

EXECUTIVE AND OFFICERS

THE NORTH SHORE AMATEUR RADIO CLUB

President	Bob Miller	VE3HNN	723-0601
Vice-President	Don Dewey	VE3GEN	668-8776
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Treasurer	Steve Wotton	VE3CFG	725-4197
Registrar	John Pluister	VE3FGL	655-4269
Get Wall Cards	Ted Brant	VE3ADD	668-3561
Editor	Glen Flintoff	VE3AEQ	725-6408

NEXT MEETING:

The next meeting will be at the Ashburn Plant of Andrew Antenna which is their Co-Ax Division. There will be a conducted tour by Don Dewey GEN followed by a 'Helix' raffle.

To get to the plant, proceed north on highway 12 to Myrtle, west to Ashburn, then take the first turn north on the west side of the village. Andrew Antenna's sign will guide you in.

NEWS ITEM:

We are all extremely grateful for VE3CK Tex Galpins' very interesting and informative slide presentation on VHF antenna theory and operation at our April meeting. Well done, Tex, and we hope you can come back.

Amateur and Advanced Amateur exams will be available to everyone interested at the Eastdale Collegiate on Wednesday, May 31 at 7:00 p.m. Please contact Don HYW at 985-8197, Seagrave so that he can inform the D.O.C. of the number of applicants.

COMING EVENTS:

The next big item of interest is the Annual Field Day to be held at Eric's (HMG) QTH. It promises to be a keenly contested affair with something for all members of the family. There will be plenty of action on -
80 and 40 CW
80 and 40 'phone
10 - 15 - 20 CW and 'phone
2 metres - all models

This event runs twenty-four hours.

Equestrian Event and the Nonquon Canoe Race times and dates to be announced.

The June meeting will feature Wayne Montague of DX Communications with a VHF display.

Heard along the leaky CO-AX -
It seems Eric HMG's new truck is known as the 'Green Machine' - could it be the TV influence?

Art RO and Ginny ADV are no doubt enjoying a vacation in Britain - Art's first return since wartime. We hope he behaved on his previous encounter.

'Horizontal Eddie' has so far kept his portable antenna polarization a secret.

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Our 'Haggis Bashers' continue to entertain us on '2' with wild tales of superb, if not superior CW operations. If they blow Field Day it will be the greatest defeat since Bonnie Prince Charlie.

REPORT OF ACTIVITIES OF THE NORTH SHORE AMATEUR RADIO CLUB TWO METRE NET:

This report covers the month of April, four 'Net-Nights'.

Interest in the net is growing steadily with the average number of check-ins for the period being 40, despite a 'low' of 24 one night.

My thanks to John VE3FGL for taking the net as a stand-in on April 13 during my absence. This is no new experience for John as he was net control some time ago while down on Thicksen Road.

We will miss Ginny VE3ADV and Art VD3RO who are overseas for a visit. Our best wishes for a pleasant and enjoyable holiday.

The net is serving its purpose as a meeting-place as is shown by the random sampling of topics discussed: Proposed Regulation Changes, Model Railroad Bulletins, Wind-Power Generating, Rig and Antenna Info., Club Membership Enrolling, Financial support for 'Good Old OSH', Club Meetings Announcements, and last, but certainly not least, FIELD DAY announcements, including 'Scott-Wilson' challenges made with reckless abandon!!!

Welcome back to these parts to Don VE3HYW after his stint of business city-hopping. Your reception in Oklahoma City was just another example of the well-known 'Ham' spirit.

Any suggestions to improve, or criticisms concerning the operation of the net are most welcome. Remember that while I do my best as Net Control it is you who call in so regularly who really make things a success.

Again, my thanks to all who help, and the usual warm welcome to our listeners and to visitors from both sides of the border.

73 & 88's, Perce, VE3AEX, Net Control

The following report on the Sunspot Cycle and what to expect of our radio signals was re-printed from H.R. Report, Greenville, New Hampshire and appeared in the Radio Society of Bermuda's 'Splatter'. It was kindly forwarded to us by Art R0.

SUNSPOT CYCLE 21—THE PEAK, HOW MUCH, AND WHEN

By O. Okleshen W9RX (Propagation Editor HR Report)

Of the many methods and authors of the "how much and when" of a solar cycle maximum, the most recent and likely the most accurate method has been devised by A. I. Ohl, a Soviet scientist whose first publication was reported in Solnechnaya Dannyye, #9 pp 73-75. H. H. Sargent III, Space Environment Services Center, Boulder, Colorado, modified the Ohl theory thus enhancing the accuracy of the basic method developed by Ohl. The theory is based on the Regression Of Recurrent Geomagnetic Activity Recorded From The Prior Cycle To Predict The Sunspot Maximum Of The Forthcoming Cycle.

Mr. Sargent modified the Ohl theory by taking into account finer time resolution and more accurate data than was available to Ohl. The Ohl theory, as modified, provided accuracies of maximum sunspot cycle peaks when tested against observed data within an accuracy of 1% in some cases. While not so in every case, accuracies within 5% of maximum sunspot level predictions appear to be common. Compared to any prior known methods, the Ohl/Sargent method would be, by far, a major breakthrough in the prediction of sunspot cycle maximum levels, when accuracy and other advantages are considered. The data used to establish and test the original Ohl theory was extracted from the last 110 years. The data before 1848 is dubious because of the information and techniques available. For that reason, some of the other theories used at that time to predict sunspot maximum levels may be erroneous.

Many other methods have been used to achieve individual and combined success to determine maximum sunspot peak levels. The IGY peak of 1957 led to anticipation of a peak level, certainly of a magnitude that would stimulate IGY research. One often used method is a "slope" technique that observes the rate of upward change at the beginning of a new cycle. This observed rate of change is then projected to a peak value. The Ohl method has two most important advantages over all other theories and methods of establishing the sunspot peak level. First, it appears to be superbly accurate, and second and probably most important, the Ohl method gives a year's earlier lead time. It is only necessary to use data from the prior decaying cycle.

The exact mechanism between the prior cycle recurrent geomagnetic behavior and the succeeding cycle sunspot maximum is not clear. However it is likely that one is directly related to the other in solar physics whereby it is even possible that a new definition of a solar cycle may have to be established. Conjecture may place some possible validity in the theory that coronal holes that relate to recurrent geomagnetic disturbances may be the birthplaces for the succeeding cycle sunspot regions. This aspect of course would have to be studied and proved.

This special report contains material from W9RX and extractions from a paper composed by H.H. Sargent III, Space Environment Services Center, Boulder, Colorado. Mr. Sargent will be presenting his paper "A Prediction for the Next Solar Cycle" March 24th to the IEEE Vehicular Technology Group Conference in Denver.

There is no doubt that the Ohl/Sargent method has great potential, as those needing accurate sunspot predictions are and have always been confronted with widely ranging opinions. We know that cycle 21 predicted maximums of 50 to 60 have already been exceeded; the February 1978 smoothed sunspot level has already reached at least 90 with the cycle peak approximately two years into the future!

As for specific figures of what may be in store for amateur radio, the following highlights and numbers have been extracted from the work of Mr. Sargent.

Predicted Smooth Sunspot Maximum For Cycle 21 By Ohl/Sargent....153.6

Approximate Arrival Date Of The Maximum.....early 1980

Prediction Of Smooth Sunspot Level Maximum By Method Of Ratios..158.0
(This method takes the averaged smoothed odd cycle peaks divided by the averaged smoothed even cycle peaks times the peak of cycle 20)

Accuracy Of The Ohl/Sargent Method As Tested With Observed Data From Cycle 20 And Compared To Cycle 20 Sunspot Peak Level..nearly 95%

Twelve Hour Periods With Geomagnetic "A" Indices Of 100 Or More Expected In The Next Ten Years.....81
(an "A" index of over 50 indicates a major geomagnetic storm)

Monthly Smoothed Predicted Sunspot Numbers
Using The Modified Ohl Method For Cycle 21

Jan 78-----58.6	Jan 79-----110.8	Jan 80-----151.5	Jan 81-----139.0
Feb 78-----64.4	Feb 79-----114.6	Feb 80-----153.4	Feb 81-----135.8
Mar 78-----69.6	Mar 79-----116.8	Mar 80-----151.4	Mar 81-----133.7
Apr 78-----75.0	Apr 79-----120.3	Apr 80-----152.0	Apr 81-----134.8
May 78-----80.6	May 79-----124.5	Apr 80-----153.6	May 81-----127.8
Jun 78-----85.1	Jun 79-----127.8	Jun 80-----152.2	Jun 81-----126.2
Jul 78-----89.5	Jul 79-----131.1	Jul 80-----150.9	Jul 81-----126.2
Aug 78-----93.6	Aug 79-----136.1	Aug 80-----149.8	Aug 81-----125.6
Sep 78-----97.6	Sep 79-----138.2	Sep 80-----146.2	Sep 81-----123.4
Oct 78-----99.7	Oct 79-----140.8	Oct 80-----145.4	Oct 81-----122.3
Nov 78-----103.3	Nov 80-----145.0	Nov 80-----143.7	Nov 81-----121.2
Dec 78-----107.1	Dec 80-----148.1	Dec 80-----141.2	Dec 81-----120.6

It is clear that if the predictions hold true, cycle 21 will be a whopper and will likely parallel cycle 18 and have an impact almost as severe as cycle 19. During periods of high solar activity, many services will be detrimentally affected. Satellite damage from solar radiation is one example. Communications and power will be interrupted. VLF Omega navigation alert used on overseas aircraft would likely be affected rendering the service at times, next to useless. Worse may be the impossibility of warning users that the system is failing. Space travel and related health hazards will become a significant factor to take into account. Magnetometer survey work for natural resources will be affected to such an extent that at times, the investigations would have to be curtailed with a severe cost impact on such resources even before production. CB radio on HF will likely be sheer havoc with skip interference. And now there is new evidence to support the fact that the weather is directly affected by solar sunspot behavior and geomagnetic occurrences previously thought to be unrelated.

HR Report feels that the amateur community should be made aware of a highly accurate prediction that may well not only affect our use of the radio spectrum, but likely our daily lives and our destiny.

MAY EDITION - 1978

The attached, updated Membership List has now been arranged in order by Bob HNH's office and reflects our all time high membership.

Also attached is an announcement and invitation to attend The Central Ontario Amateur Radio Fleamarket in Guelph.

FOR SALE:

One Only - MODEL 460 EICO OSCILLOSCOPE
COMPLETE WITH ALL PROBES AND MANUAL - \$85.00

This unit is in excellent condition. It was factory built and aligned and this model is in the current catalogues.

The range is D.C. to 4.5 MHZ.

CALL GLEN - AEQ at 725-6408

73,

Glen AEQ

attach.

THE CENTRAL ONTARIO AMATEUR RADIO FLEAMARKET

SPONSORED BY THE GUELPH AMATEUR RADIO CLUB

VE3ZM

You Are Cordially Invited To A Good Old-Fashioned Fleamarket

at the **CENTENNIAL ARENA,**
COLLEGE AVENUE WEST, GUELPH, ONTARIO

EASY ACCESS FROM THE HANLON EXPRESSWAY, (HIGHWAY 6) FOLLOW THE SIGNS

on **SATURDAY, JUNE 10, 1978**
10:00 A.M. to 4:00 P.M.

AMATEURS and FRIENDS - only 50¢

VENDORS - additional \$1.00
PLEASE BRING YOUR OWN TABLE.

SOME TABLES AVAILABLE ON A FIRST COME BASIS

- ▶ ALL INDOORS, NO WEATHER PROBLEMS,
- ▶ REFRESHMENT CONCESSIONS WILL BE OPEN,
- ▶ SOME COMMERCIAL DISPLAYS, SURPLUS DEALERS, ETC.

TALK IN on 2 METER FM

52/52 Simplex, 37/97 KSR, 96/36 ZMG

LOTS OF BARGAINS ■ MEET YOUR FRIENDS

OUR HISTORY - - - It all started as a garage sale at the QTH of Rocco HGZ, in 1975. We grew, and in 1976, many Hams arrived at the QTH of Gord VE3IH. The tremendous rise in popularity justified the rental last year of Centennial Arena. Hundreds of Amateurs and their friends came, and more will this year! Will you?

FOR FURTHER INFORMATION, PLEASE CONTACT ANY MEMBER OF THE

COMMITTEE LISTED BELOW:

ROCCO FURFARO VE3HGZ 824-1157 DENNIS GORE VE3DGA 836-6226 ELIZABETH WILSON 823-5097

& FRED HAMMOND VE3HC