

MCWA NEWS

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March 2012



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VE TESTING

Testing by appointment only

7 PM 3rd Tuesday every other month

.. Mar. 20.. May 15 , 2012

Cost is \$15 one time charge for session; no matter how many elements taken. Must show original license and/or CSCE if upgrading. Valid photo ID needed. SS#.

Steve, KB9OLD
847/477-3518

Meeting Notice

Tuesday, March 6
7 :00 - 7:30 - Socializing
7:30 - Meeting

Program: Ken, KB9I, will talk about repeaters. Hopefully, he will tell us a few secrets as well as the problems in running a repeater.

Treasurer's Report



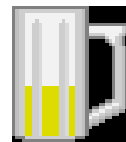
Opening Bal.	\$3947.92
Interest	.67
Dues	90.00
Checks	177.90
End Bal.	3860.69

Barry, K9YVT

2/28/12

Join Us ?

After the meeting for pizza & beverages at the Village Squire in Crystal Lake (Rt. 14 just West of Rt 31). We usually have anywhere from 6-20 people and the cost generally works out to \$10 per person with pizza.



Happy St. Patrick's Day



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**“BE
PREPARED
FOR
ANYTHING
ANYTIME”**

If anything could be said of the weather and propagation into 2012, it is that we can expect the unexpected.

My DX log across February shows healthy DX QSO's. DXpedition teams did a fine job. We are grateful for the work of HU2DX and ZK2C in February. These stations operated the bands well giving most areas of the world good access.

I was pleased to work VP6T in January. In early February (during a one day opportunity on FEB 6), I worked this team while in transit as TX6T. Another good catch was J38AT who was operating with 5w. His signal was 5/9. EC6AAE was also active and strong in February.

I was bemoaning the fact that Europe seemed anemic, as compared with the end of fall and the beginning of winter. But just at that particular time, 20m opened up to Europe and the world at 0500 utc on February 25.

The SFI and SN numbers have been low to modest with high noise indices. Along with

the high QRN solar levels, spring conditions with thunder storms have been prevalent to our south. This combination of factors has made 160m and 80m challenging.

The hotter bands have been 15m until 2.5 hours past sunset, 17m and 20m. For those who work 30m there have been some good DX contacts. One way we know spring equinox is nearly here is evidenced in the upper HF bands staying open into the dark hours. This will only improve with time into April and beyond.

I experienced an unexpected QSO during lunch break here on February 27 at 1816utc. HS0ZJU was workable on first try on 17m phone. Marc was coming in 5/9 from Thailand and I gave him a 5/5. It was 1:16 am in that time zone (very dark there). It goes to show that anything can happen anytime! The bands are offering pleasant surprises which will increase as the days lengthen.

For now you may want to work DXpedition 3C6A, Equatorial Guinea. I am a little surprised at their operations so far. This evening the team was operating 20m phone at 14.186 mHz with a listening frequency of 14.196 mHz. Stations were howling at 30 over 9 on 14.196! Some better tact may be needed for the team.

I will also be listening for 9N1II in Nepal. Some exciting operations will be coming at the end of spring.

Tune your rig and antenna and work some nice DX during Cycle 24. Be prepared for anything anytime! 73 Dave KA9OZP



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... *DE N9AVY*

South Sudan New

Prefix After a 7 month wait the new Republic of South Sudan received the Z8 prefix.

Solar superstorm could be on the way

I USUALLY try to vary my topic from month to month but my February reflection on the aurora brought in a couple of intriguing queries from readers.

One was about “the Carrington Event” and what effect, if any, the recurrence of such a phenomenon would have on the modern world. The other was sparked by a US newspaper headline from last year proclaiming, in very large letters, “NASA warning of solar superstorm in 2012”.

The two are closely related in that the Carrington Event, named after the British astronomer who made scientific observations of it, was arguably the greatest solar outburst of recent history. The flare, a great mass of hot plasma unleashed by a giant sunspot on August 28, 1859, caused an extraordinary display of auroral activity which was visible not just in the high latitudes but as far south as the Gulf of Mexico in the Americas and over Mediterranean areas in the old world.

As well as providing our forebears with an incredible light snow for several days - brighter than moonlight across much of the surface of the Earth, and much more colorful the flare and its associated coronal mass emission imparted so much energy to the Earth's magnetic field that very strange things

started happening to what was then a state-of-the-art communication system - the telegraph.

The system failed across great swathes of Europe and America with telegraph poles all over the place, and the paper used to record the Morse imprints at the most sophisticated transmission stations, being set on fire. And the machines kept on churning out nonsensical signals despite being disconnected from their power sources.

COULD something like this happen again? The answer has to be yes, given that we owe our lives to being right next door to a turbulent star, the workings of which we do not fully understand and which we have only just begun to observe systematically.

Indeed, major solar storms, though not of quite the same magnitude, have occurred on many occasions right up to modern times including October 29 and November 4, 2003, when numerous satellite sensors were overwhelmed by incoming radiation.

Something on the scale of the Carrington Event, were it to happen today, would unquestionably have a much greater impact than it did in the 19th century. We now rely to an extraordinary degree on satellite transmissions, internet connections, sophisticated telephony, and vast, delicately balanced, electricity grids. A solar superstorm could have the capability to disrupt any or all of these with deleterious effects on our shaky economies.

Is a solar superstorm likely in 2012? Closer reading of the literature on the subject reveals that the prediction for greatly increased solar activity was originally made for 2011, then revised for 2012 and has now been postponed till 2013, so the predictors are hedging their bets.

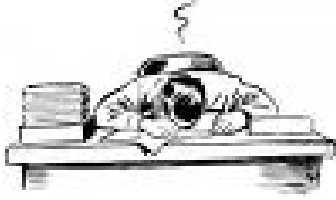
In the past, solar activity has always built up very rapidly towards its climax when powerful auroral seasons have occurred but, this time around, the sun is stuttering to life very slowly and fitfully.

Let's just wait and see what happens!



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From The Editor's Desk

5 watts (e.i.r.p.) except for amateur stations within 800 km of the borders of a number of countries - principally Russia, many of the former Soviet bloc and the Arab states. For those affected amateurs the limit will be 1 watt.

It is, of course, up to individual administrations to authorize use of the band by their amateurs.

News from WRC12 - A New Band at 600 meters.

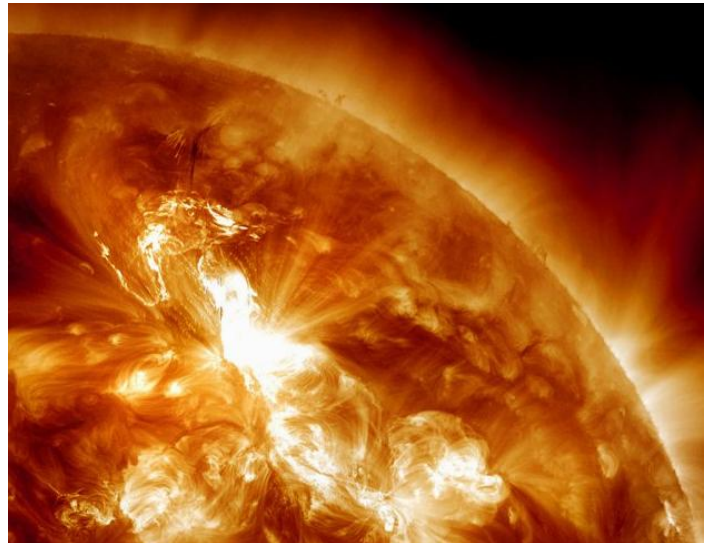
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At its Plenary meeting held 14 February 2012 in Geneva the World Radiocommunication Conference approved a new secondary frequency allocation to the Amateur Radio Service at 472 to 479 kHz. Having passed First and Second Readings it is normally a formality that this change be included in the WRC-12 Final Acts when the Conference concludes February 17th. The Table of Frequency Allocations would then be amended accordingly.

The new band at 600 meters will represent the return of amateurs to the medium waves - an area of spectrum we have not had access to since the earliest days of radio regulation.

As a secondary user, amateur radio shares 472 - 479 kHz with the Maritime Mobile Service who are the primary user in all three ITU Regions and with the Aeronautical Radionavigation Service who are a Secondary user except as noted in the following.

The new allocation to the amateur service is accompanied by several footnotes including, i) a number of countries will identify their intent to elevate the status of their Aeronautical Radionavigation Service to Primary as a step in ensuring protection from secondary users, and ii) the power which radio amateurs may use in 472 to 479 kHz will be limited to



SUNSPOTS ???

Judging from the conditions lately on the HF bands, it makes one wonder if those spots are in witness protection program. Wonder if the Indians had a "Sunspot Dance" ?



This month we have a couple articles on sunspots. Couldn't resist doing both as each has something to say.



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By The Raleigh Telegram

RALEIGH – Scientists at NASA and NOAA say that this year, activity on the surface of the sun is the strongest in six years, with more radiation reaching the earth than usual. The sun’s activity fluctuates in cycles and 2012 will see more than an average amount of solar storm activity as the sun reaches its so-called “solar maximum” with more sunspots appearing across its surface.

The sun goes from maximum to a minimum and then back again to a maximum over an 11 year cycle.

This year marks the peak of solar activity since 2005, the last solar maximum. Already in January, a series of solar flares caused some airlines to reroute their flights to keep communications from being affected. During periods of strong solar activity, flights over the poles of the earth are particularly vulnerable to communications blackouts from solar flareups.

Although the solar flares and other solar activity do not pose a serious threat to humans on the ground, they do have the ability to disrupt electrical power, communications, and other electric-powered devices. They can also potentially pose a threat to astronauts, satellites, and spacecraft in orbit.

In late January of this year, NASA scientists monitored a Mars probe en route to the red planet as a fast moving solar coronal mass ejection swept through the solar system. A coronal mass ejection is material that is expelled from the sun at high speeds.

Onboard the Mars Curiosity Rover spacecraft, scientists included a Radiation Assessment Detector or “RAD” for short. NASA says the instrument is designed to “count cosmic rays, neutrons, protons and other particles over a wide range of energies.” As the spacecraft heads toward Mars, it has been monitoring these coronal mass ejections and other solar activity. Although the Curiosity spacecraft was undamaged by any coronal mass ejection, the RAD device will help gauge the danger of solar radiation to future humans headed to Mars.

For many satellites and objects around the earth, the danger from the sun’s X-ray flare ups and other radiation emissions is very real. Not long ago, a NASA satellite was actually damaged by a solar flare.

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“A modern solar flare [was] recorded on December 5, 2006, by the X-ray Imager onboard NOAA’s GOES-13 satellite,” says NASA on one of its educational websites. “The flare was so intense, it actually damaged the instrument that took the picture.”

As the earth becomes more dependent on electrical power grids and electrical devices in general, the chances that solar activity could cause massive disruptions in every day life is increasing. Although it sounds more like a scene from a fanciful science fiction movie, such strong solar events have caused almost unbelievable problems here on Earth in the past.

In 1859, a solar event actually caused telegraph communications to fail and some telegraph equipment even caught on fire as a result. The Carrington Event, named after an astronomer who observed part of the sun’s flareups through a telescope, caused auroras so bright that people on the east coast of the United States could read newspapers at night time.

NASA also says more recent events have occurred.

A huge solar flare knocked out phone communications across part of Illinois on August 4, 1972, prompting phone companies to change the design of their long distance cables across the Atlantic, says a NASA science report. The space storm of March 13, 1989 melted some electrical transformers in New Jersey and knocked out power in Quebec for nine hours.

More recently, NASA says that GPS communications were knocked out briefly by solar activity.

“In December 2005, X-rays from another solar storm disrupted satellite-to-ground communications and Global Positioning System (GPS) navigation signals for about 10 minutes,” says an NASA science report on solar flares.

Although it is evident that super solar flare events are extremely rare, solar activity is ongoing is virtually guaranteed at some point to cause further disruptions here on earth, what’s unclear is how civilization will deal with the results if power grid failures occur.

“Experts who have studied the question say there is little to be done to protect satellites from a Carrington-class flare,” says the Science@NASA Science. “In fact, a recent paper estimates potential damage to the 900-plus satellites currently in orbit could cost between \$30 billion and \$70 billion.”

However, with attention on solar weather increasing, it’s hoped that advance warnings and more awareness and preparation on the part of utilities and communications providers will help reduce the impact that the sun’s storms may have on every day life in our modern world.