



**INDIAN
RIVER ARC**

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

VOLUME XLI, NUMBER 6

SPURIOUS EMISSIONS

JUNE, 2020

CLUB MINUTES

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NEWSLETTER EDITOR

ARMANDO DELGADO
KN4JN

HAPPENINGS

The International Amateur Radio Union Region 2 (IARU-R2) is conducting a series of emergency communications workshops online using Zoom. The first round of presentations was in May, 2020 but will continue in the future. Go [here](#) for information and to register.

The amateur radio linear transponder (SSB/CW) on the Russian DOSAAF-85 (RS-44) has been

Meeting called to order by Viron Payne, N4VEP at 19:06 hours. This meeting is both an in-person and virtual meeting via Zoom.

Viron led on the Pledge of Allegiance, then welcomed guest Brett Silvernell, K4EHK Old Business

Secretary's Report – By Ernest Hoffman K1CPO

No in person meeting last month due to virus.

Treasurer's Report: Larry Hendersin KK4WDD was absent today and report given by Viron. There followed a motion by Steve, N4UTQ to accept; seconded by Armando. KN4JN. Voted and accepted.

Technical Committee's Report - Dave Lerret KU0R: All repeaters are up with new version of controller software installed by Chris.

ARES Report: Hylan Boxer, W4UTD introduced himself to the club. He is a new ham and just learning what is required for ARES. He will run the Wednesday night Net and the NBEM training in the future.

BEARS Report - Viron Payne N4VEP: The 444.525 antenna to be replaced. BEARS now have the antenna but need to

activated. Dmitry Pashkov, R4UAB, explains that RS-85 is a small scientific satellite built by specialists at Information Satellite Systems and students at Siberian State Aerospace University (SibSAU). Transmitter power is 5 W, and the beacon is on 435.605 MHz (identifying as RS44). The transponder is inverting, with uplink centered at 145.965 MHz ± 30 kHz, and downlink centered at 435.640 MHz ± 30 kHz. LoTW

install it.

Red Cross Report - Steve Luchuk N4UTQ: We will do away with the Red Cross since it is now in Melbourne.

Now the club will meet at River of Life Church annex.

Backup station is being installed at the River of Life church. Expect to be up in two weeks. It will be some time before we have a permanent station.

New Business

All future club meetings will be on the 3rd Tuesday of the month. The next one will be on July 21.

All club equipment was removed from the Red Cross and the salvaged club towers are stored at River of Life Church on Merritt Island and a small limited access VHF & UHF capabilities are in place at River of Life Church.

Field Day is June 27 & 28. The club will not run a Field Day operation this year but members may operate from home as class D or E. The ARRL will allow the members' scores to be tallied for the club if operators submit the club name with their entries.

Coast Guard Day: Money was

donated to Coast Guard to pay for a Home Depot gift certificate to buy a gas grill for Coast Guard personnel.

Next, Viron presented an idea to buy a CONIX CONTAINER station facility for a club radio room, to be located at the River of Life Church. The container would cost about \$14,000 for a 20 foot unit and about \$15,500 for a 40 foot unit. Shipping cost would be \$500.

We will need to try and get a fund raiser to get money.

Next, Viron showed a video about amateur radio in use in emergency conditions during hurricane Michael, to illustrate the usefulness of amateur radio in big emergencies.

In closing comments, Armando pointed that in the last few years we have lost the ability to teach amateur radio to new hams and suggested organizing an Education Committee that could teach ham radio by using Zoom. Steve commented that Field Day was the best way to educate people about amateur radio.

The meeting adjourned at 20:15.

Respectfully submitted,
Ernest Hoffman, K1CPO

accepts contacts via DOSAAF-85 as "RS44."

New SSTV software YONIQ

Eugenio Fernández

EA1ADA reports that YONIQ, a modern version of the popular Slow Scan TV software MMSSTV, is now available. We are excited to finally be able to offer the entire radio community the revamped MMSSTV with the nickname YONIQ also in English

Some of the improvements that YONIQ offers include:

- Both English and Spanish languages supported
- Equipment control through the Omni-Rig system
- Independent memory system
- Download data directly from QRZ.com
- Logbook compatibility with support for JTDX, WSJT, etc
- Indication of the percentage of image sent and received

HAPPENINGS

- Improved image reception settings
- Modern visual interface

Info: to change the language go to OPTIONS-> CONFIGURE MMSSTV-> MISC

We hope you enjoy YONIQ very much and can offer the SSTV one more attraction.

You can download YONIQ from the link on the following page, look for "Descarga de MMSSTV 1.13 YONIQ"

<http://radiogalena.es/yoniq/>

WSJT-X version 2.2.0 is now in general availability release, after a short stint in beta (or release candidate)

status. WSJT-X version 2.2 offers 10 different protocols or modes – FT4, FT8, JT4, JT9, JT65, QRA64, ISCAT, MSK144, WSPR, and Echo. More details [here](#).

The US Postal Service (USPS) has temporarily suspended

international mail acceptance for items addressed to certain destinations due to service impacts related to the COVID-19 pandemic. This situation could result in the return or loss of mail, such as QSL cards, addressed to affected parts of the world. The USPS has posted a [list of affected countries](#), which is updated regularly. The Postal Service will, upon request, refund postage and fees on mail bearing a customs stamp that's returned due to the suspension of service, or the sender may re-mail returned items with existing postage once service has been restored. When re-mailing under this option, customers should cross out the markings "Mail Service Suspended – Return to Sender."

The June PDF of the **GEO Newsletter** weather satellite publication produced by the Group for

Earth Observation is now available for free download.

The Group for Earth Observation's aim is to enable amateur reception of weather and earth imaging satellites that are in orbit or planned for launch in the near future. Membership of GEO is free. Download the GEO Newsletter from

<http://www.geo-web.org.uk/geoquarterly.php>

International Lighthouse Lightship Weekend ([ILLW](#)) 2020 will take place over the August 22 - 23 weekend, a week later than usual to avoid conflicting with special events that may be on the air to commemorate the 75th anniversary of the cessation of World War II hostilities in the Pacific.

Apple has announced CarKey, a

way to wirelessly unlock your car with your iPhone, it could herald the start of an era that sees 13.560 MHz NFC transmitters installed in cars. **It will offer** security and privacy equivalent to physical keys, interoperability and user experience consistency across mobile devices and vehicles, vehicle access, start, mobilization, owner pairing and key sharing with friends, with standard or custom entitlement profiles, support for mobile devices in Battery Low Mode, where normal device operation is disabled. You will be able to use your iPhone to lock and unlock your car and also start your car. You will also be able to send a digital car key to someone via Apple's messaging apps. They will then be able to use this key to lock, unlock and start the vehicle.

ON THE AIR

ANTARCTICA, 8J. Members of the Japanese Antarctic Research Expedition team (JARE) will be active as 8J1RL from Showa Research Station, Queen Maud Land (AN-015), until January 2021. Listen for operators Take, JA1AGS and Hiro, JH7JCX. Activity will be on various HF bands using CW and the digital modes. QSL via JG2MLI or the JARL Bureau.

ISRAEL, 4X2. Isaac, 4Z1TL will activate Stay-At-Home station 4X2BESAFE until August 2. Activity will be on various HF bands. QSL via 4Z1TL, direct. No IRCs.

BULGARIA, LZ. The Bulgarian Federation of Radio Amateurs (BFRA) celebrates its 50th anniversary with the call sign LZ50BFRA until the year's end. QSL via bureau to LZ1BJ.

AUSTRALIA, VK. Station VI250COOK commemorates Captain James Cook's voyage on HMS Endeavour along Australia's east coast with activity from May 1 to August 31. For QSL information see qrz.com.

ANTARCTICA. Station KC4USV located at the McMurdo Station, IOTA AN-011, has been QRV on 20 meters using SSB. QSL via K7MT.

VANUATU. In celebration of the 40th anniversary of independence, all three members of the Vanuatu Amateur Radio Society (VARS) will operate special event station YJ40IND during the month of July. Activity will be according to the individual operators' schedules, but is expected to occur mostly during late afternoons and evenings (0600 - 1000 UTC). Operators should look for activity

on 40, 20, and 15 meters, where propagation is expected. On FT8 (normal or as the Fox) will be Rod, YJ8RN. On SSB will be Estelle Dihn, YJ8ED, step-daughter of the late VARS president, YJ8PE. On CW, listen for Colin, YJ8CW.

Alexander, RX3ABI will be active from Mirny Station, **Antarctica** until early 2021. He will operate on HF Bands.

The Brickyard 400 Jun 29-Jul 5, 0400Z-0400Z, W9IMS, Indianapolis, IN. The Indianapolis Motor Speedway Amateur Radio Club. 18.140 14.245 7.245 3.840. Certificate & QSL. Indianapolis Motor Speedway Amateur Radio Club, P.O. Box 30954, Indianapolis, IN 46230. See the website for ALL information! www.w9ims.org

Mount Rushmore Independence Day celebration Jul 3-Jul 5, 1800Z-2359Z, WOI, Pierre, SD. SOUTH DAKOTA ARES. 14.238 14.040 7.268 7.040. QSL. JIM ZAHRADNICEK, 29563 US Hwy 14, Pierre, SD 57501. WOI will be active for the independence day celebration at Mount Rushmore in SD. Some digital operation is possible using FT8 or PSK31. kdOs@kdOs.com

USS Midway Museum Ship Special Event: Independence Day Jul 11, 1600Z-2300Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 14.070 (PSK31) D-STAR on various reflectors. QSL. USS Midway (CV-41) COMEDTRA, 901 N Harbor Drive, San Diego, CA 92101.

The Solar Cycle by Armando Delgado, KN4JN

The great majority of hams know about the eleven-year solar radiation cycle and its effect on radio propagation. The sun fluctuates in radiation intensity over time, and every eleven years reaches a maximum and then slumps into a minimum eleven years later. The solar cycle is not precisely eleven years every time. Some cycles last as much as fourteen years and others as little as nine. At least, that is what the historical record shows.

Years ago, the solar cycle became known due to the changes in the number of sun spots noticed on the surface of the sun. Actually, the sunspot number is the oldest standing continuous scientific record in the world. Rudolf Wolf developed the sunspot numbering scheme in the 1700's and that system is still in use today. Using his scheme, the first official solar cycle was in the years 1755-1766.

The historical record tells us that the Chinese recorded sunspots before the time of Christ, but the modern study of sunspots began after the invention of the telescope by Galileo in 1609. In his telescopic observations, Galileo studied the sun and described the sunspots and made drawings. Later observers also tracked sunspots and reported the cyclical changes, but it was not until Wolf developed his numbering scheme that a consistent, organized record was kept.

In spite of the lengthy scientific record of sunspot changes, their connection to the overall solar irradiation pattern was not known until well into the 20th Century when scientific advances allowed the measurement of other parameters of solar activity. Now we know that the sunspot number correlates closely with solar irradiation, increasing as the sun increases activity and diminishing as the sun becomes less active. Yet, in spite of all our knowledge we still do not understand the reasons for the solar cycles, why the sun has these cycles, and the internal processes that drive them. Without this knowledge prediction of solar ac-

tivity depends on statistical analyses of previous performance, which are never precise, particularly in a short time span. There are no absolutes in statistics. There cannot be 0% or 100% in a statistical evaluation because the curve becomes asymptotic as it approaches the X axis, it approaches 0 but can never reach it. There will always be a chance, no matter how slim, that something unexpected could happen.

The current solar cycle, number 24, began in January 2008, with minimal activity until early 2010. The cycle featured a "double-peaked" solar maximum. The first peak reached 99 in 2011 and the second in early 2014 at 101. It appears likely that Cycle 24 will end sometime in late 2020. The latest predictions from the National Oceanic and Atmospheric Administration (NOAA) Space Weather Prediction Center shown in the graph tracks the projected pattern. (More details on these predictions can be found [here](#).) Normally, as a new cycle begins the magnetic polarity of the sunspots changes. In December 2019 a sunspot of reverse polarity from those of cycle 24 appeared. Then a month or two later another one showed up as well causing some observers to speculate that cycle 25 had already begun. Since then, not many sunspots have appeared on the sun's surface, and a brief one in April 2020 was a cycle 24 spot.

So even though statistical predictions cannot give us certainty in the short term, they give us certainty that a change is afoot and that we can expect the band conditions to improve in the coming months as the new solar cycle evolves and solar activity increases.



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:

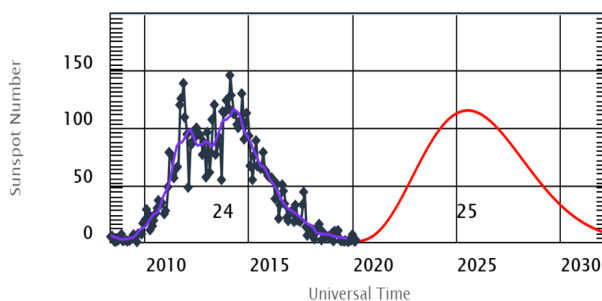
1.8025, 3.5815, 7.0475,
14.0475, 18.0975, 21.0675,
28.0675, 50.350, 147.555



Editor's Note:

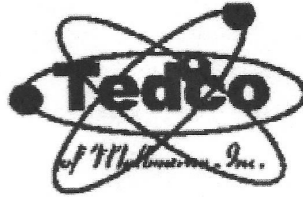
Send comments about the Newsletter or to contribute information or articles to the Editor's email address:

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, 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 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	W4NXL	ROCKLEDGE- WUESTHOFF HOSP.	IRARC	FUSION Repeater replaced with Bridgecom F
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	W4NXL	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.	K4UJZM	
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 and user 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							

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JW DAVIS SOUND
JVC PARTS

KENWOOD RADIO
KOSS
KESTER

LITTELFUSE
LOWELL

M & G
MALLORY
MACOM
MAXON
MIDLAND
MOTOROLA

NTE TRANSISTORS
NELLO TOWERS
NTE ELECTRONICS
NORMAN LAMPS

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