



ROUNDTABLE

The Denver Radio Club Newsletter

Since 1917

May 2019

PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members,

It looks like spring is actually here! Time to plan all those antenna projects that you have been thinking about all winter. I have one in mind that I want to try for the low HF bands. Beside antenna projects we have Hamvention in Dayton, (Xenia) Ohio on May 17-19 and our DRC Field Day on June 22 & 23. And to close out the summer ham radio activities, our DRC Hamfest (The Big One!) on August 18th. Mark your calendars now so you don't miss any of the fun summer activities.

Thanks to Doron (K1DBC) for chairing our DRC Field Day event. Again, the date is June 22 & 23 at Chief Hosa campground on I-70 westbound. Less than a 30-minute drive on I-70 westbound. More on that coming soon!

Thanks to Matt (N0RGT) for the very interesting and informative program about WWV at our April meeting. From the amount of questions asked and comments received, I believe this was a very big hit with the membership. Thanks Matt, maybe we could have you back for more on WWV later. I am not sure if it is possible, but, we may look into a visit to WWV as a special DRC event. We will investigate.

May Meeting Presentation by Bill Rinker (W6OAV). Plan to attend the May 15th club presentation. Mark, N0MTN, will give a presentation about "Summits On The Air" (SOTA). So, what is SOTA? Read Mark's description below:

"Summits On The Air", or SOTA, is a radio sport where amateur radio operators hike a range of summits and activate portable amateur radio. Other amateurs will make contacts with the hams on the summits. SOTA is designed to include both hikers and non-hikers, and many of us do both. SOTA started in England in 2002. There are close to 100 countries participating. The first Association in the US was in 2007. Colorado has over 1800 participating summits in the W0C association. Colorado summits range from easy ten-minute walks to day long or over-night hikes to more remote summits. Information can be found at <https://www.sota.org.uk>.

This will be a very interesting program. If you would like an early start to SOTA, listen to 146.520 simplex on weekends. You will more than likely hear SOTA stations especially as the weather gets better. Give them a call, they are very happy to put you in their logbook. Mark your calendar for our May meeting, May 15.

Thanks to all of our new members who have recently joined the DRC. Your support is very much appreciated. Please come to meetings and events and stay active. Your name and call will be posted in this edition of the Roundtable.

73 for now,

Gerry
W0GV
President



WHO'S NEW IN THE DRC?

By Bob Willson, KC0CZ

The DRC is a very active club in the Denver metro area and we'd like to have all of our members listen for these new calls and personally to make them feel welcome. Welcome to our newest members:

John Craig - KE0VCW	Donald Lewis - K0DL	Timothy Haugen - KE0VAW
Christopher Vaughn - KE0MBU	---	William Davis - K7IRC
Karen Haugen - KE0VAY	---	Curt Oliver - AJ0F

We have a number of activities throughout the year and we'd like very much for you to participate in serving your community. If you have questions please feel free to ask on any of the repeaters or see the contact information on the last page of this publication.

Also, please join us once a month at the regular club meeting on the 3rd Wednesday at 7:00 p.m. For new hams we have the Elmer session which starts at 6:00 p.m. before the regular meeting.

TECHNICAL COMMITTEE REPORT

By Bill Rinker, W6OAV

The following is an overview of current issues discussed at the April meeting.

DRC/TSA Aurora Site

Goal: Work with the TSA relative to establishing a "communications room" for the DRC.

Status: The Board is reviewing the MOU received from the TSA and corresponding with the TSA relative to the installation of wiring and coax runs.

Station 4 Remote Power Control

Goal: Install Internet controlled power outlets.

Status: Item completed. WG0N and KE0HFH have installed and tested the system.

6 Meter Repeater Issues

Goal: Troubleshoot low audio level and "buzz" issues.

Status: WG0N and N0ETV will organize a work party (weather permitting) to troubleshoot the issues and to routine the systems.

Develop Fusion Repeater Tech Support

Goal: Train several tech committee members to assist with programming and maintaining the Fusion Wires-X repeater system.

Status: K0SVT has volunteered to do the training after he finishes moving.

Generate DRC Membership Interest in Fusion

Goal: Educate the membership about Fusion and the DRC Fusion repeater.

Status: AE2L is scheduled to present his comprehensive Fusion PowerPoint at the June meeting.

<https://parkerradio.files.wordpress.com/2018/02/parker-radio-association-fusion-wires-x-presentation.pdf>

Move the Fusion repeater to Centennial Cone

Goal: Provide better coverage.

Status: The board has approved the move. A request has been issued to the Frequency Coordinators.

APRIL MEETING - WHAT'D I MISS?

BY BILL RINKER, W6OAV

This month's meeting was well attended. After attendee introductions the meeting was turned over to Orlen, WWOLF, who explained proposed changes to the bylaws. The changes basically updated and clarified several points. The changes were approved by the meeting attendees. The meeting was then turned over to the guest speaker Matt, N0RGT. Matt's presentation covered the history of stations WWV, WWVH, WWVB and WWVL followed by pictures of the sites, maps, towers, and equipment. From there the presentation covered frequencies, modulation modes, information in the signals, transmitter accuracy and stability and how people and equipment in the world are using the signals. Interest was high and the audience asked many good questions.

Matt also talked about the WWV 100 year anniversary event that will take place on September 28 and going 24-hours a day through October 2, 2019. The Northern Colorado Amateur Radio Club (NCARC) will operate a special event amateur radio station, call sign WW0WWV, on the WWV property. Information can be found at <http://wwv100.com/>



An excellent video history of WWV is available on the web at:

<https://www.nist.gov/video/nist-colloquium-nbsnist-radio-stations-story-old-timer>



LEARNING NET REPORT

BY FRED HART, AA0JK



Thanks go out to our Net Controllers: Doron (K1DBC).

The following topics were discussed this past month:

- ARRL New Publications:
 - [HF Dipole Antennas for Amateur Radio #0994](#)
 - [Energy Choices for the Radio Amateur #1038](#)
 - [Power Supplies Explained #5010](#)
 - [Portable Operating for Amateur Radio #0802](#)
- Motor Cycle Mobile
- Diana Eng (KC2UHB)
 - HF portable radio: she shows how to get set-up and operate backpack portable, including how to hang the antenna in a cluster of trees. <https://makezine.com/2015/11/06/5-ham-radio-projects-with-diana-eng/>
- Grounding and Bonding
 - [ARRL Grounding and Bonding for the Radio Amateur: Item No. 0659](#)

Great topics from our group. We certainly enjoy everyone's participation. Thanks to all. If you are listening and don't yet have your license, you can contact us via w0tx@w0tx.org or elmer@w0tx.org.

We are always looking for additional net control operators. If you would like to participate we can help you with the basics of becoming a net controller. This is a great opportunity to learn and get experience running a net.

Net controllers are always needed to perform Emergency Communications services. The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. <http://www.arrl.org/ares>. In the event of emergencies such as floods, fires, or other public service, the amateur radio community is always ready to help. If you have an interest in participating, when the need arises, learn and train now to be prepared. For additional information contact our EmComm Coordinator: Mike Vespoli (KE0HFH) at emcomm@w0tx.org.

If we don't have the answer here on the net, we have a lot of experienced hams in the club that can help. Questions can also be submitted on the YAHOO Learning Net web page <https://groups.yahoo.com>. Here you will also find information from past activity that you might find of interest.

Getting that first Technician license? Upgrading to General or Extra? We're here to help. We would encourage those who have been Hams for several years to also join us. Your experience and input is welcomed. What topics would you like to discuss? Join us Wednesday nights, 7:30 PM, 145.490, 100 Hz PL tone & linked to 448.625, 100 Hz PL tone.

(Note: The third Wednesday of the month is devoted to the DRC club meeting. Elmer Session: 6 PM, Main Meeting: 7 PM. See the [W0TX web site](#) for additional information.)

73,

Fred
AA0JK

ELMER SESSION START TIME
The Elmer Session Starts at 6 p.m. before the regular 3rd Wednesday DRC Meeting! All are welcome. Meet in Hearing Room # 2.
Come join in on the sharing of information.

THE ROUNDTABLE ARCHIVE - w0tx.org/RoundtableArchive/

MAY MEETING PRESENTATION

By BILL RINKER, W6OAV

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SOTA started in England in 2002. There are close to 100 countries participating. The first Association in the US was in 2007. Colorado has over 1800 participating summits in the WOC association. Colorado summits range from easy ten minute walks to day long or overnight hikes to more remote summits.

Information can be found at <https://www.sota.org.uk/>



2019 SIREN TESTS

By BRENNAN PATE, AD0UZ

The DRC will provide radio comms for Lakewood during the annual siren test on May 8th. Participants need to be on-site at 10:30 AM and check-in with Net Control. The Net will be run by Jim Beall (K0TOR) on 145.490/448.625. After the 11 AM siren test is completed observations will be radioed in and pizza and soft drinks will be provided at the Lakewood public service department. Within the next few days we will be contacting those who helped last year.

The Wheat Ridge siren test is scheduled for June 12th, at 11 AM. More details forthcoming.

If you would like to assist with either test, please contact Jim Beall (K0TOR) or Brennan Pate (AD0UZ) (see last page of Roundtable).

CALLSIGN NAME BADGE MANUFACTURING RESUMED

BY ROBERT BAUMANN, WV0Z

Jim Bahr served the Rocky Mountain amateur radio community for many years by providing distinctive callsign name badges. Due to declining health, Jim stopped setting up at Front Range hamfests about two years ago.

Of interest to both new amateurs as well as those who have obtained a new call, Middlebrook's Impressions, Ltd. has recently resumed making these badges available once again.

You can visit their online store at:

https://www.etsy.com/shop/MiddlebrooksImpressi?ref=search_shop_redirect, or contact them at: middlebrook.mb@gmail.com or 720-579-5454.

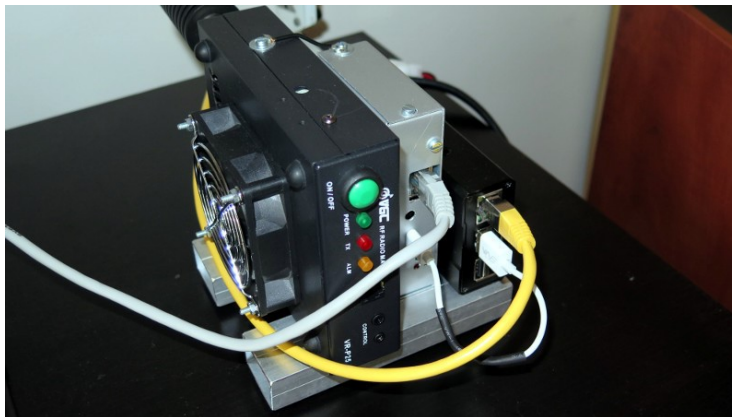
NEW PACKET RADIO - NPR

INFORMATION PROVIDED BY BRETT WILLIAMS, KB5YZB
ORIGINAL POST BY JENNY LIST, HACKADAY

Brett sent over a note linking to a post on Hackaday.com regarding a new digital mode, NPR (New Packet Radio).

Check out the full post here: <https://hackaday.com/2019/03/31/a-new-digital-mode-for-radio-amateurs/>

Another post: <https://hackaday.com/2019/03/30/bidirectional-ip-with-new-packet-radio/>



K3MT's "GRASSWIRE ANTENNA"

BY BILL RINKER, W6OAV

Deed restrictions an issue? Neighbors don't like towers? Need an easy portable HF antenna? Then the K3MT's Grasswire antenna may be the answer!

The Grasswire antenna is virtually invisible, lightweight, and compact (you can carry it in your pocket). This antenna does work! It has been used by K3MT in various installations for more than 10 years. Back in the 60's I successfully used a version of this antenna. I didn't break any S Meters but I did make lots of contacts.

This antenna will not out-perform a decent dipole up a half wavelength. However, it will survive an ice storm, wind storm, and is practically immune to lightning. Nor does it need a large tower or tall support. Your neighbors won't know it's there!

Read all about K3MT's Grasswire antenna at: http://f5ad.free.fr/Liens_coupes_ANT/G/K3MT%20Antenne%20gazon.htm

SPY RADIOS

By BILL RINKER, W6OAV

Operating a spy radio within occupied Europe during WWII was risky. The two articles (PDFs) below, written by VK3UG, describe the equipment used by spies, the techniques employed by spies to avoid getting caught and the countermeasures used by the Gestapo to locate the spy radios. The articles also describe several spy radios in detail.

One of the first spy radios was the Paraset transceiver (Figure 1) which is detailed in the first PDF below. It was parachuted behind enemy lines to Allied resistance groups in northern Europe and Scandinavia. Hence the name Paraset. The Paraset was the first successful miniaturized transceiver. It was built by Britain's S.O.E. (Special Operations Executive) which conducted sabotage, spying, and other clandestine activities behind German lines during WWII. A short video showing the Paraset in operation is available at https://www.youtube.com/watch?v=QU3fvPcT_QE.

One of the best known spy radios was the Type 3 Mk. II B2 transceiver (Figure 2) which is detailed in the second PDF below. The B2 was issued to agents, resistance groups and Special Forces operating in occupied territories. It was often installed in a suitcase. A short video showing the Type 3 Mk. II B2 in operation is available at <https://www.youtube.com/watch?v=OUo7hezogMA>. (Note: The side tone oscillator sounds terrible. The transmitter's actual signal is shown towards the end of the video.)

Click the following links for VK3UG's very interesting write-ups.

- <http://messui.polygonal-moogle.com/valves/SC199809.pdf>
- <http://messui.polygonal-moogle.com/valves/SC199810.pdf>

For a very good detailed description of spy radios, crypto equipment, intercept equipment, antennas, etc. from many countries, go to Crypto Museum's website at <http://www.cryptomuseum.com/index.htm>. Their mission statement is "The main goal of the Crypto Museum is to preserve history. This is done by collecting, restoring and describing historical cipher machines, such as the well-known Enigma machine, spy radio sets, intercept receivers and other spy-related stuff".

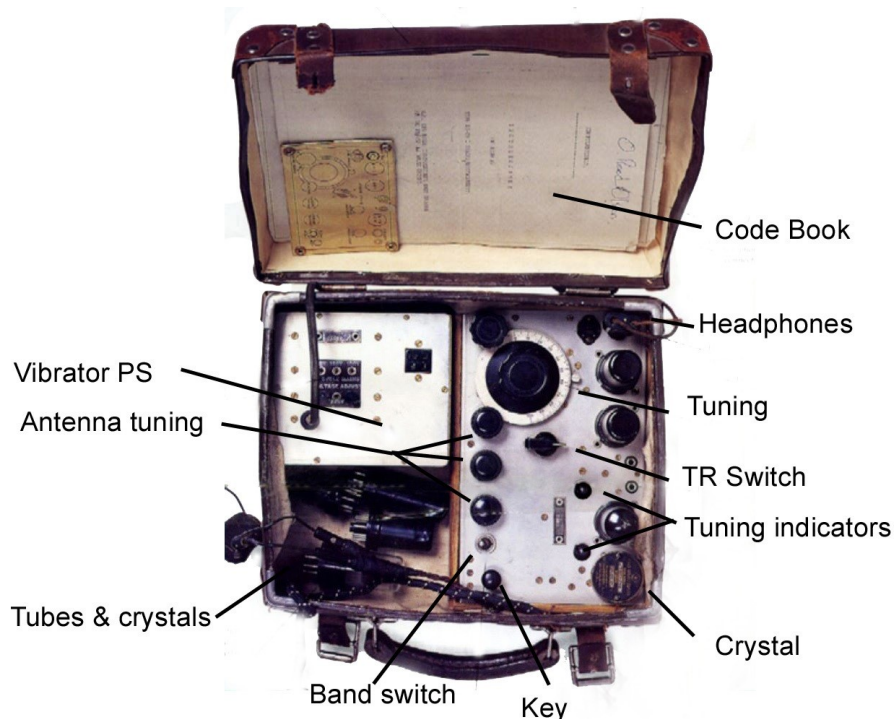


Figure 1 - An Early Paraset Transceiver

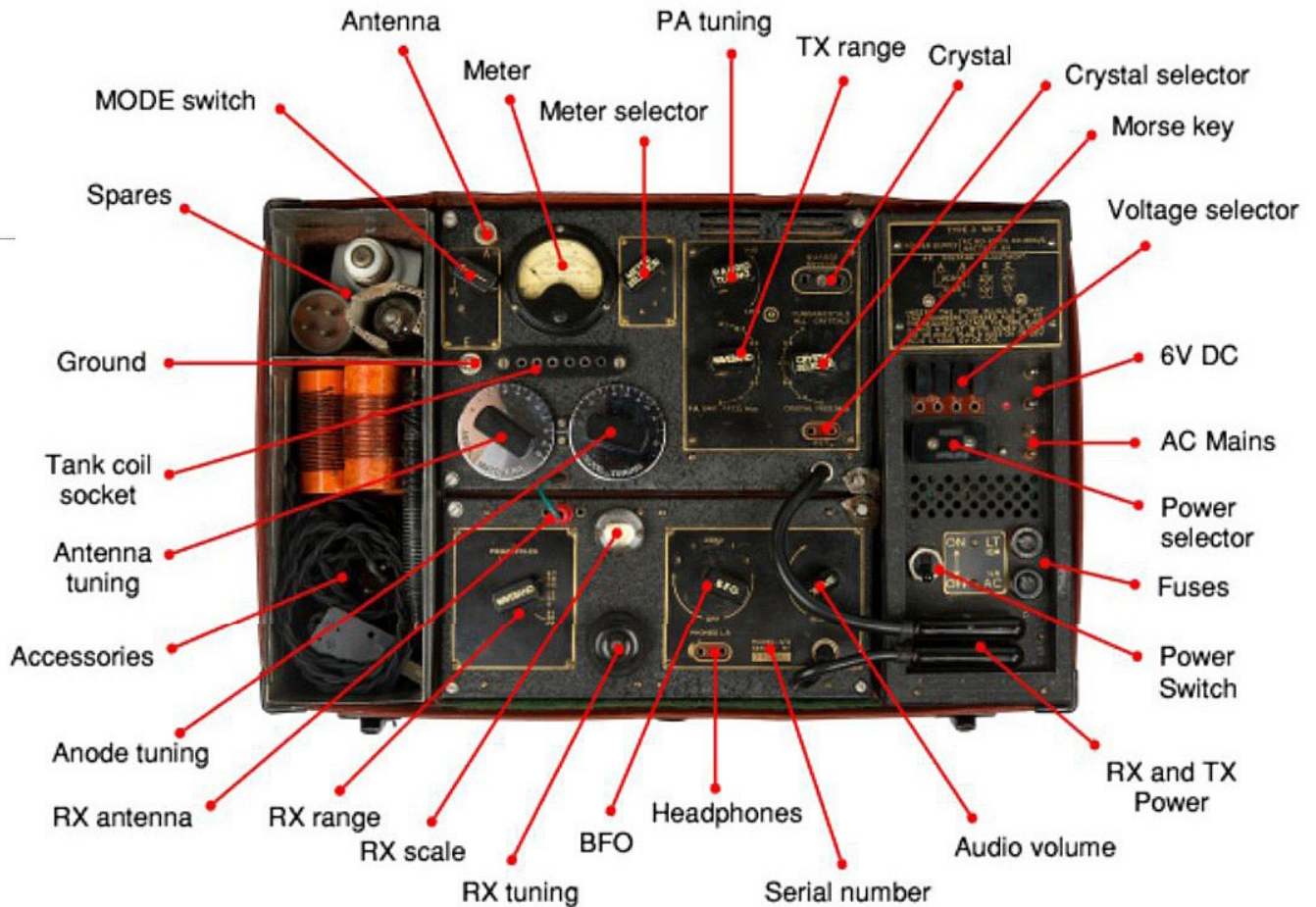


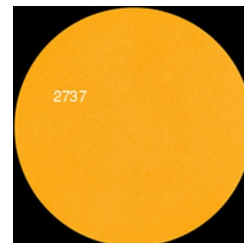
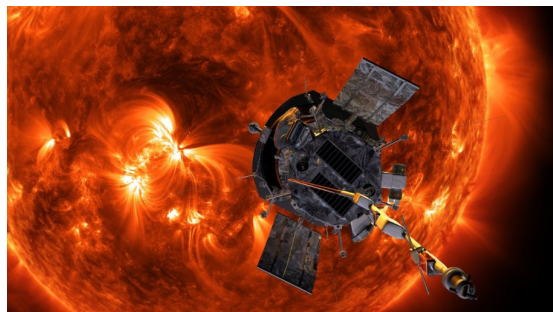
Figure 2 - Type 3 Mk. II (B2) Spy Radio

SOLAR UPDATE

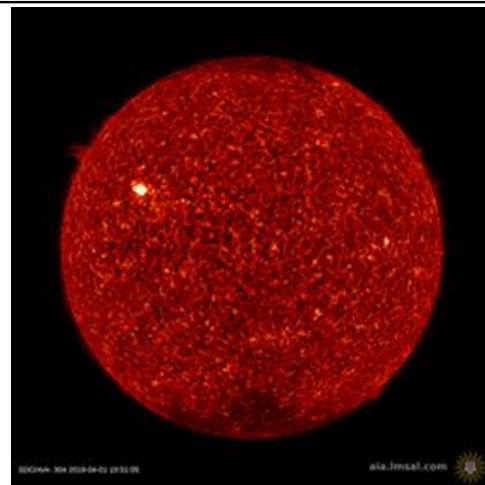
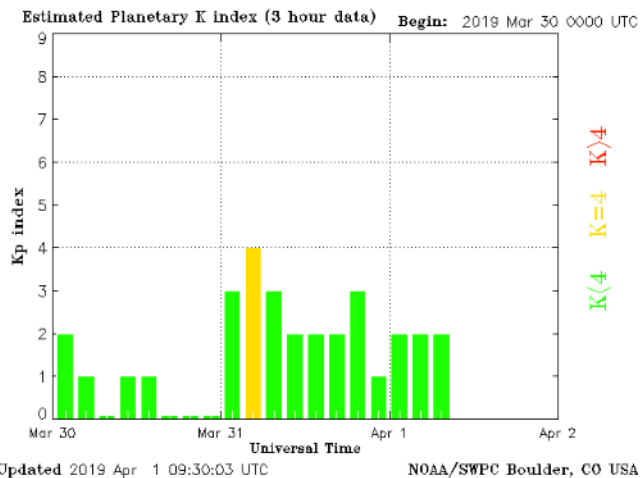
PROVIDED BY FRED HART, AA0JK

April 1st - A new sunspot was growing in the Sun's northern hemisphere. Provisionally numbered AR2737.

Credit: SDO/HMI



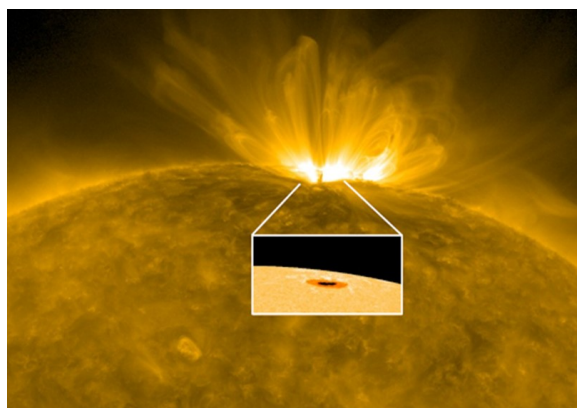
Sunspot AR2737 was quiet and posed no threat for strong solar flares. The spot's magnetic polarity identified it as a member of old Solar Cycle 24.



Solar Dynamics Observatory (SDO)

April 5th - The Earth was inside a stream of solar wind flowing faster than 500 km/s (1.1 million mph). This was causing geomagnetic unrest around the Arctic Circle. Solar wind speeds were expected to remain elevated during the following 48 to 72 hours as our planet surfed through two additional streams of solar wind.

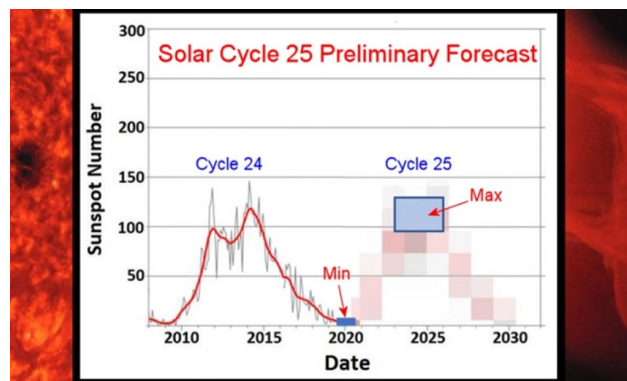
April 7th - A BIG NEW SUNSPOT: A new sunspot was rotating over the Sun's eastern limb, and it was a big one. Provisionally numbered AR2738, the dark core was nearly three times wider than Earth. The sunspot was inset in this ultraviolet image from NASA's Solar Dynamics Observatory, which also shows the region's towering magnetic canopy:



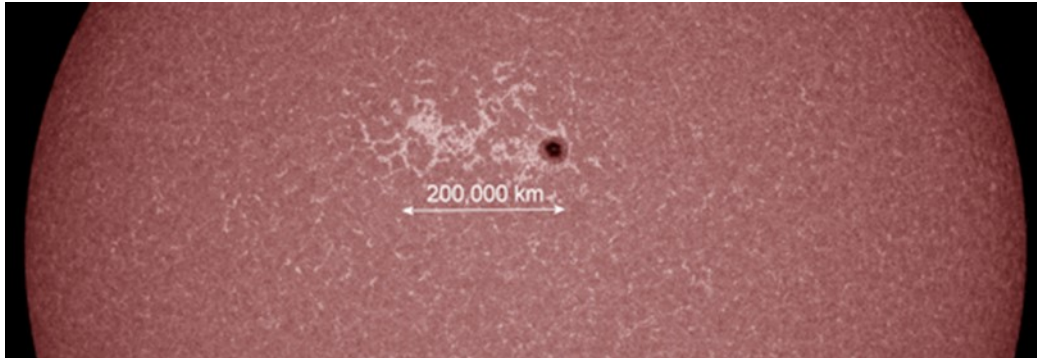
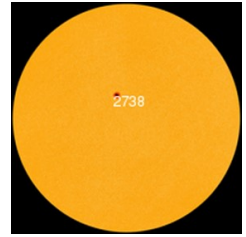
The magnetic polarity of AR2738 identified it as a member of old Solar Cycle 24. Apparently, the decaying solar cycle still has some potency even as it nears its end. Can this sunspot produce strong flares? We would not know until it turned more directly toward Earth in the days to follow. Then we would see more clearly the structure of its magnetic field and evaluate the potential for explosiveness.

MINOR GEOMAGNETIC UNREST: A minor solar wind stream was buffeting Earth's magnetic field on April 9th, and this was causing geomagnetic unrest just below the level of a G1- class geomagnetic storm.

A NOAA/NASA co-chaired international panel to forecast Solar Cycle 25 just released a preliminary forecast for the upcoming sunspot cycle and they expect it to be much like Cycle 24. The next cycle peak is predicted for between 2023 and 2026.

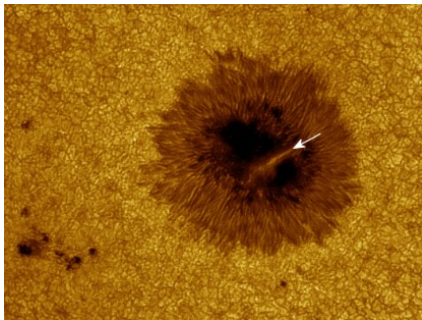


April 13th - BIG SUNSPOT FACED EARTH: One of the biggest sunspots since the solar storms of September 2017 was directly facing Earth. AR2738 (Picture Credit: SDO/HMI) had a primary core three times wider than our planet and it was creating a wake of magnetic froth on the Sun's surface more than 200,000 km long:



An extreme ultraviolet image from NASA's Solar Dynamics Observatory

Since it first appeared, the behemoth spot was not produced any very strong solar flares. However, something interesting was happening to AR2738. It appeared to be splitting apart. The primary core of sunspot AR2738 was divided by a growing canyon of light, also known as a "Light Bridge", measuring 20,000 km from end to end.

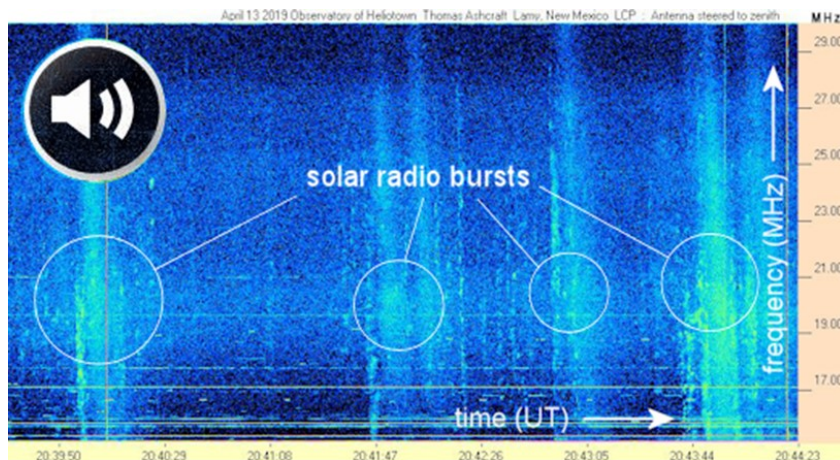


Follow the arrow.

The photo was remarkably detailed. The light bridge was about 800 km wide, less than the width of Texas. The image captured not only that narrow divide, but also hundreds of Texas-sized granules on the Sun's boiling surface around the sunspot.

The nature of light bridges was not fully understood. They often herald the break-up of a sunspot, with jets of plasma shooting up from the chasm as the sunspot decays. Some research suggests that magnetic fields at the base of a light bridge are busy criss-crossing and reconnecting, the same explosive process that sparks solar flares. Does this mean sunspot AR2738 will explode, or quietly fall apart? No one could say.

BIG SUNSPOT PRODUCES "OCEAN SURF" SOUNDS: If you have a shortwave radio, / Ham radio, you might have heard some unusual sounds this month. Big sunspot AR2738 was producing strong bursts of radio static. "They sound like ocean surf,"



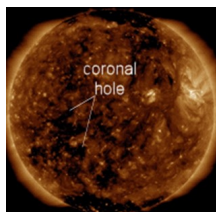
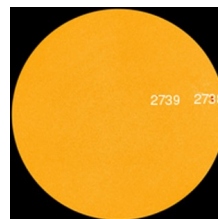
<http://strangesounds.org/2019/04/big-sunspot-produces-mysterious-ocean-surf-sounds.html>

These radio sounds were caused by beams of electrons, in this case, accelerated by B-class explosions in the sunspot's magnetic canopy. As the electrons slice through the Sun's atmosphere, they generate a ripple of plasma waves and radio emissions detectable on Earth 93 million miles away. Astronomers classify solar radio bursts into five types, these were captured and recorded as Type III. There were a lot of these solar radio bursts over a week period, and appeared to intensify as sunspot AR 2738 moved directly facing Earth.

April 16th - Solar wind intensification was minor at best. Space weather was calm.

April 18th - Sunspot AR2738 was crackling with low-level B-class solar flares. Credit: SDO/HMI

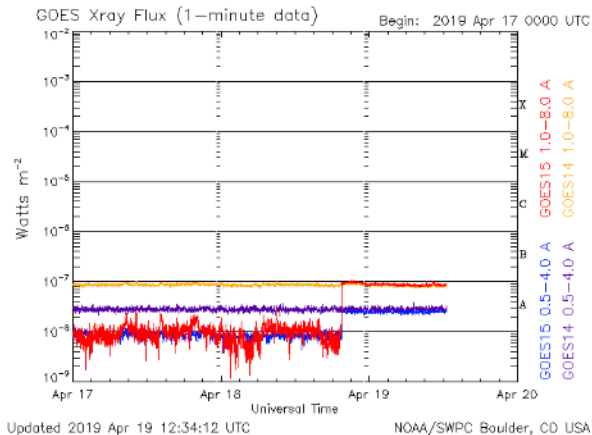
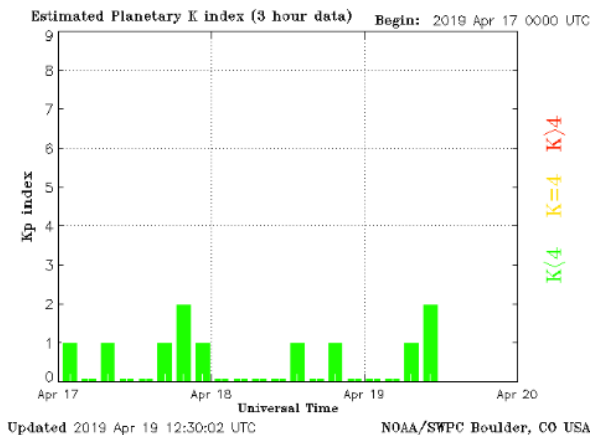
New sunspot AR2739 was small and posed no threat for strong solar flares. Credit: SDO/HMI



A minor hole in the Sun's atmosphere was turning towards Earth, and spewing a stream of solar wind in our direction. Estimated time of arrival was April 22nd . Geomagnetic unrest and HF propagation disturbance at higher latitudes was expected when the gaseous material arrived.

Solar flux was expected to tank over the following week. Space weather was expected to quiet down throughout the remainder of the week. Continued pockets of sporadic pockets of fast solar wind continued.

Region AR2738 was rotating out of view so solar flux was expected to drop back into the low 70's by weeks end. Amateur radio, shortwave radio, and emergency responders would notice the drop off in communications as we fell back into poor radio propagation on the Earths day-side.



April 20th - A southern hemisphere coronal hole was facing Earth. Enhanced solar wind was forecast to arrive in ~3 days.

Region AR2738 was rotating off the visible disk, and soon to be out of direct Earth view. The formerly "active" region previously numbered AR2736, from when it formed on March 20th, spent almost 2 weeks quiet and non threatening. The only other visible sunspot, AR 2739, was a simple bi-polar region, and not a threat for noteworthy solar flares. Solar activity was expected to remain at very low levels in the short term.

Summary: Prepared jointly by the U.S. Department. of Commerce, NOAA, Space Weather Prediction Center. Solar activity was very low. Regions AR2738 and AR2739 were stable and inactive. No Earth-directed CMEs were observed in available satellite imagery.

Forecast: Solar activity was expected to remain very low throughout the forecast period due to the low flare probabilities of Region AR2739.

73,
Fred
AA0JK

DRC's EMERGENCY RESPONSES

In the event of a disaster in the metro area, please monitor our repeaters on 145.490/448.625 (primary) and 449.350 (secondary).

The emergency Net Control Operator will provide information and/or requests to members for assistance.

[W0TX Repeater Directory](#)



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You shop. Amazon gives.

Search for Denver Radio Club @ smile.amazon.com

Note to DRC Members:

Our club depends on the involvement and participation of YOU, our members. Do you have a skill or interest that could help the club. Maybe you want to volunteer to be on a committee? Like to write? Have ideas for improving what we do? Speak up and let someone know, all ideas are welcomed and participation is always helpful. ~Editor

RANDOM SITE OF THE MONTH

[Where's George](#)

THE ROUNDTABLE ARCHIVE

Go to: <http://www.wotx.org/roundtables.htm>

THE ROUNDTABLE ARTICLE INDEX

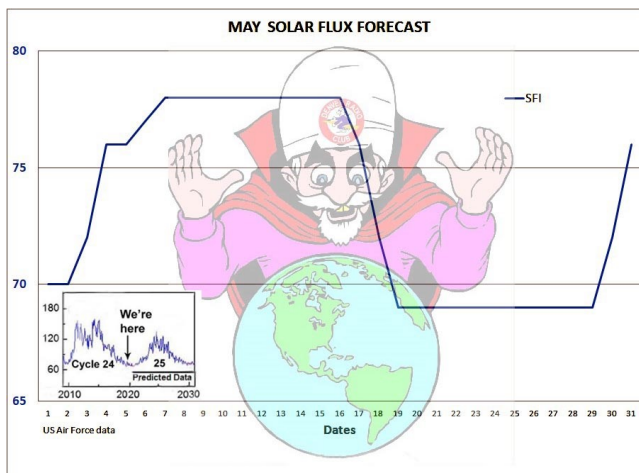
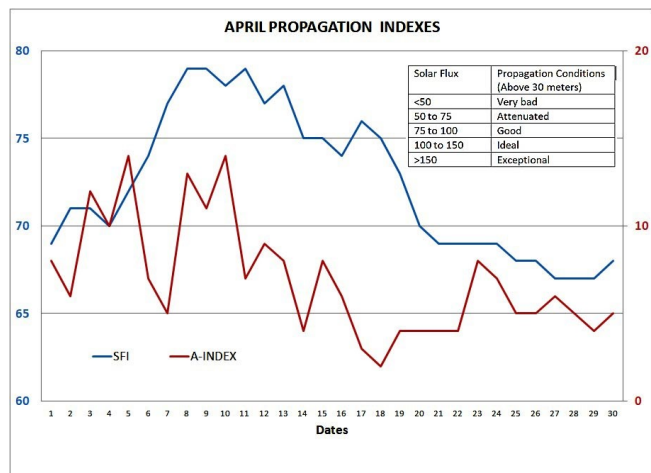
Go to: <http://www.w0tx.org/RoundtableArchive/-RoundTables-Index.pdf>

PAST & FUTURE PROPAGATION CONDITIONS

By Bill Rinker, W6OAV

The charts below show the Solar Flux and "A" indexes for last month and the forecast for this month's Solar Flux index.

Refer to the September 2010 *Roundtable* for more complete information on interpreting these charts, which is available at: [http://www.w0tx.org/RoundtableArchive/2010-RoundTables/RT201009\(SEP\).pdf](http://www.w0tx.org/RoundtableArchive/2010-RoundTables/RT201009(SEP).pdf)



UPCOMING EVENTS
HAMFESTS & CONVENTIONS

Event	Date	Location	Sponsor Website
Montrose ARC Tailgate Party	06/01/19	Delta Lions Club Pavillion	ARRL Posting

UPCOMING QSO PARTIES

The following are the Contests not sponsored by the ARRL. Please submit additions for future issues.

State/Province	Start Date	End Date	Sponsor Website	Notes
Arizona	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Connecticut	05/04/2019	05/05/2019	New England QSO Party	
Delaware	05/04/2019	05/05/2019	First State Amateur Radio Club	
Idaho	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Indiana	05/04/2019	05/05/2019	Hoosier DX and Contest Club	
Maine	05/04/2019	05/05/2019	New England QSO Party	
Massachusetts	05/04/2019	05/05/2019	New England QSO Party	
Montana	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Nevada	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
New Hampshire	05/04/2019	05/05/2019	New England QSO Party	
Oregon	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Rhode Island	05/04/2019	05/05/2019	New England QSO Party	
Utah	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Vermont	05/04/2019	05/05/2019	New England QSO Party	
Washington	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Wyoming	05/04/2019	05/05/2019	Central Oregon DX Club	7QP
Arkansas	05/11/2019	05/12/2019	Amateur Radio Klub of the Arkansas Northwest	

ATTENTION

SUPPORT THE DRC FROM YOUR AMAZON PURCHASES

You can now support your Denver Radio Club when you make purchases from Amazon.com. Amazon Smile donates 0.5% of your purchase to the non-profit (501.c.3) organization of your choice. This is at no additional cost to you. To support the DRC just visit smileamazon.com. Select Denver Radio Club, Inc. as the organization you want to support and proceed with your order as usual. Amazon Smile will credit the DRC automatically. Thank you for your support.

DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	2 meter / 20 meter gateway. Useable by Technicians on 2 meters. See January 2015 RT.
2m	145.490MHz (-) 100Hz PL	Linked to 70cm / 448.625MHz. 1° disaster net f.
2m	147.330MHz (+) 100Hz PL	Local area. Has voting receivers. Does not TX a PL.
2m	147.330MHz (+) 131.8Hz PL	Test mode operation. Send signal reports to Tech Committee.
1.25m	224.380MHz (-) 100Hz PL	
70cm	447.825MHz (-) DCS~073; NB 12.5; +/- 2.5	Saint Anthony's. Note: This is a narrow band repeater requiring DCS.
70cm	448.625MHz (-) 100Hz PL	Linked to 2m / 145.490MHz. 1° disaster net freq.
70cm	449.350MHz (-) 100Hz PL	Wide area coverage with Echolink, node # 4140. 2° net f.
70cm	449.775 MHz (-) 100Hz PL	Yaesu Fusion Digital, Wires-X and analog. 100 Hz tone required for analog.
70cm	446.7875MHz (-)	BrandMeister Repeater: Slot 1 – Wide Area Traffic, Slot 2 – Local Talk Group 310804



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

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MAY 2019		<i>DRC Net Sundays at 8:30 p.m. on 145.490 / 448.625 (no PL)</i>				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	2	3	4  New Moon
5	6	7	8 Lakewood Siren Test 11 AM Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	9	10	11  First Quarter
12	13	14	15 DRC Meeting Elmer 6 p.m. General 7 p.m.	16	17	18  Full Moon
19	20	21	22 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	23	24	25
26  Last Quarter	27	28	29	30	31	

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Please Let Us Know

Over the years we occasionally hear from hams who have read the RoundTable in other states and countries around the world. We appreciate the comments and we would like to know where you are located. So if you live outside the Front Range or Denver Metro Area and read the newsletter either online, email or hard copy please send a short note via email with your *City, State or City, Country*.

We will publish it at a later date in our new regular feature called RoundTable RoundWorld.

To respond to this request send your information to drc.editor@gmail.com.

Subject: I'm located in...

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