

Dxers Unlimited for Sunday 26 October 2014



By Arnie Coro - radio amateur CO2KK

Hi amigos radioaficionados all around the world ... this is the weekend edition of your favorite radio hobby program.... Dxers Unlimited with yours truly, Arnie Coro at the microphone, I am now ready to bring to you about ten minutes of information about our favorite way of spending whatever spare time is available... that is no other than playing with our radios.

Here is now item one... Huge, gigantic, the biggest in long time, erupting almost constantly , producing high intensity solar flares, including three of the most intense one, the X type flares, and many type M and type C flares, the most relevant active sunspot region now looking towards the Earth is keeping heliophysicists very busy, and I must add really worried that the huge magnetically complex sunspot active region may produce a huge X type flare while in a geo-effective position. The predicted solar flux for this weekend was 230, which is higher than on any day since January 7 of this year, when it was 237.1. Prior to that, we didn't see solar flux values this high since 11 years ago, in late October 2003.

I can also add that it seems like we are going to see a very rare third peak of activity for this very unusual solar cycle. Already solar flux levels have surpassed the 220 flux units mark for the first time in years .Yes amigos, sunspots active regions, coronal holes, coronal mass ejections and filaments are all phenomena that we can monitor visually from Earth, and that are capable of producing events that may impact on our

planet....

Item two: For those of us that live in the Northern Hemisphere we are now at the end of the equinoctial propagation season, and entering into the winter season, with the month of November producing the lowest height of the upper layers of the ionosphere. So expect much better DX conditions to be happening during the next eight to twelve weeks. Twice a year the Earth receives for a limited period of time almost equal illumination from the Sun , and this produces very peculiar and certainly good short wave propagation conditions that are ideal for DXing...

This happens during the spring and autumn.... and this is why we name those conditions the equinoctial periods.

Item three: More about Dxing during the winter season.... the AM medium wave broadcast band propagation conditions will stabilize and reception will become easier as static crashes go to very low levels or vanish, as thunderstorms are less frequent during the winter season , by monitoring the three Tropical Bands 120, 90 and 60 meters you will be able to pick up many small regional or semi'local stations that operate on those bands to provide local communities with a radio service that reaches beyond the coverage area of a single AM medium wave broadcast band transmitter of low to medium power, that is from one to ten kiloWatts.

Just around sunrise, be on the lookout for weak AM broadcast band and Tropical Band stations and try again just around sunset.

Item four, here at the weekend edition of Dxers Unlimited amigos... several listeners have sent e'mail messages to inforhc at enet dot cu asking for more information about amateur radio in Cuba, and how Cuban ham stations are operating more often during international contests. As this program goes on the air for its first run, the CQ Worldwide SSB contest will still be active.... but later when Dxers Unlimited is broadcast after 0100 Hours UTC, the contest would have come to an end. The competition during one of those big international contests is absolutely amazing, but there are still chances to obtain awards by individual stations, especially those that register under the low power or very low power categories.

The sudden increase in solar activity that came right before the contest began during Friday evening local time here in the Americas, that is Saturday UTC day, will without doubts produce some very interesting propagation conditions that should enhance the scores of many participants.

A recent media interview given by Pedro Rodriguez CO2RP the President of the Cuban Federation of Radio Amateurs highlighted the fact that organization now has more than nine thousand five hundred members all along the Cuban archipelago...

Practically all Cuban radio amateurs are active in one way or another on the 2 meters band, using the FM mode... A lower number of FRC members operate on the short wave bands using CW, single side voice and digital communications modes... but their number is increasing as the current ongoing interest in home brewing simple single band HF transceivers for the 40 meters band is producing more activity on that band.

The net control of one of the most popular 40 meters band nets, Pedro CO3RX recently posted a message on the FRC website about the number of participants on the Santa Cruz del Norte Seaside Net, that goes on the air on Fridays at 5 pm. According to the CO3RX posting a little more than one thousand different Cuban stations have checked into the net recently. And as stated earlier participation by Cuban radio amateurs in the most relevant and well known contests has increased and some stations have achieved excellent scores.

There are also other 40 meters band nets that provide nationwide coverage, like my own The Soldering Iron Net, devoted to technical topics that goes on the air Sunday mornings. Si amigos, yes my friends,

amateur radio is growing in Cuba with a particular emphasis now in digital communications technologies, home brewing of radios and antennas, and with several groups that are regularly entering into the most challenging worldwide radio contests.

Stay tuned for more radio hobby related information from Cuba and the world.... This weekend edition of Dxers Unlimited will continue in just a few seconds...

I am Arnie Coro in La Habana, Cuba

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This is Radio Havana Cuba , the name of the show is Dxers Unlimited and here is now our next radio hobby related item... Resourceful Cuban radio amateurs have recently struck gold, when several of the most well known fans of the Soldering Iron net passed along the information that some computer UPS units, the uninterruptible power units that are used to provide electricity to computers when the AC power line fails, use MOSFET power transistors that operate nicely as linear amplifiers on the 40 meters band, and even higher in frequency.

Broken down UPS units of the type that use the MOSFET devices are the source from which to obtain them . A pair of one popular type of MOSFET units removed from a damaged UPS that could not be repaired, are providing around 60 Watts power output on 40 meters using a low power 5 Watts transceiver to drive it by means of an attenuator pad that keeps the drive level at a proper value and provides protection against spurious oscillations.

As the number of those MOSFET devices used by the inverters inside the UPS units is usually from 2 to 8 depending on the power output , it has proven to be quite easy for the resourceful Cuban amateurs to visit computer repairs workshops and ask for the damaged

circuit boards from which the radio frequency capable MOSFET devices can be removed.

The MOSFET linear amplifiers are easy to adjust and they are all provided with a properly designed and built band filter that keeps the radiation of unwanted frequencies down to the levels prescribed by the international regulations .

Another interesting finding by the builders of those solid state linear amplifiers is that the ferrite core used in the middle of the video cable of old CRT monitors provides the practical possibility of building an excellent broad band output transformer .

Now a short form propagation update... An active Sun requires continuing monitoring if you really one to benefit from the unusual and dynamically changing propagation conditions.... If another huge sunspot appears, then the solar flux may enter into really record breaking figures with all the associated consequences , HF bands and 6 meters band Dx should be plentiful via the F2 and the F layers of the ionosphere. I hope to have you all listening to the middle of the week edition of Dxers Unlimited on Tuesday and Wednesday UTC days amigos.



Radio Habana Cuba