County Hunter News

July 1, 2009
Volume 5, Issue 7

Welcome to the On-Line County Hunter News, a monthly publication for those interested in county hunting, with an orientation toward CW operation.

Contributions of articles, stories, letters, and pictures to the editor are welcomed, and may be included in future issues at the editor's discretion.

The County Hunter News will attempt to provide you with interesting, thought provoking articles, articles of county hunting history, or about county hunters or events, ham radio or electronics history, general ham radio interest, and provide news of upcoming operating events.

We hope you will enjoy the County Hunter News. Feel free to forward, or provide links. Permission is given for copying or quoting in part or all provided credit is given to the CHNews and to the author of article.

County Hunter Nets run on 14.0565, 10.122.5, and **7056.5**, with activity nights on 3556.5 on Tuesday evenings around 8-9pm Eastern Time. Also, with low sunspot activity, most of the SSB activity now is on 'friendly net' 7188/7185 KHz. The cw folks are now pioneering 17M operation on 18.0915. (21.0565, 24.915.5, and 28.0565 when sunspots better). Look around 18135 or 18.132.5 for occasional 17M SSB runs.

You can see live spots of county hunter activity at ch.W6RK.com

For information on county hunting, check out the following resources:

The USACA award is sponsored by CQ Magazine. Rules and information are here: http://countyhunter.com/cq.htm

For general information FAQ on County Hunting, check out: http://countyhunter.com/whatis.htm

MARAC sponsors an award program for many other county hunting awards. You can find information on these awards and the rules at: http://countyhunter.com/marac_information_package.htm

The CW net procedure is written up at: http://www.wd3p.net/ch/netproc/netproc.htm

There is a lot more information at www.countyhunter.com . Back issues of the County Hunter News are available at www.CHNewsonline.com

De N4CD (email: telegraphy@verizon.net)

Notes from the Editor

N4CD Bob

Hams have been hoping that things will get better as we head toward Sunspot Cycle 24. So far, we haven't seen much progress. Last month, the solar flux managed to get up to 72 for a day or two. In June, most of the time it was below 70 and in the middle of the month was at 68 and even lower! That is not good for HF propagation. The current predictions for Cycle 24 are being revised downward all the time and solar physicists are scratching their heads trying to figure out how to predict this one. So far, all the models have been very poor in predictions!

This month we review a relevant book by Stuart Clark, a prominent UK journalist, with his new Sun Kings. It's a fascinating story of the

development of the understanding of sunspots and solar physics. You'll recall from last month the article about the solar storm of 1859 described by Carrington – and the great effect it had on the Earth. So, hang on and we'll go into a lot more detail later.

1) **Mobile Activity in June 2009**

Band conditions have been so-so. Some days 20M and 40M seem fairly decent. A few mobiles go out with 30M capability and fill in a lot of counties for the folks. We're into summer like conditions, and the solar minimum conditions continue. There have been some E-skip type openings on six and 10 meters, and when mobiles are far enough away, some activity on 17, 15, and ten meters. Maybe we need to keep up the work on 30M so those interested can get the Single Band award there, and 17M seems like a nice band when conditions are good, and the mobile is 1000 plus miles away.

Toward the end of May, Larry, **NA7W**, made a trip to some rare OR and WA counties (Wallowa) and ran on SSB and CW.

Alan, **KI7WO** returned from his trip to ND.

WQ7A, Terry, and Jack, **N7ID** were mobile out west putting out counties on SSB on several weekends.

The last weekend of May folks had opportunities for counties/band counties in the CQ sponsored WPX contest. 10M and 15M open for part of the weekend, and 20M was good with most of the HI counties on the air for those needing them.

Jim**, KB6TAL,** was out and about in AZ and NM.

Ron, **KB6UF**, returned from ME to LA via Los Angeles – the county way. Then back east.

Steve, **AK8A**, was mobile up in MI.

Merv, **KH7C**, activated the rare Kalawao. Scottie, N4AAAT, and others arranged to get Merv QRV from there. In the morning around 1500Z he

was good copy into TX (339) on 20M. It seemed like 30 or more made it through, about half direct, then half with help from Jim, KB6TAL doing relays. Then later that day, at 0300Z, Merv was pounding in on 20M with a 599 signal and working stations from most of the country direct. After a good 20 minute run, with a few relays, he moved down to 40M CW and worked a few dozen there for another 20 minutes! The solar flux was 70, the A index was 6. Nothing spectacular propagation wise, but dozens got through, even from the east coast on 40M! He ran it again later, and was even spotted on 3556.5

Jerry, W0GXQ, made a run in MN to clean up some needs. Then he headed into ND, all the way to Sheridan MT and back - for the weekend of June 6/7, running on 40/80/30/20 and 17. At high noon on Sunday, he was worked on 21.0565 by at least half a dozen folks in Benson, ND! For about half the day, he was good copy on 17M. It opens late, closes early, but folks added new band counties to the log!

His report (from K3IMC Forum)

"It was good to be back on the road and I found that the bands were in pretty fair shape. Twenty meters was by far the best, accounting for 50% of my contacts.

Contacts per band: **Twenty**-606, **Forty**-289, **Thirty**-268, **Seventeen**-30, and a few on Fifteen and Eighty (Total contacts 1,208).

I tried using one 40 meter resonator with a tuner, but it just doesn't hack it. Next time I will have two resonators and full power on both nets.

Another observation . . . if you can help it, don't make a trip at the same time as other mobiles running <u>your</u> county needs. It's just too hard to keep up with them when you are running 5 or 6 bands on CW in addition to some on the SSB nets. I missed a bunch!

I believe there were a dozen folks who picked up a "LC" from this trip. "

Later in the month, he was off putting out MN counties for Master Platinum. The band cooperated at times with 17 and 15m contacts, and maybe a few on 10M, although the flux was at 67 for the trip.

Fixed special event station, **W1AW/7** was on for a while in Oregon on June 6, 2009. I worked them, and the operator didn't know the county. It took me a few hours (using Google) to find that they were at an ARRL event in Seaside, OR, which turned out to be in Clatsop, OR. I needed that one! You never know where the special event stations will be. A few weeks ago, W1AW was out in CO, as W1AW/0 in Estes Park. I needed that county too! The best part is most special event stations don't want to yak(hello, 599, QTH, 73) , and if you need QSL cards, they QSL 100% with an SASE.

Bill, **KD7KST**, ran a few in Oregon on SSB and PSK31 to get them off the most needed list.

Phil, **AB7RW**, was spotted in WA in a few counties.

Rick, **AI5P**, was running mobile in SD and ND, and Larry, NA7W, put out some others in WA.

Eddie, **G4KHG,** spent a few weeks on Kauai – then will head to the western US to run counties for 9 days in July. He was worked on 40 and 20M, often with good signals. Spotted also on 20M RTTY.

Mark, **W8MP**, was running down in GA putting out counties.

Barry, **N0KV**, and Pat, **N0DXE**, were out in CO, mostly on ssb headed to a desperately needed county for N1BY.

Ross, **N0ZA**, made two runs in CO.

Kirby, W8DCD took a nice trip (SSB). His report from K3IMC

"I put out 143 counties in 12 states during our 3500 mile trip. I have now transmitted from 48 states and also GeoCached from them too in my year of CH'ing. I have transmitted from 810 counties.

We left on a Thursday night at 8pm. We camped the 1st night in northern Indiana. The antennas wouldn't tune so I had to make some repairs. The next night found us in Harrisburg PA. We visited the Hershey Choco factory and then headed toward NJ and NY. The next day we looked at a Polaris ATV in Boston and bought it. I then had to find a trailer. I bought a

used trailer in RI for $200. We took the trailer with us to Nantucket. We took the ferry to the Island and I talked a guy into letting my use his truck to run that county. I had a crowd of people watching me on Main Street Nantucket. "what is that guy doing?"

Then back through Boston (ate dinner at Hill Toppers) and into NH. The antenna broke again and needed some more duct tape. Into ME and we stayed with friends on a lake. Boy that water was cold. Down into NH to see the White Mountains. There was a motorcycle convention in Laconia, NH. In the mountains, we came upon a crash; 2 bikes and gone down. I switched to EMT mode and assist until the FD arrive and took the patients. The worst was a broken shoulder and he will be ok. His bike was trashed. Then we headed toward Niagara and then onto Cedar Point amusement park Sandusky, OH. That was the highlight of the trip for the kids. We then finished driving home and arrived Sunday morning at 1am.

We had a great trip; but too much driving and not enough time having fun. We are glad to be home. "

Jerry, **W0GXQ**, took another trip around MN. His report:

"Saturday was a long day - 5:30am to 8:00pm. Only 535 miles but numerous stops. I decided to try 17m around 11:00am and worked it in every county thereafter. Sunday I ran on 17 the entire day. Twenty percent of my CW contacts (270) were made on 17/15/10 which was quite exciting for a change. The 165 Q's on 17m must have helped those collecting band contacts.

Trip recap: 916 miles, 44 counties, 1,596 contacts (CW-1,326, SSB-270). 40m = 342, 30m = 292, 20m = 692, 17m = 165, 15m = 82, and 10m = 23. Ran forty new ones for MP (many more to go).

I did manage to run one of two counties in MN for which I am good for Natural Bingo (Goodhue). Not many choices with a call like mine."

De N4CD – I guess the secret is be far enough away from folks so when the skip is 1200-1500 miles, there are people that far away to work you on 17, 15 and 10M!. Wouldn't likely work so well in the middle of the country. I didn't hear 80% of the people on 15 or 20 that worked Jerry. Didn't hear half of them on 17M. Skip too long!

NM2L, Greg, headed north to VT running counties 40-15M.

2) Oops, we goofed – (What, again?)

In the May Issue of the Chnews, we published a picture with the wrong caption. To straighten things out, we present the picture again with the right caption. Sorry about that. The gremlins were at work again.

W9JL - Jim

And while we're chasing gremlins, Jim, AD1C, caught the typo – the three states now without QSO Parties are Alaska – AK, Iowa- IA and South Dakota – SD. Several folks with sharp eyes caught that one.

3) N1HHW – SK

Bunny, N1JFR, reported that Bob, N1HHW, is now a silent key. For many years, they ran as a 'team' operation all over the country.

4) **Natural Bingo Award**

from KE3VV:

There was also a lot of discussion about whether to have a numbered award. It will not be numbered, but an endorsement to BINGO with a special plaque of its own.

Here is the rule:

SPECIAL ENDORSEMENT: MASTER COUNTY HUNTER - NATURAL BINGO: A county hunter who works All USA Counties using only Valid Contacts with stations that match the first letter of the county in which they are operating with one of the letters in the suffix of the station's amateur Call Sign may apply for Master County Hunter - Natural Bingo. The special rules for short call signs, repeated letters in call signs, stars, and wild cards do not apply to Natural Bingo. The rules for counties with two or more words in the name and the rules for Alaskan Judicial Districts apply to Natural Bingo. This special award is unnumbered. A unique MARAC Special Plaque is awarded for completion of Master County Hunter - Natural Bingo.

The MARAC awards page has been updated as of June 2009 to reflect this and other possible changes.

5) County Maps

Mark, KO1U, sent along the following URL to print out county maps in various states:

http://www.nationalatlas.gov/printable/reference.html#Texas

6) Solar/ RF Propagation Site

Here's a good site I've stumbled across to track daily SFI, A, K index along with other interesting solar data and sunspot pictures. It loads real fast too!

http://www.solarcycle24.com/

7) Spotting - Helpful Hints

If you spot on the spot web sites, please only list the counties. Spotting "C/L countyA/countyB" will confuse some of those who use the alarm programs or try to import data into Logger from the spots page. If you list both counties with a '/' between them, that is all that is needed, as in "Isanti/Chisago, MN". Leave off the "C/L". Same if you are out running on cw – just wasting time and dits – hi hi.

If you want to include a comment, such as 'good for NB', please put that in parenthesis. Like 14.0565 K0ARS Shelby, MO (good NB).

3M REUNION

ATTN: All Manchester Old Timers !

It is time to stop crying in your beer and lamenting the fact there are no more MANCHESTER minis !

There are several of us out here who have missed the "good old days" of the Manchester flavor Mini and we have praised KM4W, N4ANV, W4RKV, and their assistants who produced what we still, after all these years, refer to as the best of the minis ever held by County Hunters. Instead of just sitting back and looking at the good times in a "rear view mirror" of mental history, we are going to do something about it !!! How 'bout a .....

MANCHESTER REUNION?

We have arranged for the rare opportunity to again meet and enjoy a few days of "eyeball QSO's" and "rag-chews" just like we did in the 80's & 90's and have the opportunity to renew some long ago made friendships as well as start a few new friendships. In general, we will relive some of our youth..... even if for just a few days!

Put aside the weekend of September 24-25-26-27 (Thursday thru Sunday) to rejoin your old friends in an unprecedented opportunity in

Manchester, TN at the Holiday Inn, newly built in 2002 and renovated (1 million $$$!) in '08. Rooms are ready to be reserved- just waiting for your call. A special rate of $89/couple/night plus tax includes a hot breakfast. You must call the hotel direct at 931-728-9383 for these reservations with rate approval by Amber Kelley, the convention manager. Advise them you are a "radio attendee" or there " for the radio club reunion" .

NOTE: There will be no meetings, and all activities are "A La Carte". You can arrange to eat at Mary BoBo's (you need to get your reservations in to her NOW to get a seat in September!) , visit Jack Daniels Distillery, or enjoy a Grand Old Opry performance as you wish..... Our goal is to offer to you several days of optimum socializing with one another! There are no dues and/or attendance fees, and no banquet planned..... but plenty of room to eat ! We will circulate info for the mentioned " Extra-Curricular-Activity selections shortly with phone numbers for you to make your own reservations.

MARY BO-BO'S AT LYNCHBURG, TN

Telephone #-931-759-7394

At this time (5/29/09) there are the following seats available:

Friday (25th) at 11:00 a.m.-90

Friday (25th) at 1 p.m.-48

Saturday (26th) at 11:00 a.m.-40

Saturday (26th) at l p.m.-60

The cost will be $19/per person plus TN tax
Make sure you understand that you will be treated to 2 meats, 6 vegetables, homemade bread, dessert, and a beverage and WONDERFUL SOUTHERN HOSPITALITY!!

If you want to have a meal at Mary Bo-Bo's call ASAP. You must make a reservation with a valid credit card. If you should not call ahead in the event of a cancellation, your card will be debited the reservation amount.

We are working from Bill's original attendee list and are making phone calls to each of you who are on record of attending the original event. There is additional information available on this by contacting any one of the following three people:

Herb Morgan, W9GBH.....
HM315pka@verizon.net ..... (H) 317-877-2697

Ron Rosenwald, KA3DRO..... ka3dro@tampabay.rr.com.....
(H) 352-382-7074

Al Garrett, KG5J.....
alevkg5j@windstream.net .....(H) 501-889-2888

Once you have made your hotel reservations, please drop an email to one of us so we can be sure to include you in all our communications and be able to advise others just who will attend.

We have made a number of calls already and been pleasantly surprised by the reception we have received and the number of people who have expressed their intention to attend..... including a few who have been off the air for some time !.

We also have been saddened by the number of county hunters on this list who have become SK. This reunion and your attendance becomes even more momentous.

We look forward to seeing y'all !! until then... STAY WELL !!!

vy 73..... Herb, Ron & Al.....

State QSO Party Coverage

There were two more state QSO Parties in June – AL and WV. We continue the detailed coverage of the events as this was a lot of the excitement during the month to fill in lots of new counties in the challenging sunspot minimum

conditions. There was limited activity on SSB but enough to fill in some for the folks. .

AL QSO Party

Before the contest, I checked the rules for the starting times and recommended frequencies. It helps to print out the abbreviations which will be used for the countries, too. I copied the list of proposed routes and printed them out – it is sure handy to have in the middle of a contest when you aren't sure initially what the county is, or whether to jump in because you really need it, or wait a bit until the pile dies down. I'm working on 4th time CW, so if I need it for that, I'll be waiting and pouncing as fast as possible – sometimes listening as the mobile has been running, knowing what county is planned next (one I need) and then being the first to hear the new county! (I shouldn't divulge all my secrets – hi hi). Also, you can prioritize things – if you don't need the next counties by 3 mobiles, you watch the other's progress toward the ones you need.

Sometimes mobiles don't ID very often. In this contest, if a station was on 7035, it likely was KC4HW. NY4N was running on 7043.3 most of the time, and KN4Y was up around 047. When KC4HW was supposed to be in Wilcox next, my last 40M cw county (been looking for it for a long time), I had the radio on 7035 even when he wasn't on 40M, and sure enough, that's where he popped up in Wilcox! Got him right away before the mob found him (and I worked him first, spotted second). K4ACG could go 2 or 3 or 4 minutes before an ID – helped if you knew where he usually ran and what county he should be in! Then, when he IDed, usually under people still calling, you could decipher it. Of course, if you also spot other mobiles about the same time, half the folks are trying to work the other stations just spotted, too. Thins out the pile on the one you need!

Most mobiles return close to the same frequency after band changes, and you can often tell mobiles apart by their keying speeds, and how they send the exchanges. That helps when sigs are weak. Of course, everyone is always 599 or 59 in a contest for the log.

This was a good QSO Party with lots of mobiles out running. Likely every county was on the air with a mobile or fixed station. Lots of activity on 80M, too. This was the rejuvenated AL QSO Party.
Mobiles out running were N5WR, K4EXT/KG4VBK, NY4N, KC4HW, K4ACG, KN4Y, and others on SSB. Most of the activity, like other QSO Parties, was on CW. The county hunter regulars were out in force chasing the AL counties. I started out needing about 30 and would up getting the needs down to 6. 20M sort of died in the afternoon, the missing counties were run, but just nothing heard at this QTH for the missing ones. I made 81Q in 52 out of the 67 counties.

There were hundreds of spots. What is somewhat amazing is that three or four AL stations made hundreds of QSOs on 40 and 20M SSB, and very very few of them were spotted. Others made up to 100, and a total lack of SSB spots the whole contest. It looks like the SSB folks are either all stuck on 14.336, or waiting for others to spot the counties so they don't have to go looking for the AL stations – or they don't need any AL counties! Take you pick.

K4YR made 330 SSB QSOs (20/40M) . Never spotted!

K4AB made 175 QSOs on phone. Never spotted. (He was spotted on cw!).

You really have to wonder! Some stations worked 20-30 multipliers (counties) on SSB, and yet just a few were spotted. Well, there were 12 SSB spots total, nearly all of them on 40M. There were well over 100 cw spots. Probably 60+ counties spotted on cw.

K4EXT – Gary /KG4VBK – Justin ran quite a few in AL mobile. You can read up a bit and see their mobile at:

http://www.k4ext.com/hamradio/tests/aqp2009/index.asp

"We ran 10 counties, 80/40/20 CW, all stop-and-operate. Total Q's between my son Justin and myself was 383 -- no clue on multipliers yet since we kept handwritten logs.

During driving times, we went QRT so that I could fire up my heating pad for a little back/hip relief ... that thing (with DC to AC inverter) is quite a

noise-maker for our IC-7000! Might have to next try a DC heating pad and see if that works better.

I promised my XYL we would be back before nightfall - wrong! I indicated that I might do a little SSB during the contest - wrong! I hoped to keep up with Justin on QSO count - wrong (he had twice as many Q's as me)!

We really did have a great time."

KN4Y: "Great weather, good band conditions and plenty of CW stations." 783Qs

From the 3830 Contest Reflector:

K4SAV/m : (570Q) "I really wanted to try 160 but there was no one there and I couldn't leave 40 and 80 which were running 60 to 80 Qs per hour at the end. 160 wouldn't have matched that. Thanks to all for an enjoyable contest.

160: 1
80: 135
40: 205
20: 216
15: 14
10: 1

Jerry"

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K4TD/QRP: (291Q) "Had only intended to operate about 2 or 3 hours but lost track of time and stayed on longer... :-) DL3DXX gets my award for best ears. He copied my 5 watt QRP signal on 80M...I was quite surprised to get a call from him. QRP is a much different world than the normal QRO I run... LOL!!! Hats off to all those who worked me."

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AA4FU (Clay. AL -404Q): "Had a great time being a "rare one" even with the low multi-band dipole. It worked better than I expected and even worked a couple of DX stations on 80m. QRN was quite bad on 40m early, but it got better in the last couple of hours."

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WB8JUI (OH – 140Q): "The Alabama QSO party continues to get better every year. Good mobile and fixed station activity.

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WA1FCN (Walker, AL) – 437 Q, all cw

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KC4HW/m (540Q) : "Great turn out in and out of Alabama! Thanks to everyone that participated in our event! We had perfect weather. Maybe not so perfect propagation, but it was as good as it could be!

I was mobile, CW only with my YL as the driver! -17 counties! The actually trip operating in the AQP was 503 miles. So about 1 Q/mile. My YL drove almost all the way during the AQP. She began to tire around 9PM and I took over and got us the rest of the way in.

The mobile station consist of a 99 Chevy "Red" Truck with 253k miles. Never missed a beat. Radio is an Icom 706MKII. I added the 500Hz CW filter this year and it was a lot better, especially on 40m. The antenna was the Hustler Mobile setup with resonators for 20m, 40m and 80m. Used a laptop with a DC to DC supply, Writelog and a microKeyer USB for the interface. My first contact was with KL7AI and I thought: Man! this was going to be good! 20m was pretty good and yielded a lot of Qs. 40m was good too, but seemed noisy during the early evening hours. Use 80m at the end and worked several, but there was alot of effort trying to get those Qs.

Changing counties was a trip with the pileup each time. It was fun to work through it all. Had a number of Qs from DL3DXX, HK3Q and TI2II.

73!

Jim/KC4HW”

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N5WR/m Eric: (937Q) ‘This was my first attempt at mobile contesting. I did CW while stationary, SSB while driving. Had about 6.5 hours of actual CW operating time, 4.5 hours of driving/SSB time, and about 1 hour on gas stops, antenna adjustments, and troubleshooting. Conditions were average on 20 early in the contest, not very good in the afternoon, but picked up considerably on 40 in the evening. Have spent the last couple of months building a mobile setup in my car. The Hi-Q 4/80 seemed to play well.

I had several software problems however with Winkeyer/N1MM that cost me some operating time. I think I was getting RF into
Winkeyer when adjusting the coil on the antenna when changing bands. I had to reboot several times, and ended up shutting down N1MM and disconnecting Winkeyer each time I changed bands as a workaround. Activity was good on CW and I was able to keep a good rate throughout the contest. Phone was quite difficult however with much higher noise, and I was really only able to get a decent run going in the evening on 40 from DeKalb and Marshall counties.

I had a very pleasant drive through some beautiful country in rural eastern Alabama. The contest ended by operating in Marshall and Jackson counties on the shore of Lake Guntersville, with a clear moonlit sky overhead.

NV4B (Franklin, AL): “Many thanks to those who called, especially on multiple bands. My hat is off to Jim Johnson, KC4HW and the Alabama Contest Group for making the AQP into a real event. Jim and the group's efforts to promote the AQP have paid off tremendously. “ – 391 CW and 139 SSB Qs.

John, **K4BAI**, joined the multi-op group at WX4RUS in Russell County (404Qs).

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WV QSO Party

There were quite a few mobiles out there – N8II (with W0BH), K8RYU, N8Q, K8MR, W8OP, and KD8ILL (SSB).

Kyle, **WA4PGM** headed out to WV to run a bunch, and after he got to WV, the transmitter wouldn't work, so he did 200 miles with no success. Murphy struck.

KN4Y: "There was a mild West Virginia excursion down to CW during the QSO party, but not enough to keep the naps short. The mobile signals were good when you could fine them. Was able to get three contacts for natural Bingo, four contacts for 5th time around and 1x3 call. I went to 80-meters but only heard and worked two stations, but one was a new county. Just not the CW activity you get in the FQP and CQP. I did the ten hours, counting naps, and made 71 QSO's and worked 31 counties. The summary sheet requires some thought so may just send in a log and maybe get a Tee shirt."

De N4CD: Hard to beat FL with 15 mobiles! And flat land and no mountains to block signals!

WQ7A: "Heard 6, worked 6 on 20m, Nothing on 40m."

K4XI: "Worked 32, including one on SSB during a slow spell. 11-20m, 18-40m, 3-80m --all 559 or much less. Had to quit at 0200, way past my bedtime when facing church the next morning!"

* * * * *

From 3830 Reflector

NO5W TX – 16Q : "Conditions between WV and Houston were very poor and considering that 75% of my QSOs were with mobiles, and one of them QRP, it was challenging but fun as always. I thought the pileups late in the day were rather unruly. With the weak signals from the mobiles it was tough to hear, through the constant callers, who the station came back to."

N8Q(N2WN op): Well Murphy rode shotgun with us from the get go... I had a problem with N1MM due to operator error, it still thought I was in Tn versus WV (sorry to the pileup) had to reboot the logger. Problem solved and we moved along. Weren't in WAY very long, MGO was a bit tougher due to the terrain and conditions did not seem all that great. Things improved thru LOG and BOO with more QSOs.

In BOO, I accidentally shut the vehicle off (was running it for air conditioning) and went to start, got a loud "THUNK" then nothing. Battery seemed fine, so we kept working for a few minutes. I drive a standard, so figured I could get it started. Rita doesn't so trying to get it started was not going well. A young couple from WV stopped and helped and off we went (Thanks OHIO!) We went to LIN next and made sure to stop on a slope, wanted to see if it was something simple. It wouldn't start, so did the ol' roll start.

Drove into Charleston. It was pushing 4PM looking for, at least, an auto parts store. Found one. They tell me the starter is probably gone. I'm thinking it's the relay (which they didn't have) and the nearest place open that had one was a half hour drive in the wrong direction. I gamble and pull the starter in the 90+ degree parking lot. It's no fun pulling a Tacoma starter.

Well need to "be sure" so have them check it. It works like a champ. Well it went in much easier than it came out. I ask him to call and make sure the other place has the relay. He suggests trying to jump start our truck, and we try. VROOOM! Battery had gone south and only put out like 15A. New battery we're back on the road... three hours later.

Rita has been calling her heart out on SSB while I drive from county to county. Thank you very much to those who had patience (Thanks Rick WB8JUI) and our apologies to the couple of folks lost as we rounded a mountain. Rita would get excited when someone would call, mostly because she wasn't hearing too well.

She managed 12 QSOs and wasn't completely turned off. I let her listen to the CW pileups near the end, and she asked how can you pick anything out of the mess :o)

WIR was our best county, we almost didn't go, but Rita insisted and found a

nice spot high up. Nice to work DL3DXX and UA3AGW a couple times. Didn't hear CU2JT who's usually a regular.

We did manage a couple in-state QSOs and one mobile. Wonder what happened to W8V, as I didn't see any reports of QSO with Kyle.

Many many thanks to the QSO Party regulars and the TCG folks who showed up in force.

Thanks All it was loads of fun, even with Murphy along for the ride.

Rig: Elecraft K3 with ATU and a three pack of Hustlers (tried 10, 15 and 80/75 for 0 QSOs, this was definitely a two band contest for us)"

K8MR/m (649Q) : West Virginia is not a state big enough for enough activity to justify a trip there solely to operate their QSO Party, so I had to look for some other excuses. I succeeded. On Friday my friend Barney, K3LA, and I drove to Breezewood, PA to ride on the Bike Pike, a 10 mile section of the PA Turnpike that was abandoned in 1968 when a new stretch was built to bypass two tunnels. In recent years bikers have discovered it, now including us. It was a very enjoyable ride.

On Saturday morning we headed off to W3LPL's annual Open House outside Baltimore, where we had a good time seeing lots of contester friends as well as Frank's superstation. We left there at 2 pm, two hours after the start of the WVQP to head to WV, driving home through WV while operating the WVQP.

Conditions were surprisingly good. Lots of short skip on 40, except for an hour or so around 4 pm. Much of that time was driving around Winchester, VA, getting from Berkeley to Hampshire County. 20 was also short, lots of qsos as close as MI. And thanks to all the TN guys! Not sure if they really liked the WVQP or were just on to work their home boy N2WN/N8Q, but their activity was greatly appreciated.

We drove past a red pickup truck parked at the PEN/RAN line, noticing as we went by the W8OP call letter plates. But there was a long downhill stretch from there with no place to stop and turn around, so we never did meet (or work) them.

We also spent nearly an hour driving through PA to get from MON to OHI without killing too much time on the slow WV roads. So between the late start from MD and the two out of state detours, we only operated a bit over half time.

We missed the Hancock county line, so probably operated an extra ten minutes as Brooke, but the rates on 80 CW were great in any event. Because of that we never had time to get to 40 from Hancock, so sorry to anyone who missed us because they couldn't work us on 80.

All in all, a very fun weekend."

NT2A: "WVQP made 127 QSO and 37 counties. 40, 80M were good, 20M condition was up and down. Heavy rain ran all day in NY and I guess in WV too. Local mobiles mostly quit after the first hours. Tnx K8MR and N8II (W0BH) for improving the activity. I got 2 new counties: Berkeley and McDowell. Need 3 more counties from WV: Webster, Tyler, Wetzel."

K4BAI: "Good activity, particularly by mobiles. 20M was short enough for QSOs in WV for almost the entire contest period. 15M was open from GA to WV for most of the afternoon, but only N8II/M seemed to know it. Nothing heard on 10M. 40 was quite good for the entire contest period. 80M seemed to be OK, but with significant QRN. No mobiles heard there.

If there was 75M phone activity other than from K8JQ, I never found it. Again, I must suggest that a specific frequency or range of frequencies be suggested. Tuning the entire General class band on some bands looking for a lost WV station seems senseless when most QSO parties specify center frequencies so that in-state stations have a starting point and out-of-state stations aren't discouraged by not knowing where to tune

Best WV QSO Party ever! 73, John, K4BAI.

Sunspot Cycle

There is hope! From ARRL Propagation Bulletin of June 5, 2009:

"It is so great to see some real Cycle 24 sunspot activity this week. Instead of a phantom that pops into view one day and is gone the next, we have sunspot 1019, which has persisted for five days, so far. Emerging on Sunday, May 31, the resulting daily sunspot numbers through June 4 are 15, 23, 19, 17 and 17. This is a Cycle 24 spot, and at high latitude too, which is an indication of a new cycle spot."

Latest NASA Solar Update

The sun is in the pits of a century-class solar minimum, and sunspots have been puzzlingly scarce for more than two years. Now, for the first time, solar physicists might understand why.

At an American Astronomical Society press conference today in Boulder, Colorado, researchers announced that a jet stream deep inside the sun is migrating slower than usual through the star's interior, giving rise to the current lack of sunspots.

Rachel Howe and Frank Hill of the National Solar Observatory (NSO) in Tucson, Arizona, used a technique called helioseismology to detect and track the jet stream down to depths of 7,000 km below the surface of the sun. The sun generates new jet streams near its poles every 11 years, they explained to a room full of reporters and fellow scientists. The streams migrate slowly from the poles to the equator and when a jet stream reaches the critical latitude of 22 degrees, new-cycle sunspots begin to appear.

Howe and Hill found that the stream associated with the next solar cycle has moved sluggishly, taking three years to cover a 10 degree range in latitude compared to only two years for the previous solar cycle.

The jet stream is now, finally, reaching the critical latitude, heralding a return of solar activity in the months and years ahead.

"It is exciting to see", says Hill, "that just as this sluggish stream reaches the usual active latitude of 22 degrees, a year late, we finally begin to see new groups of sunspots emerging."

The current solar minimum has been so long and deep, it prompted some scientists to speculate that the sun might enter a long period with no sunspot activity at all, akin to the Maunder Minimum of the 17th century. This new result dispels those concerns. The sun's internal magnetic dynamo is still operating, and the sunspot cycle is not "broken."

Because it flows beneath the surface of the sun, the jet stream is not directly visible. Hill and Howe tracked its hidden motions via helioseismology. Shifting masses inside the sun send pressure waves rippling through the stellar interior. So-called "p modes" (p for pressure) bounce around the interior and cause the sun to ring like an enormous bell. By studying the vibrations of the sun's surface, it is possible to figure out what is happening inside. Similar techniques are used by geologists to map the interior of our planet.

In this case, researchers combined data from GONG and SOHO. GONG, short for "Global Oscillation Network Group," is an NSO-led network of telescopes that measures solar vibrations from various locations around Earth. SOHO, the Solar and Heliospheric Observatory, makes similar measurements from Earth orbit.

"This is an important discovery," says Dean Pesnell of NASA's Goddard Space Flight Center. "It shows how flows inside the sun are tied to the creation of sunspots and how jet streams can affect the timing of the solar cycle."

There is, however, much more to learn.

"The Helioseismic and Magnetic Imager (HMI) on SDO will improve our understanding of these jet streams and other internal flows by providing full disk images at ever-increasing depths in the sun," says Pesnell.

Continued tracking and study of solar jet streams could help researchers do something unprecedented--accurately predict the unfolding of future solar cycles. Stay tuned for that!

http://science.nasa.gov/headlines/y2009/17jun_jetstream.htm?list1092811

Wind Energy

Wind Energy is going to save us, right? Not so quick!

“The wind, a favorite power source of the green energy movement, seems to be dying down across the United States. And the cause, ironically, may be global warming — the very problem wind power seeks to address.

The idea that winds may be slowing is still a speculative one, and scientists disagree whether that is happening. But a first-of-its-kind study suggests that average and peak wind speeds have been noticeably slowing since 1973, especially in the Midwest and the East.”

Study co-author Eugene Takle, a professor of atmospheric science at Iowa State University said the trend shows a 10 percent drop or more over a decade. That adds up when the average wind speed in the region is about 10 to 12 miles per hour. There's been a jump in the number of low or no wind days in the Midwest.

“Wind measurements plotted out on U.S. maps by Pryor show wind speeds falling mostly along and east of the Mississippi River. Some areas that are banking on wind power, such as west Texas and parts of the Northern Plains, do not show winds slowing nearly as much. Yet, states such as Ohio, Indiana, Michigan, Illinois, Kansas, Virginia, Louisiana, Georgia, northern Maine and western Montana show some of the biggest drop in wind speeds.”

The study is preliminary, but there are enough questions that even the authors say it's too early to know if this is a real trend or not. It raises a new side effect of global warming that hasn't been looked into before. Yet, a couple of earlier studies also found wind reductions in Australia and Europe, offering more comfort that the U.S. findings are real.

“It also makes sense based on how weather and climate work, Takle said. In global warming, the poles warm more and faster than the rest of the globe, and temperature records, especially in the Arctic, show this. That means the temperature difference between the poles and the equator shrinks and with it the difference in air pressure in the two regions. Differences in barometric pressure are a main driver in strong winds. Lower pressure difference means less wind.

Jonathan Miles, of James Madison University, said a 10 percent reduction in wind speeds over a decade "would have an enormous effect on power production."

Pryor said a 10 percent change in peak winds would translate into a 30 percent change in how much energy is reaped. “

http://news.yahoo.com/s/ap/20090610/ap_on_sc/us_sci_diminishing_winds

The Sun Kings

After last month’s article, I did some ‘Googling’ about Carrington and his discovery in 1859. Hams are really interested in sunspots and solar activity because it affects daily life on the ham bands. One solar flare can ruin

conditions for days, and high sunspot activity can make the higher bands come alive.

That led to my discovery of the new book by Stuart Clark called The Sun Kings. (Also noted in the weekly ARRL Propagation Bulletin). Being a frugal person, rather than sending off $12 for a copy on Amazon, I went to the local library to borrow a copy. A word about him first -

"Stuart Clark is one of the UK's most widely read astronomy journalists. His career is devoted to presenting the complex world of astronomy to the general public. Stuart holds a first class honors degree and a PhD in astrophysics. He is a former editor of *Astronomy Now*, the UK's biggest selling astronomy magazine. Currently he spends most of his time writing books, punctuating this with work for the European Space Agency, *New Scientist, BBC Focus* and *BBC Sky at Night*. " (from his website)

He starts with Carrington and his peers. Around 1800, many 'scientists' thought the sun was no different than the Earth and moon and planets and wondered what type of beings lived there. The sun couldn't be 'hot' since everyone knew and you could demonstrate that as you went up in elevation, say in a balloon, it got colder and colder as you went up. Therefore it was the Earth that radiated heat. Of course, that was the 'common wisdom' and it would only change slowly.

The invention of the telescope had allowed people to observe sunspots – before that invention, only a few records existed of solar activity – and only that of very large sunspots which could be seen by the naked eye. The science of astronomy then was concerned primarily with one thing – star catalogs for navigation. England, one of the main sea powers at the time, was obsessed with star catalogs and so most astronomy dealt with details about cataloging the thousands of observable stars. As telescopes got better, even more stars had to be cataloged.

The other main area for physicists was the study of magnetic declination. The magnetic north pole and geographic north pole are not the same, so a compass is always off by a certain amount – and that varies depending where you are on the surface of the Earth. Not only that, it varies during the day, and when you have a solar storm, the compass can go wild for hours. No one had a clue as to why (or even that solar storms were responsible for the compass going wild), but having detailed tables of the magnetic

declination were essential for proper navigation any where on earth. Folks didn't have a clue as to why the Earth had a magnetic field, what caused it, or why it changed.

Stuart Clark weaves a tale of discovery – of Herschell in the 18th century noting that wheat prices in England were somehow correlated to the number of sunspots. Naturally ridiculed at the time (and still by Al Gore and his pseudo science fans today), it took over 2 centuries to establish that, yes, agricultural output is correlated to sunspot activity. No one could explain why that might happen, so that observation was basically ridiculed for 2 centuries as preposterous. Not only that, it had been determined a few decades ago that the solar variation in output was only a tenth of one percent or less, so that couldn't be the cause. (the UV output, however, changes 20% or more! You need satellites to find that out, though!)

Clark then goes through the incredible amount of work and dedication of scientists, who always had to fight the pseudo scientists to get their viewpoints accepted. There are always politics and those whose entrenched ideas, no matter how wrong, persist for decades.

The UK government set up magnetic monitoring stations worldwide to try and get a handle on the phenomena that made the compass needle go wild at times. Soon it was learned that when that happened, it happened worldwide and about the same time. No one could envision what had the strength to do that, or whether it was the earth itself causing the problem.

Other scientists starting using better equipment, and determined that, yes, the sun was hot – a million degrees F, and by using diffraction gratings, could begin to determine what elements were in the sun. After decades of sunspot observations, the cycling nature of sunspots was revealed. Some astronomers devoted a significant portion of their life watching the sun, and doing the math and correlations to try and find meaning. After the photo heliograph was invented, then detailed photographic records could be taken hourly and daily, but it still took countless hours to read and catalog the information.

The mechanism by which the sun was so hot had to await quantum physics and understanding nuclear fusion – as outlined by Einstein and others in the 20th century.

Well, let's fast forward to the 21st century. We now have satellites that observe the sun in great detail. We now know that the sun has a magnetic field that goes out 12 billion miles! During one of the last major solar flares, satellites on the way to Jupiter, Neptune, and the Voyager space craft now 7 billion miles from Earth all recorded magnetic shock waves! (which are the cause of the compasses going haywire).

So let me update you on the Carrington flare – from p171 of the book:

"Thanks to the sophisticated instruments of SOHO (satellite) and other spacecraft, astronomers can now finally reconstruct the dramatic evens surrounding Carrington's flare. As maunder deduced and Hale measured, a sunspot is just the visible manifestation of a magnetically active region on the Sun. The spot forms when the movement of electrified gas in the Sun creates a tightly squeezed loop of magnetism that bursts through the solar surface like a pulled thread on a woolen sweater. At the foot of the loop, the magnetism cools the gas, rendering it darker than the surrounding surface gas. The more powerful the loop, the larger and darker the spot…..the loops totter thousands of kilometers above the incandescent surface, twisting together until they collapse into a smaller, more stable configuration. When this happens, the energy of a million atomic bombs is unleashed from the magnetic loops, exploding into space as a solar flare."

Most of the energy is in X-rays, but a small portion is visible light. The first strike was recorded 8 minutes later. However, as the flare ripped through the sun's outer atmosphere, it snared a vast cloud of electrically charged particles in its wake, initiating a coronal mass ejection(CME) . Ten billion tons of electrons and protons were expelled from the sun headed toward Earth. Those particles hit the Earth 17.5 hours later – and that generated the intense auroras worldwide.

During sunspot minimums, there is perhaps one CME somewhere on the surface of the sun per week. At sunspot cycle maximums, there are 2-3 a day! From particularly heavy sunspots, the activity can be almost continuous. The key is whether the flare heads directly toward Earth – and in the big scheme of things, that probability is low. However, the consequences of another hit like the Carrington flare might be disastrous.

Now some further analysis from Clark:

"Two hundred years after William Herschel urged the Royal Society to investigate the links between sunspots and Earth's climate, two Israeli scientists found themselves doing just that. …At the end of their analysis, they concluded that the great master of astronomy had been right after all: there does appear to be a link between wheat prices in England during the seventeenth century and solar activity. "

Scientists had always been puzzled about how solar activity could affect climate on Earth. The solar variance in output owas teeny over time – less than 0.1% from max to min sunspots. There was no mechanism to explain it. Enter the cloud chamber.

By using the satellite records of cloud cover, it was established that the Earth's cloud cover did vary with the sunspot cycle. But no one had explained why yet. This was the 'missing link' in explaining Herschel's observation over 200 years old. When cosmic rays hit the earth (as noted in a cloud chamber here on Earth), the particles collide in the upper atmosphere and create other particles, which are the 'seed particles' for clouds. Cosmic ray activity drops during periods of high sunspot activity. The solar winds during sunspot max points are more intense, and sweep away the cosmic rays from hitting earth in such large quantities. Thus, 3-4% leas cloud cover occurs.

Although clouds trap heat, they more than make up for that in the amount of sunlight reflected back into space. Thus a cooler climate. (IT doesn't take rocket science to know that temps on cloudy days are lower!). Fewer sunspots mean cooler temps, and in England – less wheat! Thus the price is higher, and Herschel was 100% correct.

Now, to put the dagger in Al Gore's heart….by the use of carbon and beryllium isotopes, (created by those cosmic rays), the entire sunspot record going back over 10,000 years can be reconstructed from Greenland ice cores and tree rings The amount of carbon 14, formed in the upper atmosphere, in any tree ring reveals what the cosmic ray intensity was that year.

If you watch the History Channel, you'll see programs about 'the Little Ice Age' in Europe…that dropped temps for decades – and by the way, caused rivers in the US to freeze solid including the Hudson River. The Little Ice Age coincided with the period now called the Maunder Minimum, where sunspots virtually disappeared for decades. (1645-1715)

Not only that, but the scientists found that the period from 1100-1250 was a period of very low carbon 14. That is known as the Medieval Warm Period – where grapes grew in England, where the Vikings settled in Greenland and Iceland and North America. Greenland produced so much wheat they exported it back to England! That was a period of intense solar activity – and warm temps on Earth! Try growing wheat in Greenland today! No way!

Cosmic ray intensity varies 15% between sunspot min and maximum. Cosmic rays cause Beryllium 10 to be formed – and by analyzing ice cores from Greenland, the entire history of the variation in cosmic ray bombardment (and thus solar flare activity) can be easy established.

Let's put this in perspective. The last 60 years have seen MORE solar activity than at any time in the past 8000 years! By a significant amount. Good for hams. We have lived through a period of fantastic radio conditions that were exceptional. And that includes the Medieval Warm Period. With more magnetic activity, a warmer climate results.

Shortly, the CERN particle accelerator will be used to generate high level proton beams, and the mechanism of cloud formation may reveal the exact particle interaction mechanism by which clouds on earth are formed. That might lead to AL Gore having to publicly recant his pseudo science of AGW once and for all. It took over 100 years for sunspots to be accepted as the cause of auroras and magnetic compass problems. I guess it might take another 20-30 years before we see the global warming religion die down in the face of real scientific evidence.

Sadly, we may be at the end of the historic sunspot activity period. Predictions for cycle 24 and 25 and now much lower than anything we've seen recently. Maybe we are headed toward another minimum of almost no sunspot activity in a few more decades? That would lead to global cooling on a scale unimaginable. Frozen rivers up north. The Great Lakes frozen solid. Crop failures worldwide and half of Europe under severe winters and poorer summer conditions. Another Little Ice Age.

It's a good read – so maybe you are a bit intrigued and will follow up?

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Now, you think this is all ‘new’?

From the NY Times, now a chief promoter of global warming hysteria – I guess they don’t read their own articles – from the 1980s!

http://www.nytimes.com/1989/06/13/science/analysis-links-sunspots-to-weather-on-earth.html

“Now a consensus is emerging that there is a statistical correlation between sunspots and the weather. Acting on the consensus, American meteorologists are about to put the findings to work in an attempt, starting next winter, to improve the Government's long-term weather forecasts.

Although no direct physical connection between sunspots and the weather has been demonstrated, the statistical correlation has so far withstood every test to which skeptics could subject it. It ties sunspot activity to an atmospheric phenomenon in which certain stratospheric winds at the equator shift direction about every year to 15 months, blowing first from the west and then from the east.

Among other things, the finding indicates that when the winds are blowing from the west and sunspot activity is at or near its 11-year peak, the southeastern United States often has a colder-than-normal winter.

The phenomenon also affects the course of the North American jet stream, scientists believe, thereby helping determine the track of storms across the continent. The scientists say that it also affects North Atlantic storms and helps shape the weather from Japan to Canada and Europe to the Middle East,”

More Pictures from Dayton

Likely 80 to 100 county hunters made it to Dayton, and we present a few more pictures of the county hunters who were there this year. (See the annual Master List of articles/photos to see others who come year after year and have appeared in earlier issues.)

Jack WD4OIN USACA 1055

Rodney, WD8CTX USACA #956


Jim, N1BY USACA #1080

Ben WY4D

Al Gore - Clueless

Once again, it looks like Al Gore, the global ‘climate change’ fanatics, the Obama administration, and the IPCC scientists may be clueless.

From the Economist (May 23, 2009):

“In 2006 Mario Lebrato and Daniel Jones of the National Oceanography Centre in Southampton, England, were using a remotely operated deep-sea vehicle to study the sea floor near an oil pipeline off Côte d’Ivoire. What they found surprised them. It was a thaliacean graveyard. And its discovery throws into question the received wisdom about one important aspect of climate change, namely how much carbon from the atmosphere ends up at the bottom of the sea.”

Thaliaceans are abundant creatures in many parts of the ocean. Their bodies are transparent and gelatinous, like those of jellyfish. They are actually chordates—in other words, part of the same group of animals as humans, even though they do not have backbones. The thaliacean graveyard off Côte

d'Ivoire came as a surprise because not much was known at the time about what happens to animals with gelatinous bodies, whether chordates or jellyfish, after they have died. It set Mr Lebrato and Dr Jones thinking, because if thaliaceans are falling to the bottom of the sea in large numbers, they might be taking a lot of carbon with them.

Mr Lebrato and Dr Jones report in *Limnology and Oceanography*, that when they analysed thaliacean tissues they found that the creatures were one-third carbon by weight, which was much more than they expected. Jellyfish, by comparison, are 10% carbon, and diatoms (single-celled algae that are common in plankton) 20%. It also helps explain why thaliaceans are so dense—and thus sink so quickly after they die.

Hitherto it was assumed that the main way carbon gets from the top to the bottom of the ocean was as part of dead planktonic algae sinking to the seabed. But the discovery of just how carbon-rich and prone to sinking thaliaceans are may change that assumption. Because they gather by the billion in feeding swarms around the world (they eat single-celled algae), the amount of carbon thaliaceans are taking to the bottom of the sea is by no means trivial. But he estimates that the "jelly pump", as he refers to it, sinks almost twice as much carbon as algae do.

"The lack of mixing between deep and shallow water in the ocean means that it is likely to stay down there for a long time—something that will have to be added to computer models of how the climate works. The carbon cycle has thus acquired another epicycle, and become even more complicated to understand than it was."

* * * * * * * *

And Al Gore, who flunked elementary school science, supposedly knows what is going on? You got to be kidding! The more folks actually look into science, the more flawed all the hysterical bleating appears to be about NYC being 100 feet underwater in 100 years. Not a one of the touted 'sophisticated computer models' has predicted the last 5 years of global cooling. Why would anyone really believe them any longer, when year after year they are revealed to be seriously flawed? Oh, it's 'religion' not science. Don't you dare to 'question it'. They're trying desperately to fix their 'models' that failed for the past five years.

Did you catch Oprah lately? She's been gushing on and on about how great it is to have her own personal private jet. This is the 'liberal media star' who invites Al Gore frequently as a guest to talk about 'how the planet has a fever', yet has no problem using 10,000 times more CO2 emission that 99% of her viewers as she jets about the country in her private jet – joining Al Gore and the others who spew out CO2 by the megaton in their private jets while telling YOU that you have to use less to save the planet! Only the 'common folks' are going to get socked by their phony carbon taxes – redistribution of your wealth and assets. It seems she can go on and on about how bad it is to spew out carbon and how we all have to sacrifice, but don't ask HER and Al Gore to give up their private jets! That will never happen! Hippocrates of the highest order!

CONELRAD – A Story from the Past

Do you have an old AM radio or communications receiver around from the 1950s that has the AM Broadcast band on it? If you're an old timer, you'll recall the dial markings at 640AM and 1240AM. There was either a dot, or a red triangle in a circle, or the initials 'CD" on the dial – required by law.

When the United States and the Soviet Union, who were allies during World War II, became enemies in the Fifties, the possibility of Soviet warplanes attacking the American mainland became real. Military leaders also realized that signals from domestic AM radio stations could help approaching bombers find U.S. cities.. An enemy navigator could tune to WABC on 770 kcs, for example, and fly in that direction to New York City. (this supposes that Russian navigators were poor, too). It was paranoia time of the Cold War, with 'duck and cover' drills required in elementary schools, and the development of 'fallout shelters' country wide.

In 1951, President Harry S Truman signed legislation authorizing CONELRAD to begin operation. CONELRAD - CONtrol of ELectronic RADiation - required all AM stations in the United States to sign off in the event of an enemy attack, save for those designated to stay on the air at either 640 or 1240. Multiple signals on the same frequency, coming from different directions, would prevent enemy planes from using one station as a

direction finder. In addition, in some markets, stations would take turns every 15 seconds quickly being the emergency broadcast station. There would be no single continuous signal to home in on.

Manufacturers of radios were required to mark the CONELRAD frequencies on all sets sold in the United States. The marking can be a triangle inside a circle -- a variation on the Civil Defense logo -- just a triangle, a dot, or the letters "CD," depending on the size of the radio.

In the event of a CONELRAD alert, all broadcast stations and later ham radio operators were to immediately cease normal operation. In 1957, the FCC modified the rules to include hams. As part of your ham station, you had to have a means of monitoring continuously for any alert while on the air, then immediately leaving the air should an actual alert be issued. An AM receiver or equivalent was required at every ham station!

Heathkit had a special CONELRAD monitor – the CA-1. Even the first CB licenses in 1958 required the operators to monitor for alerts and cease all operations until the 'all clear' message was given.

From the 1957 Heathkit Catalog for the Heathkit Automatic Conelrad Alarm Kit:

"This Conelrad Alarm works with any receiver,; AC-DC transformer operated – or battery power, so long as the receiver has AVC. When the monitored station goes off the air, the CA-1 automatically cuts power to your transmitter, and lights a red indicator. "

It contained a thyratron tube, 6 amp relay, and built in power supply. Back then, it costs $13.95. A small cable hooked it up to your nearby AM receiver.

CONELRAD ALARM

Broadcast stations were required to test the system once a week. They'd sign off, come back on with a tone, and explain that it was only a test. Once a year, every station except those designated to move to 640 or 1240 went silent for a half hour. For most, it was strange to hear nothing on the radio except one station where the announcers were casually talking about why everyone else was off the air, while reminding everyone to be thankful it wasn't the real thing.

When ICBMs were developed in the late 1950s, the threat of enemy bombers using AM signals as guidance became a non-issue. On July 13, 1962, the requirements for hams to monitor Conelrad ceased. Now, the Conelrad monitors made by half a dozen manufacturers are interesting but useless boatanchors. Next time you see a vintage 50s radio, look for the markings at 640 and 1240AM – it's even on things like the Hallicrafters S-38 early receivers made during that timeframe and similar.

The government spent a lot of money connecting the emergency stations together with telephone lines – the state of the art in 1950s. After 13 years, Conelrad ended, and was replaced with the emergency broadcast system, which would broadcast emergency instructions on any remaining station after a disaster of any kind.

High Speed Code

“The October 1936 issue of QST reported on the first official "Amateur Code Speed Contest" ever held. Eugene A. Hubbell, W9ERU, took home the silver trophy with his wining speed of 52.2 words per minute. Held at the ARRL Central Division Convention that year, the contest required operators to decipher plain language text for two minute intervals that ranged in speed from 25 to 52.7 words per minute. "Only bona-fide amateurs, holding at least an amateur operator's license, were eligible" to compete in the contest, the article stated.

Fast forward to 1995. Competitors from 15 countries on three continents traveled to Siofok, Hungary to show off their CW operating skills in the first IARU High Speed Telegraphy (HST) World Championship. According to Barry Kutner, W2UP, HST has long been considered a sport in Europe, especially Eastern Europe, similar to chess or an Olympic sport. Kutner was the sole US representative at the 2005 HST World Championship in Macedonia. In 2009, he is leading a team of seven this September to Obzor, Bulgaria for the Ninth High Speed Telegraphy IARU World Championship.

Kutner said that most of the participating IARU Member-Societies hold a national competition in their country, seeking members to field and sponsor a team to the World Championship. "In some of the eastern European countries, where they take this very seriously, there are team and/or individual coaches, too," he said. Competitors must be licensed Amateur Radio operators, except entrants in the younger categories may be SWLs.

In the US, Kutner said those who wish to participate in the World Championship do so at their own expense. "In past years, there has either been one -- myself in 2005 and Ilya Kleyman in 2007 -- or no US participants," he told the ARRL. "This year, we have a team!"

The US team consists of shortwave listener Brana Kleyman (category A,

women 16 and younger); Kody Low, KB3RUP, and Cal Darula, K0DXC (category B, men 16 and younger); Ilya Kleyman, KE7OPG, and Ken Low, NV1P (category H, men age 40-49), and Gary Schmidt, W5ZL, and Kutner (Category I, men 50 and older). "The 2 OM categories are full," Kutner said. "But we are always looking for younger hams, especially young ladies!" There are nine categories, and each country can only send two competitors per category, for a maximum of 18 competitors.

There are three main competitive events at HST meets: Transmitting, receiving and receiving Amateur Radio call signs via RUFZxp <http://www.rufzxp.net/>; the sending and receiving portions of the competition are referred to as the Radioamateur Practicing Tests (RPT). There is also a pileup competition.

In the RPT, random letters and numbers are sent via Morse code -- five characters at a time -- at a high speed. Separate competitions are held for the reception of only the 26 letters of the Latin alphabet, only the 10 Arabic numerals or a mixed content of letters, numbers and some punctuation symbols. Competitors may choose to record the text by hand on paper or by typing on a computer keyboard. The competition starts with one minute of transmission sent at an initial speed defined for the entry category (usually 50 letters per minute for juniors and 80 letters per minute for the other age categories). After each test, the competitors' copy is judged for errors. Subsequent tests are each conducted at an increased speed until no competitor remains who can copy the text without excessive error.

The transmission tests require competitors to send five character groups in Morse code as fast as possible. Competitors send a printed message of five character groups at a specific speed that is judged for its accuracy by a panel of referees. Like the receiving tests, there are separate competitions for sending five character groups of only letters, only numbers or a mixed content of letters, numbers and some punctuation symbols.

Kutner noted that 100 letters per minute is equivalent to 25 words per minute and 100 numbers per minute is equal to 36 words per minute. The mixed category of 100 letters, numbers and punctuation is equal to 29 words per minute.

The Amateur Radio Call Sign Receiving Test uses a software program called RufzXP that generates a score for each competitor. Rufz is the abbreviation of the German word Rufzeichen-Horen that means "listening of call signs." In RufzXP, competitors listen to an Amateur Radio call sign sent in Morse code and must enter that call sign with the computer keyboard. If the competitor types in the call sign correctly, their score improves, and the speed at which the program sends subsequent call signs increases. If the competitor types in the call sign incorrectly, the score is penalized and the speed decreases. Only one call sign is sent at a time and the event continues for a fixed number of call signs (usually 50). Competitors can choose the initial speed at which the program sends the Morse code and the winner is the competitor with the highest generated score.

There is also a Pileup Trainer Test that simulates a pileup situation on the air -- numerous stations attempt to establish two-way contact with one particular station at the same time. This competition uses a software program called MorseRunner

<http://www.dxatlas.com/MorseRunner/>.

In this test, more than one amateur radio call sign is sent at a time via Morse code that is generated at different audio frequencies and speeds, timed to overlap each other. Competitors must record as many of the call signs as they can during a fixed period of time. They may choose to do this either by recording the call signs by hand on paper or by typing them in with a computer keyboard. The winner is the competitor with the most correctly recorded call signs.

HST has definitely come a long way since 1936 when Hubbell dazzled the crowds with 52.2 words per minute; competitors at the IARU HST World Championships consistently have speeds of more than 500 characters per minute -- 100 words per minute. While it's too late to join the 2009 US team, it's not too early to think about upcoming events. If you are able to copy and/or send CW at dizzying speeds, why not think about attending the next IARU HST World Championship?”

Source: ARRL Letter, June 5, 2009, by ARRL, Inc, Newington CT 06111

Better Plane Aerodynamics

A new study says that within three years jumbo jet makers could be testing out a new type of wing that reduces mid-air drag and cuts fuel costs by an estimated 20 percent. The wing would do this using small, built in jets that redirect air around the wing during flight.

"This has come as a bit of a surprise to all of us in the aerodynamics community," Duncan Lockerby, an associate professor of fluid-solid mechanics at the University of Warwick in the U.K. and head of the research project funded by the Engineering and Physical Sciences Research Council (EPSRC) and aircraft maker Airbus, said in a statement. "It was discovered, essentially, by waggling a piece of wing from side to side in a wind tunnel."

Part of this learn-as-they-go approach stems from the Advisory Council for Aeronautical Research in Europe's (ACARE) goal of cutting carbon dioxide emissions from passenger aircraft in half by 2020".

Source: http://www.scientificamerican.com/blog/60-second-science/post.cfm?id=not-a-drag-high-tech-airplane-wings-2009-05-22

"The new approach, which promises to dramatically reduce mid-flight drag, uses tiny air powered jets which redirect the air, making it flow sideways back and forth over the wing.

The jets work by the Helmholtz resonance principle - when air is forced into a cavity the pressure increases, which forces air out and sucks it back in again, causing an oscillation – the same phenomenon that happen when blowing over a bottle.

"The truth is we're not exactly sure why this technology reduces drag but with the pressure of climate change we can't afford to wait around to find out. So we are pushing ahead with prototypes and have a separate three year project to look more carefully at the physics behind it."

Engineers have known for some time that tiny ridges known as ‘riblets’ - like those found on sharks bodies - can reduce skin-friction drag, (a major portion of mid-flight drag), by around 5%. But the new micro-jet system being developed by Dr Lockerby and his colleagues could reduce skin friction drag by up to 40%,”

Source: http://www.epsrc.ac.uk/PressReleases/wagglewings.htm

2009 Toyota Sienna Radio Installation

de Pete, NN9K

The antenna mount on the vehicle is a four magnet mount sold by Lakeview Communications. Each magnet is 5 inches in diameter. I covered the magnet portion with adhesive, vinyl shelf paper instead of the vinyl pads supplied by Lakeview. Because the ridges on the van roof would not let the mount sit correctly I had Lakeview rework the magnet placement to match the flat areas on the van roof. That allowed me to use the original magnet mounting holes for attaching the ½ inch tined, copper braid that I used to ground the

mount.

Stainless steel, bayonet, quick release adapters are installed on both ends of the regular Hustler mast. This allows me to separate and store the resonator portion of the antenna system on the mag-mount. The mast portion easily fits into the back of the van.

The bayonet adapters also allow me to easily change the resonator mounts without retuning the system. For example, during normal traveling I only run 20, 30 and 40-meters. For contesting I run 10 through 80-meters and have those resonators mounted on another horizontal mount.

I have modified the “traveling” resonators as follows; the 30-meter resonator is a rewound 15-meter Hustler resonator, the 40-meter is a rewound 20-meter Hustler resonator and the 20-meter resonator is the standard Hustler product. The rewound resonators have lower wind resistance and less total weight for the system. I haven't noticed any change in bandwidth or heating problems with the modified resonators.

(Note—In the picture above the antennas are shown in the “stored” position not the operating position.)

The round black piece attached to the base on the antenna is a ferrite core with several windings of 14-gauge wire, don't ask me the value, but is does seem to help with rain static and so forth.

Notice the black nylon cord tied to the mag-mount and the luggage rack cross arm. Magnet mounts may be hard to lift straight up but will easily slide so the nylon cord gives some protection during a very sudden stop.

Guy ropes are attached to the mast and attached to the rear most luggage rack cross arm and to eye bolts installed on the front of the luggage rack rails.

Coming up with a good secure guy attachment point for the front guys was probably the hardest part of the installation. Per one of the Toyota mechanics, it is best to keep the luggage rack cross arms as far to the back of the vehicle as possible. Placing the cross arms to the front causes them to vibrate and make a lot of noise. It's not easy to access the luggage rail attachment bolts either for grounding or anything else. I had to come with something that didn't involve removing the rails. Digging around in my junk box I found two small, threaded, flat pieces of metal that would fit inside of the rails and allow the eye bolt to be attached and that solved the problem.

Grounding the mag-mount was pretty straight forward. Stainless steel bolts and self-locking nuts were used for the braid attachment. Due to the difficulty accessing the bolts holding down the luggage rack rails, I ran the braid to the rear of the van and attached it to one of the bolts for the rear door piston mounts. This was done on each side of the van.

The coax run was also pretty easy since there was an access hole already in place for the tail light wiring and access to the interior of the vehicle was provided through the access panel for the jack storage.

Because of the spacing provided between the van body and the rear door there is no chance of either the grounding braid or the coax being pinched. The coax access used existing openings and did not involve crossing any gaskets so the integrity of the water/weather proofing was not compromised.

Inside the van I was able to run the coax inside the paneling to a point directly across from the radio mounting position and then run it under the carpet to it's final position.

Installing the Icom-IC7000 in the Sienna van took a lot of time and thought - there just isn't a lot of room in the newer vehicles for radio installation. And if you are remoting the radio you have several problems to consider: where do you install the head, where do you install the radio body, where do you install a speaker and how do you run the associated wiring? Finally, after a lot of thought, I came up with what I think is a nice, clean, functional installation for the inside of the vehicle.

After the locations for the head and radio body were determined, the first step was to run the wire for radio power. During the van purchasing process I told the sales manager I wanted their mechanic to installing the wiring for the radio power. I would provide all the material and they would drill the firewall, weatherproof the hole and run the wiring under the carpeting to a designated location. I also wanted a relay installed so that the radio only received power when the vehicle ignition was on. I provided a relay, fuse

holders as well as a drawing of the installation. Note—I used rubber blade type fuses holders that have a rubber cover to keep out moisture and I have found that coating the blade portion of the fuses with an anti-oxide product helps prevent corrosion and a corresponding high resistance joint in the fuse holder.

After the 12 volts wiring was in place I installed the necessary wiring between the radio head and the body. Wiring for radio control, speaker and CW keying were all run under the carpeting.

The radio head was installed in a bin (for lack of a better description) located low on the dashboard.

The headed is mounted on a block of wood that was cut and shaped to fit the interior of the bin. It was necessary to drill a hole in the side of the bin (plastic sides) to allow access to the headphone jack. There is adequate room to insert the microphone jack if I ever decide to use a microphone.

The bin holding control head can be closed and I can listen or operate with no problem, I just can't change frequency without opening it.

As you can see the speaker is installed on the floor and is attached to a piece of metal that is slid under the console body.

The radio body installation was a bit more complicated. The middle row of two seats has a space for a console between the seats or you have the option of moving the right seat closer to the left one thus removing the space in the middle of the seats. To accomplish this there is a pair of hold downs that the seat attaches to in the space between the seats.

I decided to install the radio body between the seats utilizing the hold downs to secure the base of the box that would be built to house the radio body. The first order of business was measuring to ensure the box would be big enough

to hold the radio body but small enough so the seats could fold forward to allow access to the rearmost row of seats.

A base was cut to hold the radio body, a noise filter, two large, computer capacitor and a fan. The capacitors probably help a little with noise abatement but their primary purpose is to maintain the voltage to the radio especially when contesting. They probably aren't necessary but I have them and they are good insurance. Icom radios, especially 706 series as well as the IC-7000, seem to run rather warm so I use a fan to blow on the heat sink to help keep the radio a bit cooler. The fan receives it's voltage from the radio and is only operational when the radio is powered on.

As you can see in the photograph all the wiring is run through one of the holes in the base that are used to fasten the base to the van body. Wide nylon tie-wraps are used for that purpose at both the front and rear of the base. If you look very closely you can see the piece of copper wire that I use to secure the Anderson Power-Pole connectors to keep them for inadvertently separating. Cheap and effective! The four wood blocks are used a screw anchor points to secure the cover to the base. The spacing allows access to the cover screws when the seats are in a raised position.

It is possible to move the console that sits between the two front seats to the middle row. If this is done Toyota provides a cup holder that be installed in the base that remains between the front seats if the console is moved. I

decided that we could make things more functional if we incorporated the cup holder into the radio cover.

The cover is open in the rear to allow access to the cabling as well as providing as much air flow as possible. The only reason to remove the cover would be for control cable removal and that happens rarely. The finish coat of gray paint makes the cover blend into the van interior and makes it look like it “belongs”

The last problem I faced with the installation was where to place the paddles. Since I use the radio's internal keyer, I didn't have to worry about also placing a keyer. I thought that one of the cup holders would be an ideal place for the paddles, good location and the top of the console provided a good hand rest. Luckily we had lots of extra cups that I could chose from and modify as necessary as a base for the paddles. After finding a metal cup that was the right height and fit for the cup holder a few wraps of duct tape made it fit snuggly in the holder. A Dremel tool was used to remove the handle and trim some excess plastic from the lid. The paddles were then screwed to the cup lid to make a secure mounting. I also drilled a hole in the lid for a place to store a pen or pencil.

I'm still undecided as to what paddles to use, so I have mounted two different types mounted and available.

I like the Vibroplex paddles but the other set is handy since the paddle pieces slide into the body when they are not in use. Maybe the solution is to use the smaller paddles for casual operation but the others for more serious efforts. I guess time will tell.

The entire interior radio installation owes its neatness and good looks to Tony, N9YPN. His help, suggestions and wood working skills were

invaluable in accomplishing the installation and we both are very happy with the end result.

Peak Oil News

Another Oil Spike Within 2-3 Years

Saudi Arabia warned oil prices could spike to beyond the near $150 record high of 2008 within two to three years, as energy leaders on Monday decried a blow to investment in expanding capacity due to the financial crisis.

Energy ministers and officials at the Group of Eight energy summit in Rome are meeting as oil prices hover at a six-month high of over $60 a barrel, but below the $75 a barrel level producers say is needed to spur investment in new production.

Saudi Arabian Oil Minister Ali al-Naimi said the world was heading for a fresh spike after the current phase of faltering demand and lower prices, which reflected the global economic downturn rather than an indicator of things to come.

"We are maintaining our long-term focus rather than being swayed by the volatility of short-term conditions," he said in prepared remarks at the summit.

"However, if others do not begin to invest similarly in new capacity expansion projects, we could see within two-to-three years another price spike similar to or worse than what we witnessed in 2008."

Low prices and weak demand had discouraged investment in energy projects, with high development costs and tight credit markets compounding the problem, Naimi said."

Source: Reuters News

Cuba – Some problems

Cubans are in for an especially hot summer under an energy saving plan that could shut off air conditioners at work and require Saturday-morning blackouts at home. The plan, signed by new Economics Minister Marino Murillo and circulating Tuesday among government offices and state companies, also calls for large-scale vacations for government workers but doesn't say if they will be paid. The measures are necessary, it says, to conserve petroleum used to generate electricity during the Caribbean nation's sweltering summer months.

The island produces about half its oil and receives the rest from Venezuela on highly preferential terms. Most of Cuba's electricity is generated by crude. Venezuela and its socialist President Hugo Chavez, who has become Cuba's chief economic benefactor since the collapse of the Soviet Union, send the island 92,000 barrels of oil a day in exchange for social programs such Cuban doctors who provide free care. But Venezuela's ability to continue such largesse is uncertain as plummeting oil prices have put a major dent in its revenues.

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Source: http://www.google.com/hostednews/ap/article/ALeqM5htY7rg9CIC...

Britain – Food Police Again

No Beer for You! The lib lunatics continue to amaze with their actual serious insistence that they control you and your actions to 'save the polar bear babies' and enrich Al Gore's personal wealth.

"GIVE up lamb roasts and save the planet. Government advisers are developing menus to combat climate change by cutting out "high carbon"

food such as meat from sheep, whose burping poses a serious threat to the environment.

Out will go kebabs, greenhouse tomatoes and alcohol. Instead, diners will be encouraged to consume more potatoes and seasonal vegetables, as well as pork and chicken, which generate fewer carbon emissions.

"Changing our lifestyles, including our diets, is going to be one of the crucial elements in cutting carbon emissions," said David Kennedy, chief executive of the Committee on Climate Change.

The problem is because sheep burp so much methane, a potent greenhouse gas. Cows are only slightly better behaved. The production of 2.2lb of beef releases methane equivalent to 35lb of CO2 Tomatoes, most of which are grown in heated glasshouses, are the most "carbon-intensive" vegetable, each 2.2lb generating more than 20lb of CO2 Potatoes, in contrast, release only about 1lb of CO2 for each 2.2lb of food. The figures are similar for most other native fruit and vegetables.

The climate committee is analysing emissions from farming and will suggest measures to reduce them. **However, it has concluded that people will have to change their habits.**

Alcoholic drinks are another significant contributory factor, with the growing and processing of crops such as hops and malt into beer and whisky helping to generate 1.5% of the nation's greenhouse gases. "

First, they come for the lamb and beef. Then the tomatoes. Then your beer and wine. There is no end to a 'librul' mindset and what they will control. Actually, it is total control – commie style.

Source: http://www.timesonline.co.uk/tol/news/environment/article6350237.ece

Green Jobs

Finally, a European university study has been concluded analyzing job growth resulting from the responsible energy policies in Spain (leading the

charge in the fight to establish alternative energy resouces):

"Despite expensive and extensive green-job policies, a surprisingly low number of jobs were created. In addition, about two-thirds of those green jobs were just to set up the energy source in construction, fabrication, installation, marketing and administration. Only 1 in 10 of the green jobs created was a permanent job operating and maintaining the renewable sources of energy.

Each wind-industry job created in Spain required a subsidy of about $1.4 million. Overall, the average subsidy cost for each green job was about $800,000 (571,138 euros). And to create about 50,000 green jobs, Spain lost 110,000 jobs elsewhere, principally in metallurgy, nonmetallic mining, food processing and beverage and tobacco jobs.

Each green megawatt brought on line destroyed 5.28 jobs elsewhere in the economy (8.99 by photovoltaics, 4.27 from wind energy, 5.05 by minihydro power.) The total higher energy cost - the amount renewable energy cost more than available, conventional market-price energy - between 2000 and 2008 was about $10 billion. Moreover, the report concludes, "These costs do not appear to be unique to Spain's approach but instead are largely inherent in schemes to promote renewable energy sources."

The high cost of green energy predictably drove energy-intensive Spanish companies and industries out of Spain to countries with cheaper carbon-based energy, while the cost to Spanish taxpayers of renewable-energy subsidies was "enormous ... 4.35 percent of all value added taxes collected, 3.45 percent of household income tax or 5.6 percent of the corporate tax."

http://washingtontimes.com/news/2009/may/27/five-million-gre...

Fortunately, an intensive analysis of Spain's experience will no doubt enable the US to avoid a similar outcome. Our government is much more capable of implementing economically successful policies, I'm sure. It would be a shame to destroy 10+ million American jobs just in order to create 5 million new ones.

Oil News

Exxon Mobil held its annual meeting in Dallas, TX on May 28, 2009. From the President, Rex Tillerson:

“Tillerson said demand for oil and gas will grow through 2030 as the world´s population grows and developing countries become more affluent, with more drivers. Exxon will need those markets to offset slow growth in the U.S. and Europe.”

From Dallas Morning News;

“Exxon Mobil Corp. chief executive Rex Tillerson said U.S. demand for gasoline probably reached its peak last year, and stricter vehicle efficiency standards will probably drive demand down further.”

"Half a billion people have moved out of abject poverty to a minimum acceptable standard of existence, and that's due to energy," Tillerson said to the crowd of investors gathered at the Meyerson Symphony Center, adding that the world will continue to rely on fossil fuels for decades to come.

"Our approach to alternative energy in the near term is alternative ways to consume fossil fuels" more efficiently, he said.

The Irving oil giant projects that demand for gasoline in the U.S. will decline, as it has in Europe. Demand in China, on the other hand, is likely to triple by 2030, according to Exxon. Tillerson said demand in India and the rest of Asia will also grow.

"That's where the real rapid growth in fuels is," he said.

Tillerson said Exxon is developing technology to use fossil fuels more efficiently, such as tire liners that keep tires inflated longer and lightweight automobile plastics. He said rather than investing in an area where Exxon has no expertise, the company targets problems that its own technology can solve.”

Source: http://www.dallasnews.com/sharedcontent/dws/bus/stories/DN-exxon_28bus.ART0.State.Edition1.40daeec.html

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"The US Government Energy forecast from the Energy Information Administration said global oil demand is expected to reach 107 million barrels a day in 2030, up from this year's nearly 84m barrel/day. Almost 75% of the expected increase in energy demand will occur in developing countries, particularly china, India, Russia and Brazil, the agency said."

Source: Reuters 5/29/2009

Remember the article last month from Peter Huber on Burning Carbon? There are a trillion barrels of oil out there. Worth probably 100 trillion dollars. They are not going to just sit there. They will be extracted and burned (used). The US and Europe might cut back, but the rest of the world intends to develop to at least the highest standards they can afford, and 'cheap' energy is what they will use. Coal, oil, natural gas. The countries that have the resources will sell them. They need the money.

Mobile Installation Idea

Need to mount your radio in your minivan? Check out this by W8WWV.

http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/706MKIIGMount.htm

"This page describes a very simple and inexpensive mobile mount for an ICOM 706MKIIG radio. This design would also work with other models of small and relatively lightweight radios. I built the mount for my Nissan Quest minivan. While the identical design probably won't work in most vehicles, I hope that there are some ideas and concepts presented here that can be adapted for other situations.

I wanted to use my 706MKIIG for more than mobile operation. It is also my portable and backup radio. This means that I didn't want to permanently mount it in my vehicle. I needed a mount that would allow the radio be added to or removed from the minivan in a matter of seconds."

Other ideas for mobile installations can be found at:

http://www.k0bg.com/mounts.html

Laura Smith- FCC- Dayton

From the ARRL Letter, ARRL, Newington, CT 06111

“The Dayton Hamvention was one of the first events Smith has attended in her role as Special Counsel. Cross introduced Smith, explaining that he used to work for her and that she was "one of the best people that we possibly could get for this job, because before she came to the Wireless Bureau, she had worked in mass media. After she had been in the Wireless Bureau, Laura had been the president of a trade association in Washington. Many of the issues that come up with other entities using amateur spectrum are entities that are either in mass media services or in land-mobile services and they are basically lusting after your bands. So we are fortunate now that when someone calls up, Laura has this breadth of knowledge of not only what the amateur stuff is, but where [land-mobile and mass media services] actually really should belong. And she can counsel them very gently that they need to get licensed here and not, you know, where they think they are. This is something you don't
see. Believe it or not, this is a tremendous help to you."

He mentioned that Smith plans to stay in this position for the long haul: "So if you have any ideas about a short-timer or think you're going to get away with it, plan on about 15 years down the road. In the meantime, behave yourselves!"

Smith explained that when she took over the amateur enforcement position earlier this year, the job had changed a bit from when Hollingsworth was in the office. "This job used to be in the Spectrum Enforcement Division down in DC; it was a remote position in a DC office," she explained. "It is no longer in that Division. I am actually a Field Agent. I'm attached to the FCC Field Office, I'm in the Northeast Region and my supervisor is the Regional Director for the Northeast Region." She told the crowd that she has spent a large portion of her time going through all the files that had accumulated, about 430 cases, while the position was vacant.

She explained the different types of complaints her office receives, such as complaints dealing with criminal investigations, technical violations, harassment and language complaints, malicious interference complaints and unlicensed users.

Smith also handles RFI complaints. Saying that these complaints are "ultimately going to be the most troublesome," she explained that there are two kinds of RFI complaints. "The first type of RFI complaint I get are the ones where your neighbors are complaining about you. You guys are causing interference to their television or to their radios or their telephone. The Commission generally tells them if you are a licensed amateur operator operating in the parameters of your license, then the Part 15 device that you are causing interference to is subject to that interference, and the rules state that very clearly. We suggest that they either work with you or they get a filter; those are the two suggestions."

Smith, in cooperation with the ARRL Lab, also handles utility line interference complaints. "This one, you would think, would be easy to resolve -- the power line is causing interference, the utility will come out and fix it and everything will be fine. Not quite so easy," she explained. "Those of you that have been experiencing it for 3, 4, 5, 10, 12 years know that in fact, that is not what happens. What I am discovering is that the utilities quite simply don't know how to fix the problem. They can't identify the noise. What they will do is they will go out and will find 15 sources of noise. They will fix these 15 sources of noise and then they will come back to me with this detailed list of these 15 sources of noise that they have fixed. Yea! We're all done. No -- they haven't fixed your noise. So they don't quite understand the concept of 'Don't just run out and fix everything you see, that's irrelevant to the amateur.' The amateur wants you to fix their noise."

Smith described that the first step the utilities need to do is to go to the amateur's house and listen to the noise and determine exactly what they're hearing. "This way, when they fix it, you can ultimately figure out if you have in fact fixed their noise. I'm trying to figure out a way with the Lab as to how we can best tell the utilities that they really need to think about how their processes work and what we can do to educate them so they can get out and fix this."

Smith has also given utility companies time limits to fix the noise complaints. "I am telling them, 'If you go out and you can't fix it, every two weeks you have to report back to me in writing why you can't fix it.' Utilities are, generally speaking publicly traded companies, so what happens is that they have a Board of Directors that they answer to. Those people are not going to want them to waste time and energy writing this crazy woman in

Gettysburg every two weeks a detailed report. And believe you me, if they miss their deadline, I call them and tell them 'You've missed your deadline. I need your report.' I have spoken to more heads of utilities in the last three weeks than I ever care to speak to again. They have no qualms about calling me, saying 'We can't meet the deadline.' And I explain to them that's fine, I'll just write up this nice little letter [saying] you can write your check to the federal government."

Stealth Antenna

Here's an interesting antenna system. It might give you a few ideas for antenna mounting or design.

For local HF communications, you want an antenna that radiates mostly 'up' – near vertical. That is called a NVIS – Near Vertical Incidence Skywave.

From Wiki:

"**Near Vertical Incidence Skywave**, or **NVIS**, is a radio-wave propagation method that provides usable signals in the range between groundwave and skywave distances (usually 30 to 400 miles, or 50 to 650 km). It is used mainly for military and paramilitary communications and by radio amateurs. The radio waves travel upwards into the ionosphere, where they are refracted back down and can be received within a circular region up to 650 km from the transmitter. If the frequency is too high, refraction fails to occur and if it is too low absorption reduces the signal strength.

The usable frequencies for NVIS communications are between 1.8 MHz and 15 MHz. The most common bands used in amateur radio are 3.5 MHz and 7 MHz, with experimental use of 5 MHz (60 meters) frequencies. Military NVIS communications mostly take place on 2-4 MHz at night and on 5-7 MHz during daylight. The lowest layer of the ionosphere, called the D layer,

causes attenuation of low frequencies during the day. This layer disappears at night enabling improved communications at the lower frequencies during this time. “

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From Stealth Technologies:

“The Stealth ST-940B Mobile HF NVIS Magnetic Loop Antenna has been developed to address the emerging need to reduce the visibility of vehicles fitted with traditional HF antenna systems.

Earlier, the presence of large HF Whip or auto tune vehicular antenna used to make vehicles an easy target But, the unique design of the ST-940B provides for a hidden, almost undetectable presence of en efficient antenna system on the vehicle, which is camouflaged by shaping it as a regular luggage roof rack.

The highly efficient auto tune antenna radiates with an almost vertical take-off angle. It provides reliable communication within distances that are traditionally affected by skip zones created by the radiation pattern of non-NVIS antennas.

Picture with the loop in the up position – It folds down to be part of the roof rack so you don't even know the vehicle has radio gear in it.

A closed H/Q loop circuitry ensures significant increase in transmitting end receiving power as well as reception immunity to ignition and industrial noise. Compared with the traditional whip-type vehicle antennas, the ST-940B gives an additional 9dB of omni-directional gain, even in regions with poor soil conductivity. As a result, the overall performance of the entire vehicular HF installation is now much higher than other vehicle antenna systems.

The motorized folding loop can change its position within seconds from inside the moving vehicle at any time. The antenna is designed so that it normally operates when the hinged loop is raised. However to support ALE/CALM and other networking functions of modern transceivers, the antenna can work for reception even when the loop is folded down. This feature allows for the vehicle to maintain a "hidden look" till transmission is required.

The roof rack has been meticulously designed to become an integral part of the antenna system rather than building the antenna around a random rack. The fully functional roof rack can also be used for carrying almost any kind of cargo, except fuel and light flammables.

The all-welded lightweight aluminum construction of the ST-940B HF Mobile antenna provides physical strength, excellent tuning point stability and protects the mechanical parts of the antenna from damage. Made to the highest quality standards and with extensive knowledge of materials, the construction is free of environmental problems such as corrosion due to dissimilar metal joints, UV degrading, low temperature cracking and dehermitisation.

The shock-sensitive components of the system are protected by aircraft-type shock absorbing vibroframe. The micro-processor controlled interface of the Stealth ST-940B allows for flexibility in connection with any type of mobile HF transceiver.

The highly efficient auto tune antenna radiates with an almost vertical take-off angle. It provides reliable communication within distances that are traditionally affected by skip zones created by the radiation pattern of non-NVIS antennas."

Source: (more info and pics at):
http://stealth.ae/plugins/custompages/detinf.php?id=372&id_categories=136

Note: If you want to work that station 200 miles away on 20M, if both stations have this type of antenna, you have a good chance of making a contact! Some county hunters accidentally make a NVIS antenna when they put their 80M dipole up at 30 feet and think they'll work much of anything!

Solar Cycle 24

May 29, 2009: An international panel of experts led by NOAA and sponsored by NASA has released a new prediction for the next solar cycle.

Solar Cycle 24 will peak, they say, in May 2013 with a below-average number of sunspots.

"If our prediction is correct, Solar Cycle 24 will have a peak sunspot number of 90, the lowest of any cycle since 1928 when Solar Cycle 16 peaked at 78," says panel chairman Doug Biesecker of the NOAA Space Weather Prediction Center.

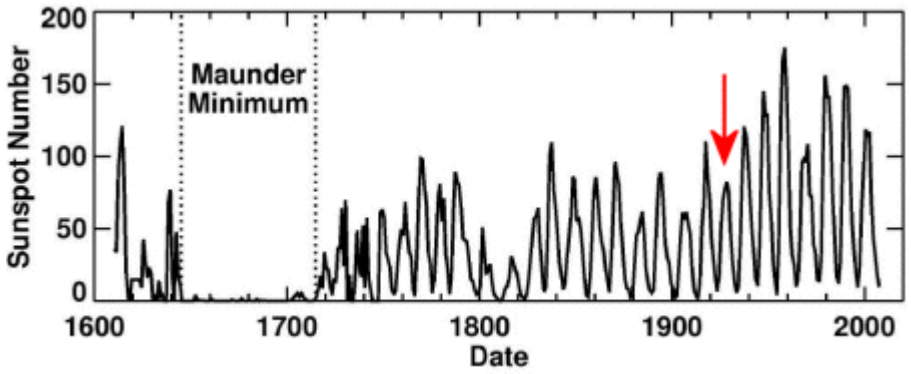
t is tempting to describe such a cycle as "weak" or "mild," but that could give the wrong impression.

"Even a below-average cycle is capable of producing severe space weather," points out Biesecker. "The great geomagnetic storm of 1859, for instance, occurred during a solar cycle of about the same size we're predicting for 2013."

The latest forecast revises an earlier prediction issued in 2007. At that time, a sharply divided panel believed solar minimum would come in March 2008 followed by either a strong solar maximum in 2011 or a weak solar maximum in 2012. Competing models gave different answers, and researchers were eager for the sun to reveal which was correct.

"It turns out that none of our models were totally correct," says Dean Pesnell of the Goddard Space Flight Center, NASA's lead representative on the panel. "The sun is behaving in an unexpected and very interesting way."

Researchers have known about the solar cycle since the mid-1800s. Graphs of sunspot numbers resemble a roller coaster, going up and down with an approximately 11-year period. At first glance, it looks like a regular pattern, but predicting the peaks and valleys has proven troublesome. Cycles vary in length from about 9 to 14 years. Some peaks are high, others low. The valleys are usually brief, lasting only a couple of years, but sometimes they stretch out much longer. In the 17th century the sun plunged into a 70-year period of spotlessness known as the Maunder Minimum that still baffles scientists.



Above: Yearly-averaged sunspot numbers from 1610 to 2008. Researchers believe upcoming Solar Cycle 24 will be similar to the cycle that peaked in 1928, marked by a red arrow.

Right now, the solar cycle is in a valley--the deepest of the past century. In 2008 and 2009, the sun set Space Age records for low sunspot counts, weak solar wind, and low solar irradiance. The sun has gone more than two years without a significant solar flare.

"In our professional careers, we've never seen anything quite like it," says Pesnell. "Solar minimum has lasted far beyond the date we predicted in 2007."

In recent months, however, the sun has begun to show timorous signs of life. Small sunspots and "proto-sunspots" are popping up with increasing frequency. Enormous currents of plasma on the sun's surface ("zonal flows") are gaining strength and slowly drifting toward the sun's equator. Radio astronomers have detected a tiny but significant uptick in solar radio emissions. All these things are precursors of an awakening Solar Cycle 24 and form the basis for the panel's new, almost unanimous forecast.

According to the forecast, the sun should remain generally calm for at least another year. From a research point of view, that's good news because solar minimum has proven to be more interesting than anyone imagined. Low solar activity has a profound effect on Earth's atmosphere, allowing it to cool and contract. Space junk accumulates in Earth orbit because there is less aerodynamic drag. The becalmed solar wind whips up fewer magnetic storms around Earth's poles. Cosmic rays that are normally pushed back by

solar wind instead intrude on the near-Earth environment. There are other side-effects, too, that can be studied only so long as the sun remains quiet.

Meanwhile, the sun pays little heed to human committees. There could be more surprises, panelists acknowledge, and more revisions to the forecast.

"Go ahead and mark your calendar for May 2013," says Pesnell. "But use a pencil."

Source: Credit: Science@NASA

Peak Oil

It's Official -- The Era of Cheap Oil Is Over

Every summer, the Energy Information Administration (EIA) of the U.S. Department of Energy issues its *International Energy Outlook* (IEO) -- a compendium of data and analysis on the evolving world energy equation. The recent release of the 2009 IEO has provided energy watchers with significant revelations. By far the most significant disclosure: the IEO predicts a sharp drop in projected future world oil output (compared to previous expectations) and a corresponding increase in reliance on unconventional fuels" -- oil sands, ultra-deep oil, shale oil, and biofuels.

For the first time, the well-respected Energy Information Administration appears to be joining with those experts who have long argued that the era of cheap and plentiful oil is drawing to a close. Almost as notable, when it comes to news, the 2009 report highlights Asia's insatiable demand for energy and suggests that China is moving ever closer to the point at which it will overtake the United States as the world's number one energy consumer.

As recently as 2007, the IEO projected that the global production of conventional oil would reach 107.2 million barrels per day in 2030, a substantial increase from the 81.5 million barrels produced in 2006. Now, in 2009, the latest edition of the report has grimly dropped that projected 2030 figure to just 93.1 million barrels per day -- in future-output terms, an eye-popping decline of 14.1 million expected barrels per day.

It indicates that the usually optimistic analysts at the Department of Energy now believe global fuel supplies will simply not be able to keep pace with rising world energy demands

Until recently, Energy Information Administration officials scoffed at the notion that a peak in global oil output was imminent or that we should anticipate a contraction in the future availability of petroleum any time soon. "We expect conventional oil to peak closer to the middle than to the beginning of the 21st century," the 2004 IEO report stated emphatically.

Now, let's turn back to the 2009 edition. In 2025, according to this new report, world liquids output, conventional and unconventional, will reach only a relatively dismal 101.1 million barrels per day. Worse yet, conventional oil output will be just 89.6 million barrels per day. In EIA terms, this is pure gloom and doom, about as deeply pessimistic when it comes to the world's future oil output capacity as you're likely to get.

The agency's experts claim, however, that this will not prove quite the challenge it might seem, because they have also revised downward their projections of future energy *demand*. Back in 2005, they were projecting world oil consumption in 2025 at 119.2 million barrels per day, just below anticipated output at that time. This year -- and we should all theoretically breathe a deep sigh of relief -- the report projects that 2025 figure at only 101.1 million barrels per day, conveniently just what the world is expected to produce at that time. If this actually proves the case, then oil prices will presumably remain within a manageable range.

In fact, however, the consumption part of this equation seems like the less reliable calculation, especially if economic growth continues at anything like its recent pace in China and India. Indeed, all evidence suggests that growth in these countries will resume its pre-crisis pace by the end of 2009 or early 2010. Under those circumstances, global oil demand will eventually outpace supply, driving up prices again and threatening recurring and potentially disastrous economic disorders -- possibly on the scale of the present global economic meltdown.

To have the slightest chance of averting such disasters means seeing a sharp rise in unconventional fuel output. Such fuels include Canadian oil sands, Venezuelan extra-heavy oil, deep-offshore oil, Arctic oil, shale oil, liquids derived from coal (coal-to-liquids or CTL), and biofuels. At present, these

cumulatively constitute only about 4% of the world's liquid fuel supply but are expected to reach nearly 13% by 2030. All told, according to estimates in the new IEO report, unconventional liquid production will reach an estimated 13.4 million barrels per day in 2030, up from a projected 9.7 million barrels in the 2008 edition.

But for an expansion on this scale to occur, whole new industries will have to be created to manufacture such fuels at a cost of several trillion dollars. This undertaking, in turn, is provoking a wide-ranging debate over the environmental consequences of producing such fuels.

For example, any significant increase in biofuels use -- assuming such fuels were produced by chemical means rather than, as now, by cooking -- could substantially reduce emissions of carbon dioxide and other greenhouse gases, actually slowing the tempo of future climate change. On the other hand, any increase in the production of Canadian oil sands, Venezuelan extra-heavy oil, and Rocky Mountain shale oil will entail energy-intensive activities at staggering levels, sure to emit vast amounts of CO2, which might more than cancel out any gains from the biofuels.

In addition, increased biofuels production risks the diversion of vast tracts of arable land from the crucial cultivation of basic food staples to the manufacture of transportation fuel. If, as is likely, oil prices continue to rise, expect it to be ever more attractive for farmers to grow more corn and other crops for eventual conversion to transportation fuels, which means rises in food costs that could price basics out of the range of the very poor, while stretching working families to the limit. As in May and June of 2008, when food riots spread across the planet in response to high food prices -- caused, in part, by the diversion of vast amounts of corn acreage to biofuel production -- this could well lead to mass unrest and mass starvation.

The geopolitical implications of this transformation could well be striking. Among other developments, the global clout of Canada, Venezuela, and Brazil -- all key producers of unconventional fuels -- is bound to be strengthened.

Canada is becoming increasingly important as the world's leading producer of oil sands, or bitumen -- a thick, gooey, viscous material that must be dug out of the ground and treated in various energy-intensive ways before it can be converted into synthetic petroleum fuel (synfuel). According to the IEO

report, oil sands production, now at 1.3 million barrels a day and barely profitable, could hit the 4.4 million barrel mark (or even, according to the most optimistic scenarios, 6.5 million barrels) by 2030.

Given the IEA's new projections, this would represent an extraordinary addition to global energy supplies just when key sources of conventional oil in places like Mexico and the North Sea are expected to suffer severe declines. The extraction of oil sands, however, could prove a pollution disaster of the first order. For one thing, remarkable infusions of old-style energy are needed to extract this new energy, huge forest tracts would have to be cleared, and vast quantities of water used for the steam necessary to dislodge the buried goo (just as the equivalent of "peak water" may be arriving).

What this means is that the accelerated production of oil sands is sure to be linked to environmental despoliation, pollution, and global warming. There is considerable doubt that Canadian officials and the general public will, in the end, be willing to pay the economic and environmental price involved. In other words, whatever the IEA may project now, no one can know whether synfuels will really be available in the necessary quantities 15 or 20 years down the road.

Venezuela has long been an important source of crude oil for the United States, generating much of the revenue used by President Hugo Chávez to sustain his social experiments at home and an ambitious anti-American political agenda abroad. In the coming years, however, its production of conventional petroleum is expected to fall, leaving the country increasingly reliant on the exploitation of large deposits of bitumen in the eastern Orinoco River basin. Just to develop these "extra-heavy oil" deposits will require significant financial and energy investments and, as with Canadian oil sands, the environmental impact could be devastating. Nevertheless, successful development of these deposits could prove an economic bonanza for Venezuela.

The IEO report hints at other geopolitical changes occurring in the global energy landscape, especially an expected stunning increase in the share of the global energy supply consumed in Asia and a corresponding decline by the United States, Japan, and other "First World" powers. In 1990, the developing nations of Asia and the Middle East accounted for only 17% of

world energy consumption; by 2030, that number, the report suggests, should reach 41%, matching that of the major First World powers.

All recent editions of the report have predicted that China would eventually overtake the United States as number one energy consumer. What's notable is how quickly the 2009 edition expects that to happen. The 2006 report had China assuming the leadership position in a 2026-2030 timeframe; in 2007, it was 2021-2024; in 2008, it was 2016-2020. This year, the EIA is projecting that China will overtake the United States between 2010 and 2014.

It's easy enough to overlook these shifting estimates, since the reports don't emphasize how they have changed from year to year. What they suggest, however, is that the United States will face ever fiercer competition from China in the global struggle to secure adequate supplies of energy to meet national needs.

Given what we have learned about the dwindling prospects for adequate future oil supplies, we are sure to face increased geopolitical competition and strife between the two countries in those few areas that are capable of producing additional quantities of oil (and undoubtedly genuine desperation among many other countries with far less resources and power).

The global energy equation is changing rapidly, and with it is likely to come great power competition, economic peril, rising starvation, growing unrest, environmental disaster, and shrinking energy supplies, no matter what steps are taken.

Source: Michael Klare

Obama's Cap and Tax

You know, of course, that the lib dem plan of 'Cap and Trade' is nothing more than a gigantic scheme to raise billions for the government to spend on social redistribution programs, right? It's all a big joke, but it looks like Europe and the USA will proceed with sham 'targets', that will cause 30%

increases in energy, a mass migration of US jobs and factories overseas, for what purpose? None.

"China will not make a binding commitment to reduce carbon emissions, putting in jeopardy the prospects for a global pact on climate change.

Officials from Beijing told a UN conference in Bonn yesterday that <b? China would increase its emissions to develop its economy rather than sign up to mandatory cuts.

The refusal is a setback for President Obama's efforts to drum up support for an agreement at Copenhagen in December on a successor treaty to the Kyoto Protocol. As argument erupted between rich and poor nations at the Bonn talks, Yvo de Boer, the UN climate change chief, said that a worldwide pact to prevent global warming was "physically impossible".

Hopes that Copenhagen might deliver tougher carbon reduction targets were dashed further when Japan failed to make a significant commitment to reduce emissions. The Japanese commitment is a mere 2 per cent improvement on its commitment under Kyoto."

Qin Gang, a Chinese Foreign Ministry spokesman, said that China was still a developing country and its priority was to develop its economy, alleviate poverty and raise living standards. "Given that, it is natural for China to have some increase in emissions, so it is not possible for China to accept a binding or compulsory target," he said."

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http://www.timesonline.co.uk/tol/news/environment/article6481997.ece

Recall that China is adding one new coal burning power plant every 10 days, and plans to do so for the next five years. They add more coal burning capacity in 3 years as the ENTIRE USA coal plants combined

So while the US can strangle the economy, China will happily burn more coal to produce the goods, services and products that Americans want, and employ another million or ten million making them as US jobs quickly leave the country under the Obama carbon tax and spend plan.

Flywheel Energy Storage

“The state is ready to invest $2 million to build a flywheel-based electricity storage system designed to help reduce greenhouse gases, which cause global warming. The nation's second system based on the technology will be created with an expected grant from the New York State Energy Research And Development Authority, which funds projects that aim to reduce petroleum consumption in the state. The money will help Massachusetts-based Beacon Power build a $50 million plant in what is now a cornfield in this Rensselaer County town.

The plant will house an array of massive flywheels spinning at up to 16,000 revolutions per minute. They're designed to store excess power from the electrical grid, releasing it as needed to match the ebb and flow of statewide demand for electricity to avoid brownouts and blackouts.

200 flywheels -- each a rotating disk 7 feet tall and 3 feet wide -- will spin, using motors that draw excess energy from the power grid when it is not needed. When demand for electricity increases, the flywheels -- sealed in a vacuum and floating on magnetic bearings to reduce friction -- can be switched to run generators that return power to the grid.

Because of an almost total lack of friction, the flywheels can spin out power for about a hour, meaning power plants won't have to increase capacity to meet demand. A 20-megawatt flywheel plant, like the one planned for the seven-acre facility, should prevent the release of up to 12,000 tons of carbon dioxide each year. That's equal to saving 20,000 barrels of oil or taking about 2,000 cars off the road.

Beacon, based in Tyngsboro, Mass., near Lowell, has been developing the flywheel technology for about a decade and is applying for a U.S. Department of Energy loan guarantee to support the Stephentown project.

Beacon has been running a one-megawatt flywheel system near its headquarters for the last seven months that is connected to the New England electrical grid.”

http://www.timesunion.com/ASPStories/Story.asp?StoryID=809490&LinkFrom=RSS

Hamcom Dallas

Every June there is a good hamfest in Dallas, TX with thousands in showing up. Attendance was actually up about 20% over last year. Maybe fewer are going to Dayton and came to Texas instead? Thursday night saw lots of major thunderstorms dropping 8 inches of rain in places, and making it tough to get to TX via airlines, but it didn't stop many from making it.

As usual, quite a few county hunters showed up from this area of the country. In attendance were Chuck, N05W, Van WC5D, Rick, AI5P, Greg, KG5RJ, Ray, WA5OPO, Charlie, W0RRY, Stan, AC8W, K5OT, Don, KN5I – USACA 407, and likely a dozen more.

Van WC5D – on cw USACA #1092

There wasn't much new to see in the way of new equipment. I did see a very rare Johnson Mobile VFO and Mobile Johnson Mobile Transmitter. There were quite a few Heathkits, some old Swans, and quite a bit of Collins gear including S lines, a 75A2, and other goodies if you had the money and desire to take them home. It looked like quite a few were raising cash and cleaning out the collections of old rigs.

KG5RJ GREG

Chuck NO5W, Susan K5DU, John, W5RQ, Larry K5OT- USACA #1168

The Texas QSO Party awarded the club competition award to W5RQ for the Central Texas DX Contest Club K5NA/m multi-op entry plus home stations– they won the Club category for the 2008 TQP. You can see him holding the large trophy in the picture above. Chuck is the big promoter of the TQP and does all the logs. He had a table set up with displays and pictures on the TQP. On the right is Larry, K5OT – USACA #1168, who has been very active in putting out counties in the TQP in years past. In 2008, all but 6 of the 254 Texas counties were on the air.

K5NA- Richard

Chuck mentioned there is now a ham, KE5UAD, who actually lives in Loving County (pop 100). He's currently a Technician, so we can hope he upgrades and gets on HF quickly. On a past trip, the TQP multi-op bunch had stopped by there to run the county. The local police officer dropped by to see what was going on, and got interested enough to get his ham license! The TQP is coming up again in September.

Nanotech Update

"Take a hot shower and the chances are that the bathroom mirror will mist up. Glasses and camera lenses can also suffer in humid conditions. And it can be dangerous when a car's windscreen clouds over. Various methods, including sprays, materials and heating, have been used with varying degrees of success to deal with the problem. Now a Chinese team has come up with a new idea.

Junhui He of the Chinese Academy of Sciences, Beijing, and his colleagues have created a cheap anti-mist coating. They estimate one square meter of glass will cost only a few cents to treat.

Glass mists up because of sudden condensation when warm, humid air comes into contact with a cold surface. Water vapor condenses to form thousands of tiny water droplets which scatter light. Dr He and his colleagues knew that when certain nanoparticles (which have diameters of only a few billionths of a meter), are spread over glass they break the surface tension of the droplets as they try to form. The result is a thin, transparent film of water which, unlike droplets, does not scatter light.

But what size and shape of nanoparticles is most effective and can be produced cheaply? Dr He's team experimented with different shapes and found a simple one-step method using polystyrene spheres treated with oxygen and then coated with silica to build raspberry-like shapes. These shapes have proved to be the most effective in preventing a surface from misting over. Dr He and his colleagues hope to commercialize the process quickly."

http://www.economist.com/science/displaystory.cfm?story_id=13813412

Sunspot Simulation and Modeling

Well, why not a story about using super computers – out of UCAR –

"SCIENTISTS CREATE FIRST COMPREHENSIVE COMPUTER MODEL OF SUNSPOTS

Credit: Matthias Rempel, NCAR

"In a breakthrough that will help scientists unlock mysteries of the sun and its impacts on Earth, scientists have created the first-ever comprehensive computer model of sunspots. The resulting visuals capture both scientific detail and remarkable beauty. The results are published this week in a paper in Science Express. The research was supported by the National Science

Foundation (NSF).

The high-resolution simulations of sunspots open the way for scientists to learn more about the vast mysterious dark patches on the sun's surface, first studied by Galileo. Sunspots are associated with massive ejections of charged plasma that can cause geomagnetic storms and disrupt communications and navigational systems. They are also linked to variations in solar output that can affect weather on Earth and exert a subtle influence on climate patterns.

"Understanding complexities in the solar magnetic field is key to 'space weather' forecasting," says Richard Behnke of NSF's Division of Atmospheric Sciences. "If we can model sunspots, we may be able to predict them and be better prepared for the potential serious consequences here on Earth of these violent storms on the sun."

Scientists at the National Center for Atmospheric Research (NCAR) in Boulder, Colo., collaborated with colleagues at the Max Planck Institute for Solar System Research (MPS) in Germany, building on a computer code that had been created at the University of Chicago.

"This is the first time we have a model of an entire sunspot," says lead paper author Matthias Rempel, a scientist at NCAR's High Altitude Observatory. "If you want to understand all the drivers of Earth's atmospheric system, you have to understand how sunspots emerge and evolve. Our simulations will advance research into the inner workings of the sun as well as connections between solar output and Earth's atmosphere."

Ever since outward flows from the center of sunspots were discovered 100 years ago, scientists have worked to explain the complex structure of sunspots, whose number peaks and wanes during the 11-year solar cycle. Sunspots accompany intense magnetic activity that is associated with solar flares and massive ejections of plasma that can buffet Earth's atmosphere. The resulting damage to power grids, satellites and other sensitive technological systems takes an economic toll on a rising number of industries.

Creating such detailed simulations would not have been possible even as recently as a few years ago, before the latest generation of supercomputers and a growing array of instruments to observe the sun. The new computer

models capture pairs of sunspots with opposite polarity. In striking detail, they reveal the dark central region, or umbra, with brighter umbral dots, as well as webs of elongated narrow filaments with flows of mass streaming away from the spots in the outer penumbral regions. They also capture the convective flow and movement of energy that underlie the sunspots, and which are not directly detectable by instruments.

The models suggest that the magnetic fields within sunspots need to be inclined in certain directions in order to create such complex structures. The authors conclude that there is a unified physical explanation for the structure of sunspots in umbra and penumbra that's the consequence of convection in a magnetic field with varying properties.

The simulations can help scientists decipher the mysterious, subsurface forces in the sun that cause sunspots. Such work may lead to an improved understanding of variations in solar output and their impacts on Earth.

To create the simulations, the research team designed a virtual, three-dimensional domain measuring about 31,000 miles by 62,000 miles, and about 3,700 miles in depth--an expanse as long as eight times Earth's diameter, and as deep as Earth's radius.

The scientists then used a series of equations involving fundamental physical laws of energy transfer, fluid dynamics, magnetic induction and feedback, and other phenomena to simulate sunspot dynamics at 1.8 billion grid points within the domain, each spaced about 10 to 20 miles apart.

They solved the equations on NCAR's new Bluefire supercomputer, an IBM machine that can perform 76 trillion calculations per second. The work drew on increasingly detailed observations from a network of ground- and space-based instruments to verify that the model captured sunspots realistically. The new models are far more detailed and realistic than previous simulations that failed to capture the complexities of the outer penumbral region.

The researchers noted, however, that even their new model does not accurately capture the lengths of the filaments in parts of the penumbra. They can refine the model by placing the grid points closer together, but that would require more computing power than is currently available.

"Advances in supercomputing power are enabling us to close in on some of the most fundamental processes of the sun," says Michael Knölker, director of NCAR's High Altitude Observatory and a co-author of the paper. "With this breakthrough simulation, an overall comprehensive physical picture is emerging for everything that observers have associated with the appearance, formation, dynamics, and the decay of sunspots on the sun's surface."

Source: http://www.ucar.edu/news/releases/2009/sunspots.jsp

Videos and pics

http://www.ucar.edu/news/releases/2009/sunspotvisuals.shtml#video

Ice Road Truckers – History Channel

The history channel has a series called "Ice Road Truckers". For the past several weeks, it has been about driving trucks on the Dalton Highway - the road from Fairbanks to Prudhoe Bay, AK...that you can drive to get to the 2nd district. This is 'Season III" of the series.

Lots of pictures and video of going up Atigun Pass in the winter time, the truck stop at Coldfoot, etc!...interesting! Stuff you aren't going to see anywhere else. A good idea of what it is like to drive the road - the 'roller coaster' and everything in between. It's worth watching a couple weeks. It will convince you NOT to go there in the winter time. You have to be nuts to do this for a living, but hundreds of trucks make the trip each week. At least half a dozen county hunters have been up there (N8STF, WA0SBR, AA4VN, KB6UF, KL1V, W6TMD, W1TEE, K3IMC, W9SUQ/KA9QKN,). We included the story from W6TMD/KB6UF in the August 2008 issue of their trip up there to 2nd AK. You have to head well north of Coldfoot to reach the Second District of Alaska by road.

http://www.history.com/content/iceroadtruckers-season-three

On Sundays 9pm eastern/8pm central – History Channel -think also on Thursday nights if you miss it.

De N8KIE: " It looks much different in May (2009) . We ran 60 mph most of the way. The Alcan highway in Canada is actually much rougher with severe frost heaves. Gas at Yukon River and Coldfoot was $3.65/ gal. The cabins at Wiseman, 18 miles north of Coldfoot are a much better deal. Gas in places in Canada was 1.49/ litre. If you break down anywhere up there you will be there for a very long time. Was fun, wouldn't want to do it again."

De KA3DRO: "Been watching this show for some time..... this is 1st year they have traveled The "Haul Road"..... Gotta admit, it sure looks different with that snow all over the roadway and the wind at 40-50 MPH ! Almost hard to recognize the "B & B" at Coldfoot! Looks like they cleaned up the dining room a bit too! Now we need to nominate a Big Rig to go there! 73/Ron"

Awards

Fourth Time #141	John K6OHM	5/31/09
Bingo #310	Randy AJ5ZX	5/23/09
Bingo II #61	Jim N1BY	5/13/09
Bingo III #14	Scottie N4AAT	5/13/09
USA CW III #11	Tom, N4RS	4/20/09
Third Time #221	Tom, N4RS	4/20/2009
Master Gold #37	Joe, N5UZW	5/13/09
Master Platinum #3	Joyce N9STL	4/4/09
Master Platinum #4	Darrel, W6TMD	5/2/09
Master Platinum #5	Bob N8KIE	5/13/09
Master Platinum #6	Scottie N4AAT	5/20/09
Bingo #311	Ron, N5MLP	5/23/09
USACA #1185	Pete, N6HH	6/20/09
Second Time #388	Joe, N5UZW	6/22/09

Operating Events in July

There are no QSO Parties or Contests in July. It's a good month to watch the schedules for mobiles heading to the national convention in Michigan and try to snag some of the ones you need. Many other mobiles will be out on vacation trips around the country, so keep an eye open and the radio turned on.

That's it for this month. Many are headed toward the National Convention in MI.