

CHARLIE'S WHISTLE

By

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These are the days when the propagation experts are trying to figure out exactly when the minimum of our current sunspot cycle, #23 will occur and of course, when the next cycle will officially start its rise. Of course, none of them agree on the details. Cycle 24 is predicted by some to begin in late 2007 or early 2008, which is about six months to twelve months later than scheduled. Cycle 24 is expected by most scientists to reach its peak sometime in 2012. The precise date of cycle 23's end and 24's start will actually be determined empirically, probably six months past that date when the experts look back and see that the observed monthly numbers bottomed out and started rising once again. National Center for Atmospheric Research (NCAR) scientists predict that the next solar cycle will produce sunspots across an area slightly larger than 2.5 percent of the visible surface of the sun and its activity could be 30 percent to 50 percent stronger than the last one. Wow!

New hams who have become licensed in the last few years don't know what a wide open band ten or twelve meters can sound like but they surely will find out. This should be quite a show, better than most of us have ever seen. According to the NCAR forecasts, Cycle 24 should be nearly the greatest in intensity that the world has seen in the two centuries for which it has recorded data. The solar flux forecasts suggest that upcoming Cycle 24 will be second in intensity only to Cycle 19 which peaked in March, 1958 with a smoothed maximum number of 201. Cycle 19 stands as the greatest intensity in recorded history. So boys and girls, fasten your seat belts. We're in for quite a ride.

At most meetings, Charlie's club normally includes station reports from each member as part of its meeting routine. When attendees are especially numerous or they have a special program planned for the meeting, they skip station reports in the interest of time but it is always interesting and encourages members to be at least somewhat active during the month so that they have something to report. Newer members of Charlie's club are always amazed when Charlie pulls out his list and reads off the stations he has worked in the last month. Most members will go home and listen at the times Charlie listens but most never hear what Charlie hears and works. Charlie has explained several times that during the low side of the sunspot cycle, it's essential to listen deep for weak signals. Every morning, Charlie listens in the predawn hours to his favorite, the 40 meter CW band. Most every morning, Charlie manages to hear impressive DX when others do not. Of course, his 40 meter beam antenna is helpful but Charlie's operating skill is the biggest difference. Some operators who learned their DXing skills during the high sunspot numbers in Cycle 23 seem to not hear signals that aren't strong enough to move their S meter whereas old timers actually look for those very thin signals. That's where the good DX is usually lurking, amidst the crashes of noise.

At Charlie's last club meeting, Charlie's station report was unusually short. He talked about his and Mary's trip to Orlando in February and his experiences at HamCation but not very much concerning on air work. Still, compared to others in the club, Charlie was very active indeed. His report included a couple of dozen DX calls including some far eastern stations and long path southern hemisphere contacts on 40 meters during the dark hours between 0700 and 1000 UTC. Other members listened and smiled because they knew that Charlie's report meant that despite the fact that they never hear anything, Charlie surely does and it gives them all hope that some day, maybe soon, the bands will return for them also. They can remember the days of high sunspots when they would work Europeans on 10 meters from their 25 watt mobiles while driving to work and ZLs and VKs at dusk on their way home or to club meetings.

As is customary, the president asked Charlie after the station reports were completed to give the members his synopsis of conditions and how he sees the next cycle coming along, once it does start its climb. Charlie was pleased to oblige of course and was able to speak off the cuff without preparation. Experience in his working life as well as his DX ham career prepared him quite well to easily speak to people without pages of notes or hours of prep work.

Charlie proceeded to tell the club members, "Cycle 24 is now warming up its engines and within the next year, will begin its climb. Solar cycles tend to be sawtooth shaped with rise-times much shorter than fall-times. So, once the rise has started, good band conditions on ten and possibly six meters may start within a year. That means that by the fall of 2008, we should be working Europe regularly during daylight hours on twenty meters and occasionally on fifteen and even ten. By fall of 2009, twenty should open around the clock, fifteen should be open most evenings until midnight and ten and six meters will open to world wide DX. Now is the time to get ready for what probably will be the best DX conditions in the next 25 years. Don't wait for the next solar peak to put up the new antennas you have been dreaming about or you'll get them installed just in time for the big decline into relatively poor conditions that may last for another 20 years."

Charlie explained to his fellow club members, "NASA solar physicist David Hathaway has predicted that the following cycle after #24 will be extraordinarily weak, with its peak high smoothed sun spot number at only about 75 to 80 which is not much different than our present readings and we're near the bottom of this cycle. Most of you think our bands are dead now." Charlie was firm in pointing this out, "All of you who enjoy the kind of wide open band conditions that you remember in the 'good old days' would be very well advised to spend some time this summer to pull your ten and six meter beams out of storage and getting them back up into the air. This may be your last opportunity to use them for thirty years. Cycle 24 may very well hit an index of 100 by 2008, 135 by 2009, 160 by 2010 and 180 or higher by the expected peak in 2012. The bad news is that after that, the downslope of Cycle #24 will be very sharp, dropping to an index that could be as low as 25 to 50 by 2015, lower than existing conditions today."

Charlie looked around the room and said, "I surely don't want to shock anyone but for those of you who don't think you can work DX during low sunspot years, you had better spend serious operating time during the next few years and enjoy Cycle 24 thoroughly because some of us won't be around when high sunspot conditions like this might come around again, possibly well after 2025."

Charlie realized that he had shaken the new hams with what he said, especially those over the age of 60. But then the old DX master smiled and said, "You know, it's not all bad news for you guys who just bought new \$12,000 transceivers. You'll have a great time chasing DX for the next several years. But, I'm very serious when I tell you this. You'd be very well advised to sharpen your operating skills because in the years after 2013, your normal mode will require you to listen deep on the so called low bands and know how to pull weak DX out of the noise. If the scientists are correct, during those years, band conditions above 20 meters will be fairly quiet. Your best bands will be 40 and lower in frequency."

Charlie figured that he had shocked his fellow club members sufficiently for one meeting so he stopped and asked if anyone had questions. A few hands went up and Charlie picked one. It was Harold, a new retiree. He asked, "Charlie, are you concerned with this news?" Charlie thought for a moment and smiled. "Not really, Harold. My favorite band is 40 meters. It should continue to produce DX for as long as I'll be around. Propagation on 40 isn't shut down as it is above 20 meters." Another hand went up. It was Emily, the 12 year old daughter of Jim, the club treasurer. She just upgraded to General under the new FCC ruling that dropped the code test. "My dad says

that I don't need to worry about what you said at all. I'll be able to work anything I want to work." Charlie grinned and said, "Well, that may be true, Emily. Your dad isn't a DXer but there's still hope for you." The members laughed at that comment. Then Charlie went on, "Seriously though, if someone never cares to work anyone beyond another ham ten or twenty miles away, he or she will probably not be affected. Read up about ground wave and propagation using ionospheric reflection. Over the next sunspot cycle, you'll experience some outstanding conditions on fifteen, twelve, ten and six meters. You'll contact other young hams across the country and in other countries for several years during the next cycle. After doing that for a while, you may discover that DXing is a lot of fun. But, be sure your school work always comes first." Jim, her dad, applauded at that. Several others joined in.

Charlie looked around the room. There were no more hands, so he thanked the president and sat down. The president thanked Charlie for his terrific impromptu lesson on sunspots and added his own admonition to the members, "Folks, Charlie generally knows what he's talking about. I can see plenty of antenna work taking place this summer and fall. I know that I'll be pulling my six meter antenna out of the rafters in the barn."

Then, the president asked if the membership had any ideas after hearing Charlie's talk. One hand went up. It was Andy who had just graduated last year with a Mechanical Engineering degree. "Mr. President, I'd be willing to design a combination ten and six meter yagi and donate some stock for members to build an inexpensive and small beam for those bands." Another hand went up. It was Mike, Charlie's good friend who is a serious flea market dealer. Mike said, "I know where I can get plenty of tubing that would be perfect for a small beam like you have in mind. I'll donate some and help fabricate the pieces."

The president said, "Well this sounds like a terrific club project for the fall. Let's name Andy and Mike to head up the committee and pull in some others if you need them. By next meeting, can you publish some cost figures of what someone could expect to pay for one of these antennas?" Both Andy and Mike nodded and said they would do so.

On the way home from the meeting, Charlie heard from Mike on the club repeater, "Say Charlie, that was a great idea that Andy had, wasn't it?" Charlie replied, "It surely was. I wish I had thought of that myself. I need one of those ten and six meter beams myself and so do you. Neither of us has much of an antenna for those bands. We both could use one and building two yagis on a common boom is a great idea. It's good that we have some smart kids in the club, huh?"

Andy had been listening on the repeater and took advantage of the long pause after Charlie made his comment to Mike. Andy picked it up and jumped in saying, "While you were talking at the club Charlie, the idea hit me. Most of us in the newbie crowd don't have an old ten meter beam in storage. The club needs building projects and this would be simple and inexpensive for any member to build and it would be very useful as well.

It would be fairly small and easy to put up using a TV rotator and it wouldn't have to be very high either. A full wave on 10 meters is only 32 feet." Mike picked it up, "Charlie, it's as you just said. It's a darned good thing that we have some smart kids in the club." Charlie replied, "Amen brother!"

Ben Franklin once said, "By failing to prepare you are preparing to fail." Charlie and his friends are preparing for the great conditions that we'll experience soon and in that preparation, they'll make themselves ready for the much different conditions that will follow. We all should follow their lead.