NARS NEWS

W5NC Houston, Texas Northwest Amateur Radio Society

June 2020

Northwest Amateur Radio Society

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VE License Exam Info — Page 6

Lunch Break - North

Jun 24 Panera Bread
Jul 01 Jason's Deli
Jul 08 Macaroni Grill
Jul 15 Adriatic Grill
Jul 22 BJ's Brewhouse
Jul 29 Gianna's Restaurant
Aug 05 Spring Creek BBQ

Saturday Breakfast:
Saturdays at 7 am
Denny's 6504 FM 2920 @ TC Jester (west of Kuykendahl)

Lunch Break - Medical Center

Jun 24 Pappas Barbecue
Jul 01 Antonio's Mexican Grill
Jul 08 Pasha's Deli
Jul 15 Buffalo Grille
Jul 22 Vieng Thai Restaurant
Jul 29 Southwell's Hamburger Grill
Aug 05 Niko Niko's (BW-8 & I-10 West)

Suspended

Monday Lunch (was Taildraggers lunch):
Mondays at 11 am; Goodson's in Tomball

The following items have been changed for June:

1. **The June 19th general meeting will take place via ZOOM.**
2. **The June 27th VE session will be held. It will not be held at the usual location and with special Covid-19 restrictions in place.**
3. **Lunch Break Medical Center has been suspended until further notice. The North lunch break has resumed, but check on the reflector for the latest information.**

Next Gathering: Friday, June 19th

"Field Day planning".

- June 19th, 2020 at 7:00PM
- ZOOM.
- login: 2815436502 PC: 123456

NARS News is published monthly by the Northwest Amateur Radio Society (NARS). Northwest Amateur Radio Society is a Special Services Club affiliated with the American Radio Relay League, ARRL Club No. 2120. Please send all submissions to the newsletter editor before the end of the month prior to publication.

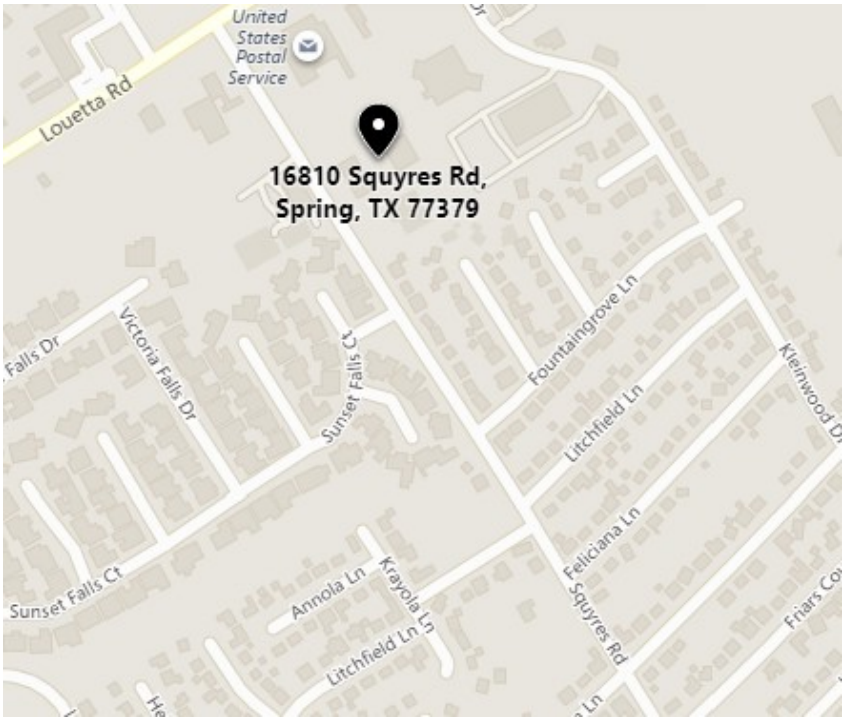
Meeting Location—When social gatherings are allowed.

We will meet at Klein Fire Department Administration, 16810 Squyres Rd., Klein, TX 77379. It is located behind Klein Fire Station 4.

Picture from http://kleinfiredept.com/services/stations/headquarters

The Board wishes to thank the Klein Fire Department for the generous offer allowing NARS use of their facility.

LOCATION MAP — 16810 Squyres Rd.



June 2020 message from NARS President

Well looks like business are starting to reopen. Most restaurants now can have up to 50% occupancy. That is good news, but it means that some still find confusing information with regards CDC restrictions and how they are to be followed. Given so much conflicting information, our club activities will continue to be modified. Here are current plans:

We will have a VE test session on Saturday June 27th at our normal club meeting location Klein FD Administration building. The Tomball Hospital location remains closed to outside groups until at least July and maybe later. I have already registered as of this writing eighteen applicants wanting to take a test and some additional five inquiries. We will keep to the published Health Distancing requirements for all events at KFD. Here is a summary of the May 23rd session:

We had 35 candidates taking 48 tests.

I would like to especially recognize the following persons who helped make this event one of the most successful in recent years.

Kirc N5XJB, Rich Jones W5VEK, Bob Ewers K9HOU, Art Grant KM4YGH, and Marty Fitzgerald W5MF

More details of the May 23rd session can be found later in the Newsletter and our website.

We have finalized our Field Day activity planned for June 27th. This year we will have a remote FD working from home QTH. Details of how FD will function are provided later in this Newsletter and on our web site.

We are hopeful that our UHF repeater can be installed and brought online later this month. It will be located not far from KFD and will have links to our other locations. Lots of work going on behind the scenes and updates will be posted in our website.

Difficult times require modifications to how we interact with each other and support various activities.

Topic for up-coming NARS General meeting – June 19th

We have a special presentation regarding Field Day planning for our upcoming Club General meeting. Friday June 19th at 7PM. We will discuss details and requirements to make this event successful. We will utilize ZOOM. An email will be resent prior to the meeting with further information.

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President's Corner—Continued from Page 3

Fun Facts:

Which is dangerous: 1 volt and 230 amps of current or 230 volts and 1 amp of current?

Which is dangerous: 1 volt and 230 amps of current or 230 volts and 1 amp of current?

230 amps of current would kill you instantly, **IF** you could get that much to flow through you, but you cannot with 1 volt. Your resistance is so high that 1 volt would only be able to push about 0.0001 amp of current through you, even if you are wet.

230 volts will not be able to push 1 amp through you, although it can push enough to kill you under the right circumstances.

So, 1 volt is not dangerous, and 230 volts is dangerous.

When something has a current rating, that current is only going to flow through a low resistance. Your body is a high resistance.

Ron Matusek WA6TQH

Opportunities to Serve

JUNE GATHERING

Our June gathering will be held on ZOOM this Friday June 19th at 7PM.

ZOOM

- login: 2815436502
- PC: 123456

Topic:

“Field Day”

MAY MEETING RECAP

The May gathering consisted of:

“Stealth Antennas” presented by Carl Foster KB7AZ

DMR Training

If you are interested in obtaining a copy of the Video of each Session please bring a USB stick (estimate 3GB per session) and we can make a copy available to you to download on your USB stick with a NARS donation of $6.00 per session. You can sign up at the meeting. Many have requested this as a helpful tool to refer back to when programming radio’s and other general information related to DMR. This video is NOT planned for wide public publication so take advantage of this opportunity.

VE Session Congratulations

Michael W. Schroeder - New Technician

Randy L. Brown - New Technician

Vasiliy Y. Astapov - New Technician

Thomas M. Register - New Technician

Joshua M. Philippus - New Technician

Yuriy Polyakov - New Technician

Jon R. Bose - New Technician

Kevin Bair - New Technician

Glenn A. Raney - New Technician

Luis Moya - New Technician

Pascal R. Fortin - New Technician

Jonathan R. McBride -New Technician

David L. Consford - New Technician

Stephen P. Salazar - New Technician

Claire L. Williams – New Technician

Andrew J. Gulde – New Technician

Jerry Paul – New Technician

Jerry B. Fowler - New General

Sergio Martinez Torres - New General

Daniel F. Merges - New General

David E. Wiggins - New General

David E. Miller - New General

Chris Bair - New General

Steve T. Newby KI5EYU - Upgrade to General

Michael W. Fowler KF5VLC - Upgrade to General

James T. Halbert Jr. - N5ANT - Upgrade to General

Donald L. Hunt - KD5DLH - Upgrade to General

Samuel L. Barnes KI5HKP - Upgrade to General

Terrell J. Jessen KI5IPP - Upgrade to Extra

Charles F. Abramson K9CFA - Upgrade to Extra

Michael C. Livingson KF5MVP - Upgrade to Extra

Mark J. Siman KB5SCD - Upgrade to Extra

Saturday, May 23rd (Klein Fire Department)

We had 35 candidates taking 48 tests

Element 2 tests given: 26; passed 24; Failed 2
Element 3 tests given: 15; passed 12; Failed 3
Element 4 tests given: 8; passed 4; Failed 4

Thanks to the VE's in attendance:

Martin Rogoff N5GPS; Stephen G. Protz KA5AUD; Cindy Grant KM4YGG; Keith Dutson NM5G; Sam Labarbera N6HB; Marvin J. Wilken KT4W; Robert Ewers K9HOU; Brian Derx N5BA

And to Ron Matusek WA6TQH , NARS ARRL VE Liaison.

Special points of interest:

- Next VE Session: June 27th, 2020; 8:15 at Klein Fire Department Administration Building behind Klein Fire Station 4 at 16810 Squyres Rd., Klein, TX 77379.

NARS WEBSITE: W5NC.NET

E-Mail Reflector: mailman.qth.net.

NARS now has a new address!

Please update your address list!

Northwest Amateur Radio Society
P.O. Box 11483 Spring, TX 77391

Oak Forest Amateur Radio Club • Houston, TX •

Houston Transtar Building

Conference Center West Entrance

6922 Katy Road

Houston, TX 77024

V.E. Exams every 4th Saturday of the month at 9:30 a.m.

Contact: Mark Landress, WB5ANN@arrl.net for further info.

Welcome, Congratulations, and Condolences

NARS Info

NARS name tag

Any member can request a badge and should contact Cindy, KM4YGG, & Art, KM4YGH.

Board Meetings

The board meetings will be at 6:00 on the same date and at the same location as the general membership meeting, except for January due to the NARS award banquet.

Weekly 2m Net

Wednesdays at 8 pm.
Monitor Reflector for Current Repeater.
Coordinator: Neal Naumann N5EN.

General Membership Meetings

3rd. Friday each month at 7:30 pm. — EXCEPT January Banquet
Located at Klein Fire Station Administration, 16810 Squyres Rd., Klein, TX 77379. Located behind Klein Fire Station 4.

Weekly DMR Net

Tuesdays at 7 pm.
Monitor Reflector for Current Repeater.
Coordinator: Sam Labarbera, N6HB
slabarb@outlook.com

NARS Resource List

Digital Modes (Including DMR)

Walter Holmes – K5WH
Marty Fitzgerald – W5MF
Ron Matusek – WA6TQH

NARS Officers & Other Contacts

President & Board Chairman

Ron Matusek WA6TQH
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Sam Labarbera N6HB
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Directors (term expires 12/31/2020)

Richard Nelson KF5WRD
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officers@w5nc.net

Mike Pate K5MAP
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officers@w5nc.net

Texas QSO Party

Co-coordinator: Chuck Sanders NO5W
832 657-4832
no5w.chuck@gmail.com

Administrative & General Info.

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officers@w5nc.net

Web site

URL: http//www.w5nc.net
Web Master: Bill Buoy N5BIA
281 370-3510 webmaster@w5nc.net

NARS E-Mail Reflector

NARS@mailman.qth.net
Coordinator: Keith Dutson NM5G
keith1@dutson.net

VE Session (ARRL) Manager

Ronald Matusek – WA6TQH
vec@w5nc.net

Texas QSO Party

Co-coordinator: Keith Dutson NM5G
281 516-1466
keith1@dutson.net

NARS has a social media presence

NARS has a social media presence! Thanks to Sam Labarbera, N6HB, we have a Facebook page for those who would like to follow us there. Visit the W5NC Facebook page and join! It is open to ham radio operators, so there is a short quiz to qualify new members.

We also have a Twitter feed. Follow us on https://twitter.com/nars_w5nc.

A Comment on Solar Minimum and the Media

Richard Nelson, KF5WRD

As I write this on Monday, May 18, 2020, my news feed produced a FoxNews article, "Evidence suggests sun entering 'solar minimum' stage: reports," by Edmund DeMarche. Perhaps you saw this story or something like it. In a nutshell, the article begins with

> *It's been 100 days since the last recorded sunspot, which one expert says is evidence that we are entering a phase called solar minimum*

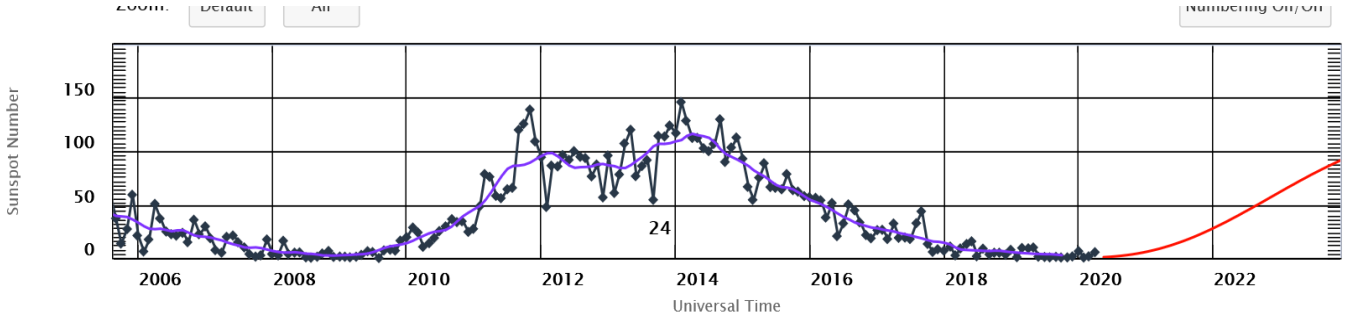
This statement is followed by troubled attempt to explain why this matters (using conflicting quotes including references to the "Little Ice Age" and climate change). Ignoring this article for now, let's discuss space weather, the solar minimum, and why it matters to amateur radio.

Solar Cycles

It turns out the sun alternates between quiet and active phases. It also happens that sunspots tend to be more common and larger during the active phases. The alternating pattern is called a solar cycle. A solar cycle begins at solar minimum with little solar activity and few sunspots on the Sun. At the peak of that cycle—called solar maximum—the Sun produces more particles and radiation. These cycles are irregular, typically lasting between nine and 14 years (about 11 years on average). It also happens that the Sun's magnetic field completely flips (the Sun's north and south poles switch places) during these cycles.

Right now, we're in the trough and scientist are trying to determine if (when) we hit the minimum. The articles are in the news because this minimum is lasting longer than the most recent cycles. The last cycle (24) had a weaker maximum and two peaks.

Figure 1 - Cycle 24 from https://www.swpc.noaa.gov/products/solar-cycle-progression



Taking long view, here are the cycles based on sunspot count:

Figure 2 - Solar Cycles, 1750-Present

What happens in a Minimum vs Maximum?

So as an amateur radio operator, why do you care about this?

The sun emits various forms of electromagnetic radiation (in varying proportions) such as light, heat, and a proportion in the extreme ultraviolet (EUV) and above. Basically, when the sun is in an active phase it emits more EUV, which more readily ionizes the upper atmosphere. Ionization (technically free electrons) is what allows radio signals (of certain frequencies) to skip and improves propagation.

So, the short version is the bands ted to be quiet in a minimum period such as now. And band conditions improve as solar activity increases

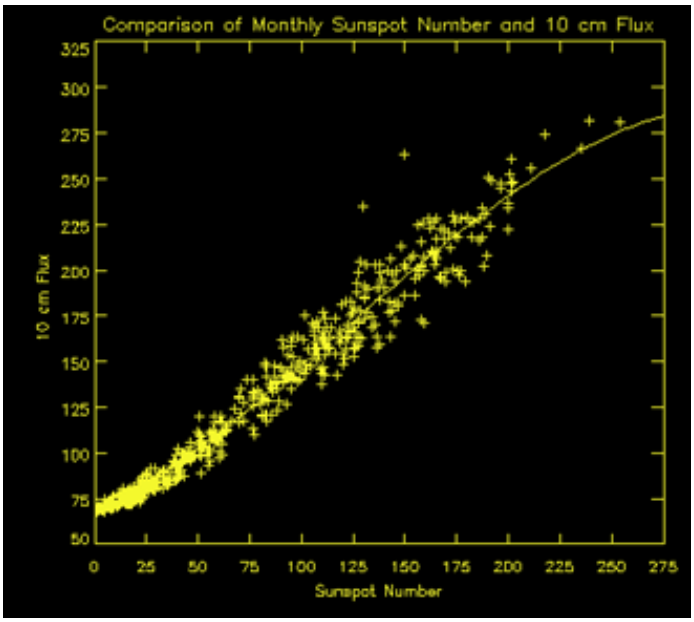
Sunspots

Prior to satellites, radio, and other technology the only way to gauge solar activity was by watching sunspots. Remember that magnetic activity changes with cycles? As the magnetic fields change, so does the amount of activity on the Sun's surface. One way to track the solar cycle is by counting the number of sunspots. This leads to a whole discussion about sunspot counts (see references) but essentially several observatories create a count which is averaged over time.

10.7cm Radio Flux

The sun emits radio waves across a broad band of frequencies, but those at 10.7 cm (2800 MHz) are important to space weather. Called the F10.7 index, this measurement correlates well with the sunspot number as well as a number of UltraViolet (UV) and visible solar irradiance records.

Figure 3 - Correlation Between Flux & Sunspot Count



Unlike some solar indices, the F10.7 radio flux can easily be measured reliably on a day-to-day basis from the Earth's surface, in all types of weather. Reported in "solar flux units", (s.f.u.), the F10.7 can vary from below 50 s.f.u., to above 300 s.f.u., over the course of a solar cycle. Typically the 10 cm flux is averaged over a month or a year although sometimes a 90 day average is made.

<u>When will this minimum end?</u>

Short answer, nobody knows for sure. We cannot tell for certain until it has passed. Confirmation of solar minima is delayed by how it is measured. The minimum is defined from the 12 month smoothed sunspot number. This means that six extra months of sunspot data are needed before the smoothed sunspot number can be calculated. For example, it took more than a year to ensure the minimum in May 1996 had taken place.

It also takes time to be sure to determine a trend (think COVID-19). We must confirm that the smoothed sunspot number is indeed rising and will not return to a lower value. This is a real problem when we experience an extended minimum.

Another factor can be the appearance of "new cycle" regions. These are regions that have magnetic characteristics of the new cycle rather than the old cycle. These can indicate the start of the new cycle, but also but can begin to occur over a year before minimum. We have some observations of Cycle 25 sunspots… so there's hope.

References

- Edmund DeMarche, “Evidence suggests sun entering solar minimum stage…” 5/18/2020 https://www.foxnews.com/science/evidence-suggests-sun-entering-solar-minimum-stage-reports
- Solar Cycles – https://spaceplace.nasa.gov/solar-cycles/en/
- Radio Flux – www.sws.bom.gov.au/Solar/3/4
- The Ten Centimetre Solar Radio Flux – http://www.sws.bom.gov.au/Educational/2/2/5
- Introduction to HF Radio Propagation – http://www.sws.bom.gov.au/Educational/5/2/2
- See also Radio Communication – http://www.sws.bom.gov.au/Educational/5/2
- Solar Activity and radio – http://kv5r.com/ham-radio/solar-activity/
- Sunspots/Solar Cycle – https://www.swpc.noaa.gov/phenomena/sunspotssolar-cycle
- Sunspot Numbers – https://www.ngdc.noaa.gov/stp/solar/ssn.html
- “There are two kinds of sunspots on the sun right now amid solar cycle change,” by Meghan Bartels, 5/4/20 at https://www.space.com/sun-weather-overlapping-solar-cycle-active-regions.html
- Why Is Solar Minimum So Hard To Pick? http://www.sws.bom.gov.au/Educational/2/3/10