



**INDIAN  
RIVER ARC**

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

VOLUME XLVII, NUMBER 9

# SPURIOUS EMISSIONS

SEPTEMBER, 2025

## OFFICERS

### PRESIDENT

**STEVEN LUCHUK**

**N4UTQ**

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**KJ4VGR**

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**KN4JN**

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**KU0R**

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**WOAGE**

### 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 proceeded to the President's Report. He notified the members that for the past few Saturdays some members participated in communication exercises using multiple modes and bands to test simplex local reception and to determine the best protocol to use in an emergency. All members are invited to participate in these exercises, starting at 10:00 AM on Saturdays, using the 145.37 MHz repeater for coordination. Next Saturday, September 20, there will not be an exercise because it will be the QRP weekend. This event will be held at Tom Stratham Park on US 1 starting at about 9:00 AM.

Vice-President Report: Sam, KJ4VGR mentioned that he participated in the ARRL VHF contest last Saturday, Septem-

ber 13, and made multiple contacts around Florida using FT8 on 2m. His most significant contact was with a station in Charlotte, NC.

Treasurer's Report: Steve mentioned that last month the club paid the equipment insurance of \$168.51 which brought the General Fund account to \$1081.38. The Equipment Fund remains steady at \$2013.61. The Treasurer's Report was approved for audit.

Next, the minutes of the August meeting were approved.

There being no other old business or new business to discuss, the business portion of the meeting was closed.

Steve had planned a presentation on "Interstellar Visitors" for this meeting, but the audio-visual system was not operational and he postponed the presentation. Instead, the

members present engaged in an open discussion on multiple topics, mostly revolving around unexplained mysteries of space and science, resulting in an interesting meeting.

Following the discussions, the meeting adjourned at 8:00 PM

Respectfully submitted,  
Armando Delgado, KN4JN  
Secretary

## HAPPENINGS

**September is National Preparedness Month**, which is a good time to look at your personal, family, and community resilience levels. For 2025, the National Preparedness Month theme is Preparedness Starts at Home." Amateur radio is a valuable resource for communication and community service before and during times of crisis, and can be a significant factor in your home's level of preparedness.

National Preparedness Month - Have a Go Kit  
On the ARRL website, there's an [Emergency Prep Kit Checklist](#). It lists the common items such as food and water for several days, a first aid kit, medications, chargers for your devices and other useful items.  
National Preparedness Month - Station Readiness  
Amateurs should test their ham station to ensure that it is pow-

ered by the generator. If the whole house system does not power the station, a portable generator could be an option. The key is to test the system under blue sky conditions to ensure it works, check for RF noise, and potential power drop. Having backup antennas is also crucial..

On Labor Day weekend, the Hurricane Watch Net (HWN) cele-

brated its 60th anniversary of providing critical communications support to the National Hurricane Center (NHC) and communities impacted by hurricanes.  
As Hurricane Betsy was pummeling the Caribbean on Labor Day weekend 1965, a ham radio operator started hearing calls for information from operators in the Bahamas. Jerry Murphy, K8YUW, sprang into

## HAPPENINGS

action and began relaying surface data and storm conditions to help those in the path. That first net paved the way for what would become the Hurricane Watch Net. HWN operates on 14.325 MHz and 7.268 MHz, often simultaneously, with net control stations strategically positioned throughout the region to maximize coverage. For more information about the HWN, or to get involved as a volunteer, visit [www.hwn.org](http://www.hwn.org). Also, the HWN will be hosting a podcast. The first episode of "The HWN REPORT" podcast was at noon ET September 4, 2025, on YouTube. Episode 1 featured information about the birth of the HWN and founder Jerry Murphy, K8YUW.

Florida lawmaker [wants to ban homeowners associations](#), asking for discussion on social media and calling them a "failed experiment." "We should not have authoritarian boards dictate your day-to-day life with no accountability," state Rep. Juan Porras (R-Miami) [said on social media](#). Nearly [half of Florida's population](#)—about 9.5 million people—live in neighborhoods gov-

erned by homeowners associations.

Last year, Gov. Ron DeSantis [signed House Bill 1203](#), which imposed limits on homeowners associations throughout the state.

The Swedish Amateur Radio Society, SSA, will celebrate its 100-year anniversary on September 10, 2025, with a special award activity. Beginning September 10 through October 12, SSA will feature a diploma activity that involves contacting SSA's anniversary stations on as many of the 160 – 6-meter bands and modes as possible. There will be 10 special call signs on the air: SB100SSA, SC100SSA, SD100SSA, SE100SSA, SF100SSA, SH100SSA, SI100SSA, SM100SSA, 7S100SSA and 8S100SSA. SSA will use the [Hamaward cloud](#) online logging system, allowing hunters to track their progress in real time and download their diplomas and eQSLs instantly. The same stations will also participate in the Scandinavian Activity Con-

test (SAC) this coming autumn.

Next month is the **Melbourne Hamfest**, ARRL Florida State Convention  
10/10/2025  
Start Date: 10/10/2025  
End Date: 10/11/2025  
Location: Melbourne Auditorium  
625 E. Hibiscus Blvd.  
Melbourne, FL 32901  
Website: <https://pcars.org/wp/melbourne-hamfest-2025/>  
Sponsor: Platinum Coast Amateur Radio Society  
Type: ARRL Convention  
Talk-In: 146.610  
Public Contact: Chuck Green , AD4ES  
5395 Lake Washington Road  
Melbourne, FL 32934  
Phone: 321-223-3776  
Email: [chuckgreen29@gmail.com](mailto:chuckgreen29@gmail.com)

The ARRL is asking the amateur community for support of new legislation that will limit HOAs ability to restrict radio amateur operations. To eliminate these private land use restrictions, the ARRL has worked over the past

several years with our elected officials to draft Congressional legislation — H.R. 1094 in the U.S. House of Representatives and S. 459 in the U.S. Senate — that, when passed will extend to all hams the right to operate from their homes and the right to install antennas on the land they own. We have bipartisan support for this legislation.

**BUT, WE NEED YOUR HELP TO PASS THIS LEGISLATION!!!**

How can you help? By sending a letter to your Representative and Senators asking that they co-sponsor and support H.R. 1094 and S. 459.

How can you send these letters? It is easy.

Go to — <https://send-a-letter.org/hoa/> — enter your call sign and click on "Send My Letters" and your letters will be delivered to our Washington legislative team for hand delivery to your Representative and Senators.

Does your individual letter matter? YES.

## ON THE AIR

**Constitution Day** Sep 17-Sep 24, 0700Z-0700Z, W3C, Rancho Cucamonga, CA. Jeff Widen. 7.275 14.074 14.250 21.315. QSL. Jeff Widen, 7548 Ramona Ave, Rancho Cucamonga, CA 91730. Celebrating the signing of our defining document the US Constitution on September 17, 1787 at Independence Hall Philadelphia, PA. [www.qrz.com/db/w3c](http://www.qrz.com/db/w3c) or [www.qrz.com/db/k6qcb](http://www.qrz.com/db/k6qcb)

**National POW MIA Recognition Day** Sep 19-Sep 21, 0000Z-2359Z, K4MIA, Loxahatchee, FL. PBSE. 7.195 14.265 18.150 28.400. QSL. Michael Bald, 6758 Hall Blvd, Loxahatchee, FL 33470. Observances of National POW MIA Recognition Day are held across this

country on the third Friday in September each year. This year it will be on September 19. The day was established to honor our prisoners of war and those who are still missing in action. This will be the 17th year the special event station has been activated. Again, multiple K4MIA/ will be operating. Modes used will be, SSB, CW, FM, digital modes, SSTV, Satellite. See QRZ (K4MIA) for a lot more information and a copy of this year's QSL card. Because of the volume of requests, you MUST SEND SASE to get a returned QSL. Please take time to remember our POW's, MIA's and KIA's. [www.qrz.com/db/k4mia](http://www.qrz.com/db/k4mia)

**WWV 106th Anniversary SES** Oct 2-Oct 5, 0000Z-2359Z, WWOWWV, Fort Collins, CO. WWV

Amateur Radio Club. 7.048 7.248 14.048 14.248. QSL. WWV ARC, PO Box 273226, Fort Collins, CO 80527. In North America, the SES starts on Wednesday evening, October 1 local time, and runs through Sunday evening. We always like to hear everyone's WWV story, so feel free to share yours if you're operating sideband. Our goal is to share what we know about WWV, especially with new operators who may want to learn the history behind one of the longest operating stations in the world. See you in the log! [www.wwv.org](http://www.wwv.org)

**US Navy's 250th Birthday** Oct 4-Oct 19, 1400Z-2359Z, NI6BB, San Pedro, CA. Battle-ship Iowa Amateur Radio Asso-

ciation. see website for list of frequencies; modes will be at the discretion of the operator. QSL. See website, for, information. [biara.org](http://biara.org)

FP5KE Team will be active from **Saint Pierre and Miquelon Islands**, IOTA NA - 032, 15 - 26 September 2025. Team - Members of F6KOP Club. Team leader - F2DX. They will operate on 160 - 6m, CW, SSB, Digital Modes and 2m EME.

3COW Team will be active from **Annobon Island**, IOTA AF - 039, during September 2025. They will operate on 160 - 6m. QSL via YL2GN, ClubLog OQRS, LOTW. Direct QSL: Ziedonis Knope, P.O.Box 55, Balvi, LV-4501, Latvia.

## HamSCI by Armando Delgado, KN4JN

In 2015, Nathaniel Frissell, PhD., W2NAF professor of physics at Scranton University, specializing in ionospheric physics, realized that modern amateur radio could provide a wealth of data to supplement his research. Today, the internet includes numerous amateur websites that show radio contacts in real time, like DXCluster that shows live QSOs, including call signs, UTC time of contact and frequency, while others, like the Reverse Beacon Network, show all of the above plus distance between stations and signal strength above the background noise in dB. Also, websites like ClubLog maintain logs for most expeditions, listing call signs, dates, UTC times and frequencies of the contacts. Expeditions, especially the larger ones, can make thousands of contacts from all over the world in just a few days. And of course, hams are always ready to get on the air and make contacts. With those facts in mind, Dr. Frissell founded an organization to harvest all of that data and Ham Radio Science Citizen Investigation (HamSCI) was born. Although initially the project was primarily associated with Scranton University, in time, many other universities doing research in atmospheric and solar physics joined the program.

One of HamSCI earliest projects was the Personal Space Weather Station. The organization provided a sensitive receiver and a magnetometer to any interested citizen, not necessarily just amateur radio operators, to monitor Doppler shifts of the WWV transmissions, synched to magnetic variations caused by solar irradiation, to expand on the official magnetometers that give us the A and K indices every day.

Another large project involved the solar eclipses of October 14, 2023 and April 8, 2024. With several months of forewarning as to the date, time, and tract of the eclipses, HamSCI sponsored an amateur radio Solar Eclipse QSO Party and got the word out to the ham community to participate.

The 2023 eclipse was an annular eclipse that crossed the western United States and proceeded through Mexico and on to South America. Participants were encouraged to begin operations a few hours prior to the eclipse and continue for a few hours after the end in order to bracket the radio propagation changes between baseline readings. The exchange consisted of a signal

report and the six character Maidenhead grid square of the station to provide a precise geographical location of the stations. Stations calling CQ were asked to call CQ several times or to call CQ TEST to activate the Reverse Beacon Network to obtain further data on the QSOs. Participants also were to submit their logs to a website that HamSCI published.

The 2024 eclipse was a more significant event, since it was a total eclipse. It began in Mexico and crossed the entire United States diagonally, the shadow entering in southern Texas and exiting in the state of Maine. Like with the previous eclipse, participants were asked to begin operations a few hours prior to the beginning of the eclipse and to continue for a few hours after. The exchange in the contest was the same: signal report and the six character Maidenhead grid square.

Daily night-day light changes take several hours to be completed and the ionospheric changes are slow and gradual, yet in a total solar eclipse, at any particular site in the path of totality, the period of darkness is very brief, lasting only 2-3 minutes. The ionospheric changes affecting radio propagation would be different from the regular day-night shifts. By gathering data on the patterns of radio signal propagation, researchers hoped to gain an understanding of ionospheric changes on time-limited solar radiation effects.

HamSCI also looked to study radio propagation in the ionospheric E layer by obtaining data from meteor scatter signals. To this purpose they sponsored meteor scatter QSO parties to be carried out during some of the major meteor showers of the year. This year, 2025, they ran an event during the Perseid meteor shower that peaked on August 13 but that actually was active for several days before and after that central date. They will also have another QSO party during the Geminid meteor shower projected to peak in the evening of December 13-14, 2025.

As compared to the solar eclipse QSO parties where all amateur

radio modes and all radio amateur frequencies were accepted (except for the WARC bands that do not allow contests) the meteor scatter bands are limited to 10m and 6m and the mode used is MSK 144, one of the digital modes of the WSJT group of programs and the favored mode of meteor scatter enthusiasts. HamSCI encourages participants in these events to submit logs to their designated website.

One of Dr. Frissell's research projects is a phenomenon known as traveling ionospheric disturbances (TID) that contribute to the common event of radio signal fading. This particular occurrence is not directly due to solar irradiation and its effect on the upper atmosphere but originates in the lower parts of our atmosphere. In essence, temperature and ion-density concentrations at the different layers of the atmosphere cause "waves" to travel up from the lower layers to the ionosphere where they spread, disturbing the electron plasma density in that layer, which in turn changes the radio signal refracting properties of that medium. The end result is that the refraction of some radio signals will cause them to travel farther than others, triggering the noticeable fading radio operators observe in their radio signal receptions.

The August, 2025 issue of QST has an excellent article by Ethan Miller, K8GU and Dr. Frissell, W2NAF explaining the nature of this phenomenon.

Solar and atmospheric physics research is an ongoing complex and evolving field of science. Ham radio amateurs can contribute to this source of knowledge just as we can contribute to communications during emergencies by using what we love best: our radios. HamSCI has opened the doors and provides an opportunity for hams to contribute to this important research while at the same time enjoying our hobby.



### 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](mailto: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	K4QSC	St. CLOUD, OSCEOLA	K1XC	Radio Science Club, FI 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 1k rd.	WN3DHI	
146.610	610 ME	-600	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	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 FM
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	TSq l 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 limit	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	TSq l;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 Line	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	TSq l; 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	TSq l
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 TSq l ; 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 and Rx)							
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							