

Ham Hum

July Volume MMXVIII, Issue 7

What Does the Solar Flux Index Mean?

The SFI number is the number of solar flares; Solar flux is measured in solar flux units (SFUs). It is the amount of radio noise or flux emitted at a frequency of 2800 MHz (10.7 cm, hence is it also called the 10.7 cm flux index).

A and K INDEX

When talking about the solar cycle the numbers are based on 'smoothed' numbers, this means the monthly average rather than the figures for each day. Using 'smoothed' numbers gives more accurate results, daily solar activity varies dramatically, making accurate results difficult. A and K INDEX are measurements of the magnetic field activity that are used in predictions.

The **K index** is a reading of the magnetic activity as compared to a 'quiet' day made from various locations. This index in the range 0-9. The K index is the average of of these readings.

K = 0 Inactive

K = 1 Very quiet

K = 2 Quiet

K = 3 Unsettled

K = 4 Active

K = 5 Minor storm

K = 6 Major storm

K = 7 Severe storm

K = 8 Very severe storm

K = 9 Extremely severe storm

The **A index** relates to geomagnetic stability and is calculated from K indices for the previous day.

A = 0 - 7 Quiet

A = 8 - 15 Unsettled

A = 16 - 29 Active

A = 30 - 49 Minor storm

A = 50 - 99 Major storm

A = 100 - 400 Severe storm

Continued on Page 11—Sun Spots

AKSARBEN ARC Club Meeting - June 8, 2018

The meeting was called to order at 7:10 PM by saying the Pledge of Allegiance followed by introductions by name and call. There were 33 attendees. Officers and Board members present included: Bill, WA9ASD; Brian, KE0GKB; Dan, N0POT;

Secretary's Report - Brian KE0GKB - The minutes of the previous meeting, as published in Ham Hum are accepted (with no corrections).

Treasurer's Report - Dave, N0JSB - In the month of May there were deposits of \$368.59 Consisting of: \$20.00 from Membership, \$16.00 from Treats, 22.59 from Amazon Smile and \$310.00 from equipment sales. Payments of \$530.15 consisted of \$23.54 for meeting treats, and \$40.00 for Trailer, \$367.69 Ham Hum, and \$98.92 for Flea Esta Prizes. This leaves the balance of all the club accounts at \$24,372.69

President's Report - Bill, WA9ASD - This will not be an official meeting since we do not have 4 board members present if additional board members do come we will then go to a regular club meeting.

(Secretary's Note. I gave Bill the wrong information, 4 board members are needed for an official board meeting, but the regular club meeting is different. Article V, Section 2, Subsection A. "A quorum shall consist of a minimum of Ten Percent (10%) of total voting membership including at least two board members.")

Vice President's Report - Bill, WA9ASD - Tonight's Program will be Field Day by Adam KDOMMG, July will be a presentation by "Omaha Makers Club" to show us what they are doing, and August John "KE0XQ" will be giving a demonstration of "ATV" also in August we will also get an update on Flea Esta.

Continued on Page 3

ARES/SATERN/COMMUNITY EVENTS ARES Steve, NOUP - Major accident response exercise is coming July 28 we will pass along more details as the information becomes available.

OMMRS - Mary, NOTRK - OMMRS will be activating several hospitals before the air show we do not know how many stations yet but we can always use more help and activate a few extra hospitals even if they aren't participating in the event.

SATERN- Mary, NOTRK - No additional information

Community Events - Pat KOCTU - We would like to say thank you to those who worked the Nebraska State Track Meet. We had a few new volunteers this year which is great, so we can have plenty of volunteers for future meets.

July 8 Will be the "Beat the Heat" 10K run on the Walsh Trace contact Pat if you are able to help.

Public Service - Jim, KAOKCV - No Report

Education Committee - Justin, KEOBHP - Given by Mary - NOTRK Starting on August 16th at the Salvation Army we will have training every Thursday for 6 weeks with the testing session on Tuesday September 25th. Please watch the website for the latest information

Membership Committee - Mary, NOTRK - We have one new member this month. Wade Watts KEORNT, after a brief discussion a motion was made by John KE0OPF with a second by Julie NOWAV the vote was unanimous and we welcome Wade as our newest member.

Continued on Page 4

Publications/Web Services Ham Hum - Brian, WEOBEP - Next month we will have a very informative article on Sun Spots. If you have any additional articles that you would like published, please contact Brian.

Web Services - Mary, N0TRK/Adam, K0OMMG - Website is working. If you notice any issues, please contact the webmaster. web_master@aksarbenarc.org

Repeater Committee - John, WBOCMC - The repeater is working fine.

Field Day - Adam, K0OMMG- "We will do a presentation after the Cookies"

QSL and Technical Committee - Eddy, K0IL - No Report

Courtesy Committee - Bill, KE0XQ - One card was Sent out this Month to ADOQH

Trailer/Equipment Committee - Mary, N0TRK - The equipment trailer has been washed and is looking great. We are still having some electrical problems that we will continue to work on.

We do have stuff for loan please check out the list on the website.

Transmitter Hunt - Dan, N0POT- There will be no transmitter hunts this month.

Flea-Esta - Chris. The dates are September 8,2018 we do have some prizes purchased

Old Business - No Old Business

Continued on Page 5

New Business - The radio Scouting program out at Camp Cedars have installed several radios at the camp. We have several operators that are going out every Thursday to get the kids on the air, so they can get their Radio Merit Badge. If you are able to monitor the radios on these nights to help draw the kids into conversation on the air.

DSTAR is back on the air in Omaha on 442.125. There is a talk group that meets every Thursday night at 9PM. Also, there is an international Net that starts every Sunday at 7PM.

The SWIARC Club will have a Special Events Tent at the Air Show this year. Please watch their website for more information and if you can please volunteer to help man the tent.

Announcements - Bill - There is interest in finding people that remember the World radio Labs that happened many years ago. If you know of any one interested, please contact any club officer.

Door Prizes - Adam, KD0MMG - said, "Door prizes, we got em.". All tickets are retained until the December meeting for the big drawing...

Coffee and cookies are available in the break room before the program. Please donate to help offset the cost of these treats.

Also, support your local repeater. The club accepts donations for any area repeater and forwards the money to the appropriate owner.

At 7:50 PM, there being no more business before the club the meeting was adjourned.

Area Nets

Monday

7:00 PM 145.290 South-West Iowa ARES Glenwood, IA.

8:00 PM 144.250 NE Missouri SWOT.

9:00 PM 146.940 AARC Chat Net. Ak-Sar-Ben ARC Omaha, NE.

Tuesday

8:00 PM 50.200 6m SSB Net.

9:00 PM 145.310 Washington Co. ARES Washington Co, NE.

Wednesday

7:00 PM 146.670 Dodge Co. ARES Dodge Co, NE.

7:30 PM 7.122 CW Four State QRP Comfortable Net.

8:00 PM 3.564 CW Four State QRP Comfortable Net.

8:00 PM 145.310 Saunders Co. ARES Saunders Co, NE.

8:30 PM 7.122 CW Four State QRP Comfortable Net.

9:00 PM 3.580.5 PSK Four State QRP Comfortable Net.

9:00 PM 146.820 Pottawattamie County ARES Council Bluffs, IA.

Thursday

8:30 AM 7.122 CW Four State QRP 40M Morning Net.

7:30 PM 145.310- Lincoln/Omaha SATERN Net. Ashland, NE.

8:00 PM 28.350 SSB 10-Meter Net.

8:00 PM 144.250 2-Meter SSB Net.

8:00 PM 146.360 Heartland DX Association.

9:00 PM 28.305 10-Meter Net. (Not so Active anymore)

Saturday

12:00 PM 146.82 Swap Net Council Bluffs, IA.

8:30 PM 3.921.000 QCWA Chapter 20.

Sunday

8:00 AM 3.902.500 Swap Net.

8:30 AM 3.896.500 3900 Club.

8:30 PM 443.925+ (103.5 tone) IRLP Net.

9:00 PM 146.940- Douglas Co. ARES net, KØUSA repeater.

BOARD MEETING NOTICE

The next AARC Board Meeting is scheduled for **24 July 2018 at 6:30PM**, Peony Park Hy -Vee on Cass Street, Omaha. Unless further Notice, the board meetings are held on the fourth Tuesday of each month.

Good idea to check the WEB Site for any changes in Dates or Locations.

Club Officers & Board Members

President	Bill True	WA9ASD	president@aksarbenarc.org
Vice President	Justin Tabor	KE0BHP	vicepresident@aksarbenarc.org
2018 Secretary	Brian Sohl	KE0GKB	secretary@aksarbenarc.org
2018 Treasurer	Dave Rice	NØJSB	treasurer@aksarbenarc.org
2017-2018 Director	Dan Buchholz	NØPOT	board@aksarbenarc.org
2018-2019 Director	Brian Sohl	KC0HLB	board@aksarbenarc.org
2018-2019 Director	Barb Westcott	KE0GKB	board@aksarbenarc.org
Immediate Past President	Kevin Hill	KAØVNY	board@aksarbenarc.org

Club Committees

Courtesy Committee	Bill McCollum	KEØXQ	courtesy@aksarbenarc.org
Education	Justin Tabor	KEØBHP	education@aksarbenarc.org
Field Day	Adam Kavan	KDØMMG	fieldday@aksarbenarc.org
Flea-Esta	Chris Rice		flea@aksarbenarc.org
Membership	Mary Joseph	NØTRK	membership@aksarbenarc.org
Monday Night .94 Net	Rich Swig	WAØZQG	wa0zqg@hotmail.com
P.I.M.P.	Jim Westcott	KAØKCV	pr@aksarbenarc.org
Prizes	Adam Kavan	KDØMMG	prizes@aksarbenarc.org
A.R.E.S.	Steve Schmitz	NØUP	n0up@arrl.net
Publications	Brian Pitchanau	WEØBEP	hamhum@aksarbenarc.org
QSL Manager & Technical	Ed Edwards	KØIL	qslmanager@aksarbenarc.org
Special Events Coordinator	Pat Joseph	KØCTU	community_service@aksarbenarc.org

Technical Assistance	Ed Edwards	KØIL	technical@aksarbenarc.org
Web Services	Mary Joseph	NØTRK	web_master@aksarbenarc.org

Repeater Committee

Chairman	John Gebuhr	WBØCMC	repeater@aksarbenarc.org
Vice Chairman	Steve Schmitz	NØUP	repeater@aksarbenarc.org
Control Operator	Mary Joseph	NØTRK	repeater@aksarbenarc.org
Club Call sign Trustee	Corby Krick	KØSKW	trustee@aksarbenarc.org

Other Contacts

ARRL Midwest Director	Rod Blocksome	KØDAS	k0das@arrl.org
ARRL Midwest Vice-Dir.	Art Zygielbaum	KØAIZ	k0aiz@arrl.org
EC Douglas County	Steve Schmitz	NØUP	dcares@aksarbenarc.org
EC Sarpy County	Dennis Mitchell	KCØYKN	
Exams/Vol. Council	Brian Zdan	KMØY	testing@aksarbenarc.org
NE Section Manager	Matt Anderson	KAØBOJ	ka0boj@arrl.org
Official Observer Coord.	Bill McCollum	KEØXQ	oo_coordinator@aksarbenarc.org

AARC Ham Hum Post Office Box 24551, Omaha, NE 68124-0551

EQUIPMENT ADS

Items are sold by the Aksarben ARC and inquiries should be directed to

equipment@aksardenarc.org

Home Brew Amplifier

A superb construction of a full legal limit HF amp. by the book. Needs only a 3-1000Z tube and HV P.S. needs to be reassembled. See Aksarben eSwap for more details. just reduced to \$500. We deliver.

HP 432A RF Power Meter with 8478B thermistor mount 10 MHz to 18 GHz \$160

Shure 522 desk mic \$25

Heathkit HD-19 Phone Patch Change the connectors and you have a computer interface. \$15

1988 Handbook \$20

1995 Handbook \$20

Low speed reversible motor - 11 or 23 RPM - 115 vac \$20

600 Ohm 375 watt non-inductive resistor \$15

General Radiotelephone SWR/Wattmeter 5w / 25 Model 615C \$15

Sinclair SRL-229 Base Station Antenna.

Gain 6.1 dB (8.3 dBi). Bandwidth 6 MHz (centered @ 144-148 MHz). Power rating: 300 watts, polarization: vertical. omni-directional. Lightning protection: DC ground. Termination: N-male. Length: 258". Weight 25 Lbs. Rated wind velocity: 125 MPH. Rated wind with 1/2" radial ice: 105 MPH. Horizontal thrust @ rated wind and ice load: 190 Lbs. New price: \$1,338.75 + S&H. Your price: only \$500 (OBO) The antenna has had a minor repair and is in good working order.

More items listed on page 9

NYE Viking 2000 Watt low Pass Filter \$5

Archer SWR/FS meter \$5

MFJ-815B HF Peak Reading SWR/Wattmeter \$50

MFJ-941D Versa Tuner II - coax switch , SWR Meter, Wattmeter, antenna tuner \$60

SDR-1Q sdr receiver \$150

DX Engineering RTR-1A \$150

CW Touch Keyer \$50

West Mountain Radio RIGblaster \$40

HamGadget Pico Keyer \$25

MFJ-1022 Active Antenna \$10

NETGEAR Wireless-N Router WNR2000 \$10

NETGEAR Wireless Dual Band Router WNDR3400v2 \$15

D-Link DIR-615 Wireless N Router \$10

D-Link WBR-2310 RangeBooster G Wireless Router \$15

Belkin F5U237 7 port USB hub \$5

MAJOR ACCIDENT RESPONSE EXERCISE - 2018

The **Major Accident Response Exercise** is a large scale disaster response drill that happens prior to the Air Show at Offutt Air Force Base. This is a large scale event involving many agencies and organizations. One of those is the Omaha Metro Medical Response System (OMMRS). OMMRS is a coalition of hospitals and other medical support locations across the region.

Since its inception, OMMRS has used amateur radio as a backup method of communication. While our job is tertiary, it is no less important that we continue to drill with the hospitals. Not only to ensure the equipment in good working condition but to keep our relationship with the staff of the hospitals.

Of course the system does not work without volunteers, and so, we need YOU! After last year's hurricane season we have seen that communications systems can be overloaded even with out failing, Using amateur radio to report routine information between responders and event organizers helps to keep the phones and public service radios available for more pressing matters during a real event.

Please take a few hours out of your day on July 28th – you can sign up at this link:

<http://bit.ly/MARE-Drill-2018>

Sun Spotscontinued from page 1

A quick example of the A & K numbers

Say we are waiting for excellent conditions on the HF bands, then we are looking A and K indices of 0 lasting for a few days. Combined with a SFI (above 250). This can get all messed up by various random things happening on the sun, with these numbers you would be having a good time on HF.

If your interests are the lower HF bands, low A and K indices with very low SFI numbers would be the go.

In the real world generally propagation conditions are OK when the A index is 10 or lower, and the K index is 3 or lower and the SFI above 90. But remember lots of hams (Some like me using compromised antennas and low power) worked very good DX, added new DXCC entities to our logs, made new friends and had lots of fun. All at the bottom of the last solar cycle, when the numbers were terrible. So don't let understanding the numbers stop you from getting on the radio. There are countless stories about surprises on supposedly dead bands.

Cheat notes (for the non readers)

The A index [LOW is GOOD]

- 1 to 6 best
- 7 to 9 is OK
- 11 or more not so good

K index [LOW is GOOD]

- 0 or 1 best
- 2 is OK
- 3 or more not so good
- 5 is really terrible

SFI index [HIGH is GOOD]

- 70 not good
- 80 good
- 90 better
- 100+ best

Club Calendar

- Jul 11** Lincoln ARC meeting, 7:30PM 6131 North 14th Street, Lincoln, NE
Jul 13 AARC Meeting, 7:00 PM, Red Cross, 81st & Spring St, Omaha, NE
Jul 18 7:00 PM Heartland Hams Meeting, 403 Railroad Ave, Glenwood, IA
Jul 19 7:30 PM. Bellevue ARC meeting, Bellevue Masonic Hall Dining Room, 1908 Franklin St, Bellevue, NE
Jul 21 AARC Coffee and Conversation, 10770 M St, Village Inn Omaha, 6:30 PM (Corner of 108th and L Streets)
Jul 26 7:00 PM SWIARC meeting 705 N 16th St, Council Bluffs, IA.
Jul 26 7:30 PM PARC Meeting, 1900 E. Military Road, Fremont, NE
Jul 28 Major Accident Response Exercise — OMMRS is activated to coordinate a response
Jul 31 License Testing Omaha Area VE Team, 6:30 PM 2912 S 80th Ave, Omaha, NE
Aug 2 License Testing Lincoln ARC, 6:30 PM, 2701 N 48th St, Lincoln, NE



The July Meeting will be held on **Friday, July 13, 2018**, 7:00PM at the American Red Cross Building, 81st & Spring Street.

Presentation will be from Pat KOCTU who will introduce Eric Kaplan.

Eric is the President of the Omaha Maker Group, Nebraska's first Makerspace. He will be promoting the Omaha Maker Group, and the concept of Maker Groups and Maker Spaces. Eric says that the Maker community is for artists and craftsmen of all sorts — computer programmers, mechanical engineers, woodworkers, sewers and more — to share space, tools and ideas. The Omaha Maker Group exists to facilitate a place where people can explore Technology, Science and Art. <http://omahamakergroup.org/>

New Members

Wade B. Watts, KE0RNT



JUNE Raffle Prizes

Raffle Prizes won at the June meeting were an ICOM hat by Albert, KE0LOL. A YAESU hat by Chris, a set of mechanics picks by John, N2AO. Von Oliver, KD0KFR picked up a Test-La-Coil Kit. Kim, KE0BXB won an LED Light Fixture.



The Mr. Reeh prize was picked up by Dan, N0POT, a headset Radio with a broken wire on the battery terminal.



The Brown Bag Prize was won by Julianna, N0WAV, a 4 outlet power strip.

FIELD DAYS 2018 WAS HELD AT FREEDOM PARK ALONG THE MISSOURI RIVER

Read more on this event on the Ak-Sar-Ben ARC Web site and Face Book



2018 Field Days Site at Freedom Park. The AARC trailer and mobile antenna shown here where the 20 Meter Band was worked.



In the Gazebo, Mitch, WOJG works 40 Meters while Adam, KD0MMG Logs in the contacts.



Pat, N0CTU in the Club Trailer on 20 Meters.

The following pictures courtesy of Fred Rieser, KE0OPG

From Top Left and going Clockwise:

Inside the USS Hazard Radio Room, Joel, KE0MX

The Training Sub, USS Marlin. Aircraft display in front of the Prop display

Pat, NOCTU on 20 Meters inside the AARC Trailer

Kevin, KA0VNY on 10 M and Brian, WE0BEP on 15M

Dan, N0POT on 40 M atop the gazebo



TECHNICIAN CLASS

Have you been thinking about getting your ham radio license? Do you know someone who has thought about it? Well wait no longer.

There will be an entry level (**Technician Class**) amateur radio class starting on **August 16th**. The classes will be held at the Salvation Army EDS building at 10629 Burt Circle, Omaha, NE.

The classes will be held on six consecutive Thursdays with August 16th being the first class. The start time for the class will be 6:30 pm and run until 9:00 pm. There is no cost for the class but you can purchase a copy of the The ARRL Ham Radio License Manual 4th Edition for \$25. (this is a \$5 discount from the regular price.) The manual is recommended but is not required. If you purchase a copy on your own please make sure it is the **4th Edition**.

The next license testing session will be held on Tuesday September 25th. More details about the test will be available at the class.

Class size is limited so please complete the registration form at this link: [2018 Technician Class Registration](#) if you'd like to attend.
Please see the Note at the bottom of this page.

At this time, we do not have a General or Extra class scheduled. Please watch here for information on additional classes.

If you have any additional questions please email: hamclass@aksarbenarc.org

NOTE: Obviously if you receive the Ham Hum by mail you must use the email address to request the registration form. For those who receive the Ham Hum by email, the hyperlink will work.