



# ROUNDTABLE

The Denver Radio Club Newsletter

Since 1917

September 2019

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## PRESIDENT'S MESSAGE

BY GERRY VILLHAUER, W0GV

Hello DRC Members,

Our annual meeting and elections are happening at our September meeting. Please don't let that scare you off, as it is usually a fairly short process.

Thanks from Cathy (N0CRZ) and myself for a successful DRC Hamfest. We do not have all the numbers yet, but it appears we had a very successful event. Thanks to one and all for your help with the many jobs that made this event a success.

I have a request. If you live in the Lakewood area and think you may have a view of our station 4 repeater site on Alameda Parkway, West of Green Mountain High School, and would be willing to provide internet access from your location, please contact me. The amount of band width we would use would be undetectable. This would be a great help to the club.

WWV in Fort Collins, CO is about to celebrate their 100<sup>th</sup> year anniversary. If you would be interested in helping with the celebration by operating the Special Event Station, please contact [WWV100@ncarc.net](mailto:WWV100@ncarc.net) The event is Friday September 27 through Wednesday October 2<sup>nd</sup>. This is an opportunity to operate voice and digital modes from the WWV site and help with the celebration.

Thanks to Bill (WT0DX) and Paul (NO0T) for a very well presented and received presentation on setting up and operating a remote controlled station. This appears to be the future for a lot of hams with limited access for a station at their home QTH or for operating while traveling. Great job guys, thanks!

September's 2019 DRC membership meeting presentation, will be by Orlen Wolf (WW0LF):

During the cold war clandestine listening devices (bugs) were a constant problem. Counterintelligence officers spent a lot of time searching for these devices using what then was a "bleeding edge" state of the art modular receiver manufactured by the F. G. Mason Company. This receiver covered 2KHz to 2GHz using a variety of plug-in RF modules. It even had a spectrum monitor scope – another plug-in module. And all this for a paltry \$14,000. My presentation will include a bit of history on "bug" search techniques and a display of an F. G. Mason Model A2 briefcase receiver system (a heavy briefcase).

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:

Brian Slota - KE0WHU	Sam Sparks - KN0TTS	Jack Ciaccia - WM0G
Jennifer Wesley - KE0WBN	Kathy Samaras - N0LGA	John Stevens - WB4HZA
Jeremiah Bagula - N0KMO	Michael Quigley - KD0AJT	Kevin Wise - AI4X
Smantha Bagula - N0SMY	Mike Yocom - KC0SM	Shari Hamilton - KD0LLR
Damita Espino	Alan Beebe - W0AEB	Steve Shearer - K0STE
Jesse Caballero	Jackie Donnell - W0JED	William Hamilton - KU0E
Via Espino	Jerome Tinianow - K0OKY	Chris Jones - KE0LWP

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.

## AUGUST MEETING - WHAT'D I MISS?

By Bill Rinker, W6OAV

After attendee introductions, the meeting was turned over to the guest speakers, Bill (WT0DX) and Paul (NO0T). The title of their PowerPoint presentation was "Remote Stations". Their presentation covered: why have a remote station, remote station options, getting started, operating tips, and what's coming next. They then described and showed their control and remote stations.

Bill then brought up his remote station using his Windows laptop. After showing and describing the various screens he activated FT 8 on 20 meters. Bill proceeded to work stations in Russia and Iceland with 50 watts. Needless to say, that impressed the audience!

If you desire a copy of the PowerPoint, email Bill (WT0DX) at his QRZ listed email. The PowerPoint not only contains the information described above it also contains many URLs for websites covering all aspects of local and remote stations from hardware to software to how it all works.

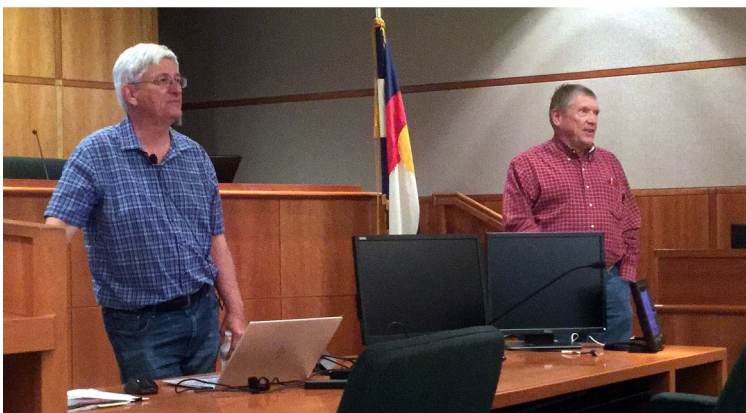


Figure 1 - WT0DX and NO0T discussing remote base operating

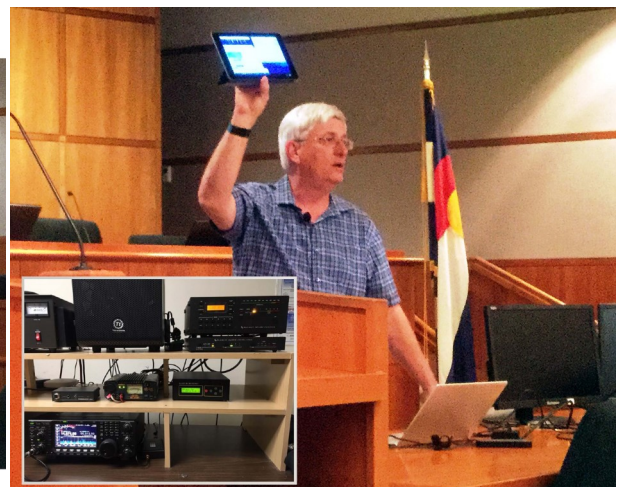


Figure 2 - WT0DX uses an iPad to control his remote station shown at left

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## TECHNICAL COMMITTEE REPORT

BY BILL RINKER, W6OAV

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

### ITEMS COMPLETED THIS MONTH

#### **Fusion Repeater – Mode?**

Goal: Determine whether the repeater should be analog/digital or digital only.

Issue: Analog users are subjected to immediate digital signals when Fusion users connect to the Colorado-Link network. Analog is not necessary as DRC has other analog repeaters providing the same or better coverage.

Status: W0GV configured the repeater for digital only. Item closed.

**Note:** By convention, this repeater, with the FM analog disabled, is now considered to be a C4FM digital repeater rather than a Fusion repeater.

### ITEMS TO BE REMOVED FROM THIS LIST

#### **Move the C4FM repeater to Centennial Cone**

Goal: Provide better coverage.

Status: A request was issued to the Frequency Coordinator (FC). Turns out the move might create interference between this repeater and an existing repeater. The move would violate FC guidelines.

### OPEN ITEMS

#### **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.

#### **DRC Repository verses Cloud Services**

Goal: Research using the DRC repository or another cloud service for off premise storing of club records.

Status: AD0UZ has submitted a recommendation to the board. The board is now considering the recommendation.

#### **Repair the Station 4 Remote Power Control**

Goal: Troubleshoot and repair the system.

Status: Still under investigation.

#### **C4FM Repeater – Network configuration?**

Goal: Remain on the Colorado-Link network or configure the DRC Wires-X Room?

Status: Still under discussion as there are 3 configurations to consider.

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## LEARNING NET REPORT

BY FRED HART, AA0JK

Thanks goes out to our Net controller: Doron (K1DBC)

Topics:

- Response from ARRL's Steve Ford (WB8IMY), and Joel Hallas (W1ZR). Grounding and Bonding. (ARRL, The Doctor Is In, August 01, 2019)
- HF band S meter reading: <https://hamradioschool.com/practical-signal-reports/>
- Hytera AR482GI DMR
- DMR: [https://www.raqi.ca/~ve2rae/dmr/Amateur\\_Radio\\_Guide\\_to\\_DMR.pdf](https://www.raqi.ca/~ve2rae/dmr/Amateur_Radio_Guide_to_DMR.pdf)



- DRC Hamfest
- Scouts Net 449.450, 1 & 3rd Sundays
- APRS: <http://www.aprs.org/>
- ITU phonetics application
- Encoding & Digital Modes
- FT8: <http://www.w0wtn.org/downloads/n0dl/Introduction%20to%20Ham%20Radio%20Digital%20Mode%20FT8.pdf>

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](mailto:w0tx@w0tx.org) or [elmer@w0tx.org](mailto: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](mailto: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.***

## SEPTEMBER MEETING PRESENTATION

BY ORLEN WOLF, WW0LF

During the cold war clandestine listening devices (bugs) were a constant problem. Counterintelligence officers spent a lot of time searching for these devices using what then was a "bleeding edge" state of the art modular receiver manufactured by the F. G. Mason company. This receiver covered 2kHz to 2GHz using a variety of plug-in RF modules. It even had a spectrum monitor scope – another plug-in module. And all this for a paltry \$14,000. My presentation will include a bit of history on "bug" search techniques and a display of an F. G. Mason Model A2 briefcase receiver system (a heavy briefcase).



### DENVER SCOUT NET

PROVIDED BY KEN KYES, K0YES

The Denver Area Scouts Net is on the 1st and 3rd Sundays each month, at 1930. 449.450 / 103.5. The net is also carried on Allstar (46079), DMR Talkgroup 310847 (and RMRL DMR repeater 449.750 Time slot 1) and Fusion Room "DENVERSKYHUBLINK".

George (KA0BSA) is getting it started and trying to get licensed Scouts and Scout Leaders to check in.

Thanks,

Ken  
K0YES

### AIRVENTURE 2019

BY FRED HART, AA0JK

A great record breaking year at EAA's AirVenture event 2019. This was the EAA's 50th anniversary celebration.

Attendance was over 625,000 and what an event it was.



Sunday July 28th marked the close of the 67th EAA annual convention, and what a convention it was. Mornings dawned with airplane noise. A week full of friends from around the globe, airplanes, forums, exhibits, air shows, and all the things that make Oshkosh AirVenture spectacular. And yes, the ARRL returned again making our joyous visit complete.

It's the kind of life experience that can only be lived here, and you have to experience it for yourself to understand. It's made possible by the passion and dedication of thousands of tireless volunteers who come together here as family each year, to put on the World's Greatest Aviation Celebration.

The ARRL was there to promote Amateur Radio and today's communication technology.



Bob (NQ1R) and Fred (AA0JK)



ARRL's Exhibit Booth

The ARRL booth was like having a major DX opening. We had Hams from around the world stopping by for a QSO. An eyeball QSO. This was a fantastic experience, and what an outstanding opportunity for them to get to know the ARRL first hand.

The countdown to Oshkosh this year seemed to take forever, but once here it seemed to be gone in a flash. From the nervous excitement of, "We just can't wait", to "let there be another week".

If you have made the pilgrimage to AirVenture, then it is a fair bet that you have seen and done some pretty amazing things. Perhaps it was the opportunity to meet and talk with aviation experts and historical figures. The educational, and hands-on opportunities.

Whether you realize it or not, AirVenture is one of the most significant weeks during the year. It's a week filled with camaraderie, interaction and opportunity. The chance to sit down face-to-face with key officials about issues and experiences.



Getting some stick-time in a new Mooney M20V.

Hope to see you all next year for AirVenture 68.

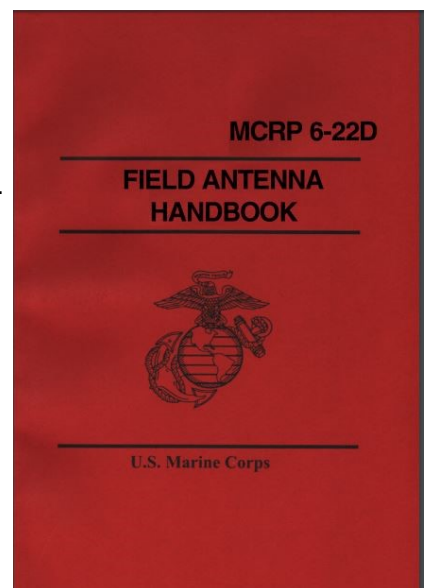
73,

Fred  
AA0JK

**MARINE FIELD ANTENNA HANDBOOK**

BY BILL RINKER, W6OAV

For a FREE 150 page very comprehensive Marine Field Antenna Handbook, go to <https://www.marines.mil/Portals/1/Publications/MCRP%208-10B.11.pdf>



# DENVER RADIO CLUB'S HAMFEST 2019

By FRED HART, AA0JK



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Tom (K6HJV) and Doron (K1DBC)

73,  
Fred  
AA0JK

**QUESTION OF THE MONTH**

BY BILL RINKER, W6OAV

Question

I would like to build a simple 2 meter ground plane. Should the radials be horizontal or slope downwards for best operation?

Answer

Bending the radials from horizontal to 45 degrees downward does have a positive effect on ground plane antenna performance. Angles of about 45 degrees are optimum. The measurements (See Chart 1) show that going from horizontal radials to sloping 45 degree downward radials produces a nice 50 ohm feed point and a very light increase in gain. The radiation angle doesn't change (See Figure 1). Going slightly either direction around 45 degrees produces very little change. The chart shows that radial angle isn't critical and doesn't have to be exactly 45 degrees.

Figure 2 shows a typical 2 meter ground plane with recommended measurements. Should the resonance be a bit off due to the environment, trim the vertical element only. The formulas for building a ground plane are:

Desired frequency (MHz) = 146

Vertical (inches) =  $(234/\text{FREQ MHz}) = 19 \frac{5}{16}$ " (Length is to the SO-239 insulator but not critical)

Radials (inches) =  $(234/\text{FREQ MHz}) + 5\% = 20 \frac{3}{16}$ "

Chart 1 – Effects of Radial Angles					
Radial Degrees	R (ohms)	X (ohms)	SWR	MAX Gain	Max Lobe Degree
0	23.26	0.0	2.15	3.56	7
-30	44.22	0.0	1.18	3.96	7
-45	50.44	0.0	1.00	4.26	7
-60	56.05	0.0	1.12	4.62	8

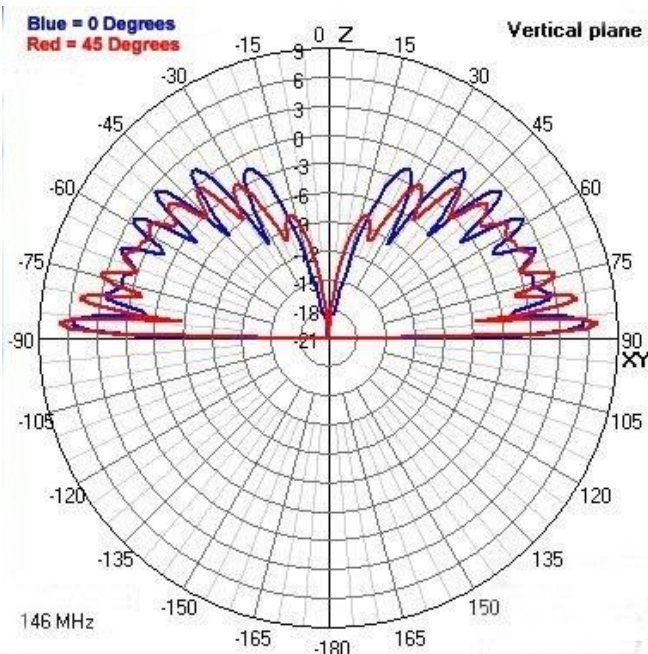


Figure 1 - Comparison of Radials at 0 and 45 Degrees

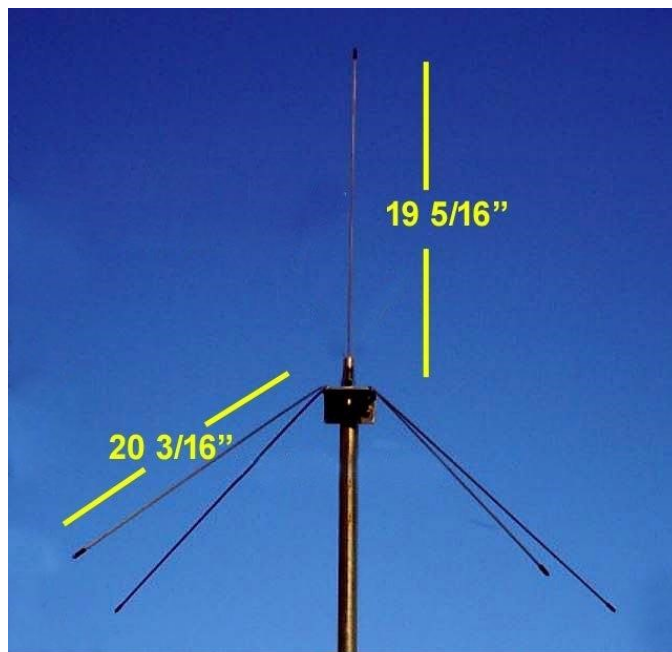


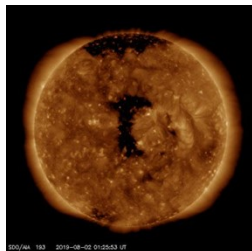
Figure 2 - Antenna used for this article



## SOLAR GEOPHYSICAL ACTIVITY REPORT

BY FRED HART, AA0JK

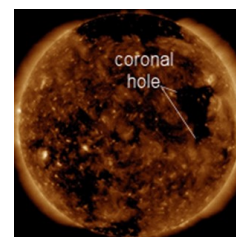
Parker Solar Probe Completes Download of Science Data from First Two Solar Encounters. Solar activity was exceedingly quiet. No sunspots or solar flares.



August 4th - Low intensity geomagnetic conditions were in effect as this coronal hole turned away. Solar Minimum was having a calming effect on Earth's magnetic field as the Sun continues deeper into Solar Minimum.

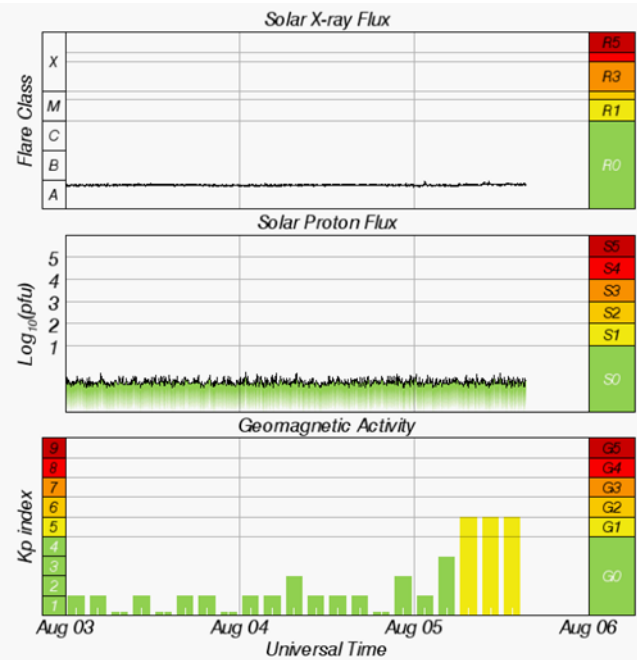
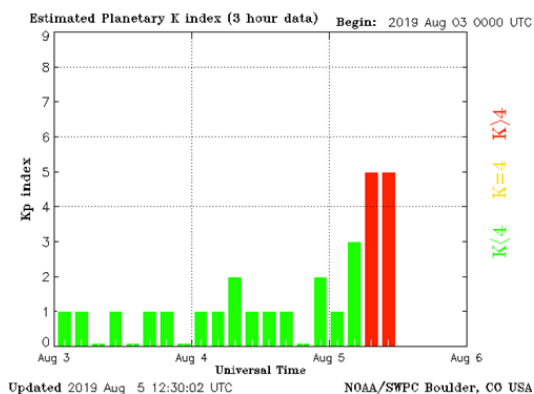
The quiet won't last forever, though. A panel led by experts from NOAA and NASA, predict that the solar cycle will bottom out in late 2019, with a bounce back to higher levels of activity beginning sometime in 2020.

August 5th - A northern hemisphere coronal hole was facing Earth. Enhanced solar wind was expected to arrive in ~3 days. Credit: SDO/AIA



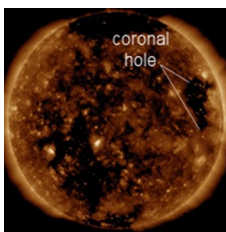
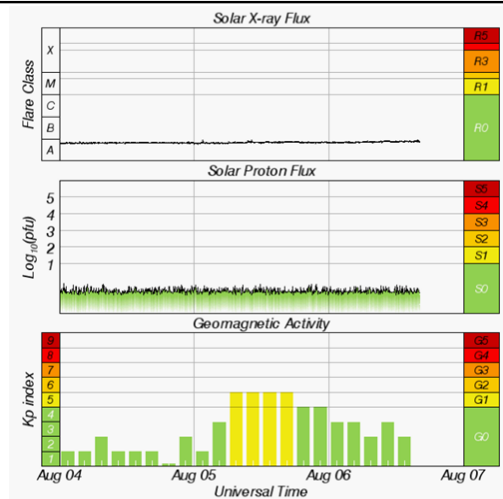
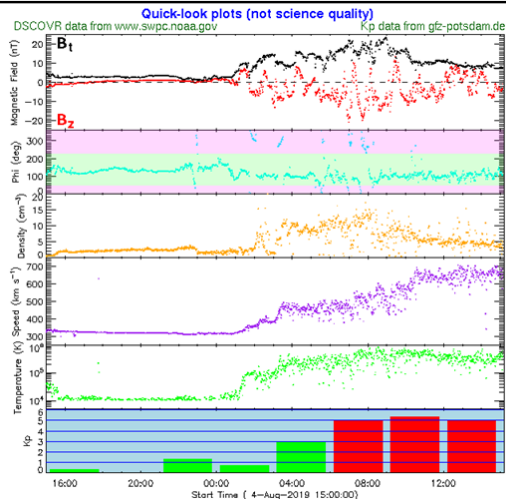
Earth was entering a stream of solar wind flowing from the indicated coronal hole.

NOAA forecasters said there was a 55% chance of G1-class geomagnetic storms on August 5th and 6th.



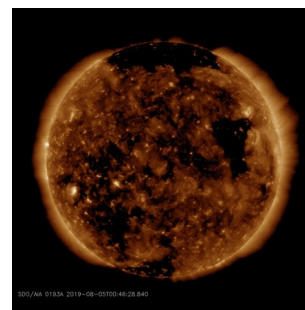
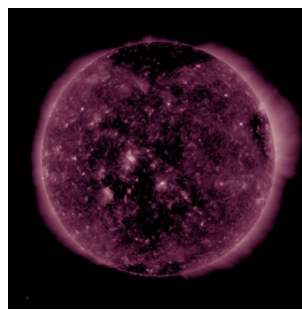
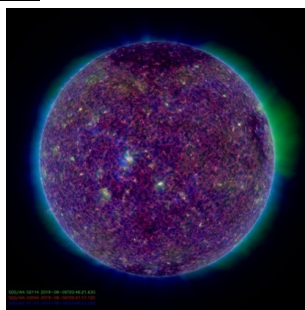
A geomagnetic storm was in progress. Passing Earth at near 600/km/s.

We had a G1+ (Kp=5.33) storm due to the high speed stream from a low-latitude coronal hole. Although the DSCOVR plasma data was a little noisy, the solar wind speed stayed at ~700 km/s.



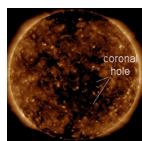
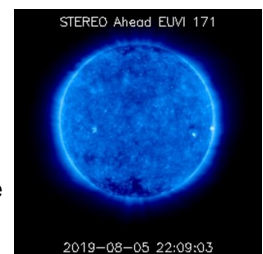
Credit: SDO/AIA

Note: The two bright spots in the southern hemisphere area. These were two solar flares attempting to develop and surface as new Sun spots. Both with reverse polarity, indicating the beginning of the new solar cycle.



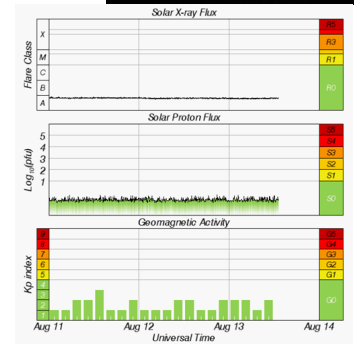
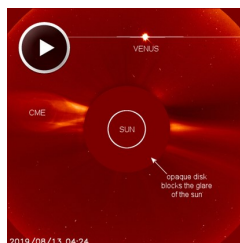
Coronal hole on the south. Two Sun spots failed in an attempt to break through the surface of the corona as their brightness decayed. Geomagnetic conditions were expected to remain calm.

The back side of Sun showed several Sun spots forming in the southern hemisphere. Not developed enough to break through the corona and get issued an official number, but a sure sign of cycle 25 in the making.



August 14th - A minor stream of solar wind flowing from this shallow coronal hole was expected to reach Earth on August 16. Credit: SDO/AIA

**EXPLOSION INTERRUPTS SOLAR MINIMUM:** A completely unexpected explosion occurred on the spotless Sun. Coronagraphs on-board the orbiting Solar and Heliospheric Observatory (SOHO) recorded a cloud of debris billowing away from the blast site:



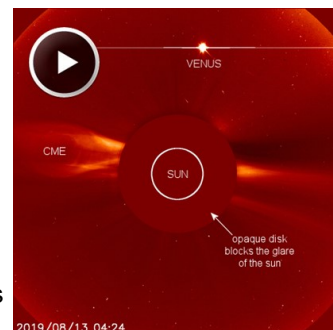
The slow-moving cloud was “not” heading for Earth. It would sail wide past our planet, and not cause a geomagnetic storm. If the blast site had been facing Earth, the story might have been different. Coils of strong magnetism, evident in the structure of the cloud, could have caused strong auroras, and other effects if they had made contact with Earth’s magnetosphere.

Explosions like this can happen at any time, even during Solar Minimum, when magnetic fields in the Sun’s atmosphere occasionally become unstable and reorganize themselves. No sunspots are required. Good thing, because the Sun had been without spots for 7 straight days, and altogether more than 150 days thus far in 2019. Solar minimum continues, with a chance of interruptions.

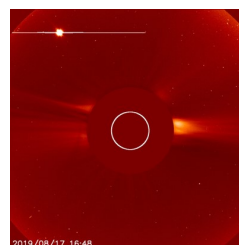
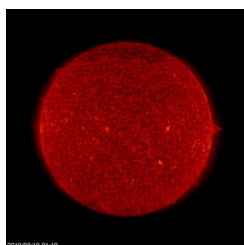
LASCO CORONAGRAPH: Imagery (right) provided courtesy of NASA and ESA.

August 16th - No sunspots were visible over the recent reporting week. According to Spaceweather.com, 67% of the days so far in 2019 have been spotless, and for all of 2018 it was 61%. In the previous solar minimum in 2008 and 2009 the spotless days ran 73% and 71%, respectively.

Solar flux has been minimal and unremarkable, with average daily solar flux changing only to 67.4 from 67.2 the past week. Predicted solar flux for the next 45 days is likewise to be unremarkable, at 67 from August 15 until September 29.

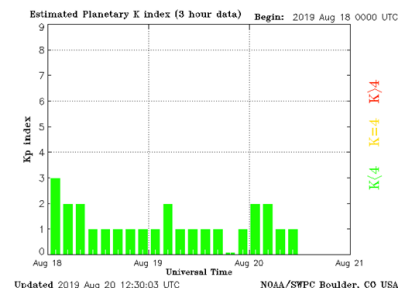
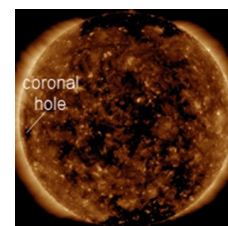


Decent coronal mass ejections with flux ropes haven’t been seen for a long time. These seen on the coronal rim are like similar examples, starting very slowly, (~100km/s), leaving signatures only over the limb, not on the disk, in <1MK images. Another stealthy event. SOHO LASCO C2



August 20th - Still no sunspots or solar flares. There were numerous coronal holes, one coming around the 90° position. An increase in plasma filament activity standing tall around the limbs. A surge in plasma speed was detected, expected increase in K-index readings as speeds increased.

A coronal hole was emerging over the Sun’s Eastern limb. It’s the same hole that strobed Earth with solar wind on August 5th, sparking G1 class geomagnetic storms. Credit: SDO/AIA



Prepared jointly by the U.S. Department of Commerce, NOAA, Space Weather Prediction Center. UPDATED 2019 August 20 0030 UTC.

Summary: Solar activity continued at very low levels as the solar disk remained Spotless. No Earth-directed CMEs were observed in available coronagraph imagery.

Forecast: Solar activity was expected to persist at very low levels on August 20th -22nd.

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](#)



**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**

[EAA AirVenture](#)

**THE ROUNDTABLE ARCHIVE**

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

**THE ROUNDTABLE ARTICLE INDEX**

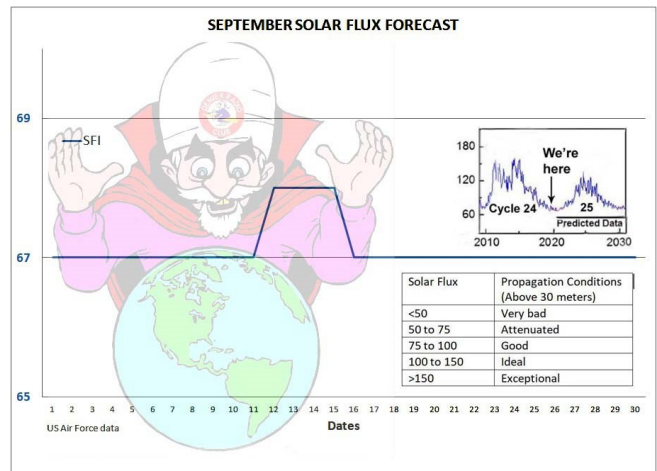
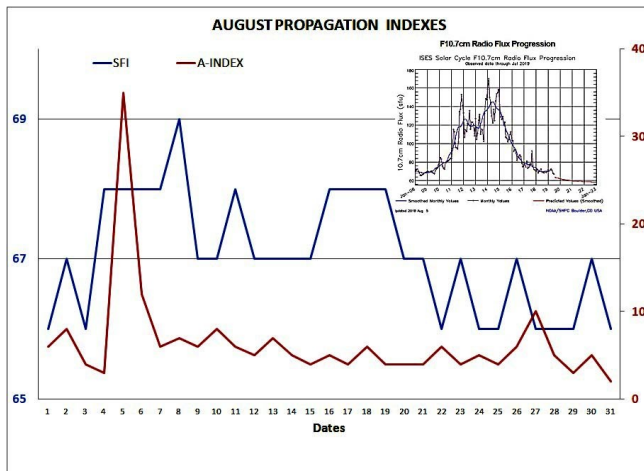
Go to: <http://www.w0tx.org/RoundtableArchive/-RoundTables-Index.pdf>

**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
BARCFest	10/06/19	Boulder County Fairgrounds, Longmont	<a href="http://QSL.net">QSL.net</a>

**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
Tennessee	09/01/2019	09/02/2019	<a href="#">Tennessee QSO Party</a>	
Nebraska	09/07/2019	09/08/2019	<a href="#">QCWA Nebraska Chapter 25</a>	
Alabama	09/14/2019	09/15/2019	<a href="#">Alabama QSO Party</a>	Date Change!
Texas	09/14/2019	09/15/2019	<a href="#">Texas QSO Party</a>	Date Change!
Iowa	09/21/2019	09/22/2019	<a href="#">Story County ARC</a>	
New Jersey	09/21/2019	09/22/2019	<a href="#">New Jersey QSO Party</a>	
Washington	09/21/2019	09/22/2019	<a href="#">Western Washington DX Club</a>	
Maine	09/28/2019	09/29/2019	<a href="#">Wireless Society of Southern Maine</a>	
California	10/05/2019	10/06/2019	<a href="#">California QSO Party</a>	
Nevada	10/11/2019	10/13/2019	<a href="#">Sierra Nevada Amateur Radio Society</a>	
Arizona	10/12/2019	10/13/2019	<a href="#">Arizona QSO Party</a>	
Pennsylvania	10/12/2019	10/13/2019	<a href="#">The PA QSO Party Association</a>	
South Dakota	10/12/2019	10/13/2019	<a href="#">South Dakota QSO Party</a>	
New York	10/19/2019	10/20/2019	<a href="#">Rochester DX Association</a>	
Illinois	10/20/2019	10/21/2019	<a href="#">Western Illinois Amateur Radio Club</a>	

**ATTENTION**

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**DRC REPEATERS**

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	2m / 20m gateway. Useable by Technicians on 2m.
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.
70cm	446.7875MHz (-)	BrandMeister Repeater: Slot 1 – Wide Area Traffic, Slot 2 – Local Talk Group 310804



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


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<b>SEPTEMBER 2019</b>		<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	4 <b>Learning Net</b> 7:30 p.m. 145.490 / 448.625 (No PL)	5  First Quarter	6	7
8	9	10	11 <b>Learning Net</b> 7:30 p.m. 145.490 / 448.625 (No PL)	12	13  Full Moon	14 <b>September VHF -</b> Starts 1800 UTC
15	16 <b>September VHF -</b> Ends 0259 UTC	17	18 <b>DRC Meeting</b> Elmer 6 p.m. General 7 p.m.	19	20	21 <b>10 GHz &amp; Up -</b> Starts 6 AM local  <b>EME Contest -</b> Starts 0000 UTC  Last Quarter
22 <b>10 GHz &amp; Up -</b> Ends mid- night local  <b>EME Contest -</b> Ends 2359 UTC	23	24	25 <b>Learning Net</b> 7:30 p.m. 145.490 / 448.625 (No PL)	26	27	28  New Moon
29	30					

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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](mailto:drc.editor@gmail.com).

*Subject:* I'm located in...

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