

# E ROUND TABLE

# Monthly Newsletter Of The Denver Radio Club

Since 1917 September 2022

# PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members,

As I write this, we just finished our DRC Hamfest. I am happy to report that it was a VERY Successful Event for the club. No real problems, the management of the Adams County Fairgrounds were excellent to work with. Like night and day compared to the folks at Jeffco!

All of our tables were sold and our attendance, which is not yet finalized, is just short of 500. Thanks to all who attended; this is what we need for a successful event. And a HUGE Thank You to all of our volunteers. Without you, it would not have been the big success that it was. Not to forget, the Biggest Thank You to Cathy, NOCRZ our Hamfest Manager. Most people wouldn't have any idea what work goes into planning and executing an event of this magnitude. Thanks Cathy!

I've had a lot of questions in the last several months, if the club was considering a face to face meeting again. Yes, we are looking into doing that. We have a very centrally located facility that we are exploring. We realize we would have to have the meeting virtual as well. This poses some technical challenges to do both at the same time. I am planning to send out a Survey Monkey questionnaire to the membership to see if you, the member, would be interested in returning to a face to face meeting. Please respond to the survey. It will help us in our decision making.

Thanks to Josh Thomas, N5XRX, for his program on 3D Printing, at our August meeting. It is truly amazing what can be accomplished with the 3D printer. Also thanks to Josh for the footage he took at our Field Day event with his drone.

Our September program will be presented by Larry Irons, K0LAI. Larry will be telling his experiences participating in the recent Golden Gran Fondo bicycle event. The event spans 91 miles from downtown Golden to Wondervu and back in one day. Most of the course has no cellphone coverage, so ham radio plays a big part in the event. The event is sponsored by ARES groups. Larry will explain the several digital and analog radio systems used to make the event happen. Remember to put Sep 21, 2022 on your calendar.

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



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W0TX w0tx.org

## Who's New In The DRC?

FROM CATHY VILLHAUER, NOCRZ, DRC MEMBERSHIP

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:

Fred Wehle - AEØRK Paul Nguyen - KD9URM Chris Keller - KØSWE John Julian - W7JPJ Jay Wolfe - KFØGKP Cody Neyrinck - WTØR David Gnuse - KFØICC Alan Hamilton - NOCALL Tad Morgan - W7TAD Brian Diem - KFØAWC Kevin Benjamin - KØEEP Franz Vasold - KAØHZB Franz Vasold Sr. - WØYPM Ronald Perkins - KEØMPC Roger Stafford - KØRGS Brad Nelson - KDØGBX

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 knowledgesharing 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.

August topics we discussed:

- D-Star
- Slow Scan TV
- Mic Fright Making that first contact
- Getting more active
- Packet
- Portable Radio Operation
- ARRL's New Radio Lab W1HQ
- 1.25 Band (222MHZ) Repeater usage
- Logging Software
- Fox Hunt
- FM on ten meters

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 <u>W0TX web-site</u>, 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: <a href="https://dcasler.com/ham-radio/">https://dcasler.com/ham-radio/</a>

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

arrl.org/public-service

Use your communication skills to help keep your community safe!





<u>weather.gov/marine/ham</u> <u>warrenares.org/home/skywarn-weather-spotting</u> SKYWARN Spotter Training Updates: <u>weather.gov/bou/spot</u> 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 <u>elmer@w0tx.org</u>

#### DRC HAMFEST VE SESSION

By Tom Kocialski, KC2CAG, DRC VE TEAM LIAISON

The first ever Denver Radio Club VE Session at the Adams County Fairgrounds was a success! The venue proved to be comfortable and quiet, and was sufficient to easily seat the 13 candidates who took the exams.

As a result of the session, 5 candidates earned their Technician license, 1 candidate upgraded to a General license, 4 candidates upgraded to the Extra Class license, and 1 candidate successfully passed the entire set of Tech, General and Extra exams in this single session. In my almost 10 years of coordinating the DRC VE Team test sessions, this had only happened once before. Interestingly, both candidates were associated with the Colorado School of Mines! Go Orediggers!

Newly licensed hams were: Paul J Smith Roderick Obrien Jeremy Mahler Chad Lorenzen Brandon Lorenzen

Todd Anderson (Tech, General and Extra!)

Upgraded to General was: Lonnie R Jamison, N0PCZ

Upgraded to Extra were: Katelin Richie, KD9EIP Richard L Andrews, WB0AKV David Johnston, W8XAL Jim Escue, KB0UDV

As a side note, W8XAL emailed me the evening of the test session that he made his first ever contact on the Extra Class band via CW to a German ham vacationing in the Canary Islands. There is a guy taking quick advantage of his new privileges!

In addition to myself, the VE Team included Blake Huber, AD0OZ; Bill Rogers, WZ0S; Kevin Schmidt, K0KPS, Stan Trout, WB2SHR; Patrick McHenry, KF0AEY (in his first appearance as a VE Team Member); and a special guest appearance by our club President, Gerry Villhauer, W0GV.





# SEPTEMBER PRESENTATION - GOLDEN GRAN FONDO A BICYCLE EVENT SUPPORTED BY AMATEUR RADIO

By Larry Irons, K0LAI

On August 28, 2022, members of Region 1 District 6 (Jefferson, Clear creek and Gilpin Counties) Colorado ARES volunteered to support the annual Golden Gran Fondo bicycle event. This event spans 91 miles from downtown Golden to Wondervu and back in one day.

Most of the course has no cellular coverage. In case of an emergency calling 911 will not work. Amateur Radio provides the necessary communications for the event. One of the challenges is the number of districts involved. The event spans across Golden, Jefferson County, Gilpin County, Golden Gate Canyon State Park, and Boulder County, involving 7 different law enforcement jurisdictions.

Amateur radio provides the necessary communications using multiple amateur radio frequencies, digital and analog modes, and public service frequencies.

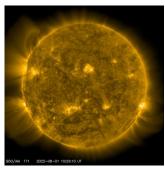
# SOLAR GEOPHYSICAL ACTIVITY REPORT

PROVIDED BY FRED HART, AA0JK



The Sun was starting to wake up after several days of quiet.

August 1st



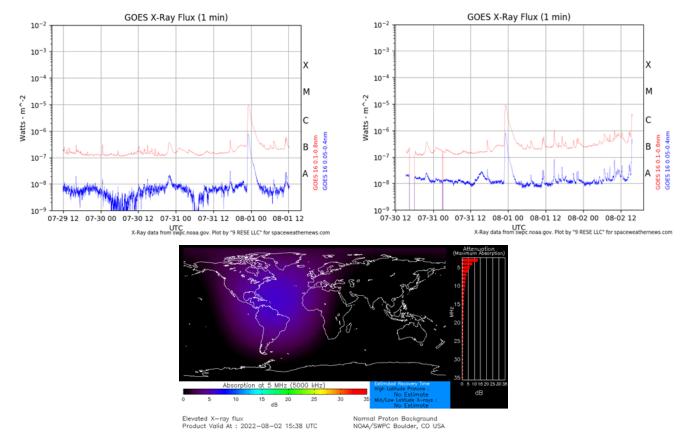
The incoming limb of the sun was looking snappy more filaments were erupting. The return of brighter active regions with a couple of dark coronal holes. One incoming near the solar equator. We were still within the slightly faster stream of the previous coronal hole but the modest speed and density to the solar wind were not producing much in terms of geomagnetic activity. We were still all green in the Kp index after the sector boundary interaction.

We saw solar flares were back on the rise, and the active regions were to blame, Just a couple on the earth facing half at the time, but the arching fields on the left compared to the right indicated that higher active regions were still on their way to face earth, compared to the quieter portion departing the west limb, giving us a breather from the space weather of the previous several days.

Near-Live image of the sun in 171 angstrom as seen by NASA's SDO



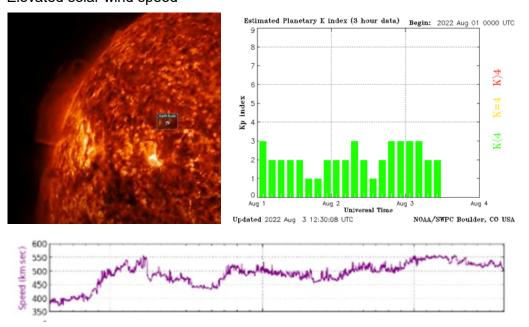
Elevated X-ray flux

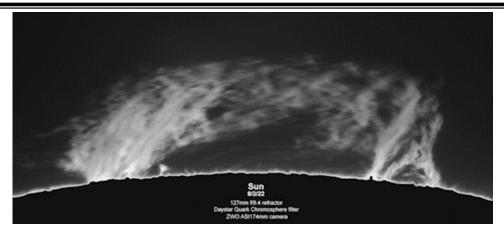


Elevated X-ray flux SFI-95 Band conditions remaining in the fair range.

K-indices remained in the green.

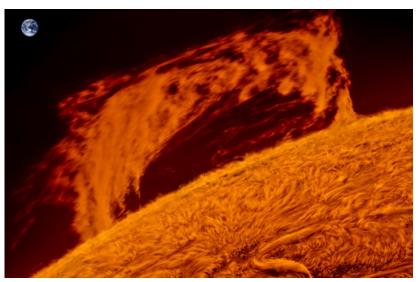
August 3rd - Elevated solar wind speed





Giant solar prominence, a loop of plasma on the sun's eastern limb, an arch that was 325,000 km long.

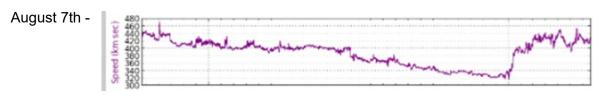
Sunspot AR3068 was growing and developing 'beta-gamma' magnetic field that harbored enough energy to produce M-class solar flares. Earth was in the cross-hairs as any explosion would be directed towards earth.

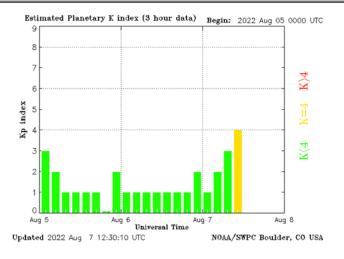


August 4th - A far-side sunspot: There was a sunspot on the far-side side of the sun so big it was changing the way the sun vibrates. Helioseismic maps revealed its acoustic echo not far behind the sun's southeastern limb. The sunspot would be turning to face earth in the following few days.

August 5th - Data Outage Alert: Images from NASA's Solar Dynamics Observatory (SDO) were temporarily unavailable as technicians rushed to repair a broken fiber optic cable linking SDO's White Sands ground station to Stanford University.

Technicians repaired a broken fiber optic link on August 5th. A greater than 2-day outage missed the emergence of three new sunspots, and the spectacular eruption of a large prominence.



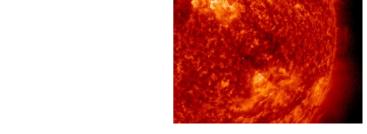




August 15th - After a week of quiet, solar activity starts to pickup.

#### DARK PLASMA EXPLOSION ON THE SUN

The sun hurled a plume of dark plasma into space following a dramatic explosion around sunspot AR3076. NASA's Solar Dynamics Observatory recorded the blast, which began on August 14th around 1130 UT.

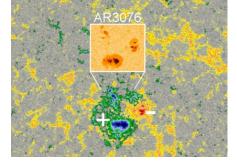


Traveling faster than 600 km/s (1.3 million mph), the plume tore through the sun's outer atmosphere, creating a coronal mass ejection. (CME).

The Solar and Heliospheric Observatory (SOHO) confirm that the CME had an Earth-directed component. It potentially could sideswipe Earth's magnetic field on August 17th, producing minor to moderate geomagnetic storms.

Reversed polarity sunspot: The sunspot that produced a dark plasma explosion was a little unusual. It

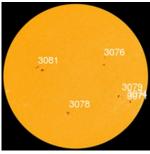
had its signs backwards.



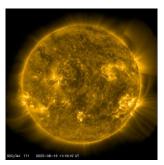
Magnetic map of the sun's surface from NASA's Solar Dynamics Observatory

According to Hale's Law, Solar Cycle 25 sunspots in the sun's northern hemisphere should have a -/+ polarity; negative on the left, positive on the right. However, the magnetogram above shows the opposite. AR3076 is a reversed polarity sunspot.

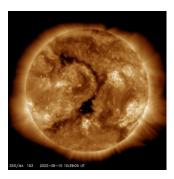
Reversed polarity sunspots are more than twice as likely to develop complex magnetic fields mixing + and – together. Reversed polarity sunspots are therefore more likely to explode.



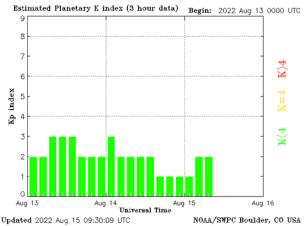
Sunspots AR3076, 78, 79 and 81 were all crackling with C-class solar flares. Credit: SDO/HMI



SDO/AIA 171



SDO/AIA 193



The Radio Sun was 10.7 cm flux:126 sfu

August 16th - A CME was hurled in our direction on August 15th by a "dark plasma explosion.

A series of M-class solar flares caused minor shortwave radio blackouts over the Atlantic Ocean and North America. Mariners, pilots and ham radio operators may have noticed unusual propagation effects at frequencies below 15 MHz especially during the hours between 1500 UT and 1800 UT.

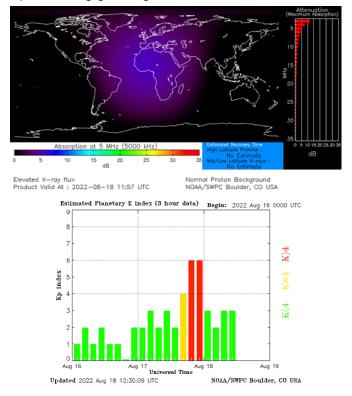
Sunspot AR3078 developed a delta-class magnetic field. AR3078 was crackling with activity.

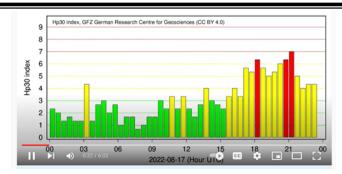
HF Fade-out Warning: HF RADIO COMMUNICATIONS WARNING 22/59 ISSUED AT 2340UT/14 AUGUST 2022 BY THE AUSTRALIAN SPACE WEATHER FORECASTING CENTER. Increased chance of R1 conditions due to AR3076 increasing in magnetic complexity to beta-gamma. DEGRADED HF PROPAGATION CONDITIONS EXPECTED FROM 15-16 AUGUST 2022 IF COMMS DIFFICULTIES EXPERIENCED TRY A HIGHER FREQUENCY BAND. SOLAR ACTIVITY FORECAST HF COMMS FADE-OUTS 15 Aug: R0, chance of R1 Possible 16 Aug: R0, chance of R1 Possible.

Solar flare alerts: Sunspot AR3078 had developed an unstable delta-class magnetic field that harbored energy for strong solar flares. NOAA forecasters said there was a 30% chance of M-class flares and a 10% chance of X-class flares. Any explosions would be geoeffective as the sunspot was almost directly facing Earth.

A cannibal CME was coming: On Aug. 14th, a dark plasma eruption hurled one CME toward Earth. On August, 15th, an exploding magnetic filament launched another one right behind it. The two CMEs were expected to arrive together on August18th, according to the latest forecast models from NOAA. This could be a "Cannibal CME" event. In other words, the second CME might overtake and gobble up the first, creating a mish-mash of the two. Cannibal CMEs contain tangled magnetic fields and compressed plasma's that can spark strong geomagnetic storms.

August 18th



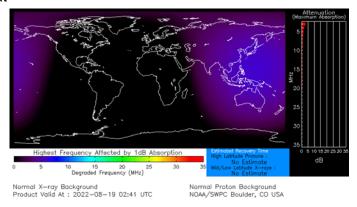


# (Germany's reported Kp chart)



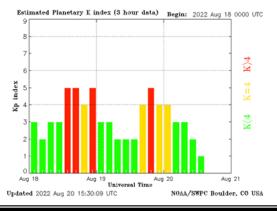


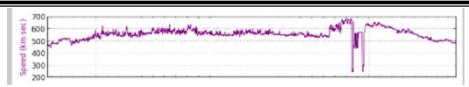
Moderate Radio Blackout



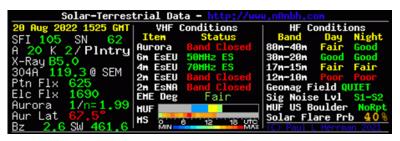
Type II Radio Emission: Begin time: Thursday, 18 August 2022 10:49. Velocity: 749km/sec

A CME just hit earth, more on the way: A CME hit Earth's magnetic field on August. 19th at 1734 UT, sparking a G-1 class (minor) geomagnetic storm. Two more CMEs were on the way: #1, #2. Both were on the edge of the Earths strike zone; they could deliver weak glancing blows on August 20th and 21st. Even a weak CME strike can cause a G1-class storm.





Solar Wind Speed



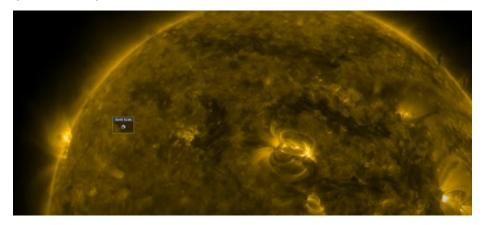
Geomagnetic unrest: A CME hit Earth's magnetic field on August 20th at 18:12 UT. The weak impact caused an episode of geomagnetic unrest (Kp=4) but not a full-fledged geomagnetic storm. Another similar CME was expected to arrive on August 21st, and it had the potential to push Earth's magnetosphere over the threshold of minor G1-class storming. Amateur radio operators should stay alert for poor HF conditions.

Helianthus Borealis: Earth's magnetosphere was buzzing with activity. At least three CMEs had hit since August 17th, none with great force, but together sufficient enough to spark multiple geomagnetic storms and sub-storms.

August 22nd - NOAA forecasters said that G1 class geomagnetic storms were possible on August 22nd . More likely, the storms would be over. A final minor CME launched toward Earth by old sunspot AR3078. It would indeed graze our planet's magnetic field.

The storms were originally predicted to reach category G3 (strong). Instead they peaked at category G2 (moderate), one notch below. That didn't mean the forecast were wrong, if only one of the CMEs had been a little more potent, the needle almost certainly would have hit the predicted value. Solar Cycle 25 is just getting started.

The Radio Sun 10.7 cm flux: 97 sfu



New sunspot AR3085 merits watching because it is growing rapidly. Credit: SDO/HMI

Development of an active region on the north. Solar wind and geomagnetic conditions were calm for the moment, but solar flaring was on the rise as a little group of sunspots were becoming a complex active region. This would need flare monitoring as we are still well within the expected solar uptick period. Mid-

August should bring a sharp increase due to the 5.9 month activity cycle.

Forecast: Report of Solar-Geophysical Activity. Issued: 2022 Aug 22 2245 UTC

Joint USAF/NOAA Solar Geophysical Activity Report and Forecast SDF Number 233 Issued at 2200Z on 22 Aug 2022.

Analysis of Solar Active Regions and Activity from 21/2100Z to 22/2100Z: Solar activity has been at low levels for the past 24 hours. The largest solar event of the period was a C5 event observed at 22/1409Z from Region 3085 (N30E01). There are currently 3 numbered sunspot regions on the disk.

Geophysical Activity Summary 21/2100Z to 22/2100Z: The geomagnetic field has been at quiet to unsettled levels for the past 24 hours. Solar wind speed reached a peak of 623 km/s at 22/0003Z. Total IMF reached 7 nT at 21/2355Z. The maximum southward component of Bz reached -7 nT at 22/0032Z. Electrons greater than 2 MeV at geosynchronous orbit reached a peak level of 3820 pfu. Geophysical Activity Forecast: The geomagnetic field is expected to be at quiet to unsettled.

73, Fred AA0JK



The Denver Radio Club is an ARRL Special Service Club

Support your hobby and join the ARRL today!

http://www.arrl.org/



# **DRC's Trading Post**

Don't forget you can find locally-sourced, ham-grown merchandise at: <a href="https://www.w0tx.org/trade.htm">https://www.w0tx.org/trade.htm</a>

#### **ATTENTION**

The DRC Board of Directors meetings are held on the 4th Wednesday of the month and are open to any member. Due to scheduling of meeting space, the board does not always meet at the same location and on occasion meetings are held via Skype. Anyone wishing to attend, please contact a board member prior to meeting night for specific information.

# **PAST ROUND TABLE PAGES**

PROVIDED BY FRED HART, AA0JK

From the September 1962 edition.

RMs: WØFEO, KØDTK, OBS: KØDCC, The Colorado SCM and his all-ham family spent the months of June and July in Bend, Ore., where the OM, WØNIT, taught summer school classes at Central Oregon College. Clubs from Arvada, Delta, Pueblo, Boulder, Denver and Littleton reported Field Day activity. Denver's club station WOOl'I reported contacts in excess of 200 on 6 meters in the FD exercises. WØETT operated during FD from a 10.000-ft. QTH with 653 QSOs. A RACES net is being activated in the Grand Junction Support Area on 1994.5 kc. The PARA operated for 22 hours on emergency power on FD. KØMNQ reported 2-meter daily contacts from Denver to KWWCP at the Pueblo Ordinance Depot during the month of June. WOACA has made several tape recordings of this unusual 2-meter Denver-Pueblo v.h.f. condition. Contacts were made on phone. Boulder amateurs KØJSV, KØMRY and WØCGO made over 150 contacts in 25 sections during the V.H.F. Contest from on top of Bighorn Mt. Traffic: WØSIN 64, KODOW 59, WOKQD 56, KOQGO 48, WOETT 8.

The History of Sparky

The club logo was originated by Miriam Juza, xyl of Marvin, W6FGD (SK), ex W0FYY. Miriam was looking for something to put on Marv's letterheads, and as a surprise for him, she drew "Sparky". Possibly in 1956, during the presidency of Carl Smith, W0BWJ (SK), permission was given to the club for its use as that was the year it first appeared on the club's publication, The Round Table. The original design of Sparky riding a lightning bolt, and holding a code key, has not been changed - but other alterations have been made in past years, namely the addition of "Denver Radio Club" encircling him and a coat of arms by Roy Raney, KØOVQ (SK).

#### **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** 



#### 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



#### THE ROUND TABLE ARCHIVE

Go to: http://www.w0tx.org/roundtables.htm

#### THE ROUND TABLE ARTICLE INDEX

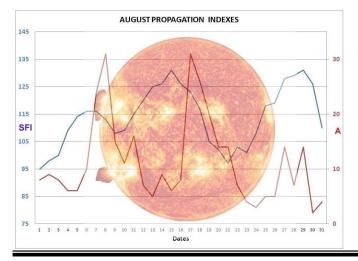
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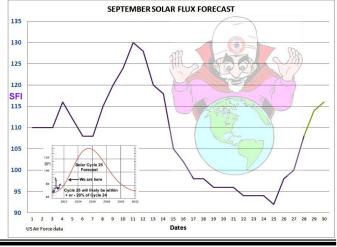
# **PAST & FUTURE PROPAGATION CONDITIONS**

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: <a href="http://www.w0tx.org/RoundtableArchive/2010-RoundTables/RT201009(SEP).pdf">http://www.w0tx.org/RoundtableArchive/2010-RoundTables/RT201009(SEP).pdf</a>





# **UPCOMING EVENTS**

**HAMFESTS & CONVENTIONS** 

Event	Date	Location	Sponsor Website
BARCfest Hamfest	10/02/22	Boulder County Fairgrounds	qsl.net/w0dk/barcfest.html

## **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
Colorado	09/03/2022	09/04/2022	Pikes Peak Radio Amateur Association	
Tennessee	09/04/2022	09/05/2022	Tennessee Contest Group	
Alabama	09/10/2022	09/11/2022	Alabama QSO Party	
Iowa	09/17/2022	09/18/2022	Story County ARC	
New Hampshire	09/17/2022	09/18/2022	Port City Amateur Radio Club	
New Jersey	09/17/2022	09/18/2022	Burlington County Radio Club	
Texas	09/17/2022	09/18/2022	Texas DX Society	
Washington	09/17/2022	09/18/2022	Western Washington DX Club	
Maine	09/24/2022	09/25/2022	Wireless Society of Southern Maine	
California	10/01/2022	10/02/2022	California QSO Party	
Nevada	10/07/2022	10/09/2022	Sierra Nevada Amateur Radio Society	

#### **ATTENTION**

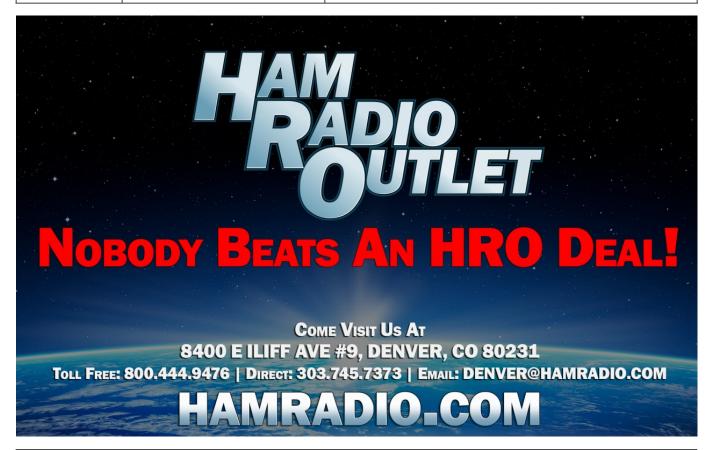
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# SUPPORT THE DRC FROM YOUR AMAZON PURCHASES

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



#### SEPTEMBER 2022 DRC Net Sundays at 8:30 p.m. on 145.490 / 448.625 (no PL) Wednesday Thursday Monday Tuesday **Friday** Sunday Saturday 1 2 3 First Quarter 5 6 8 9 10 4 Learning Net September VHF -7:30 p.m. Begins 1800 UTC 145.490 / 448.625 (No PL) Full Moon 17 11 12 13 14 15 16 **Learning Net** September VHF -10 GHz & Up -Begins 0600 Local 7:30 p.m. 145.490 / 448.625 Ends 0259 UTC (No PL) **EME Contest -**0000 UTC Last Quarter 20 22 23 24 18 19 21 **DRC Online Meeting** 10 GHz & Up -Elmer 6 p.m. Ends 0000 Local Meeting 7 p.m. **EME Contest -**Ends 2359 UTC 25 26 27 28 29 30 Learning Net 7:30 p.m. 145.490 / 448.625 (No PL) New Moon

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

# **DRC BOARD OF DIRECTORS**

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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 round a later date in our new regular feature called Round Table Round World.

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 roundtable@w0tx.org. The submission deadline is the 25th of the Month. ~ Editor