



april-fools-day-article.jpg



May 2018

# ARCO *vet*

A Community Service Organization Dedicated to Amateur Radio Since 1970

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**Armed  
Forces  
Day** CITY OF  
TORRANCE  
*Celebration*

**SATURDAY,  
MAY 19TH**



**Come On Out — Show Your Support!!**

E-mail: [W6SBA@arrl.net](mailto:W6SBA@arrl.net)



Website: <http://www.w6sba.org>

Lots of activities, both in the community and on the air in the next few weeks. I hope all members can participate. Club Picnic on Saturday May 12, at De Portola Park, 25615 Lazy Meadow Dr., Torrance. Armed Forces Day is the following Saturday, May 19. We need 10 members with Battery powered 222 Mhz rig for communications between the Division Check-In stations and Net Control from 10:00 AM to 3:30 PM. On Monday, May 28, several members will be required for the Greenhills Memorial Park Memorial Day ceremonies from 9:00AM to Noon. Contact me at wa6owm@arrl.net or 310-357-9144.

On the Air activities include the CQ WW WPX CW contest on May 26, 00:00 UTC till May 27 at 23:59UTC. Exchange: RST-Serial Number. The ARRL June VHF Qso Party is scheduled for 1800 UTC – June 9 to 02:59 UTC June 11. Exchange: Grid Squares. Modes While CW and Phone, (SSB and FM count as Phone), MSK441 and FT8 are gaining popularity along with PSK31, FSK441 and JT65. All authorized frequencies above 50.0 Mhz (6-meters) can be used. Check ARRL.ORG June VHF for more details. Try the FM-Only entry.

Kids day twice a year the ARRL offers an event designed to promote Amateur Radio to our youth. Kids Day runs from 1800 UTC to 2359 UTC on June 16. Check the ARRL website for suggested frequencies. Try “CQ KIDS DAY”, it's fun.

Again this year many groups and participants will operate in the ARRL Field Day. Field Day is the single most popular on-the-air event held annually in the US and Canada. Field Day is a Picnic, a Camp out, it's PRACTICE for an Emergency, think of the Big Island of Hawaii and Kilauea eruption. It's an informal contest and most of all FUN. The contest part is to contact as many other stations as possible, learn to operate unfamiliar radio setups, log contacts while operating off the grid with less than optimal conditions. 2018 ARRL Field Day will run from 18:00 UTC, June 23 to 17:59 June 24. Setup will start Friday afternoon on the roof of the Torrance Memorial Medical Center West Parking Lot. Lots of help is needed to get it all set-up, tested and ready for the party Saturday morning. Our task as the representative of the Amateur Radio Service worldwide community using the airwaves and show our preparedness when called upon in our community.

See everyone at the next club meeting on Thursday, May 17 at 7:30PM., and please check-in to the Thursday night Club Net, 7:30 PM, on the W6SBA/R 224.380 Mhz. If a net control station is busy or late to the net, please go ahead and start the net. Think of it as fun...

WA6OWM



### < 2018 CLUB OFFICERS >

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# MAY

## MEETING

ABCs of  
RFI for Hams

By  
Bob Brehm, AK6R



Is your transmitter the SOURCE of RFI affecting electronic devices in your own house or your neighbor's house? Are you the VICTIM of RFI from your own electronic devices or from devices in your neighborhood? Do you want to reduce your receiver noise floor so you can hear local contacts and more DX?

If you answered YES to any of these questions and would you like to find a quick and easy solution, then you should attend this presentation where you will learn how to troubleshoot and minimize RFI issues so you can have more time to operate and enjoy ham radio.

Topics in this talk include: - Fundamentals of RFI – identifying symptoms, pinpointing causes & applying simple cures - What's a ferrite and how to choose & buy the right ferrite for your RFI issue - How to use ferrites to solve the #1 RFI problem shared by all hams using HF radios - How to choose and use ferrites to solve transmitter RFI problems in your home or neighborhood - How to choose and use ferrites to reduce receiver noise and hear more DX

During the presentation you will see many examples of feed line chokes, baluns, ununs, and various practical applications of ferrites for AC/DC power lines, computer interconnect cables, transceivers, linear amplifiers, home theater systems, etc.

Bring your questions and pay attention to win one of the prizes at the end of the talk.



- 1) A man shopping in a pawn shop saw a coin dated 22 BC. He immediately knew that it was a forgery. Why?
- 2) Out of 3 males and 3 females, 3 people enter a room. What is the probability that there are 2 males and 1 female in the room?
- 3) What has a head, a tail, no legs, and is brown?
- 4) Can you name three consecutive days without using the words Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday?

### April 2018 Quiz Answers

- 1) Bill and Sam have combined ages of 30. In 14 years, Sam will be 3 times the age Bill is now. How old are they now? *If Bill is age  $x$ , then Sam is age  $30 - x$ . In 14 years Sam will be  $30 - x + 14 = 44 - x$ . This must equal 3 times Bill's age. So,  $44 - x = 3x$  or  $4x = 44$ . So Bill is 11 and Sam is 19.*
- 2) Jean is my niece said Jack to his sister Jill. She's not my niece says Jill. Explain. *Jill is Jean's mother.*
- 3) 16, 06, 68, 88, ?, 98. What number does the "?" represent? *78. All of the numbers, when read upside down, are the numbers 86 – 91.*
- 4) What was the largest island in the world before Australia was discovered? *Australia, it just hadn't been discovered yet but it was still there.*



Please join us on W6SBA  
224.38 minus offset and the  
PLat 192.8 hz 7:30pm on  
Thursdays. You can share  
any info or just say hello!

## FCC Releases Notice of Proposed Rulemaking on Small Satellites

The FCC released a Notice of Proposed Rulemaking (NPRM) on April 17, seeking comment on proposals to streamline its rules regarding the deployment of "small satellites." This would include small spacecraft put into orbit for Amateur Radio purposes, as well as small satellites launched by non-Amateur Radio entities, such as universities, but using Amateur Radio spectrum. The NPRM primarily addresses satellites launched by the commercial sector, however.



"These types of satellites, which have relatively short duration missions, have been advancing scientific research and are increasingly being used for commercial endeavors such as gathering Earth-observation data," the FCC pointed out in its NPRM.

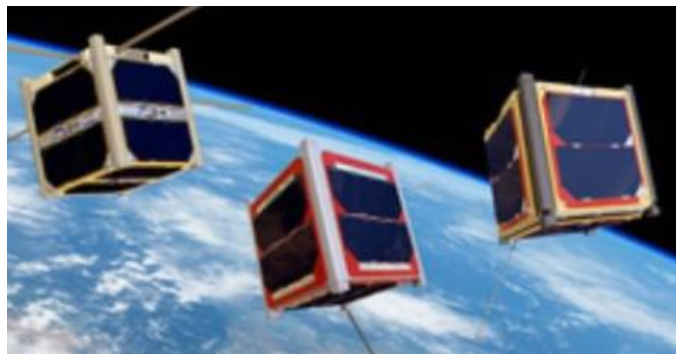
Until now, the FCC has not defined spacecraft categorized as "small satellites." An International Telecommunication Union Radiocommunication Sector (ITU-R) report focused on satellites having a mass of less than 10 kilograms with a typical mission duration as less than 3 years and deployed in low-Earth orbit (LEO), which would include most CubeSats. The FCC NPRM aims, in part, to further refine the definition of a small satellite.

The FCC has authorized small satellites as commercial operations under Part 25 of its rules, as experimental operations -- including scientific and research missions for purposes of experimentation, product development, and market trials; under Part 5 Experimental FCC rules, and as Amateur Radio satellites under Part 97.

In any case, FCC authorization is required prior to launch, and ITU Radio Regulations require that no transmitting station may be established or operated by a private person or by any enterprise without a license by or on behalf of the government of the country to which the station in question is subject. This would include spacecraft built in the US but launched in another country.

"Because the type of operations that qualify as Amateur are narrowly defined, an Amateur Satellite authorization will not be appropriate for many small

satellite operations," the FCC NPRM notes. "Commission staff may also request a document describing the mission of the satellite, in order to facilitate review and verify eligibility for operations in the Amateur Service," the NPRM continues.



The FCC notes that the International Amateur Radio Union (IARU) "will only coordinate a non-Amateur satellite, if an administration directs in writing that it be operated in an Amateur-Satellite band under an experimental or other non-Amateur license."

The NPRM does not propose any specific Part 97 Amateur/Amateur-Satellite Service rule changes, but some more general proposals could affect future authorizations under the Amateur Service.

Comments on the FCC NPRM will be invited 45 days following publication in The Federal Register. ARRL is planning to file comments. ARRL Letter 4/27/2018

## A Royal Call Sign

GR9RW will be the call sign for a Royal Wedding special event operation. To celebrate the marriage of Great Britain's Prince Harry to American actress Meghan Markle, special event call sign GR9RW will be on the air May 19 - 23. It's believed that this will mark the first use of a GR9 call sign prefix in the UK. The royal wedding will take place on May 19 at St. George's Chapel in England's Windsor Castle. Members of the Cray Valley Radio Society (CVRS) will operate GR9RW from their club station in Eltham. GR9RW will primarily use SSB and CW, with the addition of FM on VHF and UHF. Two HF stations and one VHF station will cover all bands from 80 meters to 70 centimeters. A commemorative QSL card is available upon request. ARRL Letter 4/29/2018



## IEEE SPECTRUM Report: FCC is Inconsistent Regarding Small Satellites

According to an April 10 IEEE SPECTRUM report, "The FCC's Big Problem with Small Satellites," confusion and erratic enforcement at the FCC is sending satellite makers abroad. Earlier this year, the FCC rescinded permission for Swarm Technologies to launch another round of SpaceBEEs later this month and questioned Swarm's suitability to be an FCC licensee. That came in the wake of Swarm's January launch from India, of tiny 0.25 U CubeSats, after the FCC had told the California company that it was unable to grant its application for an Experimental authorization in association with the deployment and operation of "four spacecraft smaller than 10 centimeters in one of their three dimensions." The FCC said SpaceBEEs were below the size threshold "at which detection by the Space Surveillance Network (SSN) can be considered routine."

The IEEE SPECTRUM article by Mark Harris suggested that the FCC's stance could doom Swarm's plans for a constellation of Internet of Things (IoT) communication satellites and "revealed that the FCC-licensed multiple satellites smaller than 10 centimeters over the past 5 years, including some as small as  $3.5 \times 3.5 \times 0.2$  centimeters. But the Commission has also changed its mind from one application to the next, refusing launch permission for satellites that were virtually identical to ones previously authorized. This uncertainty has led to at least one satellite maker exporting his technology rather than risk being denied a license in the US. ARRL Letter 4/19/2018



## FCC Commissioner Mignon Clyburn Stepping Down

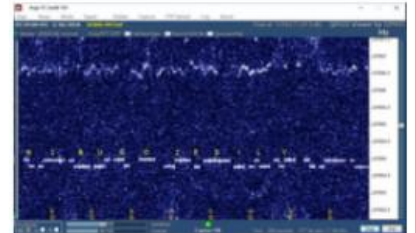
FCC Commissioner Mignon Clyburn is leaving the Commission. She announced at the Commission's April 17 meeting that it would be her last as a commissioner. She plans to leave before the Commission's next scheduled meeting on May 10.

Following her 2013 appointment by President Barack Obama, Clyburn served as acting FCC chair, the first woman to head the agency. A Democrat, she is currently serving a second term. FCC Chairman Ajit Pai congratulated Clyburn on "her distinguished tenure at the FCC," calling her "a tremendous leader and a committed public servant."

The other Democrat on the FCC, Jessica Rosenworcel, said, "Commissioner Clyburn is a dynamo. She represents the best of public service. I am proud to call her both a colleague and a friend."

## Apparent First 2200-Meter Transatlantic Contact by US Radio Amateur Reported

In late March, Paul Kelley, N1BUG, of Milo, Maine, completed what may have been the first transatlantic 2200-meter contact by a US radio amateur under Amateur Radio rules. Signals in this part of the spectrum and lower previously have spanned the Atlantic in one direction, and Canadian radio amateurs have reported transatlantic contacts on the band dating back several years.



An annotated screenshot showing the DFCW signal with both stations identified.

"To the best of my knowledge this is the first transatlantic two-way QSO from the US on 2200 meters under Part 97 operation," said Kelley, who told ARRL that he gravitates toward the more challenging, "weak-signal" aspects of Amateur Radio and has been experimenting and DXing for 37 years now.

"2200 meters is my new passion, and I am having a lot of fun with it!" he said. "I had been dreaming of -- and working toward -- a transatlantic QSO on 2200 meters for some time. Recently, I asked Chris Wilson, 2E0ILY, if he would be interested in trying to work me on DFCW60 mode. Chris and I have heard each other on WSPR, but he does not hear me well enough yet for a JT9 or other digital QSO. Chris agreed to try DFCW60 -- dual-frequency CW, 60-second dit length."

This was not a quick contact. It took four nights to complete, using night-by-night sequencing. Kelley called that "the minimum possible time" for such a contact, which included an exchange of complete call signs, signal reports, and acknowledgements. Kelley said they used the TMOR reporting system, borrowed from the moonbounce world.

"The QSO was completed at 0020 UTC March 28, when I received 'R' from Chris," Kelley said. ARRL Letter 4/5/2018

The other Democrat on the FCC, Jessica Rosenworcel, said, "Commissioner Clyburn is a dynamo. She represents the best of public service. I am proud to call her both a colleague and a friend."

The majority of the five-member Commission represents the political party of the president. According to POLITICO, Senate Minority Leader Chuck Schumer has already recommended to the White House Geoffrey Starks, an assistant chief in the FCC Enforcement Bureau, to nominate for Clyburn's seat. ARRL Letter 4/19/2018



## More-Frequent Spotless Days Signal Start of Lengthy, Deep Solar Minimum Phase



The sunspot numbers have not been good, and it does not seem they'll be getting much better any-time soon. According to the April 12 "K7RA Solar Update," no sunspots were seen over the April 5 - 11 reporting week. Solar flux has been sitting in the 60s lately and is forecast to remain at that level for

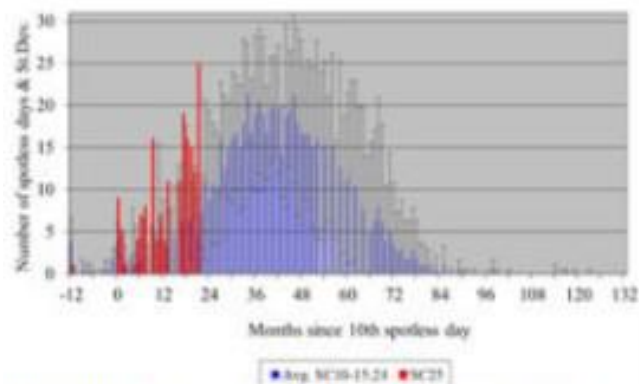
the next 45 days. We're not at solar minimum yet, though; better days lie ahead -- eventually.

Top contender Frank Donovan, W3LPL, asserts that solar precursors like spotless days, which correlate physical solar phenomena with future solar activity levels, are much better indicators of progress toward a solar minimum -- a broad phase of the solar cycle -- than of a specific event, such as the bottom of a broad solar minimum. Not only that, these and other solar precursors are useful in predicting the likely strength of Solar Cycle 25, although accurate predictions of the strength and timeframe of the Cycle 25 solar maximum aren't possible until the new sunspot cycle is under way.

"We entered the Cycle 24 solar minimum with the onset of 8 spotless days in June 2016," Donovan pointed out. "We had only 32 spotless days in 2016. We had 15 spotless days in a row in March 2017, followed by relatively infrequent spotless days for the next 7 months."

The frequency of spotless days accelerated in early November 2017, with 13 spotless days in a row. That was followed by many more spotless days over the next 5 months. In all, 2017 experienced 104 spotless days.

"The frequency of spotless days accelerated again last month, when we had 25 spotless days," Donovan noted. "We've already had 54 spotless days during the first quarter of 2018. This data and comparisons to frequent spotless days during the last solar minimum suggests that we may have just begun a period of very frequent spotless days for approximately the next 2 years, similar to the period of September 2007 through January 2009."



**This chart shows the number of spotless days -- in red -- since the 10th spotless day of the onset of solar minimum in July 2016. In blue are the average numbers of spotless days during sunspot minimums following weak sunspot cycles similar to Solar Cycle 24.**

Donovan said the next solar precursor is frequent extended periods of spotless days. For example, 2016 saw 14 spotless days in a row, March 2017 had 15, November 2017 saw 13, and early March experienced 14.

Frank Donovan, W3LPL, during a 2017 presentation on propagation at the Fair Lawn (NJ) Amateur Radio Club. "Long periods of spotless days will become even more frequent as we go deeper into solar minimum," Donovan predicted. Once extended periods of spotless days become more frequent, another solar precursor will become important, he said.

"New high-latitude, opposite-polarity Cycle 25 sunspots will then begin to appear more frequently, perhaps by late next year," Donovan said. "More frequent Cycle 25 sunspots will signal that we're approaching the bottom of the [Cycle 24] solar minimum phase."

An ongoing solar precursor that could herald the future strength of Cycle 25 is the intensity of the solar polar magnetic fields prior to the Cycle 24 solar minimum, Donovan said. "The good news is that the solar polar magnetic field strength is already slightly stronger than it was prior to the last solar minimum," he said. "This suggests that Cycle 25 will be somewhat stronger than Cycle 24."

Donovan said if the long periods of spotless days end in about 1 year, that will be a precursor of a stronger Cycle 25. If they take more than 2 years to end, however, it will portend a weaker Cycle 25. ARRL Letter 4/12/2018

## SPOT the INFORMATION

1. **Attendance drawing:** We did not have a drawing at our April meeting, so no winner. The kitty will be real good for May 22nd.

2. **Meeting location:** The Beach Cities Health District facility in the basement. This meeting location was for April only. The modifications in the TMMC Health Conference Center will be finished and we should be back in there for our May meeting. Thank you Bruce for arranging for us to meet at the Beach Cities location. Nice set up and plenty of parking. We need to keep this in mind in case needed again.

3. **Members in good standing:** This is an update of members having paid their dues for 2018. All others are still good of course.

Ken K6HRN 3282017 Matthew N6MDC 3282018  
John AF6Dh 3282019 Glendee KJ6EBS 3282020  
Greg WQ9P 3282021 Scott KM6FAX 3282022  
Clyde WB6HLS 3282023 Sarath KF6DBX 3282025  
Thank you all for your continued support. This is your club and we're so happy to have as a member. We look forward to your continued participation and support in 2018. We still have several of our members not having renewed their membership. We thank you for your support and participation in the past and wish you the very best of course. Thanks again one and all.

4. **Thank you:** Alan-KG6ZPL for your presentation at our April meeting which was great. The history of radio apparently having started in the 1700's was indeed an eye opener. Never knew the trials and tribulations going with that in those years. Thank you so much Alan-you're the best.

5. **Secretary:** Yes we have a new Secretary. Bill-AF7OO has moved to Oregon and Ed-KN6JN has stepped up to the plate to take his place. Bill brought a new and fresh look with as Secretary having been in that position with many organizations. We could have learned from him and have some. Due to health reasons Bill and his wife have had to move back. We certainly wish to thank him for his input trying to set the Secretary in a much different light. We wish him well and speedy recovery time. Thank you Bill.

We now have Ed-KN6JN , longtime member of the SBARC joined in Feb 1992, elected President for 2 years in the past and elected Council member for

2018 being appointed by and approved by the Council as our Secretary stepping up to the plate in this all important position. Thank you for being there for us again. Ed wishes to continue as Council member as well. I am sure our Pres will accommodate that as well. Holding two positions in the club or has been no problem in the club. We all should realize that the same person in this situation only has one vote as it should be. So thank you Ed for taking this job. I'll try to help when asked and back out of a lot things I've routinely having been doing.

6. **Last column:** Yes with Ed being appointed Secretary and being in a much better position to use the internet I am backing away from a lot of things. It has been a pleasure for me not only because I was the secretary but saw the need to fulfill this need to keep you informed. Lot of things are changing hopefully for the best within the club. Our website is coming along and we hope will continue to provide the electronic link for the membership as well. As I've said many times in the past this is your club. Of course, I've been around a lot longer and have seen so many changes and now can actually say, "hey this is my club as well." The club will only survive after the entire old guys pass away with an actively participating club membership. I therefore wish for and hope that we will all do this. Oh, I am not leaving and fully intend to stay with it as long as I can especially since I'll still be your Treasurer. Thank you.

7. **WAM Contest:** The 2nd Quarter WAM contest is in full swing. Please be sure to turn in your log to Ed-KN6JN on or before the July meeting. The new Secretary will have to let us know the winner of the first quarters contest and of course do so with each quarter winner.

8. **Picnic:** The first picnic is scheduled for May 12th at De Portola Park. Remember this is the park where we've had those picnics there before as well. Just go South on Crenshaw and after crossing PCH your next traffic light is Rolling Hills Road. Turn right and after passing the shopping center on your right make another right the next opportunity and follow it around a little. The park is on the right side. It will start around 10:00am.

Joe, WB6MYD

## CALENDAR

**Council Meeting** - 1st Thursday of the month  
Call Joe - WB6MYD (310) 328-0817

**Club Meeting** - 3rd Thursday of the month  
**May 17, 2018- 7:30 p.m.**

**Club Nets** - **W6SBA WEEKLY NET**  
Every Thursday @7:30pm  
(except the night of club meetings)  
**PVUSD EMERGENCY NET**  
1st Tuesday of the month  
09:30 Hours on the W6SBA repeater

**TRW Swap Meet** Saturday,  
**May 26, 2018**, 7-11 a.m.

**VE Session** - Contact: Joe WB6MYD  
Phone: (310) 328-0817  
jmlanphen@gmail.com or w6sba@arrl.net  
(All VE sessions are scheduled for Room 4 in the Health  
Conference Center for 2018)

**Social Event** - Contact: Joe WB6MYD  
Phone: (310) 328-0817  
jmlanphen@gmail.com or w6sba@arrl.net

## CLUB SERVICES

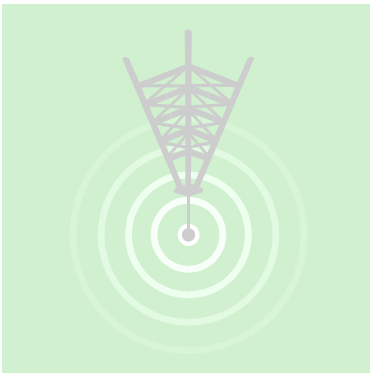
Awards Manager (HF/VHF)	Cliff - K6LH
Health & Welfare	Joe - WB6MYD
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**South Bay Amateur Radio Club Repeater**  
224.38 MHz · PL - 192.8 Hz Offset -1.6 MHz  
(See Calendar for Weekly Net Times)

## NEWSLETTER SUBMISSION

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Website: <http://www.w6sba.org>

TO:



Address Correction Requested

*A COMMUNITY SERVICE ORGANIZATION*

W6SBA

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