October
2009

The Monitor

Published Monthly for members of the Amateur Radio Clubs in Virginia's Central Shenandoah Valley

OCTOBER is...

Public Service Month

COME OUT FOR A COUPLE OF HOURS AND PLAY RADIO!

MARA Annual Corporation Meeting: Thursday, October 1

The Annual Meeting of the Massanutten Amateur Radio Association, Inc., will be held on Thursday October 1 at the Wood Grill Buffet on Reservoir Street in Harrisonburg, Virginia. Dinner will begin at 6:30 pm, and the business meeting will begin at 7:30 p.m. The primary item of business is the election of officers for 2010. Immediately following the business meeting, Bryan Daniels K4RMY, will go over the plans for the Triple Play public service event which begins the next day.

PVARC Meeting at Page Memorial Hospital on Friday, October 2

The Page Valley Amateur Radio Club will hold its meeting in the Day Room of the Page Memorial Hospital in Luray on Friday, October 2. No meal, but the business meeting starts at 6:00 pm.

VARA Meeting at Shoney's on Tuesday, October 6

The Valley Amateur Radio Association will hold its meeting at Shoneys in Staunton Tuesday, October 6. The meal starts at 6:00 pm and the business meeting starts at 7:00 pm.

OCTOBER

October 1: MARA Club Meeting
Wood Grill in Harrisonburg, 6:30 pm

October 2: PVARC Club Meeting
Page Memorial Hospital, 6:00 pm

October 2-4: Triple Play Public Service
See article on Page 6. Immediately following the October 1 Annual Meeting of MARA, Bryan Daniels will present the detailed plans for this wonderful opportunity to test our emergency communications capabilities in a live public service setting. Come to the Wood Grill on Thursday, October 1 to learn how to really plan a professional-level communications operation.

October 6: VARA Club Meeting
Shoneys in Staunton, 6:00 pm

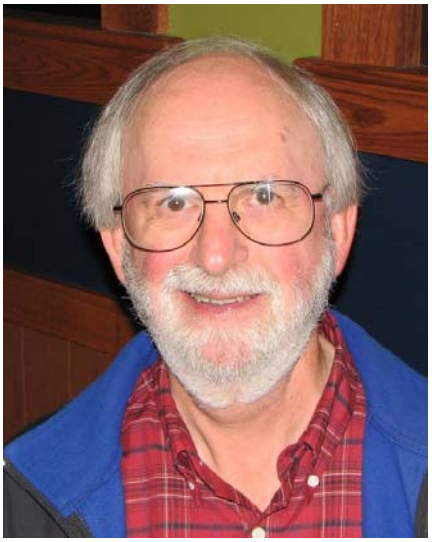
October 10: VE Testing Session:

The October testing session in Dayton, Virginia, at the Woodmen of the World building on Highway 42, will be held on October 10. Registration begins at 9 am.

October 17-18: Fall Foliage Ride

The Fall Foliage Ride will be held on the weekend of October 17-18, 2009. To date, no "head honcho" has been named for the communications operation. Breakfast will begin at 7:00 am at Shoneys, headquarters will be at Shelburne Middle School again. No other information has been received by the newsletter editor, but normally this event requires a dozen or two mobile operators for communications support.

October 24-25: CQ WW DX SSB Contest



K4RBZ: Top of the Honor Roll

It's official. Gerry Brunk, K4RBZ, current MARA Vice-President, has achieved ham radio's Holy Grail! He has now confirmed 338 countries and moves to the TOP of the DXCC Honor Roll!

Gerry has actually worked (and confirmed) even more countries, since he has worked many countries which have been deleted from the count for various reasons.

Gerry's last card was submitted to the ARRL at the Virginia Beach Hamfest in September. Look for Gerry's call at the top of the Honor Roll when it is next published. Congratulations on an impressive accomplishment, Gerry!

Top DX'er Seeking Valley Contacts

Gerry Brunk, K4RBZ, now at the top of the DXCC Honor Roll, is looking for Valley hams to work from his mobile station!

Gerry is on a trip to Kansas, and will be on 14.303 MHz at 11 am and 4 pm on Monday, September 28.

He'll then be on Midcars on 7258 kHz at 11 am and 4 pm every day starting Tuesday, September 29, through Saturday, October 3, when he'll arrive home in the afternoon. Turn on your HF radio and give Gerry a contact!

N4YSA: PVARC President's Message

Greetings from the Page Valley Amateur Radio Club.

PVARC manned a booth at the Page County Agricultural and Industrial Fair in Luray to promote the club and amateur radio.

We had some very interested visitors drop by and some of the most interested were from our Club's sponsor – the Page Memorial Hospital management team!

Our visitors where much impressed with the contacts we made both via 2 Meter repeaters and on HF/SSB using a Buddipole antenna and 100 watts.

We made DX contacts into Europe and Cuba while they watched.

So I would say that our setup was a success! Thanks to those who participated in what we hope will become an annual event.

I would like to invite all to the PVARC meetings held on the first Friday of the month we meet in the day room of Page Memorial Hospital.

"73"
Mark Hensley-N4YSA,

Waynesboro Repeater Association Annual Meeting: Wednesday, November 4

The Waynesboro Repeater Association owns and operates the 147.075 repeater on Bear Den Mountain. This fine machine is one of the workhorse repeaters in the Shenandoah Valley.

The association will hold its annual meeting on Wednesday, November 4th, at 7:00 pm in Meeting Room A of the Waynesboro Public Library.

All interested Radio Amateurs are invited to attend.

NN4JM: Radio Available for Loan

James McDowell IV, NN4JM, wants to let all MARA members know that a generous benefactor has donated a radio to the club, for the express purpose of loaning it to new hams to "Get On The Air".

It can also be used as a temporary radio for a club member whose own radio is out for repair.

The handheld is an Icom V-8 Sport. It has a double-A battery case, and is fully programmed for Valley repeaters and common simplex frequencies, and is ready to turn on and operate.

The ham borrowing the radio will need to take care of the batteries.

The radio also comes with the manual, allowing the new ham to learn how to program a modern HT.

The radio has a belt clip and can put out 5.5 watts, making it great for public service events as well as casual operating on the repeaters if you have an outside antenna or mag mount for your car.

The only condition for borrowing this radio is that the new ham sign a paper agreeing to be responsible for the radio's safety and well being and to return it on request of the MARA Board or after the ham has purchased his/her own radio.

Left: Authentic obstructionist Democrat photographed by W4PJW and K4PJJ

See page 10 for more pictures of their adventures aboard the "RV Rinehart".

Public Service Report: Shenandoah Bike 100

The weather was perfect, the riders were there (all 550 of them!), and the radio operators had their work cut out for them. There couldn't have been a more fun way of testing out our radios and exercising our skills!

Unlike a lot of other public service events, this event was a real RACE to see who could finish first.

The event started at 6:30 a.m. I have never been there before to witness the start, but let me tell you, it is a real sight to see all those bike riders jockey for the front position.

As the day wore on, the course separated the true Pro's from the Novices. The race was won in six hours and fifty minutes: a new record time for this race.

It astounds me to think of riding a bicycle 100 miles in less than seven hours, up and down mountain trails and dirt roads, ranging from about 800 feet all the way up to close to 4000 feet.

There were several accidents and injuries sewn up on the trails, and even one transport to the hospital. Fortunately, nothing was too serious and most of the injuries were attended by two doctors in the field.

All who helped with this event thoroughly enjoyed the day. We received numerous "thanks" and expressions of gratitude from riders and the organizers.

Hams who helped were:

E.C. Showalter KG4KUR
Ellsworth Neff K4LXG
Rick Adams KJ4IND
Chris Shirkey KI4BAQ
Anne Underwood KA1LSK
Ray Ritchie K4NRA
Nancy Ritchie KG4JAZ
Sheryl Tonini KJ4DOC
Gerald Nauman KN4FM
Tom Endress KJ4TOM
Daryl Tonini KJ4DNY


KG4KUR


KJ4DNY


KG4JAZ

Thanks for a job well done, and a job to be proud of.

I have had several comments from first-time helpers expressing their learning and enjoyment of the training.

Thanks also go to the Clover hill Fire and Rescue Squad for covering the north end of the race:

Chad Stover KI4HIQ, Fire Captain and EMT
Joel Will ,FF/EMT
Evelyn Derstine, EMT
Bob Shiflet, Engineer
Robert Fulk, Firefighter
Daniel Thacker, Fire Figher, and
Phil Rohrer, Chief EMT

Thanks again to all who helped out.

Gayle Shull, KU4XN

Francis "Buck" Raley, N3YFF, SK

Francis "Buck" Raley, N3YFF, age 58, died peacefully on Tuesday, September 1, 2009 in Harrisonburg, surrounded by family and friends. Buck was a good friend of Fred McDavid, KJ4INF. He had recently suffered from liver and kidney failure. Buck was an Army veteran who was born in Washington D.C. and grew up in Silver Springs, Maryland. In addition to being a ham, he was an avid outdoorsman. He is survived by his parents, two sons, two brothers and two sisters, a granddaughter, and numerous other relatives . A memorial service was held at the top of the mountain on High Top Lane off Hopkins Gap Road in Fulk's Run on September 12.

Report of the MARA Nominating Committee

The MARA Nominating Committee is pleased to offer a slate of officer candidates who have agreed to serve if elected.

Ellsworth Neff, K4LXG, has agreed to run for president.

No one has yet been found who is willing to serve as vice-president. Nominations will be accepted from the floor at the October meeting.

Sheryl Tonini KJ4DOC has agreed to serve another term as Secretary if elected.

David Fordham KD9LA has agreed to run for the office of Treasurer, since Sandy has moved to Heathsville and making the club meetings from so far away has become an inconvenience.

James McDowell IV NN4JM has agreed to run for the open Board position presently held by Ray Ritchie K4NRA, whose term expires this year.

Additional nominations will be solicited from the floor at the Annual Meeting to be held at 7:30 pm on October 1st, at the Wood Grill Buffet in Harrisonburg.

Thanks to the members of the nominating committee: Bryan Daniels K4RMY, Bob Steere N1QEQ, and Gerry

Wanted to Buy: HF Radio

Dan Beidler, KF4JSX, has a friend who is getting back into ham radio. He's looking for a reliable HF radio. He has a reasonable budget to purchase one, but would rather buy from a local ham than on e-Bay.

If you have a spare radio or backup HF rig collecting dust or looking to sell your radio to upgrade to something else, give Dan a call at 540-480-5324.

Shenandoah County Hams Meet at Exxon

Larry Miller, KB6VAA, wants to remind everyone that the Shenandoah ham group, an informal bunch of hams from Bayse, Woodstock, New Market, and that area, meet on the third Saturday of the month for a breakfast sometime around 8:30 a.m. at the Exxon station on I-81 at Highway 42. All hams are invited.

Going to the Sun...

Thanks to Jeff W4PJW and Patsy K4PJJ for the beautiful photo below, taken of the "Goint to the Sun" road out in Montana in Glacier National Park. Turn to page 10 for more details of their travels..

Update: Details of the Great Triple Play — October 2-3-4, 2009

The Great Triple Play provides a great opportunity for ARES and all local hams in Rockingham and Augusta counties to test their communications skills in rough terrain, along mountain ridges and down in the shadowed valleys.

We need manpower for all three of these public service events the first weekend in October. We are asking for volunteers to put in just a couple of hours playing with your radio and having fun.

Current members of the planning committee are Bryan, K4RMY, Bob, W4TMV , Ellsworth K4LXG and Gerald KN4FM.

If you are willing to serve, please contact Bryan K4RMY (k4rmy@arrl.net).

Net control for the **three public service events on October 2, 3, and 4** will again be stationed at Reddish Knob. Special thanks to Bob, K4DJG, for volunteering the use of his trailer for the event.

Event 1: Camp Still Meadows Horse Ride. This is a relaxing horseback ride for the benefit of a special camp for handicapped persons (www.campstillmeadows.org/). This activity is held on Sunday morning, October 4th. We will need about 5 hams to help with this low-stress event. Breakfast and lunch are provided.

Contact Ray K4NRA (k4nra@verizon.net) if you'd like to give a couple hours Sunday morning for this activity. Current plans call for the communications during this event to use simplex.

Event 2: The Grindstone 100. This is an endurance running foot race scheduled for Friday evening through Sunday morning. About 99% of this race occurs in Augusta County (www.eco-xsports.com/grindstone.php).

The course starts at the Swoope Boy Scout Camp, goes to Elliot Knob, then north to West Augusta where it crosses U.S. 250 and continues along the ridge just east of Braley Pond. It continues past Elkhorn Lake and Staunton Dam to Stokesville and then goes up to Reddish Knob. The runners turn around and return the same way.

As of September 26 there are 92 runners signed up and some are from as far away as the Orkney Islands.

Providing safety and health communication support for this event is going to be very challenging because of the mountainous terrain. It will probably involve several repeaters but may have to use simplex to maintain good coverage.

There are 15 Aid Stations planned. Seven of these stations will have runners coming through twice, once out from the start and once again on their way back to the start/finish in Swoope.

This footrace begins at 6 pm on Friday and continues throughout the night. It ends Sunday morning.

Providing communication to all the aid stations and headquarters (and the roving physician who attends to the runner needing medical treatment) will provide a first-class challenge for us. But it may not be as bad as it sounds if we have enough hams to volunteer. Because of help from the many hams last year, it was a great success. I'm sure it will go just as well this year with your help and support.

Event 3: The Shenandoah 500K National Dual Sport. This one is also a challenge but will be successful if we have enough volunteer hams participate.

This will be an off-road motor-bike ride, with up to 200 riders in the mountains.

These folks have done their homework and like the Grindstone race, the motorcycle ride is totally approved and sanctioned by the National Forest Service. (www.nvtr.org/)

They have been doing this ride for 18 years and have tried all kinds of communications schemes. As we could have predicted, nothing works for them in these mountains.

Last year was our first year helping with this and ham radio worked very well. They have asked for our help again this year and are going to donate $500 again to MARA and VARA. They have their own sag vehicles, but it has been a nightmare for them to get help sent where it was needed – all because of lack of communication. Hams with pickups that would be willing to work and haul broken motorcycles are especially welcome.

Also, there are several additional changes in the radio plans for this year. One, we hope to run APRS on sweep riders this year to be able to better track the end of the ride. Also, we hope to have several hams with radios on cycles actually participating in the ride to assist with communications.

Another change is the stationing of hams at Rockingham County Emergency Communications Center during the event for direct communication with ECC in the event of a problem needing emergency response. We will need trained volunteers for this new location as well. Hopefully, this will be the least used but most important location of the ride.

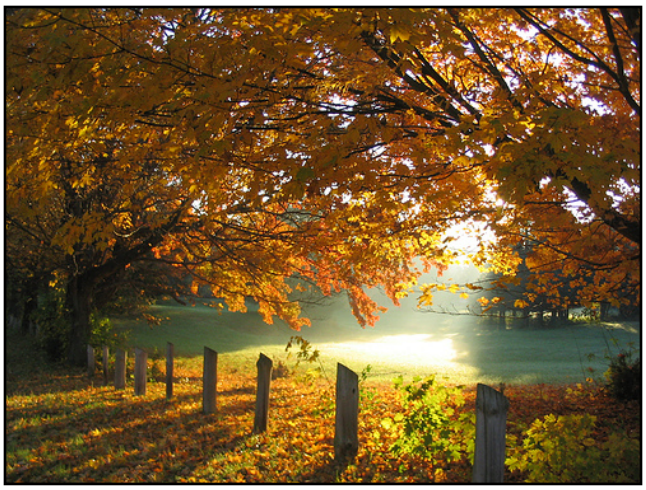
The motorcycle ride headquarters will be at Natural Chimneys Campground where the ride begins and ends. **It is not a race**. This ride basically runs from Natural Chimneys up and across the mountain where we have our Field Day to a point north of U.S. 33. It includes such places as Sugar Grove, Franklin, Reddish Knob, and Switzer Dam area. Most of the ride is in areas not accessible even by 4 wheel drive vehicles.

They need hams to 1) go to designated spots to stand by with the event sag vehicles and wait for word that help is needed and 2) set up some communication stations at various locations on the ride to relay any information that needs to get back to the organizers at Natural Chimneys.

We would like to have someone go camping at Natural Chimneys that weekend so they can be there for the bike ride headquarters.

And for the Grindstone 100 footrace, we will need someone at the Boy Scout Camp also, to be at the Grindstone headquarters. We would place others at whatever Aid Stations seem appropriate and with whatever bike sag vehicles and locations we can cover.

Bryan has a list of specific locations and times for



both events. If you are willing to volunteer your time, please contact Bryan K4RMY k4rmy@arrl.net.

We will take help for whatever time period you are available. Even if you can only help for a few hours, it will be greatly appreciated and will help us provide the coverage needed.

We don't expect very many hams will be driving around a lot. Hopefully, it will be a situation where you will want to bring along a newspaper and a good book.

Check out the respective web sites for more info:

Horse Ride	www.campstillmeadows.org/
Foot Race	www.eco-xsports.com/grindstone.php
Motor Bikes	www.nvtr.org/

More information will be available at the MARA meeting held immediately before the Triple Play: the October 1 meeting Time will be allotted after the October 1 Annual Meeting to review the last-minute planning and details.

To allow us to get started on the planning and logistics, it would be great to know who will be available and when. If you would enjoy playing radio on that beautiful weekend and want to participate, please let Bryan know via email as soon as you can.

Remember, this is a great time to get some fun experience in handling a large-scale, massive, radio mobilization, without the tragedy of a real emergency.

The Chonicles of Luetzelschwab: The Sun, The Earth, and the Ionosphere

What the Numbers Mean

Propagation Predictions --

A brief introduction to propagation and the major factors affecting it.

An article by Carl Luetzelschwab, K9LA via Alan, K9MBQ

The **sun emits electromagnetic radiation and matter** as a consequence of the nuclear fusion process. Electromagnetic radiation at wavelengths of 100 to 1000 Angstroms (ultraviolet) ionizes the F region, radiation at 10 to 100 Angstroms (soft X-rays) ionizes the E region, and radiation at 1 to 10 Angstroms (hard X- rays) ionizes the D region. Solar matter (which includes charged particles -- electrons and protons) is ejected from the sun on a regular basis, and this comprises the solar wind. On a "quiet" solar day the speed of this solar wind heading toward Earth averages about 400 km per second.

The **sun's solar wind significantly impacts Earth's magnetic field**. Instead of being a simple bar magnet, Earth's magnetic field is compressed by the solar wind on the side facing the sun and is stretched out on the side away from the sun (the **magnetotail**, which extends tens of earth radii downwind). While the sun's electromagnetic radiation can impact the entire ionosphere that is in daylight, charged particles ejected by the sun are guided into the ionosphere along magnetic field lines and thus can only impact high latitudes where the magnetic field lines go into the Earth.

Additionally, when electromagnetic radiation from the sun strips an electron off a neutral constituent in the atmosphere, the resulting electron can spiral along a magnetic field line (it spirals around the magnetic field line at the electron gyrofrequency). Thus Earth's magnetic field plays an important and critical role in propagation.

Variations in Earth's magnetic field are measured by magnetometers. There are two measurements readily available from magnetometer data--the **daily A index and the three-hour K index**. The **A index is an average** of the eight 3-hour K indices, and uses a linear scale and goes from 0 (quiet) to 400 (severe storm). The **K index** uses a quasi-logarithmic scale (which essentially is a compressed version of the A index) and goes from 0 to 9 (with 0 being quiet and 9 being severe storm). **Generally an A index at or below 15 or a K index at or below 3 is best for propagation.**

Sunspots are areas on the sun associated with ultraviolet radiation. Thus they are tied to ionization of the F region. The **daily sunspot number**, when plotted over a month time frame, is very spiky. Averaging the daily sunspot numbers over a month results in the monthly average sunspot number, but it is also rather spiky when plotted. Thus a more averaged, or smoothed, measurement is needed to measure solar cycles. This is the **smoothed sunspot number (SSN). The SSN is calculated using six months of data before and six months of data after the desired month, plus the data for the desired month. Because of this amount of smoothing, the official SSN is one-half year behind the current month.** Unfortunately this amount of smoothing may mask any short-term unusual solar activity that may enhance propagation.

Sunspots come and go in an approximate 11-year cycle. The rise to maximum (4 to 5 years) is usually faster than the descent to minimum (6 to 7 years). At and near the maximum of a solar cycle, the increased number of sunspots causes more ultraviolet radiation to impinge on the atmosphere. This results in significantly more F region ionization, allowing the ionosphere to refract higher frequencies (15, 12, 10, and even 6 meters) back to Earth for DX contacts. At and near the minimum between solar cycles, the number of sunspots is so low that higher frequencies go through the ionosphere into space. Commensurate with solar minimum, though, is less absorption and a more stable ionosphere, resulting in the best propagation on the lower frequencies (160 and 80 meters). **Thus, in general, high SSNs are best for high-frequency propagation, and low SSNs are best for low-frequency propagation.**

Most of the disturbances to propagation come from solar flares and coronal mass ejections (CMEs). The solar flares that affect propagation are called X-ray flares due to their wavelength being in the 1 to 8 Angstrom range. X-ray flares are classified as C (the smallest), M (medium size), and X (the biggest). Class C flares usually have minimal impact to propagation. Class M and X flares can have a progressively adverse impact to propagation.

The electromagnetic radiation from a class X flare in the 1 to 8 Angstrom range can cause the loss of all propagation on the sunlit side of Earth due to increased D region absorption. Additionally, big class X flares can emit very energetic protons that are guided into the polar cap by Earth's magnetic field. This can result in a **polar cap absorption event (PCA)**, with high D-region absorption on paths passing through the polar areas of Earth.

A **CME is an explosive ejection of a large amount of solar matter**, and can cause the average solar wind speed to take a dramatic jump upward--kind of like a shock wave heading toward Earth. If the polarity of the sun's magnetic field is southward when the shock wave hits Earth's magnetic field, the shock wave couples into Earth's magnetic field and can cause large variations in Earth's magnetic field. This is seen as an **increase in the A and K indices**.

In addition to auroral activity, these variations to the magnetic field can cause those electrons spiraling around magnetic field lines to be lost into the magnetotail. With electrons gone, **maximum usable frequencies (MUFs)** decrease, and return only after the magnetic field returns to normal and the process of ionization replenishes lost electrons. Most of the time, elevated A and K indices reduce MUFs, but occasionally MUFs at low latitudes may increase (due to a complicated process) when the A and K indices are elevated.

Solar flares and CMEs are related, but they can happen together or separately. Scientists are still trying to understand the relationship between them. One thing is certain, though--the electromagnetic radiation from a big flare traveling at the speed of light can cause **short-term radio blackouts** on the sunlit side of Earth within about 10 minutes of eruption. Unfortunately we detect the flare visually at the same time as the radio blackout,

since both the visible light from the flare and the electromagnetic radiation in the 1 to 10 Angstrom range from the flare travel at the speed of light--in other words, we have no warning. On the other hand, the energetic particles ejected from a flare can take up to several hours to reach Earth, and the shock wave from a CME can take up to several days to reach Earth, thus giving us some warning of their impending disruptions.

Each day the **Space Environment Center (a part of NOAA**, the National Oceanographic and Atmospheric Administration) and the **US Air Force jointly put out a Solar and Geophysical Activity Report**. The current and archived reports are on the Near-Earth Data Online at SEC page in the "Daily or less" section in the "Solar and Geophysical Activity Report and 3-day Forecast" row. Each daily report consists of six parts.

Part IA gives an analysis of solar activity, including flares and CMEs. Part IB gives a forecast of solar activity. Part IIA gives a summary of geophysical activity. Part IIB gives a forecast of geophysical activity. Part III gives probabilities of flare and CME events. These first three parts can be summarized as follows: normal propagation (no disturbances) generally occurs when no X-ray flares higher than class C are reported or forecasted, along with solar wind speeds due to CMEs near the average of 400km/sec.

Part IV gives observed and predicted 10.7-cm solar flux. A comment about the daily solar flux--it has little to do with what the ionosphere is doing on that day. This will be explained later.

Part V gives observed and predicted A indices. Part VI gives geomagnetic activity probabilities. These last two parts can be summarized as follows: good propagation generally occurs when the forecast for the daily A index is at or below 15 (this corresponds to a K index of 3 or below).

WWV at 18 minutes past the hour every hour and WWVH at 45 minutes past the hour every hour put out a shortened version of this report. A new format began March 12, 2002. The new format gives the previous day's 10.7-cm solar flux, the previous day's mid-latitude A index, and the current mid-latitude three-hour K index. A general indicator of space weather for the last 24 hours and next 24 hours is given next. This is followed by detailed information for the three disturbances that impact space weather: geomagnetic storms (caused by gusts in the solar wind speed), solar radiation storms (the numbers of energetic particles increase), and radio blackouts (caused by X-ray emissions). For detailed descriptions of the WWV/WWVH messages, visit www.sec.noaa.gov/Data/info/WWVdoc.html and www.sec.noaa.gov/NOAAscales/.

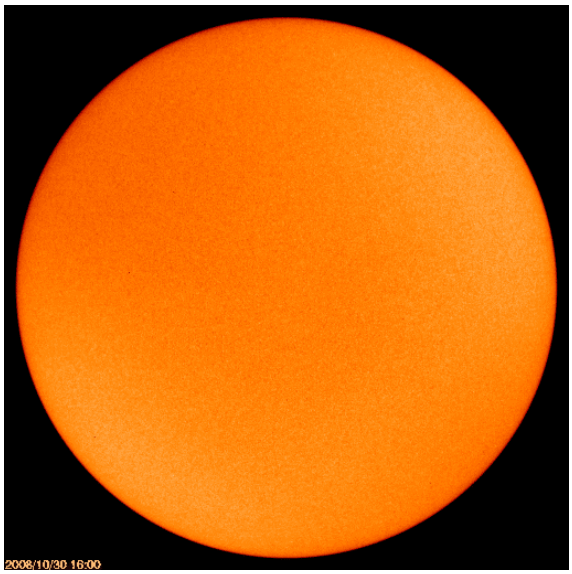
Normal propagation (no disturbances) is expected when the space weather indicator is minor. A comment is appropriate here. Both the Solar and Geophysical Activity Report and WWV/WWVH give a status of general solar activity. This is not a status of the 11-year sunspot cycle, but rather a status on solar disturbances (flares, particles, and CMEs). For example, if the solar activity is reported as low or minor, that doesn't mean we're at the bottom of the solar cycle; it means the sun has not produced any major space weather disturbances.

In order to predict propagation, much effort was put into finding a correlation between sunspots and the state of the ionosphere. The best correlation turned out to be between SSN and monthly median ionospheric parameters. This is the correlation that our propagation prediction programs are based on, which means the outputs (usually MUF and signal strength) are values with probabilities over a month time frame tied to them. They are not absolutes; they are statistical in nature. Understanding this is a key to the proper use of propagation predictions.

Sunspots are a subjective measurement. They are counted visually. It would be nice to have a more objective measurement, one that actually measures the sun's output. The 10.7-cm solar flux has become this measurement. But it is only a general measure of the activity of the sun, since a wavelength of 10.7-cm is way too low in energy to cause any ionization. Thus 10.7 cm solar flux has nothing to do with the formation of the ionosphere. The best correlation between 10.7-cm solar flux and sunspots is the smoothed 10.7-cm solar flux and the smoothed sunspot number--the correlation between daily values, or even monthly average values, is not very acceptable.

Since our propagation prediction programs were set up based on a correlation between SSN and monthly median ionospheric parameters, the use of SSN or the equivalent smoothed 10.7-cm solar flux gives the best results. Using the daily 10.7-cm solar flux--or even the daily sunspot number--can introduce a sizable error into the propagation predictions outputs due to the fact that the ionosphere does not react to the small daily variations of the sun. Even averaging 10.7-cm solar flux over a week's time frame can contribute to erroneous predictions. To reiterate, for best results use SSN or smoothed 10.7-cm solar flux, and understand the concept of monthly median values.

For **short-term predictions, the use of the effective SSN (SSNe) may be helpful.** In this method, an appropriate SSN is input to the propagation prediction software to force it to agree with daily ionosonde measurements. Details of this method can be found at www.nwra-az.com/spawx/ssne24.html.



The sun has remained spotless more days than any periods on record since Ulysses Grant was president. Unless sunspot activity picks up soon, the quiet times will begin approaching the record absence of sunspots of the Maunder Minimum of the 1600's.

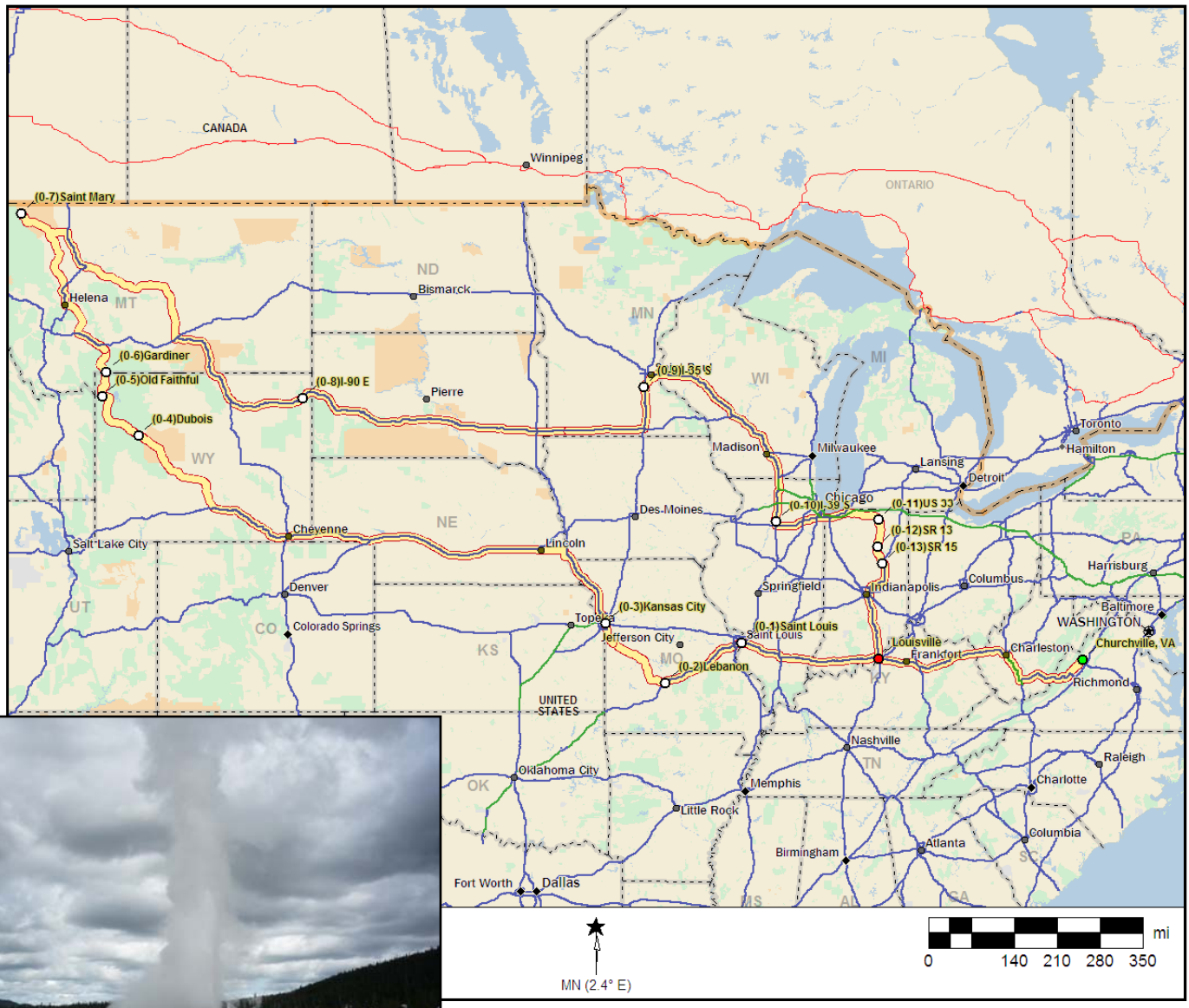
W4PJW and K4PJJ: The Adventure of a Lifetime

As the Monitor was going to press, we received the attached map of the travels of Jeff and Patsy.

Hams on their email distribution list have been having a great time keeping up with the pair as they enjoy retirement and good health as well as a nicely-equipped travel trailer.

Visiting everything from Yellowstone National Park in Wyoming to Glacier Park in Montana, from the Mall of America in Minnesota to the famous Wall Drugstore in South Dakota, from the Corn Palace to the Mayo Clinic, from the Jayco Factory tour to the Indianapolis Oktoberfest, they have been playing Johnny Cash's song, "I've Been Everywhere".

Numerous hams in the valley have been keeping voice contact with the travelers, including Neal WA4KKL, Tom WA4ESI, Ray KE4HVR, Dick W3HXH, Paul W4PFM, Gerry K4RBZ, and even an email from Clayton Towers K4RHQ. Several former valley hams have also been contacting the pair, including Bob N4ICT and fellow adventurers Ed KC4HYO and wife Gloria, who had accompanied them as far as the Mississippi, but had to turn back due to a severe shortage of fuel injector cleaner.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Harrisburg
Denver
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Indianapolis
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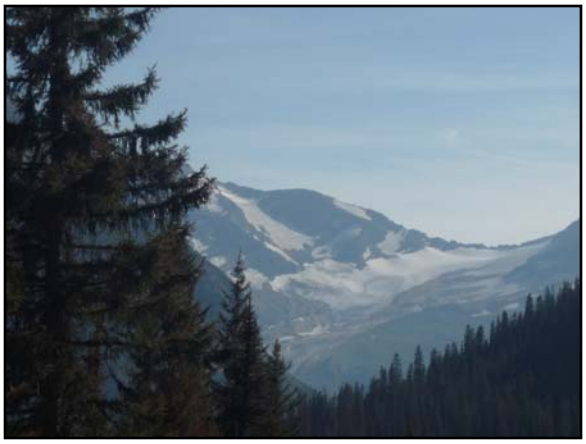


Photos by W4PJW and K4PJJ

PVARC Secretary's Report
September 4 Meeting

The regular scheduled meeting of PVARC was held in Luray, at Page Memorial Hospital at 6:00 p.m. Nine regular members and two visitors were present. The President, Mark/N4YSA, called the meeting to order and welcomed Kenneth Lawson and his brother Jonathon Lawson (no call signs yet) visiting from Stanley.

He then summarized PVARC's activities in conjunction with the Page County Agriculture and Industrial Fair held at the fairground in Luray last week. A station was "cobbled together" on short notice to demonstrate Amateur Radio's capabilities on VHF and HF/SSB. Sharing a tent with the Potomac Memorial Hospital display enabled us to forego the financial and insurance costs which would otherwise have precluded our participation. The "Radio God's" were good to us and contacts with Europe (E77DX), the Caribbean and numerous statewide stations demonstrated that Ham Radio Works when all others fail! Equipment consisted of a 2-meter handheld and a 100 watt HF transceiver with a Buddipole antenna. He thanked all who participated in what we hope will become an annual club event.

Geoffrey/WD4LYO reported that he had the visitor sign-up sheet from the Fair. He will personally invite all who indicated they would like to know more about amateur radio, to attend our next meeting. He would either call them on the telephone or by e-mail as appropriate.

There were no Committee Reports other than Minutes of the August 7th PVARC meeting which were approved as published in current edition of The Monitor, and the Treasurer's Report which remains unchanged. Both were passed by acclimation.

Two issues were discussed under Old Business. The PVARC Banner to be used at public display has not been ordered. Ben/N4FSG was uncertain if the funds had been committed. Upon being informed that the approval had been granted he agreed to follow up and place an order. Mark/N4YSA asked that he coordinate with Geoffrey/WD4LYO on the club logo. After some further discussion, it was agreed that the Banner would have both the ARRL logo and the PVARC Club logo imprinted.

Under New Business Ben/N4SFG asked if PVARC intended to have a presence at the Heritage Festival this year? Since no one had particulars on the event, Ben agreed to look into this and report back at the October meeting.

There being no further business the meeting was adjourned @ 1845.

Submitted by: Sparky Terry/KD4KL, PVARC Secretary

VARA Secretary's Report – September 1 Meeting

The Valley Amateur Radio Association met at Shoney's in Staunton on September 1, 2009. The President, Scott Newlen KI4QQZ, opened the meeting at 7:00pm. There were 19 members present and 1 guest Carrie Ferguson, wife of Steve Ferguson N4PKJ.

After a round of introductions the Treasurer and Secretary Reports were read and accepted by the club.

50/50: was won by Charlie Bennetch N4LNU, Congratulations Charlie!

We need a Committee to find new officers for 2010.

Christmas Party: The Club voted to have our Christmas Party on Tuesday the 1st of December at the Staunton Church of Christ on Churchville Ave. across from Gypsy Hill Park in Staunton.

BLUE RIDGE BONANZA Special Event: Not enough interest from the club to run the Mile post "0" Event this year.

TRIPLE PLAY WEEKEND October 2nd, 3rd & 4th Help is still needed for this event. Contact Bryan Daniels K4RMY at k4rmy@arrl.net or Elsworth Neff N4LXG at cenk4lxg@comcast.net

FALL FOILAGE BIKE FESTIVAL: October 17 & 18. We need help at several locations for this event. This is our main event of the year and we get a generous donation for our help. Let's all join in and help with this event and enjoy the fall colors along the way. http://www.shenandoahbike.org/

Meeting was adjourned at 7:49pm.

Al Bonck N3JB gave a PowerPoint presentation on Low Band Receiving Antennas. He explained the different configurations of receive antennas and the difference each configuration made in the receive signal. He showed the receive antenna he uses and the switching device used to change directions which works similar to a beam except it uses electronic switching. Thanks to Al for this well done presentation!

VARA SECRETARY
Ray Colvin KE4HVR

VARA NOTES OF INTEREST

VARA Web Site: Type in w4xd.com

AUGUSTA CO. ARES NET*:* David Tanks AD4TJ is looking for Net Controls for the Augusta County ARES Net. The Net will be held on the 146.850 repeater on the 2nd Thursday of the month at 8:00pm.

PROGRAMS NEEDED: Al Bonck N3JB, our 2008 Program Chairman, is looking for anyone that would like to do a program for the club. It does not have to be HAM related, It can be anything you think the group would find interesting. Al's e-Mail address is: margeal@ntelos.net

ON THE SICK LIST:
Denny Morland N4XPW has been in bed for some time now but seems in good spirits. He would like visitors at Avante.
Marty Krupinski KE4KEW is recovering well at home from his motorcycle accident.
Steve Davis' Wife Fran has had both feet operated on for spurs and is recovering at home.
Let's keep Denny, Fran and Marty in our thoughts and prayers.

SWAP SHOP **This is for Ham related items only.** You can send a list of items you have for sale, swap or something you would like to buy, to Fred Evans at: n4kym@yahoo.com Also a picture of the item would help it sell. Go to the VARA Web Site at: http://www.qsl.net/w4xd/ **PLEASE notify Fred when your item sells so he can remove it from the list.**

E-MAIL ADDRESSES: Keep your e-mail address up to date. Please send them to:
Scott Newlen KI4QQZ we4newlens@comcast.net, Doug Tippett N8ESW dtippett@ntelos.net,
Ray Colvin KE4HVR colvingr@comcast.net and David Fordham KD9LA fordhadr@jmu.edu.
ALSO, keep QRZ updated when call signs and e-mail addresses are changed.

73…Ray…KE4HVR

MARA Secretary's Report – September 3 Meeting

Attendance: Members: 34 Guests: 8 Total: 42

Introductions made all around.

Reports:

New Members:

1st reading: Rick Adams (KJ4IND)
2nd reading: Ray Hensley (KJ4MWQ); Larry Heatwole (AA4TC); Dedrick Merz (KI4STU); Blaise Haddock (KJ4MWW)

Secretary's minutes: It was moved, seconded and approved to accept the July and August minutes as printed in the Monitor.

Treasurer's report: As of 8/31/09 we have a cash balance of $1,911.36.

Groups:

ARES/RACES:

The ARES meeting has been changed to September 26th at 10:00 am. The meeting will be held at the ECC (Harrison Plaza 5th floor). Jim Junkins will lead the training session on how to communicate with the ECC during an emergency situation.

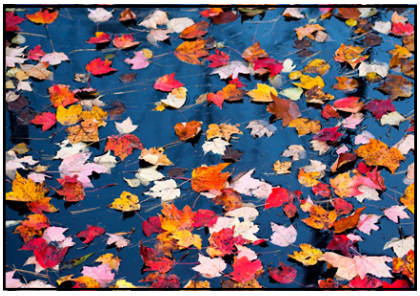
This year we will have operators posted at the ECC for the Triple Play and this training will be a requirement for operating at this location.

VEC Session - the next VE session will be held on Saturday, October 10th at 9:00 am at the Woodmen of the World building in Dayton.

Public Service – mark your calendars for the upcoming events. We have many opportunities to volunteer.

Shenandoah 100 mile mountain bike ride (September 6th). Gayle (KU4XN) is still looking for additional volunteers to help with Net Control (Old Stokesville campground) and other locations.

Bike Shenandoah (September 26th)
The Triple Play – (October 2 – 4th)



Announcements:

Virginia Beach Hamfest (September 12-13th)

The club has a HT available as a loaner

The nominating committee (Bryan Daniels, Bob Steere and Gerry Brunk) are not having a lot of luck recruiting folks to serve as MARA officers next year. Just give one of them a call if you have an interest in serving the club as President, Vice President, Treasurer or Secretary.

Old Business: None to report.

New Business: None to report

New Call or Upgrades: None to report.

Motion to adjourn, seconded and approved.

50/50 - $42.00

Won by Chris Shirkey and donated back to the club.

Program: The Magnificent Seven – Seven things you must know about your radio without the manual. Presented by David Fordham (KD9LA).

Submitted by
Sheryl Tonini
KJ4DOC

MASSANUTTEN AMATEUR RADIO ASSOCIATION, Inc.

President: David R.Fordham, KD9LA
Vice President: Gerry Brunk, K4RBZ
Secretary: Sheryl Tonini, KJ4DOC
Treasurer: Sandy Mullins, K4PZC
Board (exp 2009): Ray Ritchie K4NRA
Board (exp 2010): Bryan Daniels, K4RMY

http://mara.ws

MARA meets the first Thursday of each month at Wood Grill Buffet on Reservoir Street in Harrisonburg, Virginia.

Dinner begins at 6:30 pm,
the business meeting begins at 7:30 pm

Visitors are always welcome.

Dues ($12 per year) should be mailed to:

MARA
PO Box 1882
Harrisonburg, VA 22801

VALLEY AMATEUR RADIO ASSOCIATION

President: Scott Newlen, KI4QQZ
Vice President: Gordon Batey, WA4FJC
Secretary: Ray Colvin, KE4HVR
Treasurer: Doug Tippett, N8ESW
Program Manager: Al Bonck N3JB

http://w4xd.com

VARA meets the first Tuesday of each month. The October meeting will be held at the Shoneys in Staunton on Hwy 250 at I-81.

Dinner begins at 6:00 pm.
The business meeting begins at 7:00 pm.

Dues ($15 per year) should be mailed to:

Doug Tippett
2348 Mosley St.
Waynesboro VA 22980

PAGE VALLEY AMATEUR RADIO CLUB

President: Mark Hensley N4YSA
Vice President: Dave Firestone, K4DPF
Secretary/Treasurer: Mike "Sparky" Terry, KD4KL
Board Member: Morgan Phenix K4RHD
Board Member: : Robert Forrest KJ4HFU

Website to be announced

PVARC meets the first Friday of each month in the Day Room of Page Memorial Hospital in Luray, Virginia.

The business meeting begins at 6:00 pm

Visitors are welcome.

Dues ($12 per year) should be mailed to:

Sparky Terry
PO Box 649
Luray VA 22835-0649

The Monitor is published monthly by MARA, Inc. for members of the three amateur radio clubs in the Central Shenandoah Valley.

Distribution is in Adobe PDF format via email attachment to all club members in good standing.

Clubs differ in their policies regarding paper copies. Contact the president of your respective club for information on paper copies.

Back issues are freely available on the MARA website starting a few months after publication.

Since the clubs derive their revenue from memberships, the Monitor is not to be made regularly available on a timely basis to individuals who are not club members. Occasional complimentary current copies are provided to prospective members free of charge.

Clubs may also formally decide to provide complimentary copies at club expense to various constituencies. Contact your respective club officers for more information.

MARA/VARA

c/o David Fordham
131 Wayside Drive
Weyers Cave, VA 24486

Phone: 540-568-3024
Email: fordhadr@jmu.edu

Return Service Requested

Calendar of Events

October 1: MARA Annual Corporation Meeting — Wood Grill
October 2: PVARC Club Meeting — Page Memorial Hospital, Luray
October 2-4: **Triple-Play Weekend (public service event)**
October 6: VARA Club Meeting—Shoneys in Staunton
October 10: VE Testing Session — Dayton VA
October 17-18: **Fall Foliage Bike Festival (public service)**
October 24-25: CQ WW DX Contest Phone Weekend
October 25: Mason-Dixon (Westminster MD) Hamfest

November 3: VARA Club Meeting — Shoneys in Staunton
November 4: Waynesboro Repeater Ass'n Meeting (see page 3)
November 5: MARA Special Program: "Getting Started on HF"
November 6: PVARC Club Meeting — Page Memorial Hospital
November 7-8: ARRL Sweepstakes CW Weekend
November 21-22: ARRL Sweepstakes Phone Weekend
November 28-29: CQ WW DX Context CW Weekend

December 1: VARA Christmas Party, Staunton Church of Christ
December 3: MARA Christmas Banquet

Net schedules can be found on the MARA Website: http://mara.ws
Click on "Meeting Schedule and Calendar", then click at the top of the page.