

LINCOLN LOG 2017

May

Lincoln Amateur Radio Club



MAY MEETING

19:30, WEDNESDAY, MAY 10

NORTHERN LIGHTHOUSE CHURCH, 6131 NORTH 14TH STREET, LINCOLN, NEBRASKA

APRIL CLUB MEETING

THE AMATEUR RADIO EMERGENCY DATA NETWORK (AREDN™)

is a high-speed data network built with Amateur Radio operators and emergency communications Infrastructure in mind. By itself, AREDN is only a networking technology that provides the basis for services such as email, video, phone systems, computer-aided dispatching, and many others.

Adam Kavan, KDØMMG, and Mary Joseph, NØTRK, members of the Ak-Sar-Ben Amateur Radio Club, will give an overview of the AREDN system and demo some of the services that can be provided.

—Mary Joseph, NØTRK

COMING EVENTS

MAY

M	05/01	19:00	LOG Folding	Red Cross	220 Oakcreek Dr
Th	05/04	18:30	VE Exams	Northside Café	2701 N 48th St
F	05/06		Spring Fling Bicycle Ride		Eagle/Louisville
Sa	05/07		Lincoln Marathon		Lincoln
W	05/10	12:00	QCWA Luncheon	Slim Chickens	5805 S 85th St
W	05/10	19:30	LARC Meeting	Northern Lighthouse Church	6131 N 14th St
Sa	05/13	11:00	HPQRP Homebrewers	Bredeaux Pizza	1425 Silver St, Ashland
W	05/17	19:00	LARC Board Meeting	Red Cross	220 Oakcreek Dr
Th	05/18	19:30	SATERN Meeting	Salvation Army	2625 Potter St
Tu	05/25	23:59	LOG Deadline	Email articles & ads to	log@k0kkv.org
Su	05/28		Memorial Lincoln Duathlon		Lincoln
M	05/30	19:00	LOG Folding	Red Cross	220 Oakcreek Dr

June

Th	06/01	18:30	VE Exams	Northside Café	2701 N 48th St
Sa	06/10	11:00	HPQRP Homebrewers	Bredeaux Pizza	1425 Silver St, Ashland
W	06/14	12:00	QCWA Luncheon	Slim Chickens	5805 S 85th St
W	06/14	19:30	LARC Meeting	Northern Lighthouse Church	6131 N 14th St
Tu	06/20	23:59	LOG Deadline	Email articles & ads to	log@k0kkv.org
W	06/21	19:00	LARC Board Meeting	Red Cross	220 Oakcreek Dr
Th	06/22	19:30	SATERN Meeting	Salvation Army	2625 Potter St
Su	06/25		Trail Trek		Lincoln
M	06/26	19:00	LOG Folding	Red Cross	220 Oakcreek Dr

Lincoln Amateur Radio Club, Inc.

PO Box 5006

Lincoln, NE 68505

Club Repeater KØKKV 146.760 (-)
Packet APRS KØKKV 144.390
DX Packet Cluster telnet://cluster.k0gnd.net

LARC Web Site <http://k0kkv.org>
Facebook www.facebook.com/LARCLincoln

2017 BOARD OF DIRECTORS

President	Ed Holloway	KØRPT	402/326-1139	k0rpt@arrl.net
Vice President	Bryan Leavitt	WØBCL	402/310-1686	w0bcl@arrl.net
Secretary	Dale Douglas	KDØWVD	402/629-4543	kd0wvd@gmail.com
Treasurer	Marlene McLaughlin	KDØHYM		kd0hym@gmail.com
	Greg Brown	KTØK	402/937-3540	gwbrownx@inebraska.com
	Mike Arter	W9LG	402/770-6460	w9lg@yahoo.com
	Mike Lauver	KØLVR	402/580-4602	mlauver@neb.rr.com
	Mike Long	KØSHC	402/770-2427	k0shc13@yahoo.com
Executive Director and Club Station Trustee	Reynolds Davis	KØGND	402/488-3706	reynoldsd1@aol.com

2017 COMMITTEE CHAIRS

COMMITTEE	LIAISON	CHAIR/CO-CHAIR
Activities	KDØHYM	Bruce Wood, WAØRIM
Bylaws	KØRPT	Jeff Bennett, WØWKP
Christmas Party	KØRPT	Heather Chesnut, KDØBXA
Club Awards	KØRPT	Heather Chesnut, KDØBXA
Club Station	KØLVR	Bruce Steyer, KBØKA
Convention 3/11/2017	KDØHYM	Marlene McLaughlin, KDØHYM
Education	WØBCL	Aaron Rogge, NØADR Richard Mulder, ACØLN
Emergency Cord. ARRL	KØRPT	Ed Holloway, KØRPT
Estate Assistance	KTØK	Gordon Trout, WØKBS
Facebook	KDØWVD	Dale Douglas, KDØWVD
Field Day	KDØWVD	John Mardock, KRØP Mike Walsh, KBØQH Larry Frisch, KDØRTK
LOG Editor	KDØWVD	Aaron Rogge, NØADR Jeri Lyn Rogge NØJLR
Merchandise	W9LG	
Nets	WØBCL	Connie Zehr, NØGMA
Public Relations	KØRPT	Bob Mitchell, WBØRJJ
Public Service	KØSHC	Mike Long, KØSHC
QSL Cards	KTØK	Greg Brown, KTØK
Repeater	KØRPT	Ed Holloway, KØRPT
Transmitter Hunts	KØLVR	
Web Site	KØRPT	Aaron Rogge, NØADR
Equipment Inventory	W9LG	Larry Frisch, KDØRTK



PRESIDENT'S COLUMN



It was a great turnout for the Storm Spotter Training on April 1. Many thanks to Dr. Ken Dewey for putting the event together and making it happen! The venue was very nice with a lot of space, parking, and exhibits, and the Hy-Vee catering was a real treat. Thank you to all who came. In all, 136 licensed amateurs attended, including two who were on pending status. Since that time, Lance, KEØMWV, took advantage of the LARC VE session and passed both his Tech and General. Congrats, Lance!

Also of note from the event: 63 spotter exams were administered, four by hand at the symposium and 59 online at www.neares.net. We got 20 new ARES membership sign ups and look forward to many more. For those of you who missed the training, I am building an online training module that will allow for you to take the exams and complete the training in the comfort of your home. This should not be considered as a substitute to attending the annual training. We still want to see your smiles every year.

Thanks to Jim Davidsaver, Lancaster County Emergency Management Director, for a great program at the April club meeting. In all, 72 folks attended the meeting, with five new members in attendance. At the last LARC Board meeting, the Board approved the use of membership cards and you will soon see them at the treasurer's table.

Public service is moving very rapidly into its busy season. If you have not signed up, get with Mike, KØSHC, soon as Mike has some repeater usage data that he needs to share with you. Field Day is approaching and the committee has been hard at work.

I apologize for slacking with respect to the Supporting Business Membership. I've been fairly busy with ARES duties and now that things have slowed a bit, I can resume my work on finding more businesses to join this special membership group. Thank you to Randy, KØKRC, owner of North Creek Car Wash, for his support and being the first Supporting Business Member. Please return the support by making a visit and washing your ride with Randy!

You will hear some new net control operators on 146.76 soon. Please check in and stick around for comments. Let us know what the weather is like at your home or how the grass is greening, or in my case, yellowing.

The May club meeting will be at the Northern Lighthouse Church, located at 6131 N. 14th St. Aaron, NØADR, has posted a map to the church. The facility has round tables with chairs and rows of seating that are cushioned. We have all the technological amenities and even coffee. The property also includes handicap-accessible parking and a large parking lot. There is a room that can be used for special meetings as well. See you there!

—Ed Holloway, KØRPT

SILENT KEY

GARY JENSEN, KDØLBT/SK



Gary Jensen, age 72, died April 21, 2017. Gary was born on July 5, 1944, in Lincoln, Nebraska. He retired from Burlington Northern Railroad as a machinist after 41 years of service. Gary served in the Army National Guard. In 1991, Gary became an active member of the Coast Guard Auxiliary [sic], where he held positions of teaching and responsibilities such as Flotilla Commander and Division Vice-Captain.

— Butherus Maser & Love Funeral Home

2017 ANNUAL FLEA MARKET

CQ, CQ, CQ, all Hams wanting to clear out some old equipment they no longer want. The annual Ham Radio Flea-Market, held at Reynolds Davis', KØGND, driveway is Saturday, June 17, 8:30 to 12:00.

Bring your table and Ham equipment, and you may come away with some cash! If you don't have equipment to sell but are looking for a bargain, come on over. You may find just what you're looking for! And if you're just curious, we love to have company. Bring a friend or as many friends as you want. They may be looking for something.

Please bring Ham equipment only for this flea market. We hope to see many Ham folks. You may walk away with a bargain or some cash—or both!

—Mike Long, KØSHC

LARC PROGRAMS

MAY – AK-SAR-BEN RADIO CLUB
"HAM RADIO OVER WiFi"

JUNE – JOE EISENBERG, KØNEB

AUGUST – ED HOLLOWAY, KØRPT
"HISTORY OF LARC"

SEPTEMBER – GLENN JOHNSTON, WØGJ

SIREN TEST

APRIL 5, 2017

The following Hams helped out with the April siren test: W3ALX, WØBCL, KEØBHQ, KDØBXA, KDØDIU, KAØDZT, NØEJS, NØFYE, KEØJBT, KEØJVS, KTØK, KBØKA, KØKPH, W9LG, KDØRIY, WBØRJJ, KØRPT, KDØWVD, and KBØZNM.

Thank you everyone!

—Ron Mayhew, KEØBHQ

SKYWARN #1

APRIL 19, 2017

Spotter season has begun! Thank you to WØBCL, KDØDIU, NØDIZ, WØDMS, KDØDUU, KEØEQY, KYØK, KØKPH, K3MED, KØNC, KDØONN, KDØONQ, NØOSB, KDØPTF, KBØQCZ, KBØQEY, N3RDW, NØRHL, KDØRJD, KDØRWT, KBØRZP, KØSIL, KDØVSD, KBØWZG, KDØYFJ, and KDØZNM for helping out.

—Ed Holloway, KØRPT

PUBLIC SERVICE

The month of May has arrived and public service is a GO! To start off the month, we have two events! The first one the Spring Fling Bicycle Ride. The folks with the Great Plains Bicycle Club are grateful for your help to make their event a safe and fun.

The next event, the day after the Spring Fling Bicycle Ride, is the Lincoln Marathon. I am very thankful to Michael Ruhrdanz, NØFER, who has helped set up the net radio system so that there is complete coverage throughout the course. The Lincoln Track Club, Nebraska National Guard, the City of Lincoln, Lincoln Police Department, Lincoln Fire and Rescue, and the UNL police department extend their gratitude to everyone who helps make this BIG EVENT fun and safe for all who participate! We need more Hams to help with this event. Even if you realize last-minute you have free time on Sunday, May 7, call into the repeater. We may have an assignment for you!

One more event this month is the Memorial Lincoln Dualthon at Pioneers Park, Sunday, May 28.

Next month is Trail Trek on Sunday, June 25. It is a family bike ride throughout the Lincoln Trail System. This is a fun event! Please consider helping out. I will have sign up sheets and will get started with Cornhusker State Games sign ups.

See you at the club meeting.

—Mike Long, KØSHC
Public Service Chair

CLUB MEETING LOCATION

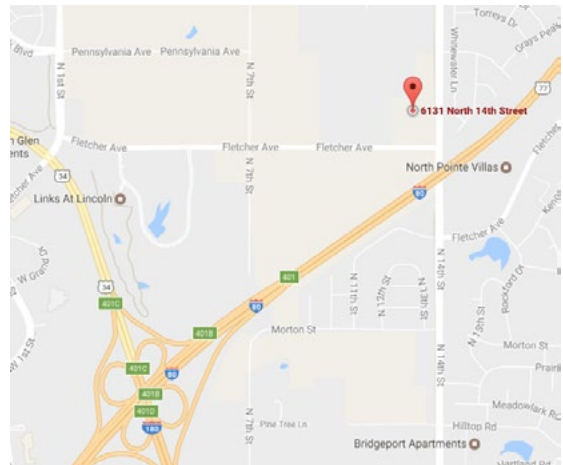
MEETING LOCATION THROUGH AUGUST

Northern Lighthouse Church
6131 N 14th St
Lincoln, NE 68521

GOOGLE MAPS

<https://goo.gl/maps/J6jkhqhNq>

There is plenty of parking and the building is handicap-accessible.



—Ed Holloway, KØRPT

APRIL LOG ASSEMBLY CREW

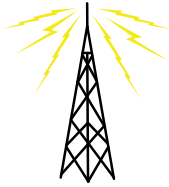


Each month a great crew prepares the LOG for mailing to approximately 800 addresses. Thank you to NØADR, WØBCL, KCØDHM, KDØDIU, NØJLR, KØJSL, KØLVR, KBØQH, KDØRIY, KDØRTK, KØRPT, NØVMT, KDØVSD, Kathryn Boldt, and Emmett Boldt for your help prepping the April 2017 LOG!

—Aaron Rogge, NØADR

LINCOLN REPEATER CLUB

146.850 — KØLNE/R



2017 is going to be a great year to become a Lincoln Repeater Club member and to participate in the LRC Raffle. We are going to raffle off two radios this year. One will be a new BaoFeng UV-5R dual band handheld two-way radio (black), and the other will be a new VHF mobile radio. Raffle tickets are \$2.00 each or three for \$5.00. The drawing will be held this fall. Good luck!

Please consider becoming a member of the Lincoln Repeater Club and being a part of the 146.850 MHz (-) community repeater operations in the area. See Chris, KCØAOP, at one of the rear tables during the LARC Wednesday night meeting at Northern Lighthouse Church. Membership cost is only \$10.00/year.

We encourage you to use our repeater as much as you like. As always, it is an open repeater. If your part of the hobby would like to hold nets on the repeater, please contact Lonnie, WDØAOP (wd0aop@arrl.net), and we will get your net reserved, advertised, and on the air.

Lincoln Repeater Club
C/O WØCHV
6705 W Mill Rd
Raymond, NE 68428-4308

Thank you for your support. 73

—Lonnie Rech, WDØAOP

REVIEW TIME

Which of the following meets the FCC definition of harmful interference?

- A. Radio transmissions that annoy users of a repeater
- B. Unwanted radio transmissions that cause costly harm to radio station apparatus
- C. That which seriously degrades, obstructs, or repeatedly interrupts a radio communication service operating in accordance with the Radio Regulations
- D. Static from lightning storms

Answer on page 11.

RADIO SPORT

JUNE

- ♦ 10-12 June VHF
- ♦ 18 Kids Day
- ♦ 24-25 Field Day

JULY

- ♦ 8-9 IARU HF World Championship

AUGUST

- ♦ 5-6 222 MHz & Up Distance Contest
- ♦ 19-20 10 GHz & Up – Round 1
- ♦ 20 Rookie Roundup – RTTY

—ARRL Contest Calendar

RADIO HUMOR

I love the smell of ozone in the morning...
smells like...victory.

—AC6V



ARRL VEC

This month we had only our regular exam session at the Northside Café on Thursday, April 6. We had three candidates, of which two passed for a new license.

TECHNICIAN

- ♦ Sebastian Botero, KEØMWW, Lincoln

GENERAL

- ♦ Lance Ferguson, KEØMWV, Raymond

Volunteer Examiners (VE's) who participated this month are ACØLD, KØKTZ, KØSIL, KCØDHM, KCØPJR, NØJWS, NØLNK, and WØBCL.



Upcoming exams are June 1, July 6, and August 3 at the Northside Café. There will also be an exam May 23 at Krueger Hall (Union College) at the end of the Technician class. For testing details, please visit <http://k0kkv.org>.

—Chris Evens, KCØPJR



Advertise Here!

Email log@k0kkv.org to learn more

ANTENNA ROMANCE

Two antennas met on a roof, fell in love and got married.

The ceremony wasn't much, but the reception was excellent.

Since they were a perfect match, soon they generated harmonics and wrapped the harmonics in dipoles.

Later the harmonics turned out to be parasitic elements.

The true story – she was a tri-bander and he felt trapped, so they went on separate beam headings.

—Source unknown
AC6V.com

USED EYEGLASSES NEEDED



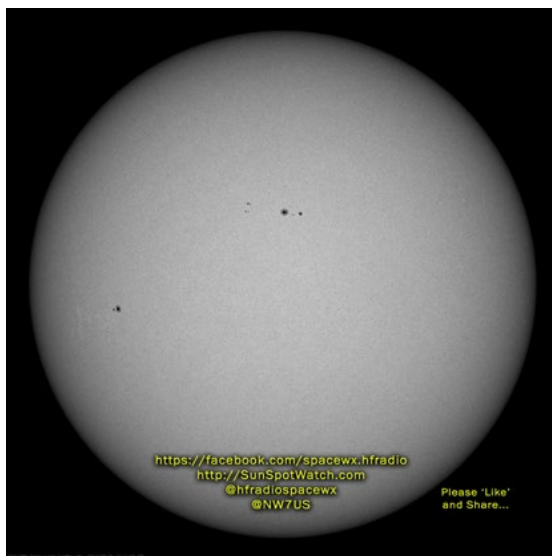
The Lions Clubs International of Lincoln will have a used glasses collection box at the May 10 club meeting. Donated glasses are cleaned, graded, and provided to Doctors Without Borders (<https://donate.doctorswithoutborders.org>) and other distribution organizations to be given to people in the Third World, with some distribution in North America.

Please bring any broken or used glasses to the next meeting for donation to the Lions Clubs.

—Dale & Kay Softley, KDØPTE / KDØTPP

ON THE BANDS WITH NW7US

It is spring, and as we move closer to summer, DX signals on the higher bands become weaker and openings sparse, especially now that Solar Cycle 24 is nearing its end. Long-distance F-layer propagation via 10 meters through 15 meters will not be commonplace due to the low solar activity, as well as the "summer doldrums" caused by the chemical changes in the upper atmosphere. The lower Maximum Usable Frequencies (MUFs) average decrease during the summer in the Northern Hemisphere, but also suffer from a barely active Sun. Optimum frequencies for DX propagation are lower during most of the daylight hours and higher during the late



Caption: Fig. 1. Since 2015, sunspot activity has slowly decreased each month. This image captures sunspots seen on the Sun on April 24, 2017, at 16:30 UTC as captured by the Solar Dynamics Observatory's Helioseismic and Magnetic Imager (SDO/HMI). This is the second rotation of the larger sunspot region, having already rotated around 27 days prior. After many days with zero sunspots, any sunspot activity is welcome!

Credit: SDO/HMI

afternoon, early evening, and nighttime hours than were observed during the winter months.

Not all is lost on the higher bands, though. During May, occasional Sporadic-E propagation pops up on the highest HF bands and even on 6 meters. While seasonal static is increasing during May on lower frequencies, Sporadic-E brings some excitement to the on-air chase for signals.

The following is an overall picture of high frequency amateur band openings expected during May 2017. For day-to-day propagation conditions expected during the month, see the Last-Minute Forecast which appears on SunSpotWatch.com.

10 AND 12 METERS: Except for an occasional daytime opening to some southern or tropical areas, not many DX openings are forecasted for these bands during May. The afternoon hours are the best time to check for DX openings. Frequent short-skip openings between distances of approximately 750 and 1400 miles, however, should be possible.

15 METERS: A seasonal decrease in DX openings is normal for May. Some fairly-good openings still are possible toward the south during the late afternoon and evening. Numerous short-skip openings, between about 600 and 2300 miles, should be possible almost daily.

17 AND 20 METERS: These should be the best bands for DX during May. Opening shortly after sunrise, good DX conditions are

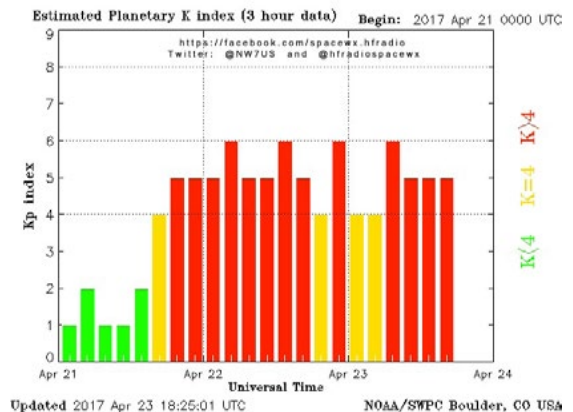
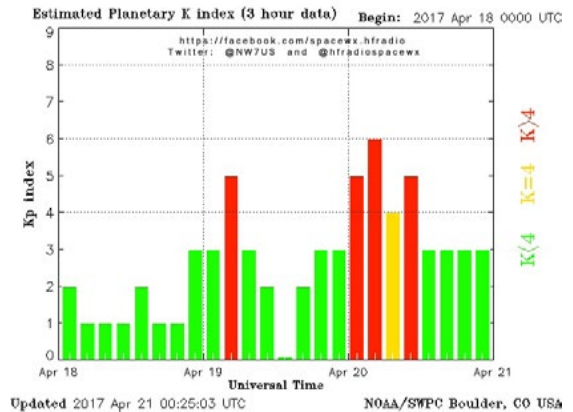
expected to one area or another through the evening hours. These bands may also remain open to southern and tropical areas through much of the nighttime hours as well. DX conditions should peak during the late afternoon and early evening, with openings possible to almost all areas of the world. Very frequent short-skip openings are also forecast for distances between about 350 and 2300 miles. Quite often, especially during the late afternoon, optimum conditions may exist for both the short and long skip, and stations a few hundred miles away will be heard at the same time as DX stations from several thousand miles away, causing considerable QRM.

30 METERS: This band will often play a major role in DX propagation, with somewhat better daytime propagation than 40, and solid nighttime propagation into some areas of the world. Exotic DX can be found here on CW and other digital modes. Check this band often throughout the day.

40 METERS: Fewer DX openings are expected because of the shorter hours of darkness and the higher level of static. Good openings should still be possible, however, to several areas of the world from shortly before sunset through the hours of darkness until shortly after sunrise. Good daytime short-skip openings can be expected over distances of between approximately 150 and 750 miles, with nighttime openings extending up to the one-hop limit of 2300 miles.

60, 75, AND 80 METERS: Fewer hours of darkness and higher static levels are also

expected to reduce DX openings on these bands, but a few fairly-good openings should be possible. Check during the hours of darkness. Excellent short-skip openings are forecast for the daylight hours over



Caption: Fig. 2. The coronal hole that rotated into geo-effective position during April, 2017, along with a blast of plasma from coronal mass ejection related to a minor solar flare, caused a few days during which the propagation of radio waves in the HF spectrum was greatly affected. The MUF over most paths was lowered by as much as 28% of typical MUFs for the week. The graph insert shows the K-index in red for the few three-hour periods when the solar wind was high, and the geomagnetic field was experiencing storm-level activity. This Sun-Earth connection exists even when there are no sunspots, because coronal holes occur during any part of a solar cycle. We expect some degradation of propagation by the second day of Field Day 2017.

Credit: NASA/SDO/SWPC

distances ranging between 50 and 250 miles. During the hours of darkness, the short-skip range should increase up to approximately 2300 miles.

160-METER BAND: Propagation conditions on this band have passed their seasonal peak, and should decline until the early Autumn. Openings up to a thousand miles or so should be possible this month during the hours of darkness. An occasional opening well beyond this range may also be possible when static levels are exceptionally low.

VHF CONDITIONS: May should see an increase in Sporadic-E, especially at the end of the month. At the same time, solar activity is not expected to be high enough to support long-range DX on the 6-Meter Band.

With Sporadic-E ionization expected to increase, look for short-skip openings, likely to occur over distances of approximately 1000 to 1400 miles. Although Sporadic-E openings can take place at just about any time, the best time to check is between 10:00 and 14:00 and again between 18:00 and 22:00 local time.

During periods of intense and widespread Sporadic-E ionization, two-hop openings considerably beyond 1400 miles should be possible on 6 Meters. Short-skip openings between about 1200 and 1400 miles may also be possible on 2 Meters.

Auroral activity is generally lower than March and April, due to the change in the orientation and position of the earth and magnetosphere in relation to the solar

wind. This year, very little aurora can be expected during May. Even so, watch for Kp values above 6, which occur on days of below normal and disturbed HF conditions (refer to the Last-Minute Forecast mentioned, above, for those days in May that are expected to be in these categories). Point your antenna toward the North when this condition exists. You will find that CW is the modulation and mode of choice, as the signals you will hear on aurora will be raspy and very distorted.

THE NUMBERS, PLEASE

The Royal Observatory of Belgium, the world's official keeper of sunspot records, reports a monthly mean sunspot number of 10.6 for March 2017, five points below 15.7 for February. The mean value for March results in a 12-month running smoothed sunspot number of 19.9, centered on September 2016. Following the curve of the 13-month running smoothed values, a smoothed sunspot level of 22 is expected for May 2017, plus or minus 14 points.

Canada's Dominion Radio Astrophysical Observatory at Penticton, British Columbia reports a 10.7-cm observed monthly mean solar flux of 74.6 for March 2017. The twelve-month smoothed 10.7-cm flux centered on September 2016 is 83.7. A smoothed 10.7-cm solar flux of about 82 is predicted for May 2017.

The geomagnetic activity as measured by the Planetary-A index (Ap) for March 2017 is 15, showing a significant uptick in geomagnetic activity since February. The twelve-month smoothed Ap index centered on September 2016 is 11.3. Geomagnetic activity this month should pick up a bit

over the level seen in April 2017. Refer to the Last-Minute Forecast for the outlook on what days we might witness degraded propagation (remember that you can get an up-to-the-day Last-Minute Forecast at SunSpotWatch.com).

ABOUT NW7US

I have been interested in the Sun and radio wave propagation since I was nine years of age. I discovered the world of shortwave radio and HF on a portable Sony four-band portable radio. When I came across the radio station WWV, I became fascinated with the atomic clock, and with solar and geomagnetic information. At the same time, I began to hear stations from around the world, coming out of thin air and through the radio's speaker. I was hooked!

For many years, I read all that I could obtain regarding the science of the Sun and propagation. At the end of high school, I was playing with creating computer programs to perform simple propagation prediction. By 1990, I became an Amateur Radio operator and began to experience propagation modes first-hand. The excitement of hearing my CQ call answered from the other side of the world because of the complex interaction of the ionosphere, the geomagnetic field, and radio waves continues to fascinate me.

When the internet became a public phenomenon (think 1990s), I decided to create a website (SunSpotWatch.com) where I could share all that I have learned. The internet has allowed me to discover a great amount of new information about the science from websites provided by NOAA and others. I have a comprehensive

and concise collection of links, datum, and resources.

Please check out my educational tweets on Twitter.com; you can follow [@hfradiospacewx](https://twitter.com/hfradiospacewx) ([Twitter.com/hfradiospacewx](https://twitter.com/hfradiospacewx)) for hourly updates that include the K index numbers, as well as [@NW7US](https://twitter.com/nw7us) ([Twitter.com/nw7us](https://twitter.com/nw7us)) which will provide a daily dose of educational tidbits about the Sun and propagation. You can also check SunSpotWatch.com for the latest numbers.

Your thoughts, questions, and experiences regarding this fascinating science of propagation are welcome. Email or write a letter; if you are on Facebook, check out www.facebook.com/spacewx.hfradio and www.facebook.com/NW7US.

Happy DX!

—Thomas Hood, NW7US

REVIEW TIME

Answer: C. That which seriously degrades, obstructs, or repeatedly interrupts a radio communication service operating in accordance with the Radio Regulations.

FCC Part 97.3(a)(23)

—Aaron Rogge, NØADR

BEST CHOICE UPC LABELS



Please bring UPC labels from Best Choice products purchased at Russ's or Super Saver to club meetings.

ESTATE SALE

FROM THE ESTATE OF ROGER WAY, KCØFLA

Item	Category	Brand	Model	Asking
101	HF Radio	Yaesu	FT-990	\$600
102	Power Supplies	FDK	M0031	\$40
103	Accessories	Heath	SB-600 w/HP 23 PS	\$20
104	HF Radios	WRL	SB-100HF	\$50
105	Microphones	WRL	SB-44	\$20
106	Accessories	Koss	Pro/4AA	\$25

Contact Reynolds Davis, KØGND, (402-488-3706) or Gordon Trout, WØKBS, (402-484-7656) for more information.

2017 PUBLIC SERVICE CALENDAR

Month	Date	Event	Location
May	6	Spring Fling Bicycle Ride	Eagle/Louisville
	7	Lincoln Marathon	Lincoln
	28	Memorial Lincoln Duathlon	Lincoln
June	25	Trail Trek	Lincoln
July	21 – 23		
	29 & 30	Cornhusker State Games	Lincoln/Lancaster County
August	3 – 12	Lancaster County Fair	Lincoln
	26	Mud Run	Lincoln
	27	Heat Stroke 100 Bicycle Ride	SAC Museum
September	9	MS Bike Ride	Lancaster County
	17	Last Blast Y-Tri Triathlon	Branched Oak Lake
	30	Market to Market Relay	Cass Cnty/Lancaster Cnty
October	21	Oregon Trail Run	Hebron
	29	Good Life Halfsy	Lincoln



All dates are confirmed, so feel free to mark your calendar. Sign up sheets will be available at upcoming club meetings.

—Mike Long, KØSHC
Public Service Chair

ISS COMMANDER PEGGY WHITSON, EX-KC5ZTD SETS NEW US RECORD FOR TIME IN SPACE

Current International Space Station (ISS) Commander Peggy Whitson, ex-KC5ZTD, this week broke the record for cumulative time spent in space by a US astronaut. President Donald Trump — with daughter Ivanka Trump and astronaut Kate Rubins, KG5FYJ, joining him in the Oval Office — called Whitson on April 24 to congratulate her on her accomplishment. With Whitson for the call on board the ISS was astronaut Jack Fischer, KG5FYH, who arrived on April 20 for his first mission aboard ISS.

"Peggy is a phenomenal role model for young women, and all Americans, who are exploring or participating in STEM education programs and careers," President Trump said. "When I signed the INSPIRE Women Act in February, I did so to ensure more women have access to STEM education and careers, and to ensure America continues to benefit from the contributions of trailblazers like Peggy."

Whitson tweeted back, "Thank you, Mr. President, for the great opportunity to highlight the research we are doing up here aboard the space station and beyond!"

Last November, Whitson, 57, launched to the ISS on her current mission, with 377 days in space already under her belt, and broke the 534 cumulative-day record in space held by Jeff Williams, KD5TVQ. Whitson became the first woman to command the space station in 2008, and on April 9, she became the first woman to command it twice. She also holds the record for most spacewalks

by a female astronaut.

"This is an inspirational record Peggy is setting today, and she

would be the first to tell you this is a record that's absolutely made to be broken as we advance our knowledge and existence as both Americans and humans," said NASA acting Administrator Robert Lightfoot.

This is Whitson's third long-duration stay on board the space station, and her mission was recently extended for another three months. Instead of returning to Earth in June as originally planned, Whitson will remain on the ISS until September, returning home with Fischer and Russian cosmonaut Fyodor Yurchikhin, RN3FI.

In addition to scientific research that cannot be conducted on Earth, Whitson and Fischer are scheduled to take part in the fifth spacewalk of the year on May 12, to conduct maintenance. Whitson first served aboard the ISS in 2002 as part of the Expedition 5 crew, was the Expedition 16 Commander some five years later, and has conducted numerous Amateur Radio on the International Space Station (ARISS) contacts with students on Earth. Whitson has since let her Amateur Radio license lapse. —

Thanks to NASA.



—ARRL

04/25/2017

<https://goo.gl/PfNkT4>

FCC PERSONAL RADIO SERVICE REVISIONS WILL AFFECT GMRS, FRS, CB, OTHER PART 95 DEVICES

In a lengthy *Report and Order* (R&O) in a proceeding (WT Docket No. 10-119) dating back seven years, the FCC has announced rule changes affecting the General Mobile Radio Service (GMRS), the Family Radio Service (FRS), the Citizens Band Radio Service (CBRS or "CB"), as well as other applications that fall under the FCC's Part 95 Personal Radio Services (PRS) rules and regulations. Part 95 devices typically are low-power units that communicate over shared spectrum and, with some exceptions, do not require an individual user license from the FCC. As the R&O explains, common examples of PRS devices include "walkie-talkies;" radio-control cars, boats, and planes; hearing assistance devices; CB radios; medical implant devices; and Personal Locator Beacons.

"This draft *Report and Order* completes a thorough review of the PRS rules in order to modernize them, remove outdated requirements, and reorganize them to make it easier to find information," the FCC said in a summary attached to the R&O. "As a result of this effort, the rules will become consistent, clear, and concise."



GMRS and FRS devices are used for personal communication over several miles; compact FRS handhelds, often sold in pairs, are widely available. While GMRS and FRS share spectrum, GMRS provides for greater communications range and requires an FCC license; FRS does not.

"The rules will increase the number of communications channels for both GMRS and FRS, expand digital capabilities to GMRS (currently allowed for FRS), and increase the power/range for certain FRS channels to meet consumer demands for longer range communications (while maintaining higher power capabilities for licensed GMRS)," the FCC explained.

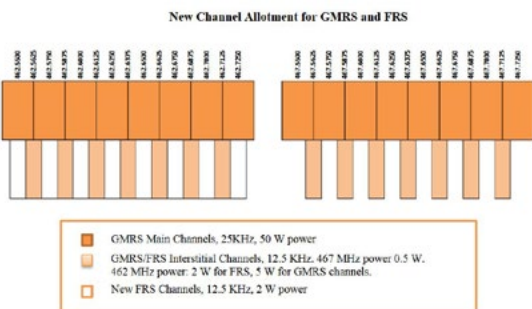
The amended rules eventually will eliminate combination FRS/GMRS radios for the most part, but allow up to 2 W PEP output for FRS transceivers. "[M]any current users of GMRS/FRS combination radios do not obtain licenses to operate over the GMRS frequencies in those radios," the FCC said. "Much of this problem likely arises as a result of the mass consumer marketing of combination devices for sale to the public in large quantities to users who do not know about or do not understand the licensing requirements attached to such radios and obligations associated with operating in the GMRS."

The FCC said it no longer will certify FRS devices that incorporate GMRS capabilities or capabilities of other services. Existing GMRS/FRS combination radios that operate at power levels of less than 2 W ERP will be reclassified as FRS devices; existing GMRS/FRS radios that operate above that power level will be reclassified as GMRS devices, requiring an individual license. Radios that can transmit on GMRS repeater input channels will continue to be

licensed individually and not by rule.

"We believe the 2 W limit for FRS is appropriate, because many of the existing combination GMRS/FRS radios already operate under that level with no significant complaints about interference or other problems, and it provides a reasonable balance between the desire for increased range over the prior FRS power levels and battery life," the FCC said.

The FCC said changes to the decades-old Citizens Band (CB) rules will remove outdated requirements, including certain labeling requirements. DXing on Citizens Band will become legal too. Once the new



rules are effective, CBers will be allowed to contact stations outside of the FCC-imposed — but widely disregarded — 155.3-mile distance limit. The revised CB rules further clarify how hands-free devices can be used with CB radios and will allow the use of wireless microphones with CB radios. "We find the record persuasive regarding the consumer demand for this feature, and it will promote safety on the highways by reducing driver distraction for those using CB [radios]," the FCC said. The FCC left in place the current power limits for the CB Radio Service.

The rule changes will phase out the use of voice-scrambling or "obscuring" features in all Part 95 devices, and it will ultimately prohibit manufacture, importation, or sale of any devices incorporating such features, "regardless of whether the Commission has previously certified that radio."



Overall, the FCC said, its action "achieves a thorough review of Part 95 rules and creates a new rule structure where common administrative rules are consolidated to reduce duplication, and individual subparts are structured with a common numbering scheme." The FCC said the changes remove "outdated and unnecessary rules, while clarifying others."

Most of the new Part 95 rules will become effective 30 days after their publication in *The Federal Register*.

—ARRL

04/28/2017

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The Lincoln Amateur Radio Club, Inc., (LARC) is a nonprofit organization devoted to the promotion of Amateur Radio. The club sponsors activities and programs to promote growth in Amateur Radio, as well as furthering the experience of those already licensed, and to create international good will.

The *Lincoln LOG* is mailed monthly to all paid members of LARC and to all Lancaster County, Nebraska, Hams.

If your label says, "COMPLIMENTARY," please consider joining the club and supporting its activities. Even if you are not currently active, your contribution will help to ensure the future of Amateur Radio. Annual dues are only \$20. For your convenience, please join by completing and mailing in the form below or visit <http://k0kkv.org> and use PayPal.

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