

Don Chesser "Thoughts about Propagation." or Unusually good conditions.

The following gleaned from Don's DX Column dated September 28th 1963 - This is a most interesting series of statements that prove that the Chesser Byesville/Cambridge era is still in Don's mind in the 60's, he writes;

Few realized that we were on the doorstep of a new era in communications and DXing. I recall only too vividly experiencing my first sunspot minimum in the early 1930's in Guernsey County Ohio. Then the standard rig was a pair of UX210's in a TNT oscillator and a Hertz antenna with just about the best receiver available was a 3 tube National short-wave receiver model SW-3.

A memorable year 1932 in my life, radio contacts into Europe were the ultimate DX on 80 Meters, VK's and ZL's on 40 Meters were simply great to chase. Twenty Meters was pretty good during daylight hours but went stone dead at sundown and I mean sundown!! Ten Meters was in an experimental state but was beyond equipment capabilities of most stations - "Who in the world would ever get anything to oscillate at 28 Megacycles?"

I worked the bands a year and a half before I heard my first Asian station (J5CC) long after sunup one morning at the home station in Byesville when the band had just opened and it took another six months to duplicate that feat. In that era working 100 countries was just about impossible because there were hardly that many countries active on 40 Meters, unless one had the station capabilities to work them. Plus remember 20

Meters was useless after sundown. That's the way ham radio was in the early 1930's and we hardly dreamed it would ever change.

Imagine to our surprise then when in 1935-36 the old twenty meter band remained open all night for world wide DX!! Signals from Europe, our one big source of DX activity in those days, howled like banshees all night, like locals, so strong we could hear every chug, whistle, burble and wheeze their SEO's and MOPA's emitted. We answered in kind, blissfully ignorant of the reason for our good fortune, confident that radio, like the nations economy, was just naturally getting better and better every day. Prosperity was just around the corner.

We knew about the Kennelly-Heavyside Layer, of course we heard about sunspots, but few of us connected the two. Instead, we

concentrated on building new 47 crystal controlled tri-tet rigs with type 46 doubler and type 46 push-pull amplifiers, all on breadboards of course, with crystal ovens to keep our frequency just a few cycles inside 14.400 Megacycles because of all the choice DX congregated just

outside the band - everyone knew that! So we rushed on, sublimely innocent of such things as beams, high power or propagation paths. Only such top echelon stars as W8CRA - W6AM - and W8JK, **all far *beyond our ken,** knowing about such things. Continued on page two Don Chesser Thoughts.



It was really a Japanese scientist one Dr. Yagi, who invented the parasitic beam and who spent years trying to interest someone in trying it, plus the stupendous advances in knowledge almost forcibly acquired during WW-2 that gave us our first great push towards our present "Unusually good conditions." Writers note; Don wrote this in 1963 when propagation was excellent.

Indeed, the aftermath of the war also delayed progress, because of the billions of dollars worth of surplus gear when brand new Hallicrafters SX-28's and Super Pro's were available for about 80 bucks and carloads of BC-610's went begging for peanuts? The big War made tempered aluminum plentiful and cheap. Radio row in Manhattan soared.

The day of the Yagi beam was truly at hand. Two and three element twirlers sprang up everywhere. Don't forget those prop pitch rotors! Those beams sprang up everywhere many of them crude but functional and they brought many of us our first glimpses of the fantastic mysteries of propagation paths, low angle radiation, back-side rejection of unwanted signals and the blessed relief from tails on single path reception.

Progress marches along with the latest wrinkle that is perhaps unintentionally contributing to our current "Unusually good Conditions."

NEEDLES - Copper needles, about an inch and a half long and one third the diameter of a human hair - hundreds of millions of them, scattered where they should do the most good in the ionosphere. Some years ago the Massachusetts Institute of Tech (Lincoln Lab) announced an experiment. The U.S. Air Force project West Ford, to shoot a great number of copper needles into a thin, high band that could be used to reflect microwave signals around the curve of the earth. Since even at sunspot maximums the ionization density of the various layers above the earth is insufficient to reflect or refract microwaves

back to earth, it was thought that tiny reflector dipoles, cut approximately to length and scattered thoroughly although thinly in the ionosphere, would do the trick. Particularly for the purposes of "Scatter" radar transmissions. Although cut to act as reflectors at only one frequency (8000Mc), scientists believe they should also prove to be effective at other frequencies, although much less efficiently.

But before the first rocket of Project West Ford blasted off its pad, the protests of outraged scientists soared into orbit. This operation finally came into being, that cloud of needles eventually took place in orbit, although no results of the experiment have yet been reported, astronomers gloomily predict that if it proves successful, the U.S. Air Force will surely want to launch more of them and the sky may soon be thick with needles reflecting all kinds of man-made radio signals and hiding the radio stars. For the present, however as several DX reporters have exclaimed during the past two months; "Lets Have More Needles!"

By Don Chesser, W4K VX ex W8K VX
September 1963 - MF/Don Chesser Thoughts
Reference *Phrase Finder (beyond our ken)
Beyond our understanding.

Excerpted from another Chesser DX Bulletin Editorial in part to understand our subjects depth. "One of the big delights and privileges of being the editor of this little magazine is opening up the mail each day. Each day's mail is a big surprise package in itself, with all the pleasures it implies."

He also stated in his early years of amateur radio getting started in Byesville, "I spent most of my spare time during the ten years preceding World War 2 in DX'ing and during those thousands of hours searching the bands I rang up the modest score of exactly 111 DXCC countries. (He had skill and purpose)

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