Sinewaves

STONEWALL JACKSON AMATEUR RADIO ASSOCIATION
Meetings: 3rd Thursday of each month, 1930 hrs at Saint Marks Lutheran Church RT19/98 Clarksburg
SJARA Tuesday Night Net
This net meets each Tuesday evening at 2100 hours utilizing the N8FMD Repeater on 147.210 Mhz with PL Tone of 103.5
January 13, 2013

Net Control	Date
1. K8TPH	January 1, 2013
2. K8WWW	January 8, 2013
3. WD8NSC	January 15, 2013

Happy New Year **Meeting January 17, 2013**

SJARA Meeting Minutes December 6, 2012

There was no meeting for December. The Christmas Dinner was held at Raymon's Restaurant on December 6, 2012, We had a good dinner and the notes and pictures can be found in the December 16, 2012 Sinewaves or on the SJARA Web Site: http://www.sjara.org

SJARA Tuesday Night Net December 2012

Sessions.....4
Total check-ins.....39
Total Time.....60
Traffic.....0
Composite listing of checkins for 2012 ending December 31, 2012 can be found on the SJARA Web Site SJARA Net Checkins 2012

ARES/FEMA

Would you like to be a Ham that cares and wants to help. Please concider becoming a member of ARES (Amateur Radio Emergency Service). When all else fails then there is Ham Radio. For more information, Read More

Morocco

The Amateur Radio balloon launched in California has been recovered. K6RPT-12 was launched from California on December 3 at 0126 UT, successfully crossed North America and the Atlantic, and landed in Morocco on December 5 at 0923 UT. On Christmas Day Ron K6RPT announced that his California Near Space Project payload had been recovered by a team of French and Moroccan amateur radio operators in Morocco on December 23. More details and pictures at Balloon Recovery

CW from Space

Plans to flash Morse code messages from the Japanese FITSAT-1 satellite have been delayed until early January due to moonlight!
Controllers had hoped to send the visual Morse messages in mid-to-late December, but determined that waxing Moon (full on Dec. 28) would make the sky too bright for most people to be able to see the satellite. Other, earlier, attempts were cancelled due to cloudy conditions over the target areas.
The plans are to begin the visual code messaging around January 7, 2013. Lights Schedule

Antarctica

Leaving soon on board the ice breaker Aurora Australis for the Australian Antarctic Territory station at Mawson is **Craig Hayhow VK6JJJ**, who will become **VK0JJJ**.

He lands on February the 10th, planning to soon after install the 6m beacon VK0RTM and test the propagation on that band.

The main HF rig is a FlexRadio Flex-5000A coupled to an

amplifier and feeding a terminated sloping triangle antenna.

On 6m it will be at 400 watts from Mawson thanks to a power amplifier from Steve Gregory VK3ZAZ, who is also the QSL manager, and radiated by a 5-element yagi. The amateur satellites on 2m and 70cm are to be accessed using a crossed duo-bander. During the next 12 months Craig VK0JJJ is in Antarctica to work and amateur radio is his leisure time activity

Doomsday

N0D

N0D was very active on the HF bands throughout the event and over 2,500 amateur radio contacts were made. All 50 US States and 54 DXCC countries were worked on the HF bands. N0D QSLs are available via KK5W (SASE required).

Balloon

As part of the special event, the **South Texas Balloon Launch Team** launched the Doomsday Balloon, BLT-32 'To the End of the World and Float', to prepare the world for its demise! The launch occurred at 2310 UTC on Saturday Dec 15th from Covey Trails Airport in Fulshear, Texas. BLT-32 was designed as a 'floater' with hopes that it would reach Europe. The balloon floated eastward for 450 miles and burst at an elevation of approximately 106,000 feet when the rising sun on the morning of Dec 16 th warmed the balloon causing the helium to expand. The balloon came down approximately 15 miles NNW of Pascagoula, MS and efforts have been successful to recover the instrument package.

Repeater

Plans are slowly progressing in the establishment of a repeater co-located with the new OES transmitter site. Plans have been approved to install the antenna and hard line for furture use of an amateur repeater. N8YPE continues to work with SERA for approval of a pair of frequencies for the repeater. A special account has been established in the Huntington Bank to deposit donations for the new repeater. If anyone would like to contribute to the repeater fund please forward moneys to N8YPE PO Box 752, Clarksburg, WV 26302

Hamtalk

The Hamtalk link is back up and aperational. I have been monitoring the link frequency but have not heard any other repeater other than 146.685 repeater via the link. Please let me know if you hear any of the linked repeaters and give a signal report. Thanks

DX on 80mtrs

80 Mtrs has been open almost every night from mindnight until 2 AM into Europe with S9+ signals. Signals have been heard from Germany, Ireland, Spain and Sweden. Give a report on what you are hearing. 20 Mtrs is open to the west coast and Alaska with very good signal reports. Is there anyone that would like to see something else in the Sinewaves. If so let me know or best of all just write an article and I will be happy to put it in the monthly Sinewaves. Also, if there is anyone you think would like to receive the Sinewaves each month by email just send me the email address and I will add them to the email group list.

I am in need of a scope. I want to align the encoder in an HF rig and need one to measure and set the duty cycle of the encoder. Must be able to measure DC voltage in the 1uv range. I would like to borrow one if possible for a short time

W1AW goes DX!

The Puerto Rico Amateur Radio League and the Caribbean Amateur Radio Group, sponsors of the American Radio Relay League Puerto Rico State Convention to be held in the city of Hatillo, Puerto Rico on January 26 and 27, 2013, and the official ARRL Amateur Radio station, **W1AW**, will be on the air as **W1AW/KP4**.

A New Wave

This article is a little lenghty but I think a very important article to all Amateur Radio Operators. I remember the 1957-1959 cycle well. I know I worked around the world using 1 watt from a small transmitter I had built in a coffee can. If the 2013 improves we may be in for a treat. The New Year brings dreams of solar cycles of old, so distant now, sweetly remembered for their profusion of sunspots. We hear many times from operators who began in the amateur radio service as teenagers at the peak of Cycle 19. With youthful optimism, they naturally

assumed that radio propagation would always be like that, when a few watts and a modest radiator on 10 meters spanned the globe during all the days and nights. If you were age 13 to 17 in 1957 to 1959, the peak of Cycle 19, perhaps you were born between 1941 and 1945, and probably looked forward to the next peak in activity. That may have been a disappointment when Cycle 20 peaked around 1969, as that had a somewhat broader peak but at a far lower level. You can see it graphically at http://wm7d.net/hamradio/solar/historical.shtml. These young adults, now 24 to 28 years old in 1969, might be busy starting families and careers, and no doubt fondly recalling simpler times and the tremendous propagation of their younger years. Cycle 21 peaked around 1980, and the former teenaged ham of Cycle 19 was now 35 to 39 years old. This was quite an improvement over the last cycle, as was Cycle 22, which looked like an echo of Cycle 21. Cycle 22 peaked around 1991-1992, with a more pronounced double-peak. The former teenager was now 47 to 51 years old, solidly into middle-age, and still wondering if sunspot activity would ever roar back to the levels of the late-1950s. The following cycle, number 23, was another double-peak, but significantly lower in 2000 to 2002 than the previous cycle. Perhaps another disappointment for the now 56 to 60 year old ham, who then sees solar activity slide into a long and low minimum over the next decade, impossible to imagine 60 years earlier. The 160 meter operators, quite happy in this situation with a much quieter Sun, have no such longing for the active Sun of yesteryear. Now the young ham of the late 1950s contemplates the peak of Cycle 24, apparently much lower than any seen in most of the past century, and expected to grow to maximum this year. Now we have many more tools to observe and measure both solar activity and propagation, and we know that activity could still increase significantly. Some foresee decades of lower activity, but of course predicting future solar activity is a very tricky proposition, and anything could happen. At http://www.solen.info/solar/images/comparison_recent_cycles.png you can see a comparison of recent cycles, from 21 to the current 24. While we've seen a number of papers and predictions for a series of quieter sunspot cycles, some disagree. For instance, Michael Proctor, professor of Astrophysical Fluid Dynamics at Cambridge University is not convinced. He was quoted this year as saying, "This present cycle is similar to the weak one that ended in 1913, and that was followed by a strong cycle." Those were Cycles 14 and 15, and Cycle 15 was only strong relative to 14. Cycles 17, 18 and 19 were stronger than 15, and so were 21, 22 and 23. It is also important to remember there is wild variability in solar activity. To make those graphs of sunspot numbers appear smooth, each point on the graph actually represents an average of a year of data. When averaged, the flurry of solar activity at the end of 2011 and some future activity in 2013 could appear as a broad peak on a graph. NASA looks frequently at their predictions for the current cycle, and often adjusts them every month. The latest shows a smoothed sunspot number a bit lower than the forecast from several weeks ago. In the December 10 forecast they predicted a smoothed sunspot number of 72 in the late in 2013, but that number is now 69 in the January 2 release. Note these are the lower international sunspot numbers, which are always less than Boulder numbers presented in this bulletin. Read the report at http://solarscience.msfc.nasa.gov/predict.shtml. With the change from 2012 to 2013, now is a good time to review sunspot numbers and trends. Average daily sunspot numbers in 2013 were up substantially from 2012. From 2004 through 2012 the yearly progression was 68.6, 48.9, 26.1, 12.8, 4.7, 5.1, 25.5, 29.9 and 82.3. I took all the daily sunspot numbers for 2012, added them together, and the sum was 30,133. Divide that by 366 (the number of days in 2012, a leap year) and the result is approximately 82.3. In 2011 it was 10,913 divided by 365, yielding 29.9. The 2012 average was higher than any year after 2003. But at the peak of

Cycle 23, the averages from 1998 to 2003 were all higher: 88.7, 136.3, 173, 170.3, 176.7, and 109.2. It seems unlikely that average daily sunspot numbers this year will reach anywhere near the level of 2000-2002. We observe a moving 3-month average of sunspot numbers, in an attempt to smooth out some of the variations. Unfortunately, the past three months were much lower then the three month period ending one month earlier. The current average of 74.4, centered on November 2012, is lower than any three month period since averages centered on February and March of 2012. The 3 month period previous to the current one is centered on October 2012, and covers September through November. The average then was 82.3. To recap averages from previous bulletins, the three-month moving averages of daily sunspot numbers centered on July 2011 through November 2012 were 63, 79.6, 98.6, 118.8, 118.6, 110, 83.3, 73.7, 71.2, 87.3, 91.5, 96.5, 91.9, 89.9, 81.2, 82.3, and 74.4. Looking at the past week, yesterday we saw a sizable gain in solar flux, when the value went from 106.7, 113.6, 117.8, and 119 to 128.8, on December 30 through January 3. NOAA and USAF predict solar flux at 130 on January 4-6, 125 and 120 on January 7-8, 115 on January 9-10, 110 on January 11, 105 on January 12-13, 110 on January 14-17, 115 on January 18-20, and 120 on January 21-23. Predicted planetary A index is 5 on January 4-12, 10 on January 13, 5 on January 14-25 and 8 on January 26. F.K. Janda, OK1HH issues a weekly geomagnetic forecast. This week he says geomagnetic conditions will be quiet January 4, quiet to active January 5, mostly quite January 6, quiet January 7-9, quiet to unsettled January 10-12, active to disturbed January 13, quiet to unsettled January 14-16, quiet January 17-19, mostly quiet January 20-21, and quiet on January 22-26. If you would like to make a comment or have a tip for our readers, mail the author at, k7ra@arrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service at http://arrl.org/propagation-of-rf-signals. For an explanation of the numbers used in this bulletin, see http://arrl.org/the-sun-the-earth-the-ionosphere.

An archive of past propagation bulletins is at http://arrl.org/w1aw-bulletins-archive-propagation.

Find more good information and tutorials on propagation at http://myplace.frontier.com/~k9la/ .Monthly propagation charts between four USA regions and twelve overseas locations are at http://arrl.org/propagation.

Instructions for starting or ending email distribution of ARRL bulletins are at http://arrl.org/bulletins.

Sunspot numbers for December 27 through January 2 were 78, 54, 49, 37, 87, 99, and 90, with a mean of 70.6. 10.7 cm flux was 106.8, 105.8, 104.3, 106.7, 113.6, 117.8, and 119, with a mean of 110.6. Estimated planetary A indices were 1, 2, 3, 4, 2, 1, and 3, with a mean of 2.3. Estimated mid-latitude A indices were 0, 2, 3, 4, 1, 1, and 2, with a mean of 1.9.

Samuel B. Morse

On January 6,1838, Samuel Morse's telegraph system was demonstrated for the first time at the Speedwell Iron Works in Morristown, New Jersey. The telegraph, a device which used electric impulses to transmit encoded messages over a wire, would eventually revolutionize long-distance communication, reaching the height of its popularity in the 1920s and 1930s. Morse spent the next several years developing a prototype and took on two partners, Leonard Gale and Alfred Vail, to help him. In 1838, he demonstrated his invention using Morse code, in which dots and dashes represented letters and numbers. In 1843, Morse finally convinced a skeptical Congress to fund the construction of the first telegraph line in the United States, from Washington, D.C., to Baltimore. In May 1844, Morse sent the first official telegram over the line, with the message: "What hath God wrought!"

29th Annual Charleston Area Hamfest

Saturday, March 16, 2013
9 a.m. to 2 p.m.

COONSKIN ARMORY
1707 Coonskin Drive • Charleston, WV

TABLES: Only $6!

Reserve Yours Early By Contacting

Dave Ellis WA8WV

wa8wv@aol.com

Setup: Friday March 15 from 2:00 to 6:00 PM
Saturday March 16 from 7:00 to 8:30 AM

FOR MORE INFO:

WRITE: Charleston Area Hamfest
PO Box 916
St. Albans, WV 25177

OR E-MAIL: n8tmw@arrl.net

TALK IN: Call W8CHF on 145.35 Repeater

GREAT FOOD!

GREAT PRIZES!

PLENTY OF FREE PARKING!

ADMISSION: $6

VE TESTING: 12:30 p.m.

ARRL and ARES Forums

DXCC, WAS, VUCC Card Checkers

DIRECTIONS: Take Exit 99/Greenbrier St., off I-64/77, towards airport. Veer right past airport turnoff. Go to stoplight at Go-Mart and turn left onto Coonskin Drive. Armory is about 3/4 mile on left, just before entrance to Coonskin Park.