**The HIARC Bulletin**

October 2022 Edition

**Newsletter of the Harris-Intersil Amateur Radio Club**

**Club Meetings:** Second Thursday of each month at Meemaw’s Barbecue on Babcock Street between Palm Bay Road and Port Malabar Road. Supper is at 5:30 PM, business is at 6:30 PM. Prizes at 7:00 PM. Our programs start at 7:15 PM. Meeting ends by 8:00 PM. As some members have allergies, we kindly ask that you refrain from wearing fragrances. Thanks.

**Repeaters:** K4HRS,145.47 Mc, tone 107.2 cycles. Down for the moment, being moved to the Turkey Creek Tower.

**Nets:**

These nets are open to everyone. Subject to change try:

* South Brevard Emergency Net: Thursdays at 7:00 PM. 146.61 Mc. In event of repeater failure 146.85 Mc and or 146.58 Mc simplex.
* Skywarn Net: 7:30 PM or so, 146.61 Mc Thursdays.
* Palm Bay Informal Net: 8 PM Thursdays on 147.255 Mc.
* Medical Complaint Nets: evenings 3.5 to 4.0 Mc.
* Gasoline Price Complaint Net: 146.61 Mc Fridays after the ham lunches

**HIARC Web Site:** [www.qsl.net/hiarc](file:///C:\Users\Worm-W10PC\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\053Z5X9S\www.qsl.net\hiarc). Website administrator; Jim Tonti, KC7SSW

**Officers:** President: Francis Parsche (“Butch”), WA4AQV

Treasurer: Pat Reilly KA4ZEC

Secretary: Open

Repeater Chairman: Clyde KD8AN

Program Chairman: Open

Field Day Chairman: Open

Sunshine Chairman: Open

Club Jester: Ken N8KH

**Annual Membership:**

Annual dues are $12.00. You can join at the meeting or send a check to:

HIARC Treasurer

Pat Reilly, KA4ZEC

1985 Howell Lane

Malabar, FL 32950

We are on a calendar year dues system with annual dues due in June. Dues are prorated by a dollar a month so if you join in April they are $2.00 to get to June, or you can pay ahead.

Send me your email address to receive the newsletter: francis.parsche@l3harris.com

**Select Hamfests**

* 11-19-22, PCARS Tailgate, Melbourne Fire Department Training Center, 1980 Hughes Road, Melbourne, FL 32935. Talk in 146.61 MHz repeater. Gets started about 8 or 9 AM. Usually everybody goes to lunch about 11 AM, ask around on the 61 repeater for the lunch location.
* 11-26-22, Palm Beach County Ham Radio Festival, [www.palmswestradio.org](http://www.palmswestradio.org)
* 1-14-22, Orlando, K4KDI Winter Tailgate, <http://k4kdi.square.site>
* 2-10/23. Orlando Hamcation, [www.hamcation.com](http://www.hamcation.com)
* 3-18-22, Stewart, [www.stuarthamfest.com](http://www.stuarthamfest.com)

**Ham Radio Lunches:**

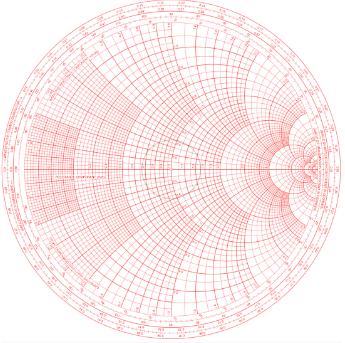
* Every Friday, 11:00 AM till 1:00 PM or so, Golden Corral on Palm Bay Road in Palm Bay. Around 9 people recently. Talk in on 146.61 Mc repeater.
* Every Friday, 11:00 AM till 1:00 PM or so, Crystal Buffet on 192. Around 9 people recently. Talk in on 146.61 Mc repeater.
* Once a month, the Saturday after the PCARS meeting, Sarno Restaurant and Pizzaria, 11:00 AM. Talk in 146.61 repeater. This restaurant is at the corner of Sarno Road and Croton Road.

**September 2022 HIARC Meeting And Program**

Our next HIARC meeting is Thursday October 13 at Meemaws Barbecue on Babcock Street. 5:30 PM for dinner, 6:30 business, 6:45 prizes, 7:00 our program.

The October program will be “Applications Of The Smith Chart” by Ken N8KH: “New inexpensive vector network analyzers (VNA) like the nanoVNA (and others) have become available.  They present the complex impedance of a circuit over frequency as a trace on the Smith chart.  In my talk you will learn how to interpret complex impedance data presented on the Smith chart format and what is really happening in your antenna tuner.  Also learn what that shunt coil on a mobile screwdriver antenna is really doing.  Be able to quickly construct a matching circuit for any antenna, once you see its complex impedance on the Smith chart.  The focus will be on practicality: what those components are actually doing, as represented on the Smith chart”.

The Smith Chart is a vector impedance diagram invented by a radio amateur Phillip Smith W1AN.



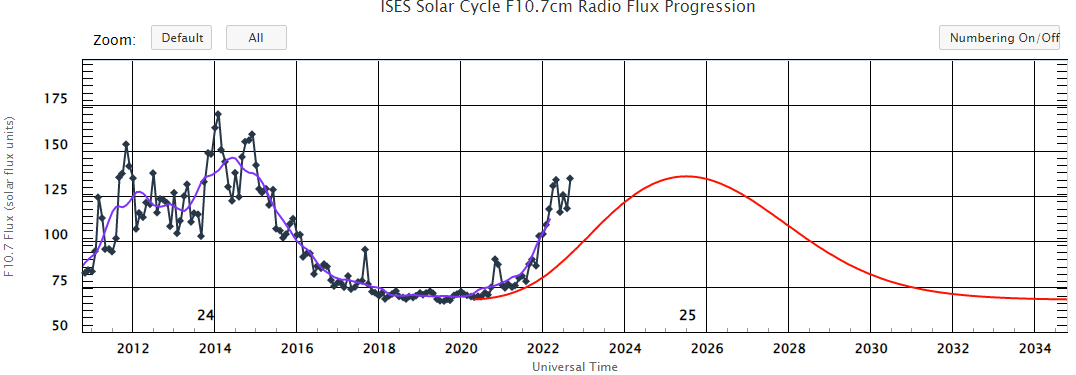
**W1AN’s Smith Chart**

**Melbourne Hamfest**

The annual Melbourne Hamfest was held last weekend October 7 and 8. About 700 tickets were sold down from 900 or so last year. Hurricane Ian was one factor with many Florida west coast amateurs not attending. There weren’t really any new equipment vendors. There were lots of used bargains which the Melbourne Hamfest is good for. Weather was great. Seminars were good. Lots of friends. Thanks to all the people who volunteered. Melbourne is a nice hamfest.

**HF Conditions Really Improving!**

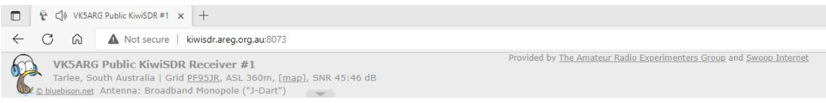
HF is getting better for many reasons. 1) Winter ionosphere conditions are coming with lower noise and less absorption. 2) Cycle 25 is taking off much more rapidly than expected. Here is current solar flux plot:

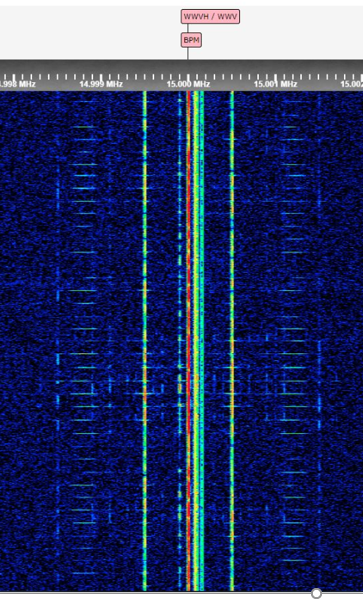
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**Measured Solar Flux Since 2011**

Of course you’re excited! The solar flux at this writing was 163! This is way above predictions it’s supposed to be only about 85 now. The highest the solar flux may have ever reached is 280, a value recorded in 1958. Double the solar flux and you can double the HF frequency you use. Double the frequency and the galactic noise level goes down by 6 dB. Lightning noise even more.

Want to see how good? The following figure shows reception of 15 MHz WWVB at a quiet site this week just before daybreak in Southern Australia.





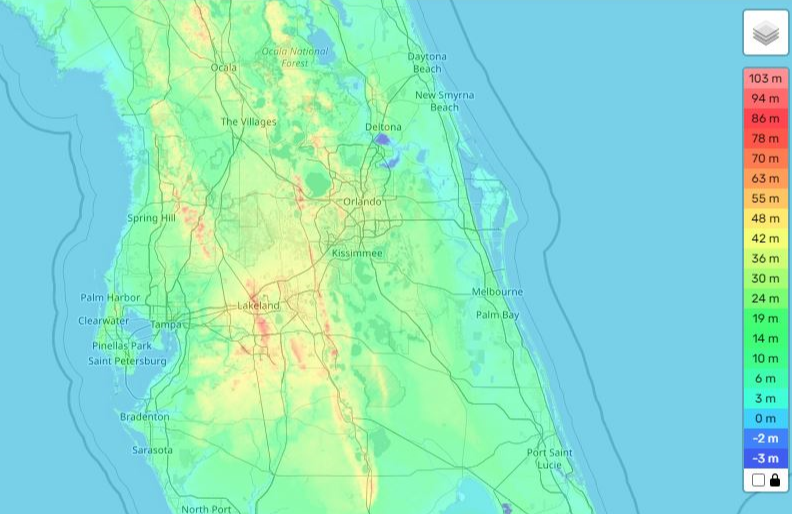
Received WWVH Spectrum At A Quiet Site In Southern Australia

So the propagation is roaring in. In this Australian spectral plot frequency is the horizontal axis, time is the vertical axis, and signal strength is in depicted colors ranging from blue for weak to red for strong. The plot also shows reception of the BPM time signal station from China and WWVH from Hawaii both coming in at the same time. BPM emissions are the fine horizontal lines way to the side of center, + - 1100 cycles from 10.0 Mc. In some parts of the world you hear two time signal stations on top of each other. Sometimes we hear Caracas Venezuela on top of 10 Mc WWV here in Florida.

20 meters is more and more open through the night now and this is an excellent DX opportunity. Middle of the night here is when stations on the other side of the earth are awake and on the air.

**Down In The Dumps? Try Some VHF DX!**

It’s always nice to find a high spot to operate during the VHF contests. Florida makes this difficult. You can try using this topographic map <https://en-gb.topographic-map.com/map-nb18/United-States/?center=27.23998%2C-80.89783&zoom=8> but all the hills are in west Florida!



**FL Topo Map: A Few Sand Hills Way Out West**

So much for heading for the hills? Not really. There is the answer!



**Level 3 Hill DX Site, Orange County Landfill**

The highest terrain in East Central Florida is the landfills, the perfect VHF site. Here are instructions for VHF action at “Level 3” hill, Orange County landfill. The true story:

1. Wear old clothes and a ball cap. Bring something to throw out and drive to the Orange County Landfill weigh station at 5901 Young Pine Road, just north of Orlando International Airport.
2. Turn your radios off for a moment.
3. At the pay booth look nonchalant. Tell the staff you want to dispose of some “*construction debris*”. *Construction debris* is important. It’s your ticket to the top of the “level 3” hill. If you say household garbage you will have to use the entrance dumpster. Dumpster propagation is poor.
4. They staff may sense you are a radio amateur. Don’t let them know you are looking for propagation enhancement. You don’t want to go to the funny farm. Propagation enhancement at the funny farm may be poor. You are normal. It’s only the non amateurs that are abnormal.
5. Follow the signs after the pay booth and wind your way to the top of level 3 hill. Last I was there level 3 was about 100 feet above terrain. Perfect for propagation.
6. Wave hello to the bulldozer guy. He will tell you in which direction to throw out your “construction debris”. He must be lonely. Most people don’t stay long.
7. Now call CQ and make your propagation enhanced contacts. You will reach all the repeaters in Orange and Brevard County no problem. How cool.
8. Take a selfie so you can savor the moment later.
9. On the way out tell everybody how nice their dump is so you can come back. Pay the minimum weight charge. $5.00 when I went. Most economical for a DX’pedition?

Well, that’s about all there is to know. Future QST article? Dump to dump contacts? Dumps on the air? We can discuss at the meeting.

73’s. till the next sunspot,

Butch WA4AQV