



THE ROUND TABLE

Monthly Newsletter Of The Denver Radio Club

Since 1917

November 2021

PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members,

Our fall weather is holding pretty nicely with mild temperatures. I sure do miss daylight as it gets less and less. Cathy and I have been visiting family in Illinois where the weather has been overcast and wet. My message this month will be a bit shorter. I am writing this out of town with a computer that is not cooperating.

Thanks to Stan (WB2SHR) for his presentation on operating ham radio from HOA restricted areas at our October meeting. His ideas, suggestions and experiences were very interesting and offered helpful ideas for our members in these similar living situations.

Our November meeting presentation will be another interesting and different presentation by John (W6NBC). John's presentation is titled "Practical Foil Metal Antennas". Yes, making practical VHF/UHF antennas using metal foil tape. Some areas John will cover are: power handling, skin effect and antenna efficiency. Mark you calendars for November 17th DRC virtual meeting. This promises to be a very interesting program.

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 Round Table.

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 welcome them to the club and repeaters. Welcome to our newest members:

David Michael - WA0CTZ	Thomas Norris - K0FTN	Tom Berlinger - W0AQQ
Denis Bourdeau	Hubert A Higgins - WA5ZXU	Michael Eck - KB3MVG
	Michael Bettencourt - W0MCB	

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.

LEARNING NET REPORT

BY FRED HART, AA0JK

Purpose:

We are here to help introduce, and promote, a variety of topics of interest to all amateur radio operators.

Our intent is to help participants get more active, involved, and engaged in amateur radio.

Topics of interest we encourage:

Personal Communications

- Getting started in the various modes, of communications.

Emergency communications

- Participation in public service.
- Training in emergency communication for volunteers.

Radio electronics, and technology

- Kit building, understanding signal propagation. and building antennas.

We strive to put experienced members / volunteers, at the forefront, as a regular source of knowledge-sharing in the Denver Radio Club. We hope members participating in the DRC learning net will find it rewarding to share experiences, and learning, that will motivate more of our amateur radio community toward lifelong journeys as Hams.

If you have experience in, and have a passion for, any amateur radio related topics, please consider providing the DRC with presentations that will motivate other Hams to share your interests.

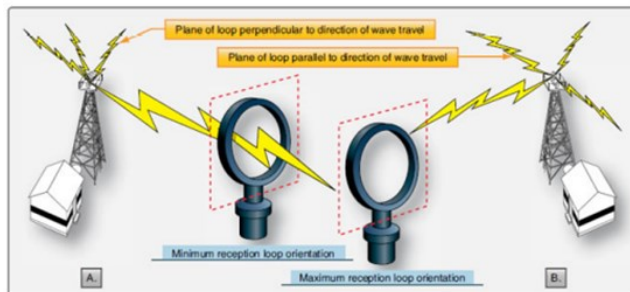
October topics we discussed:

- Buddistick PRO™ Portable Multi-Band Vertical Antenna - buddipole.com
- youtu.be/94CoA6E8LWQ
- LOGGING your contacts. Award Certificates.
- New ARRL Publications
- Home Brew Two Meter Yagi / Uda Antenna
- Let's Build the Yagi Antenna - eeweb.com

- DIY \$5 Portable VHF Yagi 2 Meter Antenna (144-146 MHz) by F4HWK:5 Steps Instructables
- The WB0CMT 3 Element 2 Meter Yagi Using PVC boom - hamuniverse.com
- Listening to Satellites with a Homemade Yagi Antenna - Make: (makezine.com) Diana Eng KC2UHB
- Build an End-Fed Half-Wave Antenna From a Kit: arrl.org/end-fed-half-wave-antenna-kit
- Basic Antenna Concepts Easy to Build Antennas ARRL #9994
- On The Air magazine October 2021 Issue
- Parts and Supplies for Your Projects
- All Electronics - Electronic and Electro-Mechanical Parts and Supplies at Discount Prices
- ESD Electro Static Discharge
- DRC Round Table: Electro-Static Discharge (ESD) (AA0JK) Apr 2018 page 14.
- Clandestine Radio Code Broadcasts
- No Counterpoise / Radials needed Antennas
- Example, Diamond BB7V Telescopic Vertical
- Caution, your coax shield is now the counterpoise. RF is coming back into your shack.
- Isolating your transmitter from RF feed-back through your coax.
- LDG The RU-1:1 is a 1:1 UnUn intended to help remove unwanted RF from the coax cable shield. It is normally used as a common-mode RF choke for short coax cable runs or non-resonant antennas. -
- The RU-1:1 features SO-239 sockets for both input and output.
- Using a Loop Antenna – Fox Hunting
- Flagpole Antennas: ant-kits.pdf at k4vrc.com

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 at the WOTX web-site, w0tx@w0tx.org, or elmer@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.

Getting that first Technician license? Upgrading to General or Extra? We're here to help. You may also find Dave Casler's Amateur Radio Licensing Guides helpful: <https://dcasler.com/ham-radio/>

We would encourage those who have been Hams for several years to also join us. Your experience and input is welcomed.

Finding your place in the amateur radio community - -> Are you looking to be more involved, learn new skills, find a mentor or friends to share your amateur radio interest? Check out your local Denver Radio Club, and start making the most of your amateur radio license.



arrl.org/public-service

Use your communication skills to help keep your community safe!



weather.gov/marine/ham
warrenares.org/home/skywarn-weather-spotting
 SKYWARN Spotter Training Updates: weather.gov/bou/spot_training



During severe weather events, amateur radio operators bring significant resources to storm spotting, including an established communications system that can function in an emergency. They provide real-time information to partners like emergency management and forecasters at the national weather service. The data received from hams helps issue weather watches, warnings, and advisories.

What topics would you like to discuss? Join us Wednesday nights, 7:30 PM, 145.490, 100 Hz PL tone & linked to 448.625, 100Hz PL tone.

73,

Fred
 AA0JK
elmer@w0tx.org

NOVEMBER 17TH PRESENTATION ANNOUNCEMENT

BY BILL RINKER, W6OAV

Hams are used to building antennas out of copper tubing, aluminum tubing and wire. However, there are other very versatile materials available which allow for the construction of some unique antennas. John, W6NBC, will discuss this subject with a presentation titled "Practical Foil Metal Antennas". His presentation contains among other things a good technical tutorial covering:

- Tape width and thickness to handle power.
- Skin effect issues.
- Antenna efficiency.
- Examples of how to design various small sized tape HF & VHF antennas.

John has written many articles for QST. He also has very information packed web site at www.w6nbc.com



USB VS LSB BAND PLAN

By FRED HART, AA0JK



Net Talk -

It's time to stump the Elmers. Or who can tell us why we use Lower Sideband (LSB) on 80- meters and 40-meters, but Upper Sideband (USB) on 20-meters and above?

The Denver Radio Club has a great Wednesday night net we call the Learning Net. A great group gathering that discuss, and answer ham-related questions.

Over the years we have seen amateur radio grow, and with that growth, changes, and long forgotten practices we take for granted but loose the explanation as to why, Well, here we had one of the group inquiring, why the different use of USB on 20-meters verses LSB on 80 and 40 meters? Good question from those new to the hobby. Also noted that knowing why this practice is used can help keep you out of trouble.

Many articles on the internet like to go into lengthy and technical explanations in answering this question, but for good reason. First you need to understand the nature of the beast prior to dealing with its many intricacies.

In the beginning there was CW, then AM. Then the introduction of SSBs, full name is Single-Side-band Suppressed Carrier (SSBSC).

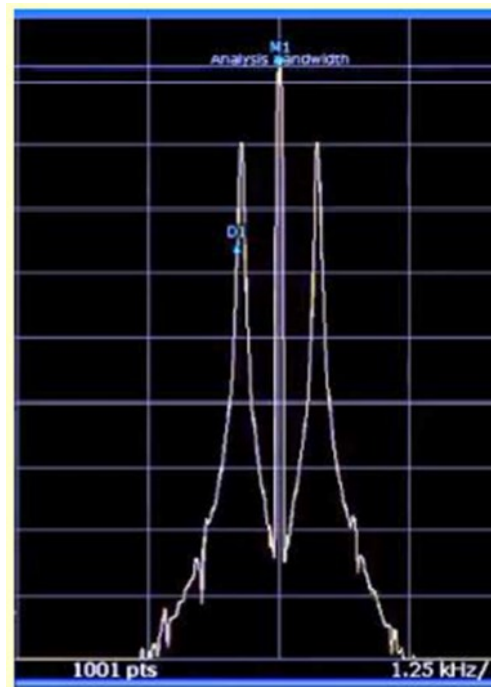
1963 was a pivotal year for hams. Single-Side-band (SSB) had arrived *en mass* and in the space of a short period of time, the amplitude modulation (AM), as great as it is, practically disappeared from the ham bands.

But there is a little more to the story, and here is an opportunity to touch on a bit of our history, and take a look at the modulation & mixing techniques that go into your radios. You might also learn something that keeps you out of trouble.

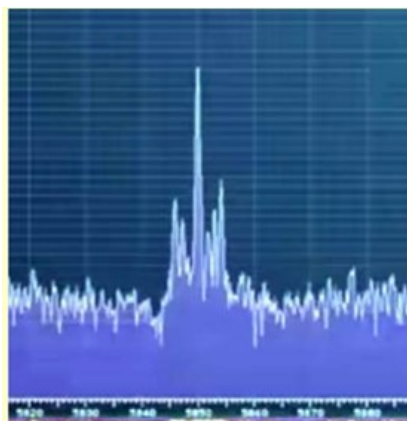
Note, the center spike on this chart is where you have set your VFO. Frequency, dial.



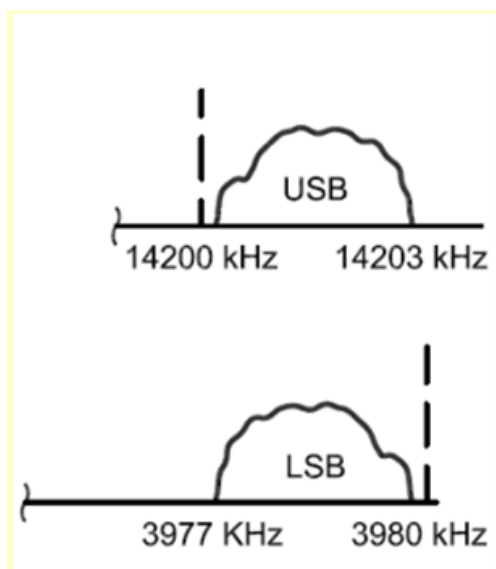
These products are our sidebands, one upper and one lower. If our carrier frequency is 3,980 kHz, then the lower sideband is centered on 3,977 kHz, and the upper sideband is centered on 3,983 kHz.



As the frequency of the audio content increases, each sideband moves farther away from the central carrier frequency.



The location of those sidebands is graphically shown here. This is the part that shows how you can get into, or keep out of, trouble.



Take a good look at this figure, and note the dashed line indicating the carrier frequency, or where the carrier would be if it were transmitted. That is the frequency that's displayed in glowing digital numerals on your rig, not the frequency of the sideband. This is why the carrier is more properly called a reference frequency, since the carrier is not there, only its ghost. And how can that get you into trouble? Suppose you hold a general class license and park your VFO on 3,800 kHz, then call CQ using LSB. Your sideband, the actual frequency of your transmission, falls into the advanced class portion of the band. Similarly, if you swing over to 20 meters and set your VFO on 14.350 MHz with USB, your upper sideband signal is entirely outside of the amateur band. The FCC takes a dim view of such operation. Pink-slip time. [BandChart.pdf \(arrl.org\)](https://www.arrl.org/band-chart)

So hopefully that explains why we use LSB for 80- and 40-meters but USB for 20-meters and above.

QUESTION OF THE MONTH

BY BILL RINKER, W6OAV

Question

I've read several different conflicting definitions online about QRP. How much power is meant by QRP? And why operate QRP?

Answer

The Q code QRP means 5 W or less output for CW, or 10 W PEP output or less for SSB. Most amateur organizations and contests use these as the official QRP limits. Why operate QRP? Many hams enjoy operating QRP to see how many miles per watt they can achieve. There are many QRP specific operating awards, contests and clubs for QRP enthusiasts. Of course, efficient antennas and good operating practices are very important.

QRP rigs are inexpensive and easy to build or buy. Figure 1 shows a homebrew QRP transceiver built inside an Altoids tin (From Wikipedia).

References:

- There is a very good article discussing QRP at www.arrl.org/why-grp.
- A list of QRP clubs is available at <http://www.arrl.org/grp-low-power-operating>
- A good YouTube video titled "Some QRP Radios" is available at https://www.youtube.com/watch?v=RpszqNMR6_U.
- A second YouTube video titled "Some More QRP Radios" is available at <https://www.youtube.com/watch?v=uAL2ImpajM>.



Figure 1 - 1.2 watt homebrew 40 meter CW transceiver

HAMS WHO HELPED WIN WWII

By BILL RINKER, W6OAV

A BBC article titled “The teenage radio enthusiasts who helped win World War II” provides an interesting description about 1500 volunteer hams that intercepted secret codes broadcasted by the Nazis and Italians. The article describes how the service started with a 16 year old ham who knew Morse code, how it grew into a massive “volunteer ham interceptors” organization and how they worked with the code breakers at Arkley View. By 1941 the hams were intercepting 10,000 messages a day. After decryption the messages were sent to Allied Commanders and Winston Churchill.

The accompanying figure and the following quote are from the BBC article. “Not only did the intercepts provide a huge amount of traffic, but through the skills of the radio amateurs ‘fingerprinting’ the Morse code of the German operators, supported by direction finding, the UK was able to monitor movements of the German forces”.

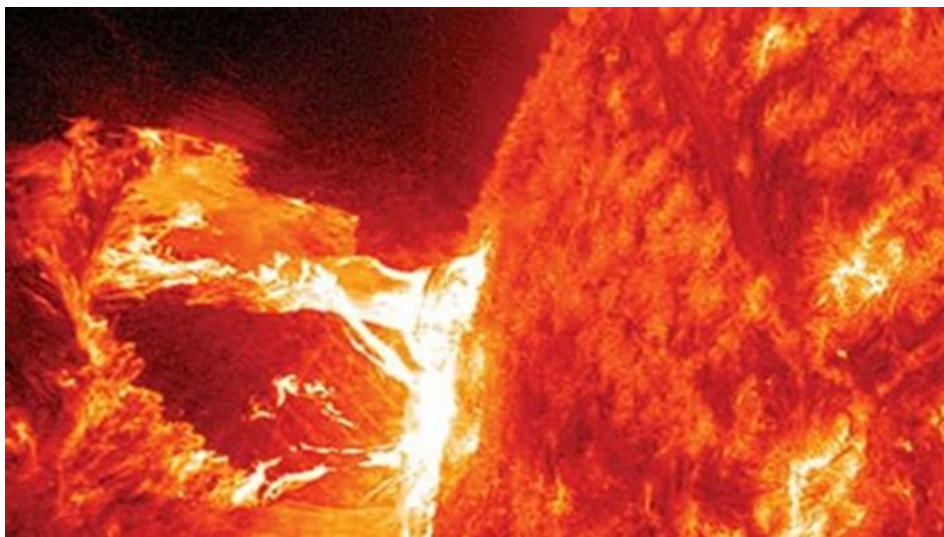
The article is available at [bbc.com/news/technology-23162846](https://www.bbc.com/news/technology-23162846)



There were about 1,500 so-called voluntary interceptors during WWII - civilians helping to intercept secret Nazi codes

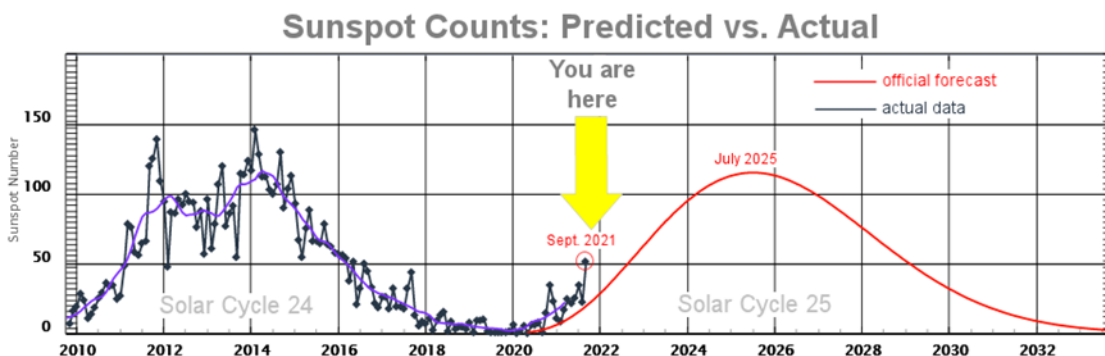
SOLAR GEOPHYSICAL ACTIVITY REPORT

PROVIDED BY FRED HART, AA0JK



October started with Earth’s magnetic field being quiet. There were no active geomagnetic storms to report.

Solar Cycle 25 was out performing forecast expectations. Sunspot counts in September were the highest in more than 5-years, and for the 11th month in a row, the sunspot number was significantly exceeding the official forecasts.

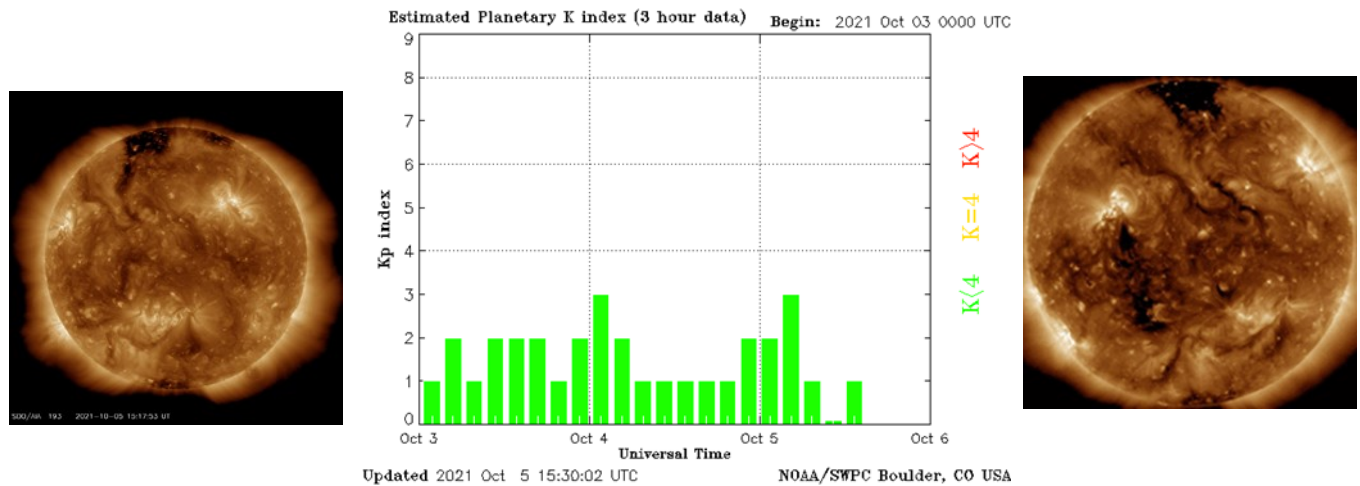


The plot above shows sunspot counts vs. time. The red curve traces the forecast issued by the NOAA/ NASA Solar Cycle 25 Prediction Panel in 2019. It calls for a relatively weak solar cycle peaking in July 2025.

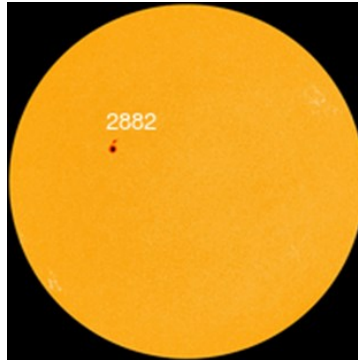
The sun has a mind of its own, though. Higher-than-expected sunspot counts suggest a stronger cycle, with a peak occurring in late 2024 instead of mid-2025. This is good news for amateur radio operators, but maybe not so good for the Internet.

A Bad Solar Storm Could Cause an 'Internet Apocalypse' | WIRED

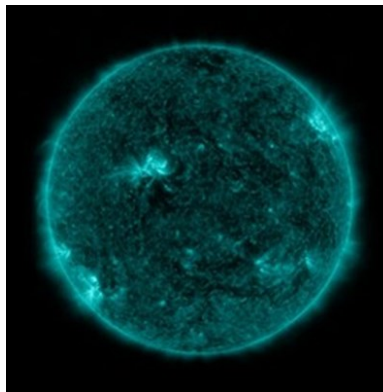
The only activity during the first week was the departing filaments on the southern limb with some re-releasing 90’ away from Earth, no solar flares ether. Solar wind and geomagnetic conditions were calm as the plasma streams settled back into normal range.



October 8th - There were no significant equatorial coronal holes on the Earth-side of the Sun. Above Image Credits: SDO/AIA, 193

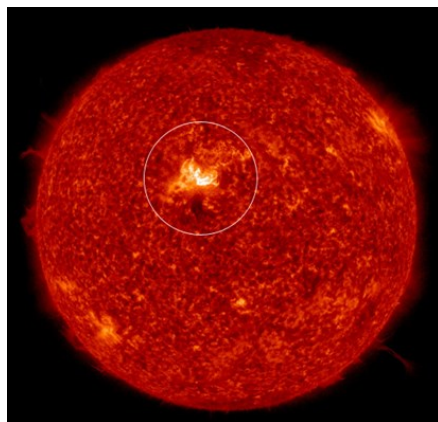


New magnetic flux was emerging near the primary core of AR2882. The juxtaposition of oppositely-signed magnetic fields increased the odds of a significant flare from this formerly quiet sunspot. Credit: SDO/HMI



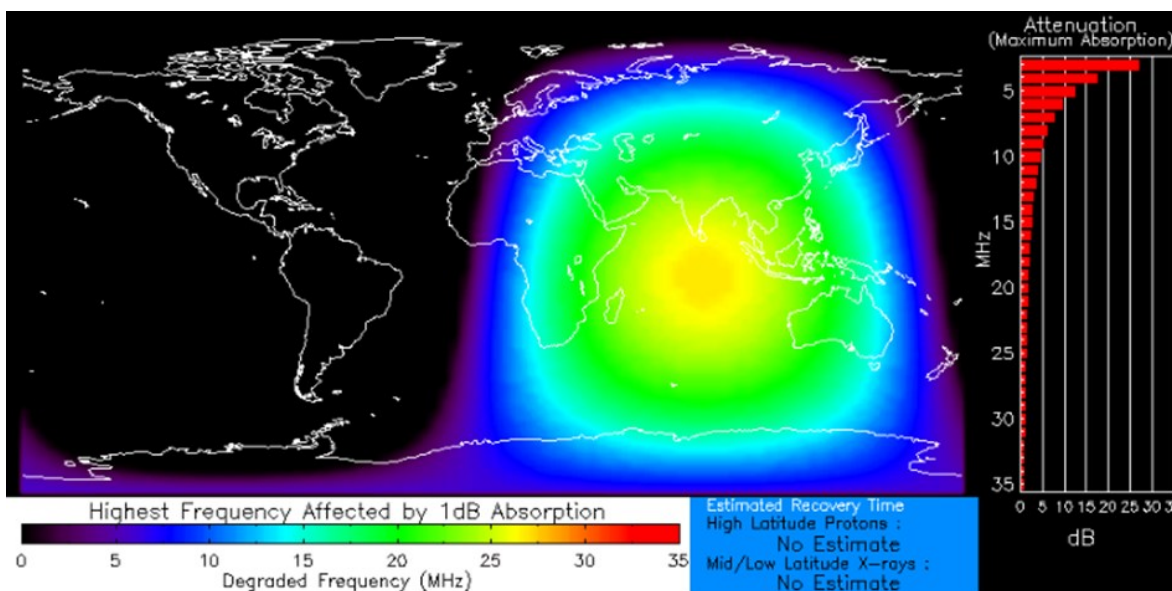
SDO / AIA 131

October 9th - GEOMAGNETIC STORM WARNING - NOAA forecasters were modeling the trajectory of the October 8th CME, and confirmed that it would likely arrive on Monday, October 11th. The impact was expected to potentially spark G1 to G2-class geomagnetic storms.



EARTH-DIRECTED SOLAR FLARE AND CME: Restless sunspot AR2882 erupted on October 9th (0640 UT), producing a strong M1.6-class solar flare, and an Earth-directed CME. NASA's Solar Dynamics captured the extreme ultraviolet flash.

Radiation from the flare ionized the top of Earth's atmosphere. This, in turn, caused a shortwave radio blackout over the Indian Ocean. Aviators, ham radio operators, and ships at sea may have noticed strange propagation effects at frequencies below 25 MHz.



Minor X-ray flux
Product Valid At : 2021-10-09 06:39 UTC

Normal Proton Background
NOAA/SWPC Boulder, CO USA

The storm cloud was expected to reach Earth late on October 11th or 12th, potentially sparking G1 to G2-class geomagnetic storms.

New images from SOHO confirmed that the explosion hurled a CME almost directly toward Earth.

Direct Hit from an Incoming Solar Storm | Space Weather News October 11th 2021.

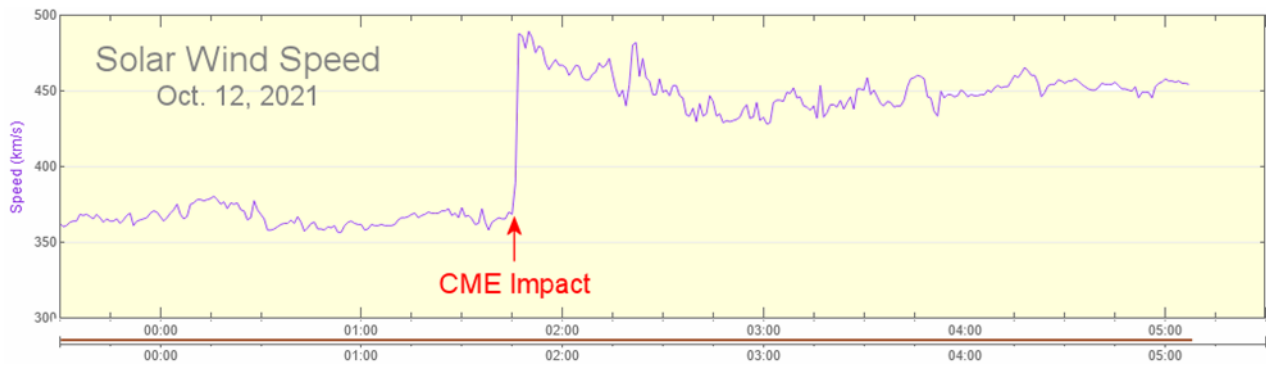
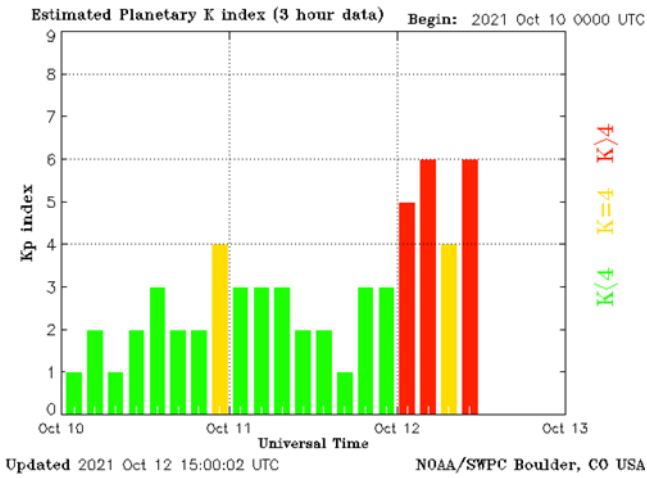


TamithaSkov

A lot of exciting things were happening this week. We had a solar storm on its way to Earth. It all started with region 2882 firing an M1.6-flare back on October 9, during which it launched a gorgeous full-halo eruption. This solar storm had been driving a shock-wave, and a weak solar radiation storm that could impact amateur radio propagation, and GPS reception over the following few days. It would slowly subside once the solar storm hit Earth. It was expected that high-latitude communications and GPS reception would be slightly impacted. In addition, we also had a small coronal hole that was rotating into the Earth-strike zone and was expected to give us some fast solar wind as a chaser to this solar storm. This meant we could have some level of disturbance throughout much of this week. Solar flux continued to be in the mid-80s which meant amateur radio propagation would remain marginal on the Earth's day-side, except when the solar storm hits.

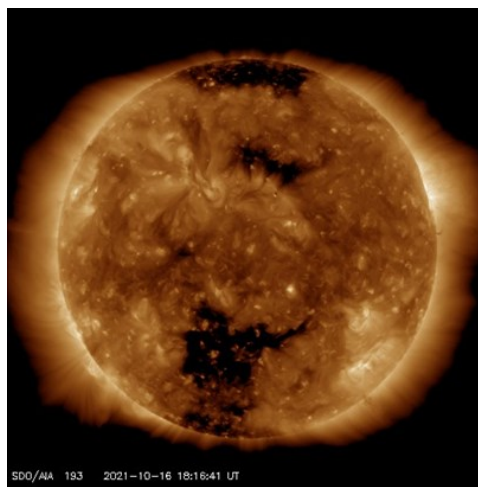
Solar storm due to hit Earth, October 11th, it had the potential to wreak havoc with the power grids.





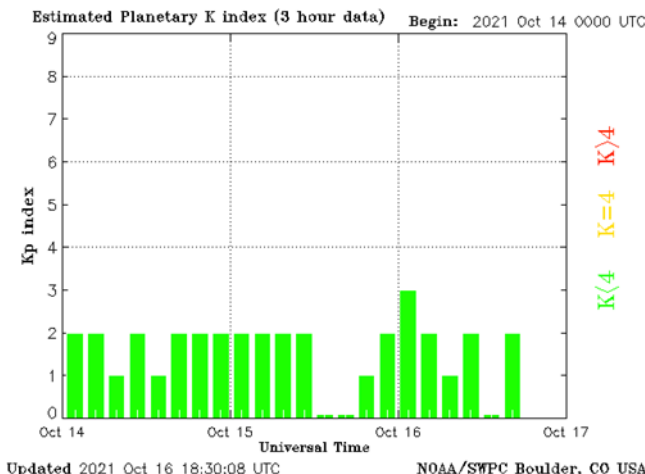
Possible effects of the solar storms, caused by the CME's, are power grid fluctuations, and orientation irregularities for spacecraft in the form of 'increased drag' on low-Earth orbiters.

October 15th



SDS/AIA 193

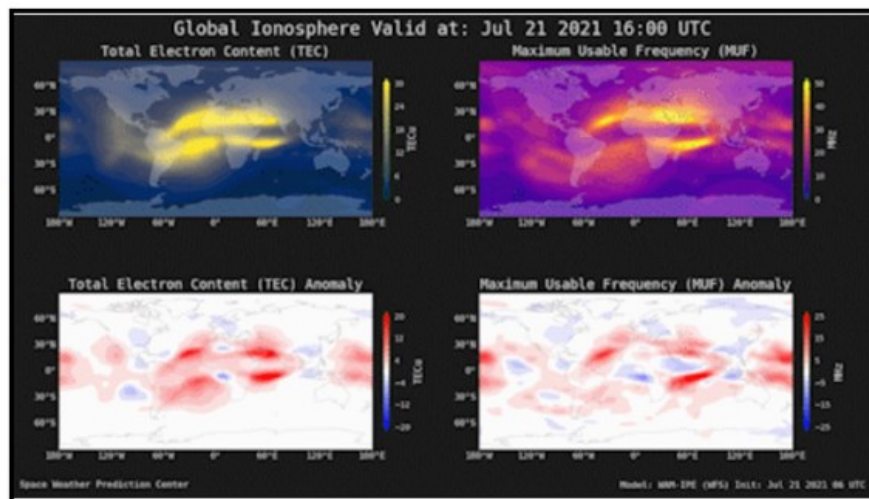
Coronal holes on the solar disc, were turning into a central earth facing longitude. Enhanced solar wind was expected to arrive in ~3 days Filaments were putting on quite a show as they were dancing off the western limb.



The geomagnetic field was quiet.

CO-ROTATING INTERACTION REGION: Geomagnetic unrest was possible on October 18th when a co-rotating interaction region (CIR) was to hit Earth's magnetic field. CIRs are transition zones between fast- and slow-moving streams of solar wind. Sharp, shock-like density gradients, and enhanced magnetic fields, in CIRs often do a good job sparking HF radio disturbances.

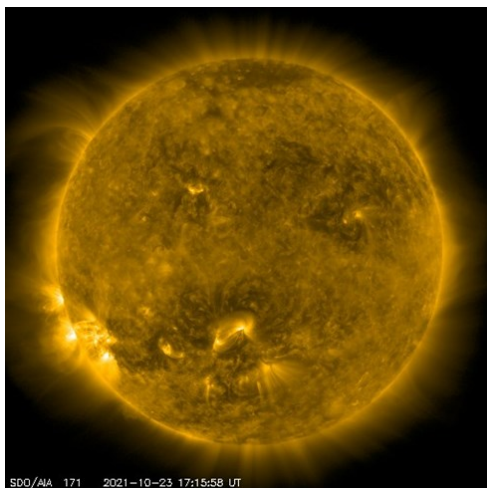
Breakthrough computer model to help NWS provide better space weather forecasts, more targeted warnings.



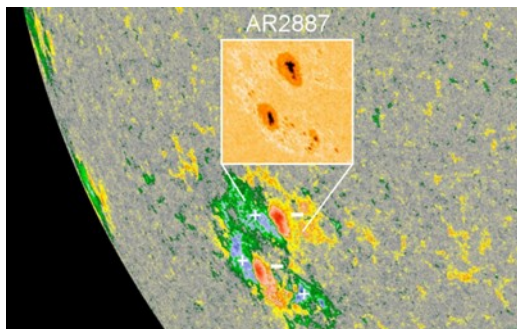
NOAA's National Weather Service (NWS) has transitioned a new computer model into operations to increase its understanding of space weather events, and improve space weather forecasting capabilities.

October 23rd - We had increasing solar activity as we entered into the last week of October. While solar flaring, solar wind, and geomagnetic conditions remained calm, the limbs were heavy with eruptive behavior. Much of it was the release of eruptive plasma filaments. Even without significant x-ray production at this time we are still going to need to carefully monitor those incoming regions for more CMEs.

and increased solar activity.



October 24th - Strange magnetism in active region 2887, New sunspots had two primary cores. Usually when a sunspot looks like this, the two cores have opposite magnetic polarities, Positive (+) and Negative (-). In this case, however they're the same.



Pictured above is a magnetic map of AR2887 from NASA's Solar Dynamics Observatory. It shows the primary poles of double sunspot AR2887 are both negative (-). Surrounding patches of positive (+) magnetic flux were providing the balance.

Perhaps AR2887 is not one but actually two sunspots jammed together in close proximity.

Far side sunspots. The sunspot number is about to increase. NASA's STEREO-A spacecraft is monitoring three active regions. All three are poised to rotate over the sun's eastern limb in the next 2 to 3 days.

Hopefully we will see some increase in x-ray activity to liven up the upper atmosphere to improve DX.

Forecast: Prepared by the U.S. Dept. of Commerce, NOAA, Space Weather Prediction Center. No G1 (Minor) or greater geomagnetic storms are expected. No significant transient or recurrent solar wind features are forecast.

There is a slight chance for isolated R1-R2 (Minor-Moderate) radio blackout conditions.

73,

Fred
AA0JK

PAST ROUND TABLE PAGES

PROVIDED BY WOODY LINWOOD, W0UI

A page from the April 1958 edition.

THE ROUNDTABLE

Published Monthly

by the

DENVER RADIO CLUB

Editor KØLTS
Fred P. Brownell
4265 So. Inca
Englewood
Colorado

REMEMBER FIELD DAY

June 28-29

PLAN TO PARTICIPATE

NET SKEDS

COLORADO STATE 2 METER NET
7:30 p.m. seven nights per
week - 146.25 mc.

HI NOON NET - 12 noon,
Monday-Saturday - 7240 kc.

COLO WEATHER NET - 8 a.m.
Monday-Saturday - 3945 kc.

LCY-YL NET - 10 a.m.
Mondays - 7234 kc.

DENVER AREA RACES NET -
9 a.m. -Sunday- 29.624 mc.

ENGLEWOOD CD NET - 8 p.m.
Wednesdays - 29.500 mc.

COLO EMERGENCY PHONE NET
8:00 a.m. -Sunday- 3890 kc.

ROCKY MOUNTAIN NET - 7 p.m.
Monday-Friday - 3570 kc.

\$10.00 on every \$50.00 spent

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908 Jersey St. --- EA 2-8481
4175 So. Broadway --- SU 1-0473
13th & Sherman --- KE 4-8380

WHY NOT OPEN A CHARGE ACCOUNT????????

73
WØBWH

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
[Tin Toy Arcade](#)

THE ROUND TABLE ARCHIVE

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

THE ROUND TABLE ARTICLE INDEX

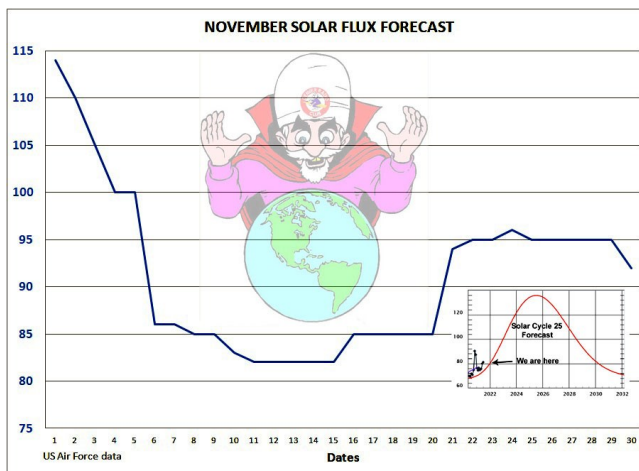
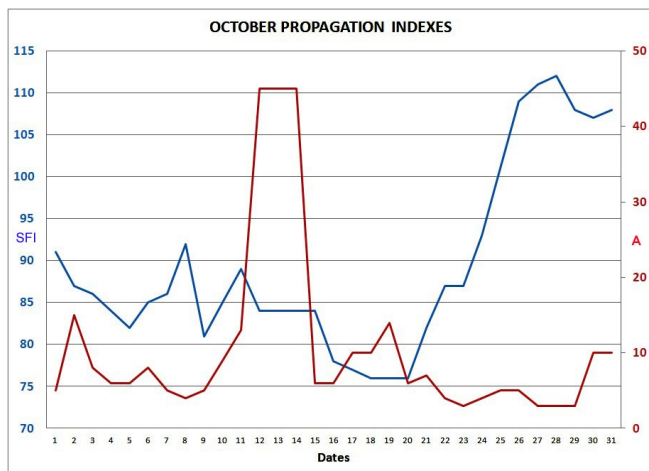
Go to: <http://www.w0tx.org/RoundtableArchive/-RoundTables-Index.pdf>

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 *Round Table* 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
Winter Hamfest	1/15/22	The Ranch, Loveland	ncarc.net
The Swapfest	2/20/22	Adams County Fairgrounds	n0ara.org

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
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The Denver Radio Club
 is an ARRL Special Service Club

Support your hobby and *join the ARRL today!*

<http://www.arrl.org/>



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.


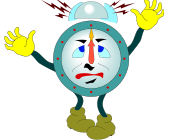





DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz	Metro Denver Area Coverage
2m	145.490MHz (-) 100Hz PL	Linked to 70cm / 448.625MHz. Primary frequency during emergency net.
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. Secondary frequency during emergency net.
70cm	449.775 MHz (-)	Yaesu digital, C4FM, Wires-X, DN, VW & Data. No analog FM. W0TX Room 40931.
70cm	446.7875MHz (-)	BrandMeister Repeater: Slot 1 – Wide Area Traffic, Slot 2 – Local Talk Group 310804

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NOVEMBER 2021							<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	2	3 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	4  New Moon	5	6 ARRL Sweepstakes - CW Begins 2100 UTC 	
7	8 ARRL Sweepstakes - CW Ends 0259 UTC	9	10 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	11  First Quarter 	12	13	
14	15	16	17 DRC Online Meeting Elmer 6 p.m. Meeting 7 p.m.	18	19  Full Moon	20 ARRL Sweepstakes - Phone Begins 2100 UTC EME Contest - Starts 0000 UTC	
21 EME Contest - Ends 2359 UTC	22 ARRL Sweepstakes - Phone Ends 0259 UTC	23	24 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL)	25 	26	27  Last Quarter	
28	29	30					

See arrl.org/contest-calendar for additional details about contests.

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Please Let Us Know

Over the years we occasionally hear from hams who have read the Round Table 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 Round Table Round World.

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

Subject: I'm located in...

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DRC members - this is your newsletter. Please email your club or amateur radio related suggestions to the editor. Members are the heart of The Denver Radio Club, so if you have an expertise or an interest in a particular segment of ham radio that you'd like to write about, you may email your submissions to drc.editor@gmail.com. The submission deadline is the 25th of the Month. ~ Editor