

WEST SIDE SIGNAL

Official Bulletin of Toronto's Oldest Amateur Radio Club

Club Executive

President

Dave Karecki VE3RER
1043 Royal York Rd Toronto On M8X 2G5
(416) 234 1456
e-mail karecki@rogers.com

Vice President

Bert Almemo VE3OBU
54 Rodda Blvd Scarborough On M1E 2Z8
(416) 283 4444
balmemo@sympatico.ca

Treasurer

Mike Durrant VE3PNX
10 Crane Ave Etobivoko On M9P 1T9
(416) 241 6017
e-mail mdurrant@ArcturusNetworks.com

Secretary

Bill Catlender VE3PA
2 Norwalk St Scarborough On M1J 2V1
(416) 439 2891
bill.catlender@sympatico.ca

Signal Editor

Dave Lott VE3BHZ
51 Lincoln Ave Cambridge On N1R 4W6
(519) 621 4396
e-mail david.lott@sympatico.ca

Custodian VE3JJ

Dave Karecki VE3RER
1043 Royal York Rd Toronto On M8X 2G5
(416) 234 1456
e-mail karecki@rogers.com

Club Historian

Position vacant

Meetings

Meetings held at 7:30pm on the third Tuesday of each month, Etobicoke. Municipal Offices (Burnhamthorpe & The West Mall) No meetings in July or August. Visitors always welcome.

Club Nets

FM Net

Wednesday 8:00pm
VE3SKY repeater 146.985 Mhz

CW Net

Sunday 10:00am 7.029.5 Mhz

SSB Net

Sunday 11:00am 7.075 Mhz

Issue No.131 May 2010



Next Meeting
Tuesday May 18th 2010
7:30pm
Etobicoke Municipal Building
Burnhamthorpe Rd & West Mall
Etobicoke

CLUB NEWS

Only 3 members managed to make it out to our April meeting, with all the hoops our president has to jump through to book the meeting room one wonders if it is all worth it. I was personally pleased to be able to attend the memorial luncheon for Al VE3UT held at his son's residence in Etobicoke. Others in attendance were David VE3RER with his wife, Phil VE3FZL with his wife, Bert VE3OBU, Chris VE3EQF, Bill VE3PA. Al's wife Rhea was there also and besides looking good she appeared to be handling things very well indeed. For someone who is 93 she is

doing great and dresses very well, she certainly has 'all her marbles' even though a bit frail physically. The executive has planned another luncheon meeting at the Kings Buffet in Mississauga on Tuesday May 18th around noon hour as usual. It's located in the east end of the plaza which is situated at the south west corner of Dundas and Dixie. I'm sure most members know the place, the food is excellent and of course there is plenty of parking space in the plaza. Band conditions are still terrible and only occasionally am I able to hear Toronto on 40 meters during our Sunday morning nets. To make matters worse I am having trouble hitting the SKY repeater at times so I am out of touch quite often. I have just been listening on the SKY repeater and heard Bill PA and Bert OBU but could not access the repeater at all. I'm not sure whether it is conditions or my equipment, I do know it's a nuisance though. Despite the poor propagation there still is quite a lot of DX to be found on 20 and 17 meters and from time to time even a little activity on 15. The solar figures don't seem to be improving much at all and sun spots are few and far between.

Plasma Physics for the Radio Amateur (1)

Eric P. Nichols, KL7AJ

taken from e-ham

In this article, we're going to take quite a departure in thinking from "SWR Meters Make You Stupid." In that former tome, we discussed only those principles you can actually demonstrate in your ham shack. (Well, that is, if you disregard the INFINITE LENGTH transmission line. Although we had to resort to a "thought experiment" to describe this concept, we actually received VERY little controversy about this. In fact, I don't think anyone even raised an objection the basic premise of the LADDER LINE to ETERNITY.

Now, whether you know it or not, if you do any H.F. operating at all, you are somewhat involved in the field of Plasma Physics. Please DON'T be daunted by the term. Although it sounds academic, esoteric, and at times, just plain WEIRD, the term PLASMA describes MOST of the universe.

What makes ionospheric physics, or what we sometimes call "uncontained" plasma physics different from transmission line theory, for example, is the fact that we have to indirectly INFER the results from rather remote observations. You can't just put an ionosphere in a jar on your kitchen counter and poke at it. Well, actually at the UCLA plasma lab, we did JUST that...but it was a BIG jar. And a fairly expensive one!

In this series of articles, we will not only remove a lot of the mystery of the ionosphere, but also present examples of how YOU, Joe Average Ham, can actually make a real contribution to scientific knowledge. YES...in the 21st century, it's STILL possible for hams to "advance the state of the radio art" without a billion dollar government grant! Ionospheric research is just such an area...there's still a lot we need to learn...even though there's a lot we know. If you're an experimentally-inclined ham, PLEASE read this entire series!

Are you ready? Great. This will be a fun trip. It will be FUN. And it will be a TRIP! Guaranteed.

Almost Nothing At All

In order to fully appreciate the wonder of the Ionosphere, you really have to realize how LITTLE of it there actually is. Some fine folks at Eiscat research facility in Tromso, Norway, (where folks have time to figure out this sort of thing), calculated the mass of the ENTIRE IONOSPHERE...that is, the entire region of the atmosphere that has any measurable effect on H.F. radio signals. The "final answer" came out to be LESS THAN ONE METRIC TON! In other words, you could take EVERY particle surrounding the Earth that has a measurable effect on radio propagation, and scoot it around with a one-man pallet truck! I was floored when I read this figure, as you should be too! How can this thing we call an ionosphere, which has little more substance than a fleeting THOUGHT have such a profound effect on radio as we know it?

The Air Up There

The density of atoms (of any kind) at 450 miles altitude...the outer reaches of the ionosphere, about the highest altitude where ionospheric radio effects can be detected, is approximately 1 12- trillionth the atomic density at sea level. That's a lot of zeroes. Or decimal places, depending on which direction you're going.

How can it get so thin so fast? Remember, air is COMPRESSIBLE. I won't agonize you by reminding you of all those gas pressure laws you ignored in high school chemistry class, except to remind you that EVERYTHING you ever learned, or didn't learn, in high school, WILL come back to haunt you. This is one of those times. Dig out your chemistry book and re-read all that boring stuff about partial pressures and such. I won't waste "ink" doing it here.

Billiard Balls and Isaac Newton

When non-scientific people think of particle physics, they think about all sorts of inscrutable things like

Relativity and Anti-matter, and really scary and complicated math. The good news is, ionospheric physics, as it pertains to radio, is actually LOW ENERGY PHYSICS. In reality, we can describe almost ANYTHING we care about in terms of plain old NEWTONIAN MECHANICS...you know, that old Force equals Mass times Acceleration stuff you ignored in high school PHYSICS class. Relativity actually has a VERY minor role in anything we care about in this regard. The only time you deal with HIGH ENERGY physics is in the actual CREATION of the ionosphere, where you indeed have lots of ultraviolet happening. But this has very little to do with the subsequent ionospheric mechanics we USE as radio amateurs. Almost anything we observe can be modeled with billiard balls rattling around in the sky. Or at least statically charged billiard balls. We don't want to simplify this TOO much!

People are quite amazed when I describe HAARP and other similar related Ionospheric research facilities as being LOW ENERGY. "How can you call a BILLION WATTS of raw CW low energy?!" they ask incredulously.

It's simple. HAARP cannot move a SINGLE ATOM around that hasn't already been ionized! A non-ionized (neutral) particle has NO interaction with radio waves (at least H.F. radio waves) whatsoever. There's nothing there to even RESPOND to a radio wave. Neutrals are INVISIBLE to R.F. So, in order for HAARP (or a ham radio transmitter) to do any "nefarious" deeds, it has to have something to "nefariate" against. Non-ionized particles don't qualify.

Walking the Planck

How do we, then, define the difference between high energy and low energy physics? Certainly, it can't be based on power consumption alone! HAARP, for instance, definitely uses as much power as many atom smashers. In fact, it creates as much R.F. power as many atom smashers. But it smashes no atoms, whatsoever. It can't even deprive them of an electron!

It comes down to a little number called Planck's Constant. Again, avoiding any scary math, Planck's constant tells us the relationship between FREQUENCY and ENERGY levels. But this only applies at wavelengths approaching the size of an atomic particle. Planck's constant has meaning when you're comparing cosmic rays to X-rays, or ultraviolet. It is utterly meaningless when you're dealing with wavelengths a trillion times longer than those necessary for atomic resonance.

So, we may loosely differentiate high energy physics from low energy physics by applying this test: Does Planck's Constant fit into the equation? If so, it's high energy physics. If no, it's low energy physics.

For ANY behavior you will observe as a radio amateur, the answer is a decisive NO.

Weather or Not

Not surprisingly, the Ionosphere has weather. Why shouldn't it? It's part of the atmosphere. The atmosphere is FULL of weather. We know that weather has all sorts of wrinkles and valleys and holes hurricanes and tornadoes. Is it reasonable to expect that the ionosphere wouldn't have such disturbances? Not to mention that the Ionosphere is, on top of all that, profoundly affected by something that has NO effect on "normal" weather whatsoever...magnetic fields. These magnetic fields produce SERIOUS wrinkles in the sky.

Why do so many hams actually seem offended that the ionosphere doesn't behave like it's a spherical mirror? The fact that the ionosphere is ever STABLE enough to reflect a coherent radio signal at all is nothing short of miraculous! In the grand scale of things, if you've EVER received a stable H.F. radio signal, for even a fraction of a second, you're just plain SPOILED!

Stay tuned for part two.....

ANNOUNCED DXPEDITIONS

May 2 to 14
Ogasawara
JD1BMH
40 - 10M all modes
QSL via JG7PSJ direct or bureau

May 12 to 16
Corsica
TK/Home Call
40-12M CW & SSB
QSL home call direct or bureau

May 13 to 16
New Caledonia
FK/W3HQ
40,30,20 CW only
QSL W3HQ direct or bureau

May 15 to 28
Aland Island
OH0-HC
All bands and modes
QSL Home calls direct or bureau

May 21 to 31
Lord Howe Island
VK9CLH (Web site)
160 & 80 CW only
QSL VK2CCC see web site for instructions

May 22 to Jun 1
Central Kiribati
T31X
Large operation all bands and modes
QSL UR3HR direct or bureau

May 21 to Jun 2
Mongolia
JT9YW
All bands and modes
QSL RW9YW

May 28 to Jun 6
Palestine
E4X (Web site)
All bands and modes
QSL EA5RM direct or bureau

HYDRO-GROUND ROD INSTALLATION

George, "Geo" (K0FF)

on Eham April 20, 2010

Driving ground rods can be a pain. This method is easy, although if you have never tried it or seen it done, it is OK to be doubtful. It does work though, we have used it with good results.

If your soil is not too rocky, no hammer needed.

Dig a small pit, about the size of a soda can in the location where the ground rod is to be planted. Fill this hole with water. Insert the ground rod into the center of the hole. Work the ground rod up and down, easy with no force. After a few strokes there will be a noticeable hole into which the rod will go down. It is important to pull the ground rod out of the hole completely each time, letting the hole fill up again with water. It is the water making the hole, not so much the ground rod.

After a few more strokes, more water will need to be added to the hole. Pretty soon the ground rod will go way into the earth. Small pebbles are no problem. The very last stroke should drive the ground rod below the level of the earth, which is where it needs to be, completely underground (by code).

When the hole is dry again, clamp the ground wire or strap to the top of the rod, cover the connection with grease, cover that with an aluminum can for protection and bury it. A bit of salt in the water will improve the ground's usefulness, also ground up charcoal is good for that.

Usually 8 foot rods go in without a hammer.

I was introduced to this method by my friend Al, W0DYI (SK) a long time ago. He was an electrician and told me they often used this method.

I added one more step, since ground rods are expensive but copper water pipe is cheap, a ground rod will just fit inside the waterpipe, let the water pipe go along for the ride, remove the rod, leave the water pipe in the ground. No hammer damage to the pipe this way.

I know, you think it is a joke. It is not a joke, it works!

Geo, K0FF

THE HILLS ARE ALIVE WITH....HAGGIS

Irene Thomas Sun Newspaper

One in five Britons believes haggis— the traditional Scottish dish made with a sheep's heart, liver and lung— is a hilltop dwelling animal, according to a survey released Friday. Another 15% replied Haggis was a musical instrument and 4% said it was a Harry Potter character.

More than 1,600 people were polled in the survey sponsored by a British takeout service. About half of those polled were Scottish

“We thought it would be interesting to see just how much people knew about Haggis across the UK. It turns out not a lot — but everyone seems open minded”, a Just-Eat.co.uk spokesman told *The Scotsman* .

I wonder if anyone considered that the responses were a bit tongue-in-cheek. If someone came to me all serious like with this poll I might've also said that Haggis was a musical instrument. Surely, it's not as ridiculous as the Bagpipes

I guess you could eat a set of bagpipes if you cooked them long enough Hi dunno about that hilltop dweller though.

Two Middle Eastern mothers are sitting in a cafe chatting over a plate of tabouli and a pint of goat's milk. The older of the two pulls a bag out of her purse and starts flipping through photos, and they start reminiscing.

This is my oldest son, Mujibar. He would have been 24 years old now.'

Yes, I remember him as a baby,' says the other mother cheerfully.

'He's a martyr now though,' the mother confides.

Oh, so sad dear,' says the other.

And this is my second son, Khalid. He would have been 21.'

Oh, I remember him,' says the other happily, 'he had such curly hair when he was born.'

He's a martyr too,' says the mother quietly.

Oh, gracious me . . . ,' says the other.

And this is my third son. My baby. My beautiful Ahmed. He would have been 18,' she whispers.

Yes,' says the friend enthusiastically, 'I remember when he first started school.'

He's a martyr also,' says the mother, with tears in her eyes.

After a pause and a deep sigh, the second Muslim mother looks wistfully at the photographs and, searching for the right words, says . . . "They blow up so fast, don't they? "

Ham Personal Glimpse

Fraser Cooper VE3FC

Way back when, when I was just a tender lad, there was a gentleman who was a bit of a fixture on 75 metres. I didn't have a 'phone license (hadn't got up to 15 w/min, yet) but I could operate an AM station at the Guelph ARC Field Day. This was shortly before hams started using the much more efficient Single Sideband Suppressed Carrier system (SSB-SC) that we all (well, most) use today.

There was a ham who lived in the Buffalo area by the name of Myron Premus. His callsign, at that time, was W2OY. He was one of the old timers who 'owned' a frequency on a given ham band and his frequency

of choice was 3810 kc/s (this was before kHz, remember). This was just 10 kHz up from the bottom of the American Phone Band, as we called it. His VFO tuning shaft was frozen to that spot, or he might have even been crystal-controlled for all I know! Remember this was AM, so there was always a lot of whistles of various pitches up and down the band from all the carriers beating together, particularly when the band was busy on Field Day.

W2OY would come on to 'his' frequency, fire up his kilowatt and call 'CQ CQ CQ 75, no LIDs, no kids, no space cadets, class A number one operators only, CQ CQ CQ.....'

Myron hated the use of phonetics, even the correct ones (Able Baker Charlie Dog... in those days). He'd sometime deliver a long monologue deriding anyone who used phonetics or in any other way didn't meet his idea of 'proper' operating practice. The usual answer to his CQs was a cacophony of whistles from several carriers. When I had the chance on Field Day, I'd try to call him 'Whiskey Two Old Yokel'. Just for the fun of it. Never got an answer that I remember.

Myron was born in 1902 and was first licenced as 8AHQ in 1919. He got 8MU and then W2OY in 1947. He ran an appliance business and was well thought-of by his customers. He actually liked children! Myron died of a heart attack while working on his antenna in 1967.

You can read more about W2OY at several websites. www.hamgallery.com/tribute/w2oy even has sound clips of Myrons operating quirks.

THE DIGITAL BLIGHT or Rights in the CW Band Plans

Paul Veal NOAH

The most recent copy of the ARRL US Amateur Radio Bands clearly shows RED for data and RTTY allowed as one in the same on the US Band Plan effective 2-23-2007 only separating out for "CW Only" for Technicians on 10, 15, 40 and 80 meters and at the bottom of all license classes on 6 and 2 meters.

But is there room here for clarification and separation of modern data modes such as PSK from CW?

As time has evolved, more and more PSK is being heard inside what has always been considered the General Class CW windows such as +- 10KHz of 14.035MHz, 7.035MHz, etc.....

In fact, as I monitor on the lower end of the band now on 40 meters at 00:50 UTC on 26 March, 2010 in the past 20 minutes, I have already counted 8 different USA PSK operators CQ'ing and/or working other stations. From 7.028MHz up to 7.037MHz, there is more PSK right now than CW. Yet many stations seemed jammed in together ignoring what is an obvious neighborhood problem.

If you look at the more recent, yet out of date band plans, data has always been well above these band segments. So what has happened? Is 7.035MHz a newly established call frequency for PSK? Sure seems like most QSO's are stateside to stateside ops with a few DX contacts going on- but you get the idea.....

How much longer until the Extra Class CW windows experience the same common practice of digital modes operating in these band segments and for what reason? Are the traditions of band plans going the way of the dinosaurs or are we at a point of newer and perhaps increasingly popular technology simply making more room for itself?