

THE NEWSLETTER OF THE KINGS COUNTY RADIO CLUB

KCRC



June 2020

“NULLUM BENEFICIUM IMPUNITUM”

Volume 7, Issue 6A

Minutes of the June 3rd 2020 KCRC Meeting

Our June “Pre-Meeting Question and Answer Session” tabled for WebEx small talk.

The monthly meeting was called to order at 8 PM, by our President, Joseph AC2AE. Also present at tonight’s meeting were Vice President Mitch N2RGA, Treasurer Frank KD2QPU, Secretary Roy AC2GS, Executive-At-Large Board Members Berlotte KD2MYF, and Jason KD2LRX, Howard N2GOT, Richard KA2KDQ, William AC2ZV, Howie KD2MSU, Maxime AC2ZW, Bob KD2NVB, Joe K2MLY, Tommy N3TJO, Glenn N4ESU, Ralph KD2RN, Joe N2DEJ, James KB2FMH, Bob W2ZF, and a new guest Christian K2CVD.

The vote to accept the minutes of the May meeting was passed unanimously.

Treasurer Report—Frank KD2QPU reported that our Treasury currently has \$1,514.94 in our bank account as well as \$306.16 in our PayPal account for a total of \$1,821.10 in assets.

Repeater status was discussed by Joseph AC2AE and Mitch N2RGA - The voice announcements still need to be optimized for the controller’s speech synthesis circuits—this is planned for the next routine maintenance visit to the repeater site.

2 Meter Net Report—Joseph AC2AE reported consistent activity on the Net, with 8-10 check-ins on an average week. Glenn N4ESU has been rotating into the position of Control Operator for the 2 Meter Net.

10 Meter Report—Roy AC2GS reported that the 10 Meter Net is doing well, although propagation conditions limit activity mostly to the NYC-NJ area.

KCRC TechNet—Roy AC2GS reported that activity was low at the beginning of the Net, but tended to become more active over time. We still need people to join in with either questions, topics, or their own observations. As mentioned previously this isn’t a podcast, or a radio show—it is a technical Net, and requires participation in order to thrive.

Fusion Net Report—Jason KD2LRX reported that the FusionNet sees approximately 20-25 check-ins each week. He is looking for suggestions that might entice listeners to email suggestions for future FusionNet episodes.

Old Business: Our VE Liaison Officer, James KB2FMH, reported that it is unclear when we will regain access to our usual VE site across the street from Methodist Hospital. He evaluated other options, including remote testing via The Anchorage VE group, and outdoor testing. At this time it was decided that the best short term course would be to refer interested parties to contact Columbia University’s VE Sessions, since they have been offering VE sessions despite the social distancing required during the present pandemic.

Our Club presently has 97 members, our new members for May are Preston KB2IHX and Jim. 71 members have paid their 2020 dues (a 74% compliance rate).

We are still selling Club patches at \$5 a piece and \$1 shipping and handling. You can save the shipping and handling fee by buying them at our monthly meetings (when they are re-established).

Field Day 2020 was discussed. Due to social distancing Floyd Bennet Field will not be available to us. The ARRL has advised Amateurs that 1D stations (home based, using utility power) will be allowed to contact all other Field Day stations and they can list their Club affiliation and have points merged for their Club.

New Business: We have delayed removing members that did not pay their 2020 dues, due to the Covid-19 Pandemic. We decided that any members that have chosen not to pay their 2020 Club dues by August 1, 2020 will be stricken from our Club roster. Joe AC2EA volunteered to personally contact members that have not yet paid this year's dues.

Joe AC2AE suggested that our Club Bylaws require some 'freshening up'. He mentioned changing the listed 'Member at a distance' dues be updated to the \$6, as it is presently. He also suggested that there be a new rule that Honorary Memberships be voted upon and require a 2/3 majority of members in good standing during a general membership session. He also suggested codifying a "Mentoring Committee" to act as 'go-between' new Hams and more experienced Cub members that were interested in mentoring. He also suggested defining an Election Committee within the Club By-Laws to deal with candidate selections, etc. He also proposed that the Club President's term be lengthened from one year to two year terms and also lengthen term limits from a total of 2 consecutive years to 4 consecutive years. This will be discussed further during next month's General Meeting.

Mitch N2RGA discussed that much of the Club's property is being stored in his shed, which will either need repairs or replacement soon. He will review the options available for our next General Meeting.

Mitch N2RGA once again urged Club members to upload any Club related photographs that they had to our Club website for display purposes.

A new barbecue will be required for our next Club Picnic, but decisions regarding what to purchase was tabled since our next Club Picnic will not be scheduled for months.

The Club congratulated Berlotte KD2MYF on attaining her Extra class VE ID, so that she will be able to assist in testing examinees for General and Extras class license.

The meeting was concluded.

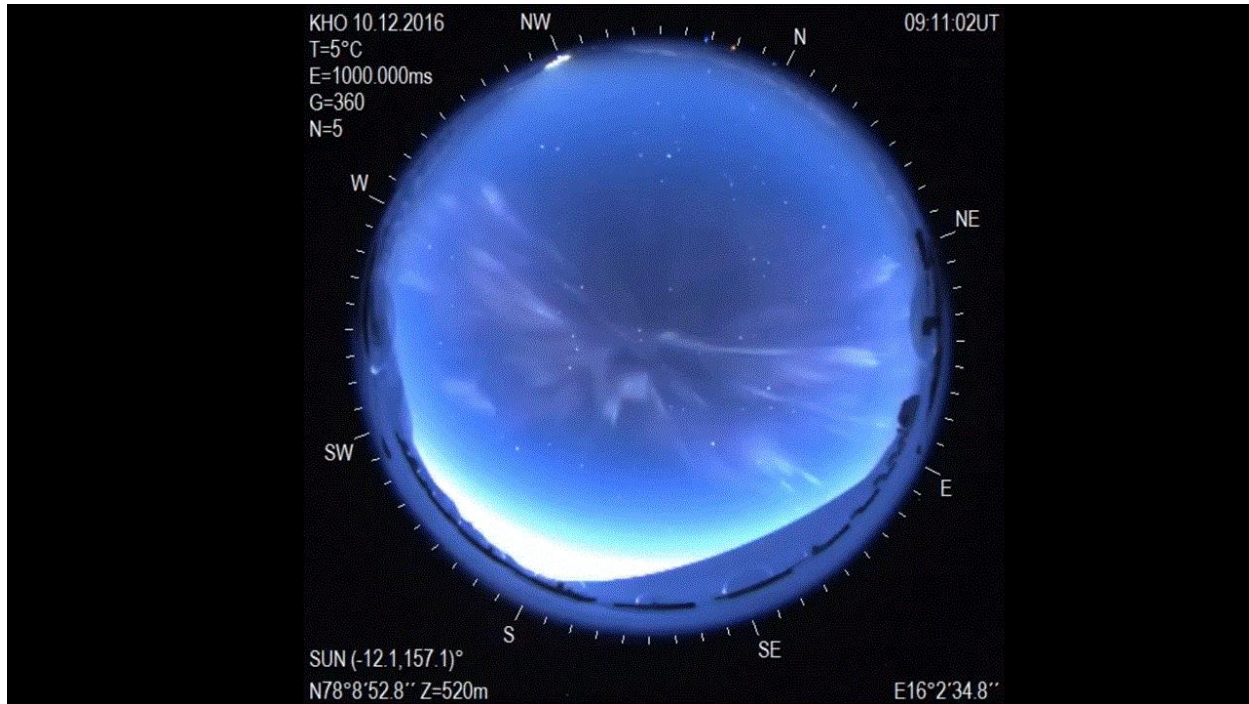
Stay Safe!

Disclaimer: The views and opinions expressed in this publication are those of the author and do not necessarily reflect the official policies or positions of the Kings County Radio Club, its Executive Board, nor its General Membership.

These minutes were respectfully recorded and submitted by Roy AC2GS on this day, June 3rd, in the two thousandth and twentieth year of our Lord of Propagation.

The Kings County Radio Club is at www.KC2RC.com or
www.KingsCountyRadioClub.com
KCRC is an ARRL affiliated club (see: www.ARRL.org)

...But What Happened to the A, B and C Layers?



All good Hams should know **ALL ABOUT** those layers of our ionosphere, that make DXing possible – the **D**, **E**, and **F** layers. Sometimes the **D**, **E**, **F₁** and **F₂** layers!

After all, they are part of the amateur radio license question pools for Technician, General and Extra class licenses.

But it can't be sheer coincidence that they are the 4th, 5th, and 6th letters of our alphabet – are there A, B, and C layers? Are they the 'redheaded stepchildren' of the ionosphere, seldom mentioned in good company?

Or did someone just decide to start with the 4th letter in the alphabet rather than the first?

Well, our ionosphere is the layer of our atmosphere with an abundance of free electrons and ionized atoms. It starts from, approximately 30 miles above Earth, as far as 600 miles into space!

The first mention about an electrically conductive layer of our atmosphere goes as far back as 1839, when the noted Scientist Carl Frederick Gauss postulated such a thing.

Nothing much came of this idea, at first. Until Guglielmo Marconi successfully received the first trans-Atlantic radio signal on December 12, 1901, in Canada.

This was a bit of an embarrassment for some men of science, since until that time, there was no good explanation for how something like that could have been physically possible. In fact, a Dr. Jack Belrose contested Marconi's achievement, until Marconi repeated that experiment, successfully, one year later.

While some scientist just complained and discounted Marconi's achievement, other, more industrious scientists spent their time better, trying to figure out how Marconi actually did this!

In 1902 Oliver Heaviside proposed a layer of ionized gas that refracted the radio waves back onto the Earth and extending their range further than was believed possible. Arthur Edwin Kennelly discovered some of the ionosphere's radio properties around the same time, and so the new layer of the ionosphere was *christened* **The Kennelly-Heaviside Layer**. It extends from an altitude of 60 miles to about 100 miles

Fortunately, for us, the full impact that the ionosphere had on radio propagation was not yet understood. In 1912 the U.S. Congress passed the Radio Act of 1912, limiting us Amateurs to the *worthless* frequencies above 1.5 MHz – were we were free to discover the magic of ionospheric radio propagation to our heart's content!

The term *ionosphere* was itself only *coined* in 1926 by Scottish physicist Robert Watson-Watt. The only Nobel Prize given for the ionosphere went to Edward V. Appleton in 1947 for his confirmational experiments of Robert Watson-Watt's theory!

But why are we calling this the Kennelly-Heaviside Layer? What is it, in relation to our good old D, E, and F layers?

Well, the guy that got a Nobel Prize in 1947? He decided to re-name the same layer previously known as the Kennelly-Heaviside Layer, as the (E)lectrical Layer in 1927 – that was quickly shortened to the "E" Layer!

Like I've written before, "*life ain't fair*"!

Another distinctly different layer of the ionosphere, is located 40 to 55 miles in altitude, below the **E Layer**. Since it is closer to the Earth than the previously discovered **E Layer**, it was called the **D Layer**.

And then there is the distinct layer of ionosphere above the **E Layer** – *the F Layer* extends from 93 miles to 310 miles above the Earth!

So, now, hopefully, the D, E, and F Layers make better sense.

But are there any other layers? Are there A, B, or C layers?

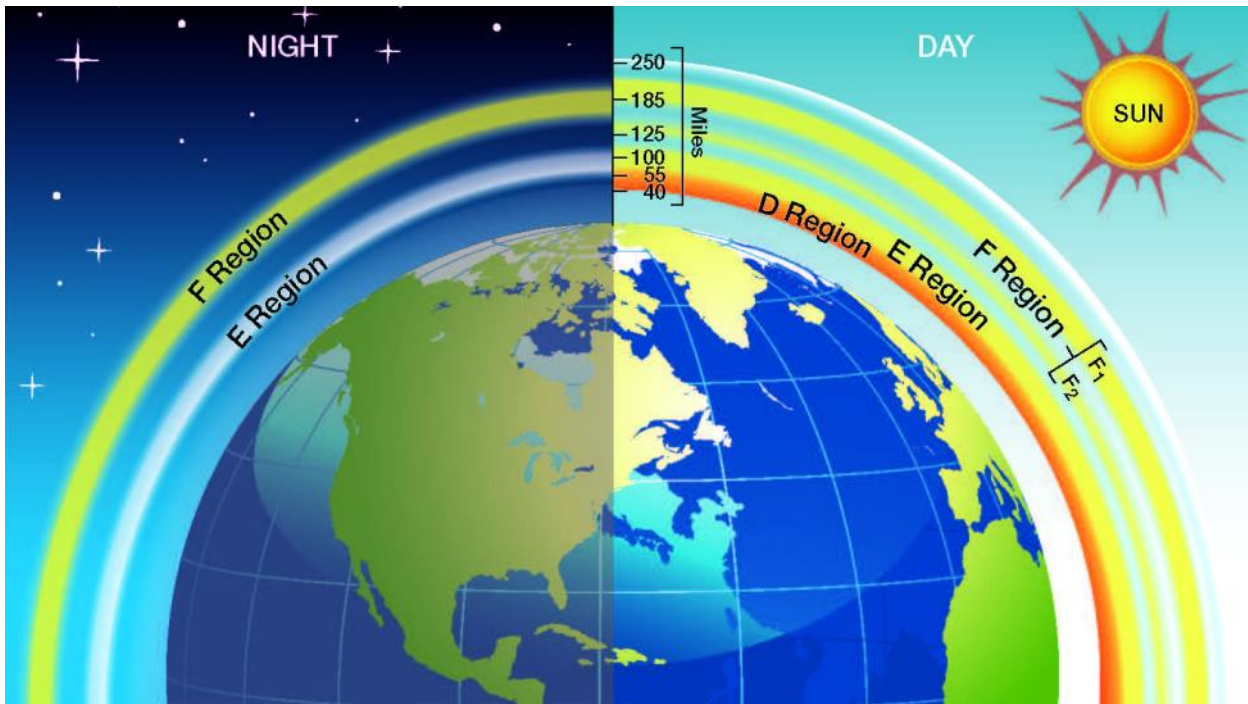
Well, the F layer can be ionized strongly enough to split into two distinct layers F₁ and F₂....

AND there is actually something called the **C Layer** of the ionosphere – but its level of ionization is so low that it doesn't have any effect upon radio signals, so no one really talks about it.

But there is no such thing as an **A Layer**, nor a **B Layer**. At least, not yet.

Just D, E, F₁, and F₂, to talk about.

So, now ya know!



Roy AC2GS

(This article is based on a presentation that was made on a LIMARC TechNet. If you are interested in science and technology (and why would you still be reading this if you aren't), stop by the LIMARC TechNet every Sunday night at 8 PM, and bring questions, or answers, or email your questions to mailbag@AC2GS.com! Or check out my other Technical Net on KC2RC 146.730, at 9 PM on the second and fourth Wednesdays of every month.