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April 2008

SARA General Meeting, Monday April 7th, 2008 at 7:00PM at  
in "the Little Theater" Room D-104 at Niskayuna High School



## The Great Aurora of 1989

Bob Ringlee and Jim Stewart (K2PK)

Aurora effects on earth were first identified in the 1800's when telegraphers observed their circuits continued to work even with their batteries disconnected when the aurora was visible. Aurora and auroral

E propagation are well known to 6 and 2 meter CW and SSB operators, as are accompanying HF blackouts. Hams monitor solar activity and predictions, including solar flux and the A and K indices, in order to predict band openings. The great aurora of March 13/14 1989 was a superstorm that produced propagation on the bands as high as 902 MHz. At the same the aurora produced many other effects, such as noticeable compass needle deflection, satellites moving out of their orbital station, power system blackouts and transformer damage. How all this came about is an interesting tale that is relevant at the start of a new sunspot cycle.

Bob Ringlee has 60 years experience as an engineer, starting with shipboard turbines, then with GE, PTI, and now as an independent consultant. His work and wide ranging interests have taken him throughout the spectrum from audio to RF. Bob and Jim were involved in investigations of the 1989 aurora's effects on the power system, especially as it involved transformer damage. Connected with this came a broader interest in the overall problems caused by the aurora. Notes in Jim's log book indicate the amount of VHF activity during that event. This all led to preparation of talks on solar geomatic effects that they have given to several different groups.

The SARA Meeting will begin at 7 PM in Room D-104 "the Little Theater".

### About The SARA Meeting Location

The normal SARA meeting location for 2008 is in Niskayuna High School's "Little Theater" Room D-104 which is on a cross hallway between the two wings in the rear of the school. This is about 150 feet down the hall and to the right of the old meeting location in "new cafeteria". Due to school construction at the main entrance of the school there are changes in parking and the traffic pattern for access to the rear parking lot. Access to the school's rear parking lot must be gained by entering from Nott Street which crosses Balltown just south of the school at the light. Go past the shopping mall where Friendly's is a few hundred yards on Nott and go into the Niskayuna High School rear entrance which is marked on the left. This entrance leads to the parking lot on the side/rear of the school. As always SARA meetings are held when Niskayuna High School is open and has classes, so if there is a school closing that day or evening due to inclement weather check the K2AE repeater 147.06 or call one of the club officers on the phone or radio.

**NEXT MONTH'S SARA MEETING DATE: MONDAY MAY 5<sup>th</sup>, 2008**

## **SARA BOARD OF DIRECTOR'S MEETING**

Due to no major actions pending that needed SARA Board action for March so there was no regular SARA Board Meeting for March. But the SARA Nominating Committee has been formed and will be developing the 2008-2009 slate of SARA officers over the next few weeks. The Nominating committee is comprised of Hal Post AK2E, Jim Stewart K2PK and Dan Whelan N2UD (Chairman).

## **~ FLASHBACK ~ FIELD DAY 1941 - 67 YEARS AGO!**

The 9<sup>th</sup> Annual ARRL Field Day June 7 thru June 8, 1941

The Schenectady Amateur Radio Association was formed in 1930 in part to provide emergency communications to our community. The interest in emergency communications among the ham community caused the ARRL to begin to hold an annual "Field Day" operating event beginning in 1933. Recently I received a reprint copy of the "QST January 1942" edition and upon review I found that the results of ARRL Field Day held the summer before on June 7 through June 8, 1941. The QST reported that this 1941 Field Day event was the largest operating event held in the US to date. They indicated that 163 ham club stations participated and 119 non club group stations participated. Overall the 1941 Field Day submissions indicated that there was over 2180 hams participating at these Field Day operations. This of course was while World War 2 was raging throughout Europe and Asia but the US had yet to enter the war, something that would happen on December 7<sup>th</sup>, 1941, literally just a few weeks before this issue of QST came out. So much was about to change for amateur radio and so many of the hams and their families including SARA. In 1940 the ARRL began the practice of classifying stations by the number of transmitters on the air simultaneously (from 1 to 13 transmitters were entered in 1941). It is also apparent that mostly only stations operating on emergency power (generator or batteries) submitted Field Day entries. By the way, the only ham bands available for use at that time were 1.8, 3.5, 7, 14, 28 and 112 Megacycles and both CW and AM phone were used. (SSB, digital modes, and logging computers had yet to be invented!

Of interest for us today is that SARA participated as a club in Field Day 1941 and below are the details as published in the January 1942 QST:

### **SARA in 1941 ARRL Field Day**

SARA Callsign: W2ACB/2      Transmitters: 4      Power Class: A      "4A"  
Total QSO's:                300                Score: 4050                Operators:    26 Licensed Hams + 3 others  
SARA members participating: W2ACB, W2BKW, W2BRS, W2BSH, W2CBO, W2CJP, W2CVZ, W2DC, W2GTC, W2HCV, W2HZL, W2JZR, W2KFN, W2KNB, W2KUG, W2LU, W2MIY, W2MJT, W2MTE, W2MYA, W2NAD, W2NHY, W2NOY, W1MMF, W8AKS, W9SNP, Mr. Conti, Mr. Gennaro, Mr. Gorski  
The top scoring station in the "4A" category was W3BKX/3 Frankfort ARC with 644 QSO's and a score of 9765 and SARA placed 12<sup>th</sup> among the 27 club stations in the "4A" category.

By way of comparison the new all time FD record (as of 1941) was achieved by the Tri-County Radio Association station W2GW/2 in Plainfield NJ took top honors with a score of 13,968 points in "11A". They had 35 operators and made a total of 1112 contacts of which 412 were with other portable FD stations and 697 were with fixed home stations. They operated all bands from 1.8 to 112 Megacycles. ( The activity of W2GW/2 included 163 QSOs on 1.8 Mc., 447 QSO's on 3.5 Mc., 245 QSO's on 7 Mc., 144 QSO's on 14 Mc. 32 QSO's on 28 Mc. and 61 QSOs on 112 Mc. Their contacts were divided almost evenly between AM phone (542) and cw (570). Power for W2GW/2 on all bands was limited to 30 watts and power provided by four AC generators. and AM phone

### **ARRL Field Day 2008 Is Coming.....**

Now it is less than 60 days to Field Day 2008! It certainly isn't too early to start thinking about the biggest operating event in SARA's year which will be coming up on the weekend of June 28-29. Set-up begins on Friday afternoon June 27 and help is always appreciated then and at tear down on Sunday afternoon at 2 pm. It is also a great time to introduce your family, kids and grandkids to ham radio. You can also find some info about Field day in past SARA News or on our website [www.k2ae.org](http://www.k2ae.org)

“DA DIT DA DIT DA DA DIT DA DA DIT DIT DIT DA DA DA DIT DA DIT DIT DA DIT”

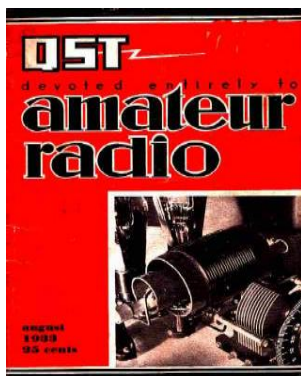
## FLASH BACK AGAIN ! - ITS 1933 .....THE SCHENECTADY AMATEUR RADIO ASSOCIATION IS ON THE AIR !

N2UD Dan Whelan – SARA News Editor

For those not familiar with the areas radio history way back in the dawn of radio (both broadcast and ham radio) you might be surprised to learn that for most of the first three quarters of the last century the city of Schenectady was well known on the world map because of GE, WGY and GE’s worldwide shortwave broadcasting from here. The hams in the Schenectady Amateur Radio Association (SARA) were of course a big part of these GE operations and engineering breakthroughs and they were on the ham bands from the area too. Here is some of the scoop from the August 1933 of QST. SARA as a ham club was officially formed early in 1930 with its first meeting held after work at the GE plant, although not everyone worked at GE. But throughout the early years of ham radio SARA and its members were active on the bands in a variety of ways important to not only our club but the hobby in general.

.....So come with us now to those thrilling days of yesteryear when the hams of SARA let out a hearty call of “Hi Ho Silver! Away!” Oops wrong nostalgia channel..... By the way back then W2ENR was apparently our official club callsign, the Federal Radio Commission (predecessor to today’s FCC) required every physical radio station to have its own unique callsign. This included hams who may have wanted to operate mobile.....so even individual hams sometimes had more than one call!!!

P.S. check out the equipment and component ads here and in “SARA News Extra” and note that some of them refer to stuff made right here in Schenectady on lower Broadway, see if you can figure out what it is?



It is interesting to take a look at some of the older radio magazines and manuals. Really things were rather different in so many ways yet pretty interesting too. The August 1933 QST for example was 80 pages in size and cost 25 cents. Thumbing through it, while it has about half the pages of a typical 2008 vintage QST it has fewer ads.

It is interesting to take a look at some of the older radio magazines and manuals. Really things were rather different in so many ways yet pretty interesting too. The August 1933 QST for example was 80



### W2ENR, Schenectady, N. Y.

HERE is a glimpse of some of the Schenectady gang operating W2ENR, the station of the Schenectady Amateur Radio Association. Besides



W2ENR

functioning in normal club activities, the station works in the Naval Reserve Net each Friday night, being operated by members of the local communication reserve unit.

The transmitter, loaned by W2BWF, has a crystal-controlled oscillator using a Type 10 tube, two buffer stages with 865’s, and an 860 final amplifier, this last operating with about 1500 volts on the plate. Provision is made for doubling into 40 and 20 meters. The receiver is a three-tube having a detector and two audio stages using 201-A’s.

Grouped around the set are W2EFM, W2LU, W2CJP-ZZK, W2DTS, W2AZH and W2CAZ.

QST for

## "Its 1933..... S.A.R.A Is On The Air!" - Continued

Another comparison is that radios back then were of course almost always separate transmitters and receivers and much had to be fabricated to get a typical station on the air. There was a lot of work required for a ham just to get on the air since few things were ready to use "out of the box." Still the costs for that time were still pretty significant. For example a transmitter kit that put out a few watts could be had for around \$20 or so and receivers a for a bit more than that at the low end. Of course there were some really good (for the day) pieces

of equipment and parts that could be had if you spent significantly more...not unlike today. But also like today you needed some smaller items to make it all come together or to just train yourself as to what you were doing so investing in ARRL membership cost 3 dollars a year or just 25 cents for a news stand issue. But \$3 would buy dinner for two in most diners or enough gas to fill your car's tank! Compare that to today!!!! But today with an average modest salary around \$1000 a week, this sounds cheap but we have to remember that back then just buying a ham rig with the accessories to put together a reasonable CW station running up to a few dozen watts with a fair receiver would run at least a hundred dollars or more which was several weeks wages for the bread winner of the family. (If you were lucky enough to have a job during the Depression!). One other thing to consider is that this particular QST issue mentions that there were about 37,000 Federal Radio Commission RC ham licenses then, of which about 10,000 were for portable use. At that time a ham had to have another ham license and call sign for mobile or portable operation. Back in 1933 the US had one sixth the population of today; but we now have more than twenty times as many ham radio operators in the US with over 700,000. So in many ways things have changed for the better.

### HIGH FREQUENCY MYCALEX Insulation

WELL known to the professional radio engineer, Mycalex is now offered the amateur and experimenter by Isolantite, Inc., as the result of an arrangement made with the General Electric Company, manufacturers of G. E. Mycalex.

Mycalex incorporates the desirable electrical insulating properties of glass and mica, together with a high value of mechanical strength and toughness which neither of these two materials alone possess.

G. E. Mycalex is admirably adapted to service in the construction of insulating details for the high frequency receiver and transmitter. It is characteristically rigid, like glass or porcelain, but unlike the latter is neither as hygroscopic nor as fragile. The power factor of G. E. Mycalex is .2%, and its loss factor 1.5, whereas, the corresponding values for these same properties in organic sheet insulators are several times higher. Moreover, G. E. Mycalex will not carbonize like plastics in common use and it is, therefore, particularly recommended for transmitters where high voltage circuits are to be insulated.

Available in convenient sheet form, Mycalex, in small sections, may be fabricated by the amateur in much the same manner as any sheet insulation with the simple tools ordinarily at his disposal.

G. E. Mycalex may be obtained promptly from Isolantite, Inc., in the sizes and at the net prices given below:

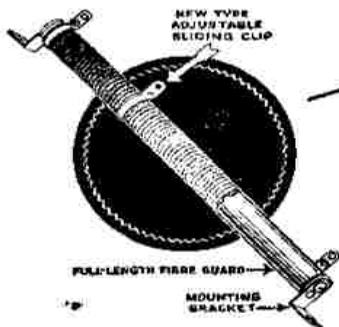
1" wide, 12" long, 1/8" thick..... \$.90 each  
2 1/4" wide, 12" long, 1/8" thick..... 1.40 each

A copy of this announcement has been mailed to dealers in amateur radio products in the United States, in the hope that they will keep a stock of G. E. Mycalex on hand for your convenience. If your dealer cannot supply you, order direct from this advertisement. All orders for any quantity accompanied by check or money orders will be shipped prepaid anywhere in the United States at the prices quoted above.

### ISOLANTITE, INC.

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Factory: Belleville, New Jersey



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Ordinary  
Resistors  
With

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155 Varick St., New York, N.Y.  
**ELECTRAD**

*Special thanks go to Sid Wolin W2LZH since he identified some info about SARA and provided the vintage copy of QST from August 1933 that this article is based on.*

### HUDSON DIVISION

EASTERN NEW YORK — SCM, Robert E. Haight, W2LU — W2ATM leads with FB traffic schedules. W2BLU is second high. W2BJA is out after 17 months of illness. W2BLL uses portable FDW. W2UL, CC and CL bid W6CXW Bon Voyage on 7 mc. as he sails for Japan. W2KW is going strong. W2CFU sports an FB7. W2CBN joined VCR. W2QY hopes to be with the boys at Natl. Glider Meet at Elmira. W2FPH is welcomed to our section. W2FUR makes nice report. W2BTQ hangs his shingle for traffic. "Sky hooks down again," says W2CJS. W2ANV reports A.A.R.A. meetings adjourned for summer. W2SZ and ENY haul in sky wires. W2EQD was assigned portable FVI. W2FUM is new ham. "Things

kinda quiet on Hudson," reports W2BZZ. W2DDW reports via two page letter for Mid Hudson Amateur Radio Club. New officers: pres. W2BJX, W2BCO vice-president, Archie Smith treasurer, W2DWO secretary. W2CGT is rebuilding. W2AXX moves to new QTH. W2AEQ is taking a YL for better or worse. SARA held annual picnic and married hams trimmed single hams in ball game. W2CJP is active on 7 mc. W2BIA schedules Chicago for Worlds' Fair traffic.

Traffic: W2ATM 294 BLU 120 BJA 106 LU 76 BLL 57 UL 30 FUR 20 KW-CFU 17 CBN 12 QY 7 FPH 3 BTQ 2 CJS-ANV 1.

## UPCOMING EVENTS

Dates	Contest / Hamfest / Event	Location / Website
7 April 2008	SARA Meeting – 7 PM	Rm.D-104 Niskayuna High School
13 Apr 2008	Mt. Beacon ARC Hamfest <a href="http://www.wr2abb.org">http://www.wr2abb.org</a>	LaGrangeville, NY Tymore Park <a href="#">1 Duncan Road</a>
19 Apr 2008	Drumlins Hamfest	Newark, NY (Finger Lakes)
18-20 April	34th ANNUAL EASTERN VHF/UHF CONFERENCE (ARRL Affiliated) <a href="http://www.newsvhf.com">http://www.newsvhf.com</a>	CROWNE PLAZA HOTEL (860)-741-2211 1 BRIGHT MEADOW BLVD. (OFF RT.5) ENFIELD, CT 06082
26 April	Orange County ARC Hamfest	Town of Wallkill Community Center 2 Wes Warren Road Middletown, NY
16-18 May 2008	Dayton Hamvention <a href="http://www.hamvention.org">http://www.hamvention.org</a>	Dayton, OH Hara Arena
30-31 May 2008	Rochester Hamfest (Rochester ARA) <a href="http://www.rochesterhamfest.org">http://www.rochesterhamfest.org</a>	Fair and Expo Center & RIT Inn & Conference Center; Henrietta, NY
14-15 Jun 2008	ARRL June VHF QSO Party	
28-29 Jun 2008	ARRL Field Day (SARA at Glenville Hills FD)	SARA Field Day Operation
	See Other Hudson Division Hamfests Listed in SARA News Extra!	

Be sure to check out the ARRL Hamfest calendar for more detailed information on these and other upcoming hamfests. Go to <http://www.arrl.org/hamfests.html>

### Some Hamfests worthy of special note:

Orange County Amateur Radio Club Hamfest; Saturday April 26th 8am to 2 pm  
Town of Wallkill Community Center; 2 Wes Warren Road; Middletown, NY  
AA2DS 845-342-2056 after 6pm [AA2DS@htwc.rr.com](mailto:AA2DS@htwc.rr.com) Talk in on 146.76 repeater.



Want to write an article for SARA News? Contact Dan Whelan N2UD [n2ud@arrl.net](mailto:n2ud@arrl.net)

## SARA's Board Of Directors 2007-2008

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Sec: Hal Post AK2E [ak2e@arrl.net](mailto:ak2e@arrl.net) 584-6441  
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## VE Registration (518) 370-1350



SARA Dues: Regular Member \$20 \_\_\_\_\_ New Member Initiation \$5 \_\_\_\_\_ Repeater Fund \$ \_\_\_\_\_  
Family Member \$5 \_\_\_\_\_ Student Member \$5 \_\_\_\_\_ SARA News US postal delivery Add \$5 \_\_\_\_\_

Name \_\_\_\_\_ Callsign \_\_\_\_\_

Email \_\_\_\_\_ (SARA News is sent via Email)

Street \_\_\_\_\_ I belong to ARRL \_\_\_ ARES \_\_\_ RACES \_\_\_

City \_\_\_\_\_ Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_

Mail to: **Schenectady Amateur Radio Association Inc.; P.O. Box 449; Schenectady, NY 12301**

**Schenectady Amateur Radio Association  
P.O. Box 449  
Schenectady, NY 12301**