

## Oak Forest ARC Club Meeting Minutes 4-24-21

Meeting open at 9:00 AM Held online

Participants. W2WF STEVE WB5ANN MARK KG5PYY JEREMY KE5AOA RICK W5OFT MIKE KG5IRR BARRY KI5KGY PAUL KG5OIR HAL WW5S MIKE KW5KEN KEN NA5NA CLEM KF5WFB Elisha W5XUX Martin

Steve Call to Order.

Treasurers Report: business report and discuss payments and options. Banking and payments with procedures for changing or adding signatures and other issues to be discussed off line.

Zoom meeting options. Recording. Cost. Platform. Jeremy to prepare options. Discussed options for posting content and videos and how to handle this on the website. Options relevant for online platform.

Elisha gave notice of the simplex net and proposed participation.

Discussed options for returning to Transtar for club meetings and testing.

Discussed Field Day schedule and options for this year. Options for Transtar

Vote to keep Saturday meeting date made unanimous by members.

9:50 A Presentation of Ionosonde interpretation. Basics of reading an ionogram – the output from ionosonde – ionospheric radar.

Presentation of Field Day 2021 video from ARRL

Presentation of SuitSat video from the International Space Station.

Ionosondes are HF radars with antennas that point straight up from the transceiver and sweep the HF band. The return chart shows the altitude and strength of the return signal by frequency. There are transceivers all over the world and these are used to develop models that determine the distance and frequency of propagation.

<https://www.youtube.com/watch?v=oTFKNCo3Cl8>

These ionosonde returns are used to generate maps showing the critical frequency and maximum useable frequency by distance and other propagation reports. Critical frequency is that frequency at which the signal is reflected from the ionosphere when the antenna is pointed straight up. Maximum useable frequency is that frequency that will be reflected from the ionosphere at a distance from the transmitter. The key concept is the maximum useable frequency is usually higher than the critical frequency at distance from the transmitter.

<http://giro.uml.edu/IRTAM/>

The images generated show the compiled data in moving images that show graphically how the electron density affects propagation.

<https://en.wikipedia.org/wiki/Ionosonde>

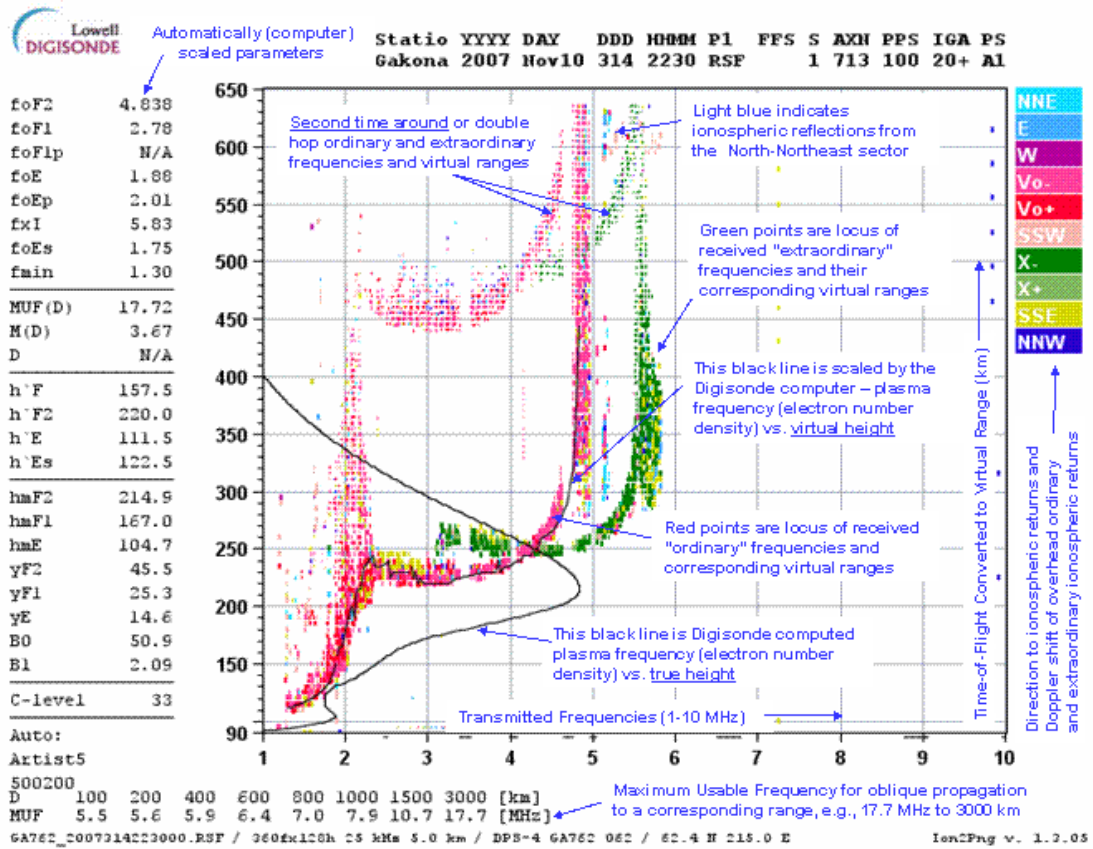
<https://www.voacap.com/hf/>

For actual point to point propagation, the online program VOACAP can be used to determine what the propagation will be from any point on the globe by date and time. Program is run briefly for demonstration. To be shown at some other time.

End at 11:00 AM

Presented by the Emperor WB5ANN





Basics of an Ionogram.