

June 27 – 28 Field Day. SPARC will be  
participating. Details to follow.

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## **Scholarships Available**

The Foundation for Amateur Radio  
announces 48 scholarships for 2009.  
Contact  
FAR Scholarships

PO Box 831  
Riverdale, MD 20738  
or online at <http://www.farweb.org/>

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## **Editor's Notes**

The Ephrata Community Hospital Amateur  
Radio club now has the call K3ECH for use  
from the hospital during drills and  
emergencies. The probable first use is the  
HEARS drill scheduled for May 2<sup>nd</sup>.  
Several hospital employees are now licensed  
and are supported by about a dozen amateur  
operators from the Ephrata area.

I know we have new comers to ham radio  
who don't understand all the terms that we  
use here without explanation. I try to define  
uncommon acronyms the first time they  
appear in an article, but what seems  
common to me, may not be common to a  
newcomer. Do we need a series of beginner  
articles? I recall that someone wrote such  
articles for this newsletter in the past.  
Feedback from readers would help.

The 6m sporadic E season starts in May.  
We will have more information on 6m DX  
operating in future issues. Near the end of  
this issue, you will find extracts from a  
NASA report on the dismal state of cycle  
23/24 sunspots.

Sporadic E layer propagation does not  
depend on sunspots. See the March issue  
for more information on Es. FM works on  
Es, but you will find far more DX activity  
using SSB/CW and horizontal polarization.

You may wonder why VHF DXing is almost  
exclusively on horizontal polarization.  
Horizontal polarization produces a  
significant forward scatter enhancement at  
the horizon. When I started in Amateur

radio in Connecticut, there was an intense debate between advocates of horizontal vs. vertical polarization. I was attending Northeastern University in Boston at the time. Connecticut was firmly horizontal polarization on 2m and Boston was firmly vertical. Novices were allowed 2m phone privileges and the NU club station, [W1KBN](#), had a converted SCR522 which I operated during many lunch hours.

That is how I met Bill Keyes, W1YQI, in Marblehead, MA who was advocating a change to horizontal polarization. The result was a nightly schedule from Salem, CT to Marblehead, MA whenever I was at home. I could always hear his 200w and he usually heard my 15w. Gradually the tide turned and horizontal polarization is now the standard for VHF/UHF DXing.

Well that was a rather long diversion from the topic of getting ready for the coming 6m Es season. When the ionization is very strong signals are huge. An old TV rotator should easily handle a one to three element 6m beam. M<sup>2</sup> and others make horizontal loop antennas if you don't want to deal with a rotator. You may need your old TV rotator for digital TV after June 12<sup>th</sup>.

73, George W3FEY

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## ARES/RACES



As part of the clubs commitment to emergency communications, the SPARC repeater system is maintained as available for linking with other area repeaters.

**Lancaster County VHF Net is held on the first Tuesday of the month at 2030 hours local time. Presently being held on the 145.230, 145.310 and 147.015 (+ offset) MHz repeaters with minus offset and 118.8 PL.**

**The Lancaster County primary ARES/RACES repeater is on 145.310 MHz with minus offset and 118.8 PL.**

**Combined York County Amateur and ARES/RACES NET convenes at 8:30 PM (2030) Mondays on 146.97.**

**Pennsylvania RACES HF Nets are held at 3993.5 kHz LSB on all Sundays except holidays.**

**The statewide net is on the first Sunday of the month at 0800 hours local time.**

**The Central Area (including Lancaster County) net is at 08:30 local time.**

## SPARC Nets

**SPARC holds nets on the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> Tuesday (every Tuesday except the first) at 2030 local time on 145.230 MHz minus offset and a PL of 118.8.**

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## Club Officers

President Harry Bauder – [WA3FFK](#)

Vice-President: Rick Watson - [N3SWJ](#)

Secretary - Dave Sarraf. - [N3NDJ](#)

Treasurer - Ted Freedman - [K3KSA](#)

Repeater Trustee - Dave Payne - [N3LOM](#)

Past President - Mike Warner – [N3XPD](#)

Board of Directors - Jim Silvius – [KW3E](#)

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## Other Nets of Local Interest

**Delaware Co. Mobile Sixers Net Schedule**  
Sunday 2000 50.550 MHz USB

## Cumberland Co.

Monday 2130 144.160 MHz USB

**Packrats** 1296.100 MHz USB net Mondays at 2130 local time

Bob, W2SJ, Pennsauken, NJ, FM29lw, is temporary net control while K3TUF is coaching Special Olympics. Bob has a good signal into Lancaster County. He looks west ~ 2135-40.

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## QRZ News Publication

QRZ News is published monthly on the second Wednesday of each month, one week before the monthly meeting. Deadline for article submission is the Tuesday before publication.

We operate on an exchange basis with other non-commercial publications. Articles printed in QRZ News may be reprinted in a not for profit publication provided proper credit is given. Reprinted articles require permission from the original source.

QRZ News is archived at [http://www.k3ir.org/QRZ\\_News.html](http://www.k3ir.org/QRZ_News.html). Documents are in PDF or MS Word format depending on the software tools available to the editor at the time of publication. Microsoft provides Word Viewers from their download site <http://office.microsoft.com/en-us/downloads/default.aspx>

Can anyone provide copies of the issues missing from the archive?

Jim Silvius, KW3E, has found the following issues: May 2006, November 2007, October 2007, and July 2007.

I recently purchased a copy of Adobe Acrobat 9. I don't know how to use it yet,

but I tried scanning in one of the old issues. It worked well, but there is repair work to be done. As I have time, I will get these issues ready for posting on the web site.

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## EVE !!! - Radio Amateurs bounce a signal off Venus

As reported by the Southgate Amateur Radio Club

*Reprinted from the April 2009 issue of Cheesebits, newsletter of the Mt. Airy VHF Radio Club.*

Radio Amateurs have achieved the very first reception of amateur signals bounced off the planet Venus, over 50 million km away - EVE (Earth-Venus-Earth) Peter Guelzow DB2OS, President of AMSAT-DL has provided a description of this landmark achievement.

On March 25th, 2009 a team from the German space organization AMSAT-DL reached another milestone on its way to our own interplanetary probe toward planet Mars. The ground station at the Bochum (DL) observatory transmitted radio signals to Venus. After traveling almost 100 million kilometers and a round trip delay of about 5 minutes, they were clearly received as echoes from the surface of Venus. Receiving these planetary echoes is a first for Germany and Europe. In addition, this is the farthest distance crossed by radio amateurs, over 100 times further than echoes from the moon (EME reflections).

For receiving the EVE signals, an FFT analysis with an integration time of 5 minutes was used. After integrating for 2 minutes, the reflected signals were

clearly visible in the display. Despite bad weather, signals from Venus could be detected from 1038UT until the planet reached the local horizon.

The 2.4 GHz high power amplifier used for this achievement is described in the current AMSAT-DL journal. This represented a crucial test for a final key component of the planned P5-A Mars mission. By receiving echoes from Venus, the ground and command station for the Mars probe has been cleared for operational use and the AMSAT team is now gearing up for building the P5-A space probe.

For financing the actual construction and launch, AMSAT-DL is currently in negotiation with the DLR (Deutsches Zentrum für Luft- und Raumfahrt) amongst others, to obtain financial support for the remaining budget of 20 Mil Euros.

AMSAT-DL wants to show that low-cost interplanetary exploration is possible with its' approach. The EVE experiment was repeated on Thursday, March 26th for several hours with good echoes from Venus. Morse code was used to transmit the well known "HI" signature known from the AMSAT OSCAR satellites.

73s de Peter Guelzow, DB2OS

Ed note: This is an outstanding achievement from AMSAT-DL. Clearly, EVE is way beyond the capability of the typical home station even with considerable resources; however, the moon is only about 240K miles away and a reasonable target. Thanks to Joe Taylor, K1JT, software that will extract signals from below the noise level is available free to Amateurs for use on your shack computer. See

[http://en.wikipedia.org/wiki/Joseph\\_Hooton\\_Taylor%2C\\_Jr.#Amateur\\_Radio](http://en.wikipedia.org/wiki/Joseph_Hooton_Taylor%2C_Jr.#Amateur_Radio) for more information.

See the January issue of QRZ News for the how to article by Bodo, DL3OCH for working 23cm EME with a single yagi antenna.

Lance Collister, W7GJ, has many tips on using JT65 (the JT stands for Joe Taylor) on his web site at <http://bigskyspaces.com/w7gj/JT65checklist.htm>.

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## Big Brother is watching

This is truly amazing. Just click on the link below. Once the picture loads, double click on any area. As you double click again and again you zoom in on the faces of each and everyone there. Great security device!

Hard to believe - the technology is mind-boggling !

[This is a photo](#) from the 2009 Inauguration, In which you can see **IN FOCUS**, the face of each individual in the crowd !!!

You can scan, double click and zoom to any section of the crowd. Wait a few seconds, and the focus adjusts.

The picture was taken with a robotic camera at 1,474 megapixel. (295 times the standard 5 megapixel camera)

Makes you wonder who's watching us now !!!!!!!

Gary Giering, AF3U

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## Tornado Hits Lancaster County

Report by Randy Maurer, WA3HLP

The tornado is embedded in the hail and rain shaft on the left side of the photos, hidden by the storm but there non-the-less! You're looking at the gust front and wall cloud that precedes a very strong storm! That greenish-blue hue is caused by the large hail as the light shines through it. If you ever see that coming it's best to find a place to hide :-)



Pretty cool as long as you're not in it's path!

Here are a few pic's from the amazing storm Sunday 29 March 2009. There was a tornado watch out so I walked up our lane to watch the sky. Here's the first picture I took. (The white building group toward the center is Green Dragon Farmers

Market.)

After a few minutes I heard a loud roar of wind and I watched in admiration as it rolled the clouds back...as if a huge hand was pushing them. It only took seconds for the storm to zip along the horizon. I was distressed just a bit because my camera wasn't capturing the beautiful



and terrifying indigo green, nor the magnificence of the light and clouds (as rarely cameras do). I attempted to bring back some of the life by adjusting the levels in Photoshop; however, no color was added.

Notice the mountains on the

horizon disappear as the storm moves. I believe this is hail. Some places near us had hail the size of golf balls. ouch. Tell me if this doesn't look threatening...!



Yikes!

This was about the time I decided to run. The mighty rushing wind was upon ME and felt like it could pick me off the ground, and I preferred to stay. I quickly snapped one in the other



direction during my run for cover (below). By then very large rain drops were descending upon me too.

(Although we never got hail) I wished later I had gotten a shot just to the right of the storm, because the sun was shining brilliantly. Wild! Seeing this drama fueled my ambition to become a storm-chaser! It was a pictorial reminder to me that God's grandeur and magnitude is just as present and available in the storms of life. He not only controls the wind, but he offers to ride it with us, if we dare to trust him when His face is covered by a cloud. Terrifying? Yes.

Mr. Beaver laughed at the question "Is Aslan safe?" He answered "No, He is not safe. But He is good." -C.S. Lewis



Amen!

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## Deep Solar Minimum

*Excerpted from a full NASA report available at*

[http://science.nasa.gov/headlines/y2009/01apr\\_deepsolarminimum.htm?list919813](http://science.nasa.gov/headlines/y2009/01apr_deepsolarminimum.htm?list919813)

**April 1, 2009:** The sunspot cycle is behaving a little like the stock market. Just when you think it has hit bottom, it goes even lower.

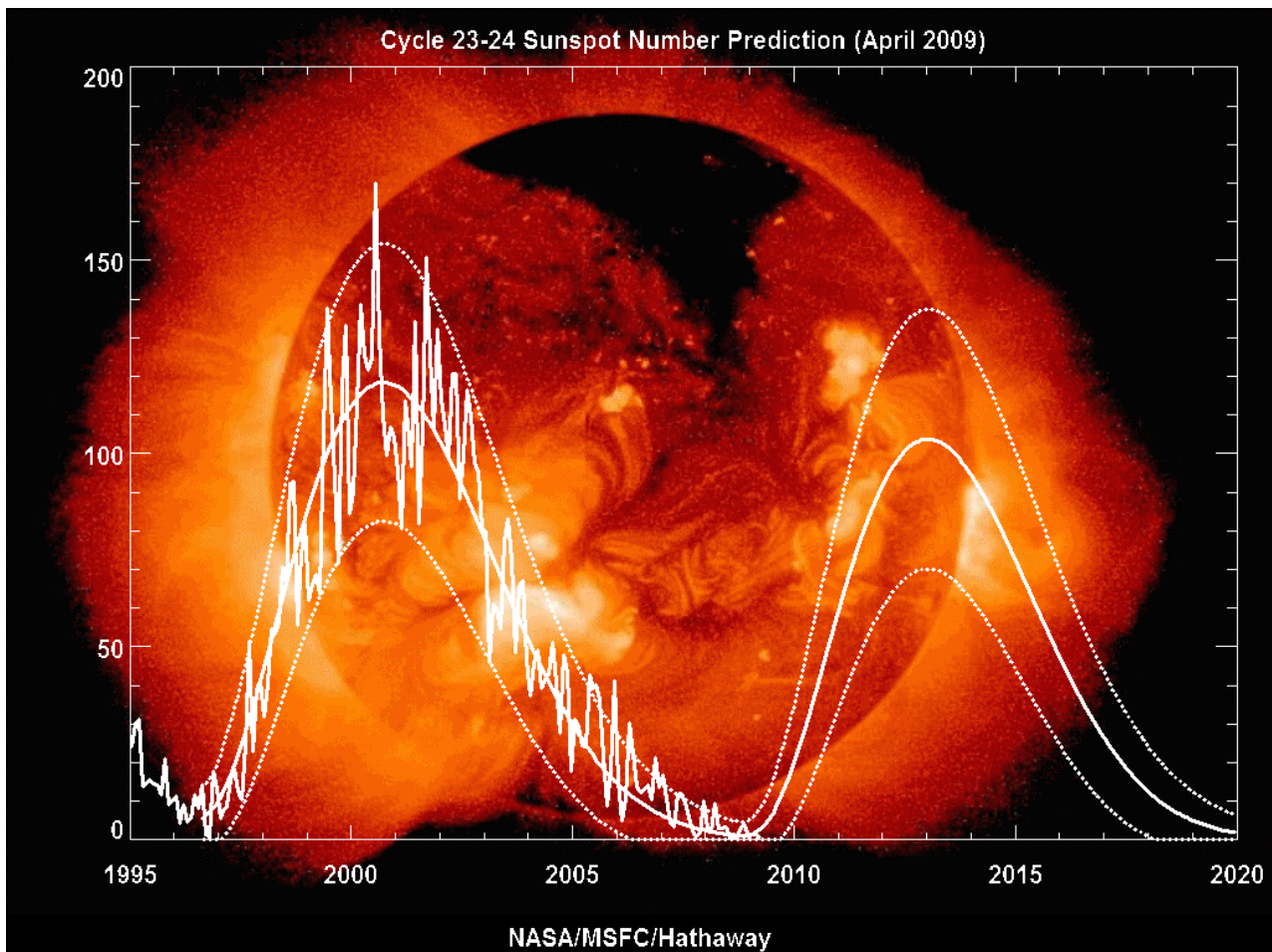
2008 was a bear. There were no sunspots observed on 266 of the year's 366 days (73%). To find a year with more blank suns, you have to go all the way back to 1913, which had 311 spotless days. Prompted by these numbers, some observers suggested that the solar cycle had hit bottom in 2008.

**Maybe not.** Sunspot counts for 2009 have dropped even lower. As of March 31st, there were no sunspots on 78 of the year's 90 days (87%).

It adds up to one inescapable conclusion: "We're experiencing a very deep solar minimum," says solar physicist Dean Pesnell of the Goddard Space Flight Center.

"This is the quietest sun we've seen in almost a century," agrees sunspot expert David Hathaway of the Marshall Space Flight Center.

**Below:** The sunspot cycle from 1995 to the present. The jagged curve traces actual sunspot counts. Smooth curves are fits to the data and one forecaster's predictions of future activity.



Quiet suns come along every 11 years or so. It's a natural part of the sunspot cycle, discovered by German astronomer Heinrich Schwabe in the mid-1800s. Sunspots are planet-sized islands of magnetism on the surface of the sun; they are sources of solar flares, coronal mass ejections, and intense UV radiation. Plotting sunspot counts, Schwabe saw that peaks of solar activity were always followed by valleys of relative calm—a clockwork pattern that has held true for more than 200 years.

The current solar minimum is part of that pattern. In fact, it's right on time. "We're due for a bit of quiet—and here it is," says Pesnell. [more](#)

Author: [Dr. Tony Phillips](#) | Credit: [Science@NASA](#)