VOLUME XLVII, NUMBER 6

SPURIOUS EMISSIONS

JUNE, 2025

INDIAN RIVER ARC

P.O. BOX 237285, COCOA
FLORIDA 32923-7285

OFFICERS

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N4UTQ

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KJ4VGR

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KN4JN

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KU0R

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W0AGE

PAST PRESIDENT
VIRON PAYNE
N4VEP

CLUB MINUTES

President Steve Luchuk, N4UTQ called the meeting to order at 7:15 PM. Following the Pledge of Allegiance Steve called for visitors; there were none.
President's Report: Steve said that the KSC club will join our club for Field Day.
Treasurer's Report: After a payment of $743.20 for liability insurance, the current checking account balance is $1209.89. The Equipment Fund remains stable at $2013.65. The Treasurer's report was approved for audit.
Next, the meeting minutes for the month of May were approved.
Technical Committee Report: Dave KU0R mentioned that Francis Merceret, NA4CW is giving away his Rohn towers that are in excellent condition and the club should get them. Dave also mentioned that the 146.88 MHz repeater at the church has good coverage except towards the north. Also the repeater clock is off.
Steve mentioned that the 220 MHz repeater has great coverage and is popular. He suggested that members get 220 MHz radios to enjoy the use of that repeater.
Past President Report: Viron, N4VEP said that next Saturday, June 21 the QRP event will be at Tom Statham Park.
Following the business meeting Steve showed slides of the foods that will be available during Field Day including bacon, hotdogs, meat balls, sausages and hamburgers.
He then proceeded to show pictures of hams engaged in "real" Field Days held in actual fields.
Next, he showed pictures of past Field Days held by our club in some of the local parks.
After the pictures Steve opened the floor to discuss plans for this year's Field Day. Following some discussion, it was tentatively decided to use only two radios and to operate using amplifiers. Members were encouraged to bring their own radios so that they can be tested in the harsh environment of Field Day operations. One other consideration was to use the KSC club's call sign, N1KSC; however we need to get their permission first.
The meeting adjourned at 8:19 PM
Respectfully submitted,
Armando Delgado, KN4JN
Secretary

HAPPENINGS

13 Colonies Special Event

Every year during the week of July 4 amateurs activate special event stations from the original 13 colonies to commemorate our declaration of independence.

This year the event starts at 9:00 AM EDT on July 1and continues through July 7 at midnight.

The stations will be:

New York.....K2A
Virginia.....K2B
Rhode Island.....K2C
Connecticut.....K2D
Delaware.....K2E
Maryland.....K2F
Georgia.....K2G
Massachusetts...K2H.
New Jersey.....K2I
North Carolina.....K2J
New Hampshire....K2K
South Carolina.....K2L
Pennsylvania.....K2M

There will also be three more special event stations:

England.....GB13COL
France.....TM13COL
Philadelphia, PA....WM3PEN

They will operate in all modes and all bands, including the WARC bands and 6m.

This event is very popular and the first few days expect pile-ups, but by the end of the week it will be easier to make a contact.

For more information go to their website.

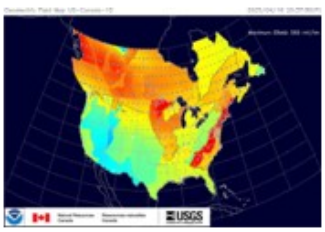
HAPPENINGS

During the recent Dayton Hamvention Dr. Tamitha Skov, WX6SWW, the "Space Weather Woman", made an interesting and informative presentation about space weather and propagation.

The talk is available in You Tube at the following address.

https://youtu.be/ULQJwQ1m1Dk?si=5aE0QUhELRAUWxIF

Electrical activity in the ionosphere induce electric currents on the ground. The image below shows where the currents developed during a major geomagnetic storm that occurred last April.



The red color denote the places of highest currents.followed by yellow green and blue in descending order.

The full details and explanation of the event are found at the space weather website:

https://spaceweather.com/archive.php?view=1&day=18&month=04&year=2025

For those interested in VHF SSB communications the CQ International VHF contest will be on July 5-6. On the weekend of June 14 was the ARRL VHF contest and the 6m band was wide open for the entire weekend; solar conditions are still active and strong .
The 2025 CQ World Wide VHF contest has been split into two dedicated weekends- one weekend for analog (SSB/CW/FM) operation and one for digital operation. The analog weekend begins at 1200 UTC on Saturday, July 5 and concludes at 1200 UTC on Sunday, July 6. The digital weekend begins at 1200 UTC on Saturday, July 19 and concludes at 1200 Sunday, July 20. Note that the start and end times of the contest have changed from previous years. Full rules are available at: cqww-vhf.com/rules.

Google has introduced a new, experimental artificial intelligence (AI) weather model for predicting hurricanes. The new AI-based tropical cyclone model will be another tool for meteorologists and weather enthusiasts alike to predict the track and intensity of future storms this hurricane season. Google's new AI-powered tropical cyclone model is the latest addition to its WeatherNext model family, a suite of AI weather models from Google DeepMind and Google Research. According to Google, "this model can predict a cyclone's formation, track, intensity, size and shape — generating 50 possible scenarios, up to 15 days ahead." Get details here.

August is lighthouse month. On August the 7th the USA celebrates National Lighthouse day and the following weekend, August 9-10 is the National Lighthouse-Lightship radio event when hams in the USA operate from many lighthouses in the country. More details found in their website. Then on the weekend of August 16-17 will be the International Lighthouse/Lightship event when amateurs will activate lighthouses all over the world. Their website offers more information, including a list of participating lighthouses. Both these events occur annually and are extremely popular, providing an opportunity to make unique radio contacts. Also, since these are not contests, but events, they can operate in the WARC bands.

ON THE AIR

Boy Scouts of America/ Michighan CrossRoads Council - Trail To Eagle (TTE) Jun 29-Jul 3, 1300Z-0500Z, K2BSA/8, Metamora, MI. Garden City Amateur Radio Club (GCARC). 14.330 7.270 3.840. QSL. GCARC, P.O. Box 482, Garden City, MI 48136. Scouters earning the Radio Merit Badge will operate during the week as time allows. https://michiganscouting.org/camping/trail-to-eagle

The White House Communications Agency Amateur Radio Club Independence Day 2025 Celebration Special Event Jul 4-Jul 7, 0000Z-0000Z, W0H, Jackson, OH. White House Communications Agency Amateur Radio Club. 3.875 7.275 14.250 28.550. Certificate. Lowell Yates, 6809 Four Mile Rd, Jackson, OH 45640. Help the White House Communications Agency Amateur Radio Club celebrate our nations independence https://whitehousecomms-arc.org

California State Fair Jul 11-Jul 27, 0000Z-2359Z, K6C, Sacramento, CA. ARRL Sacramento Valley Section. 7.290 14.290 21.390 28.390. Certificate. Carol Milazzo, PO Box 665, Citrus Heights, CA 95611-0665. https://www.arrlsacvalley.org

Our Lady of Mount Carmel Festival 150th Anniversary Jul 14-Jul 19, 0000Z-2359Z, NJ2KC, Bridgeton, NJ. New Jersey Knights of Columbus Amateur Radio Club. 7.2500 14.3500 21.3500 28.4500. Certificate & QSL. Thomas M. Perrotti, N2JIE, 785 Vineland Avenue, Bridgeton, NJ 08302. NJ2KC.org

Gerard VK4BGL/G3WIP will be active as VP8DPD from **Falkland Islands**, IOTA SA-002, 10 May - 12 July 2025. He will operate on HF Bands. QSL via G3WIP buro, LOTW, eQSL.

Dave, G4WXJ will be active as ZC4RH from **Cyprus**, IOTA AS-004, 14 - 20 June 2025. He will operate on 40 - 6m Bands, FT8, FT4, SSB, CW. QSL via DK6SP, LOTW, ClubLog OQRS.

GUYANA, 8R. Aldir, PY1SAD is QRV as 8R1TM until July 10. Activity is on 160 to 6 meters using CW, SSB, and various digital modes, as well as on various Satellites, during the weekdays between 2300 and 0200z. QSL to home call.

ANTARCTICA. Alex, DL2ALY is QRV as DP0GVN until December. Activity is on 160 to 6 meters using SSB and FT8, and on Satellite QO-100. QSL via DL4BBH.

THAILAND, HS. Members of the Thai DX Association are QRV with special call sign HS30DXA until June 21 to celebrate the club's 30th anniversary. Activity is on 160 to 10 meters using CW, SSB, and FT8. QSL via HS6MYW.

The Solar Wind by Armando Delgado, KN4JN

When hams want to assess the status of potential radio propagation they search two parameters: the 10.7 cm solar flux and the K_p index. The solar flux is a proxy value for the intensity of solar irradiation that reflects on the level of ionospheric ionization. The higher the solar flux is, the most likely there will be good radio propagation, especially in the higher HF bands. The K_p index is an indicator of the status of the Earth's magnetosphere. The higher the number, the more unstable the Earth's magnetic field is. This instability interferes with radio propagation and at high numbers, indicating a geomagnetic storm, it may block all radio propagation. Thus, the best combination for good radio propagation is a high solar flux and a low K_p index, as long as there are no coronal mass ejections (CME) actively affecting Earth.

Experienced amateurs who regularly operate the HF bands can attest that there are days when the solar flux is high, the K_p index is low, there are no CME's in the horizon and yet the upper bands remain quiet and the lower daytime HF bands show only few weak signals with much fading of those signals that can be heard. The factor responsible for this situation invariably is the solar wind.

The sun, like all stars, is a nuclear furnace. In the interior of the sun gravitational forces cause atoms to fuse together releasing huge amounts of energy. This energy works its way to the surface of the sun, the photosphere, and coalesces just above it in the solar corona, an area of intense heat that reaches one million degrees Kelvin. In this high energy environment electrons and protons are energized in the form of plasma with particle collisions producing bremsstrahlung radiation covering the entire electromagnetic spectrum and where most radio signals from the sun originate. Energized particles also escape the solar gravitational field and flow out into space in what is known as the solar wind.

Although continuous, this plasma emanation is not stable or steady. The sun's rotation imparts a rotational moment to this particle flow, causing it to twist and bend as it travels into space. Also, some plasma flows are faster than others and as the fast moving particles catch up with slower moving ones, turbulence results. As this chaotic particle stream reaches Earth, the charged particles align with the Earth's magnetic field creating intense electric currents that fluctuate with the changes in the particle flow. These electric currents induce magnetic fields that interact with radio waves, interfering with their propagation.

The National Oceanic and Atmospheric Administration (NOAA) monitors a fleet of satellites that keep track of multiple parameters of solar activity. The website spaceweather.com summarizes much of this information and offers links to detailed daily and hourly observations, including the solar wind, showing its speed and density. As a general rule, when the solar wind speed is greater than 500 Km/sec it will create enough instability in the magnetosphere to affect radio propagation.

A relatively new solar observation is the presence of areas of the solar corona that fade away creating what are called "coronal holes". These areas of missing corona allow plasma from the surface of the sun to be ejected directly into space, causing intense plasma flows of high speed particles. When these flows reach Earth, invariably they cause magnetospheric instability, disrupting radio propagation.

Another factor to consider regarding the solar wind is that the plasma flow of charged particles creates a magnetic field. This magnetic field, called the interplanetary magnetic field, is 3-dimensional with components in the x, y, and z axes. The z axis is parallel to the Earth's magnetic lines of force. It also has orientation that can be north or south. When the magnetic field has southern orientation, it is attracted to the Earth's north magnetic pole and thus intensifies the effect of the solar wind in that hemisphere. This information can be found in the spaceweather.com site under B_z value.

Beside monitoring the solar flux and the K_p index to assess radio propagation, it is important to add the solar wind parameters to get a more clear picture of the ionospheric conditions.

W1AW CW PRACTICE TRANSMISSIONS

7 PM EST Slow CW : 5-15 WPM Mon, Wed, Fri

7 PM EST Fast CW: 35-10 WPM Tue, Thu

FREQUENCIES:
1.8025, 3.5815, 7.0475, 14.0475, 18.0775, 21.0675, 28.0675, 50.350, 147.555

Editor's Note:

Send comments about the Newsletter or to contribute information or articles to the Editor's email address:

olardelga@aol.com.

ACTIVE REPEATERS INCLUDING DMR, PACKET & SIMPLEX

RACESBRE0008 REV B

Repeaters & Packet are open for all licensed amateur radio operators to use.

OUTPUT FREQ.	STD. NAME	OFFSET	TONE/CC	CALL	LOCATION	OWNER	NOTES
WBFM							
145.130	130 VB	-600	107.2	AB4AZ	VERO BEACH, INDIAN RIVER	AB4AZ	
145.350	350 SC	-600	103.5	K4OSC	St. CLOUD, OSCEOLA	K1XC	Radio Science Club, Fl Club
145.370	**370 CO**	-600	156.7	W2SDB	COCOA-BROADCAST CT.	IRARC	Yaesu Repeater replaced with Bridgecom FM
145.470	**470 ME**	-600	107.2	K4HRS	MELBOURNE- RIALTO PL.	HIRAC	
145.490	**490 TI**	-600	100.0	WN3DHI	TITUSVILLE SR405 & Fox lk rd.	WN3DHI	
146.610	**610 ME**	-600	None/107.2	W4MLB	MELBOURNE- HOLMES HOSP	PCARS	Tone Downlink only
146.625	**625 MM**	-600	100.0	KE4NUZ	NW of MIMS NEAR HARRISON RD.	KE4NUZ	Limited coverage
146.775	**775 MM**	-600	100.0	K4KSC	NW of MIMS Hog Valley , W of I95	K4KSC	
146.850	**850 ME**	-600	None/107.2	W4MLB	PALM BAY- Port Malabar Rd.	PCARS	Tone Downlink Only
146.880	**880 RO**	-600	107.2	W4NLX	ROCKLEDGE- WUESTHOFF HOSP.	IRARC	FUSION Repeater replaced with Bridgecom Fl
146.895	**895 PB**	-600	107.2/107.2	**K4EOC**	PALM BAY- DeGroot Library	EOC	TSQL as of 5/2018
146.910	**910 TI**	-600	107.2	K4KSC	TITUSVILLE Water Tower on south st.	TARC	
146.940	**940 RO**	-600	None	K4GCC	ROCKLEDGE Carver Rd.WLRQ Tower	LISATS	
146.970	**970 TI**	-600	107.2	K4KSC	TITUSVILLE-T'VILLE TOWERS	TARC	
147.075	**075 SC**	+600	107.2/107.2	**K4EOC**	SCOTTSMOOR Near US1-Aurantia Rd	EOC	TSQL as of 5/2018 Relocated 4/2019
147.135	**135 RO**	+600	107.2/107.2	**K4EOC**	ROCKLEDGE-EOC	EOC	TSql as of 5/2018
147.240	240 DE	+600	123.0	KV4EOC	DELAND	VARES	
147.255	**255 PB**	+600	107.2	K4DCS	Near Babcock & Palm City S City limi	PBARC	
147.330	**330 TI**	+600	107.2	K4NBR	TITUSVILLE-PARRISH HOSP.	NBARC	
147.360	**360 TI**	+600	107.2	N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	DSTAR Gateway in work
442.850	**850TI4**	+5000	107.2/107/2	N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	TSql;FUSION/WBFM/WIRES-X
444.325	**325ME4**	+5000	107.2	K4DCS	MELBOURNE-TRINITY TWRS-E	PBARC	
444.375	**CNLBRE**	+5000	107.2		I95 FDT Twr 1/2 Mile N of County Lin	SARNET	"SARNet Sebastian Repeater"
444.425	**425ME4**	+5000	107.2	W4MLB	MELBOURNE- RIALTO PL.	PCARS	
444.525	**525RO4**	+5000	103.5/103.5	**K4EOC**	ROCKLEDGE-EOC	EOC	TSql; VOICE/NBEMS
444.650	**CNMBRE**	+5000	107.2	W4NLX	COCOA-FHP SR520	IRARC	"SARNet Cocoa Repeater"
444.750	**750TI4**	+5000	156.7/156.7	N4TDX	TITUSVILLE- TGO WATERTOER 230 ft.	NBARC	TSql
444.875	**875MI4**	+5000	107.2	KC2UFO	MERRITT IS. COURTNEY SPRS.	K4UZM	
444.925	**925KS4**	+5000	131.8/131.8	N1KSC	KENNEDY SP. CTR.-VAB	KSCARC	FM Tsql ; P25 capable
224.120	**120CO2**	-1600	123.0	AA4CD	COCOA Broadcast Ct.	AA4CD	
DMR							
444.150	**150TI4**	+5000	CC1	K2JO	TITUSVILLE-PARRISH HOSP.	KC2CWT	DMR FL
444.575	**575CO4**	+5000	CC3	K4DJN	COCOA BROADCAST CT.	AA4CD	DMR Brandmeister
444.675	**675TI4**	+5000	CC3	K4DJN	TITUSVILLE-T'VILLE TOWERS	AA4CD	DMR Brandmeister
ATV							
427.250	**250CO4**			K4ATV	COCOA BROADCAST CT.	LISATS	NTSC INPUT 439.25 See www.lisats.org
PACKET STATIONS:							
145.090	**WL2KPB**	WINLINK		W2PH-10	PALM BAY-W2PH QTH	PBARC	WINLINK GATEWAY
145.090	**090 ME**	PCARS		W4MLB-2	MELBOURNE-TRINITY TWRS-EAST	PCARS-K1YON	BBS W4MLB-4 EASTNET
145.770	**770 PB**	SEDAN		K4EOC-7	PALM BAY	N2DB	http://www.fla-sedan.com
145.770	**770 TI**	SEDAN		KD4MWO-4	TITUSVILLE	N2DB	INACTIVE NODE
BREVARD RACES/ARES SIMPLEX							
146.480	**CENTX**	SIMPLEX		N/A	CENTRAL REG	IRARC	CENTRAL NET SIMPLEX BACKUP
146.550	**SOUTHX**	SIMPLEX		N/A	SOUTH REGION	PBARC	SOUTH NET SIMPLEX BACKUP
146.580	**MLBX**	SIMPLEX		N/A	MELBOURNE REGION	PCARS	MELBOURNE REGION NET SIMPLEX BACKUP
146.595	**NORTHX**	SIMPLEX		N/A	NORTH REGION	TARC	NORTH NET SIMPLEX BACKUP
147.540	**EOCROX**	SIMPLEX		N/A	RACES Bay	EOC	EOC VOICE/NBEMS
SIMPLEX							
146.520	**CALL52**	SIMPLEX		N/A	Station to station, anywhere		VHF national simplex calling freq
146.490	**TAC A**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
146.560	**NBRX**	SIMPLEX		N/A	NBARC -Club/Parrish Hosptial Activities		
146.580	**TAC B**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	**TAC C**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	**IRARCX**	SIMPLEX		N/A	IRARC 'FUN NET" and CLUB ACTIVIES		
147.450	**TAC D**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.570	**TAC E**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.000	**CALL46**	SIMPLEX		N/A	Station to station, anywhere		UHF national simplex calling freq
446.500	**TAC A4**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.600	**TAC B4**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.700	**TAC C4**	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006

2 Meter & 70 cm WBFM repeaters use CTCSS; if one frequency is listed it is for uplink (user Tx) , if two are listed the repeater is set for uplink and downlink (user Tx a

Repeater Call Signs in bold are owned by Brevard Emergency Management and are maintained by the county. Repeater Trustee: Ron K2RJ

NOT ON AIR

Standard Names in Bold are recommended for Emergency Radio in Brevard *

PBARC= Palm Bay Amateur Radio Club (Replaces DCS for South Brevard) See Ed W2PH for more info