Delaware - Lehigh Amateur Radio Club, Inc.

W3OK Corral NEWSLETTER

DECEMBER 2001

Club meeting on December 6 at IU20

Something Different

There will be no program at the December Meeting a pre-Christmas party with the club furnishing the tea and coffee and if you are going to attend bring some kind cookies or other goodies.

Christmas City station

by Bob, KB3CSS

Listed below is a tentative schedule of those who have volunteered for the Christmas City Event. Those with an asterick following their names are fairly certain as to the time slot; the other names have been entered just to "get the ball rolling". If you disagree, or if your plans change, let me know and I'll rearrange the schedule as best I can.

Saturday

9-11	Dave N3EYT & Bob KB3CSS
11-1	Mark K3MP* & Carl AA3IX *
1-3	John WD8SCX
3-5	Bob N3SNZ*
5-7	Bob W3HJ*
7-9	Glenn N3ULW & Gerald N5ZXJ

Sunday

9-11	Jim KB3BYU
11-1	Sara KB3CLQ* & Rick K3OO*
1-3	
3-5	Bob N3SNZ*
5-7	Gerald N5ZXJ
7-9	Bob KE3AW

Many of you have volunteered for much more than the single slots shown, but in an effort to get as many people involved (especially NEW HAMS), I have made an effort to assign only a single slot per day. Ideally, there will be at least two people assigned per slot, to allow for duty alternation. NEW HAMS should not worry about inexperience, since you would be paired with a veteran who can show you the ropes.



I would also ask for volunteers for the other activities (snacks, qsl's, etc.) and especially for the INITIAL SET-UP on Saturday 7:30 - 9:00.

I am also looking for someone to prepare the QSL certificates. The theme I am considering is "A Patriotic Christmas Card". Jill and Glenn did an excellent job last year, but will not be available this year. They spent a lot of time last year, and I hope someone can take up the slack this year. If there are no volunteers, I will either get the PrintShop software myself, and make the attempt, or else have a professional print up the necessay certificates (more expensive, but less time impact on our membership).

de Bob, KB3CSS



Delaware-Lehigh Amateur Radio Club, Inc. Income and Loss Statement

Balance	**$3,385.38**
INCOME Class Materials	
126.00 Club Dues	50.00
Donation Income	200.00
Donation Income 50 - 50	36.50
Interest Checking	4.15
VE Test Session	12.00
TOTAL INCOME	**$428.65**
EXPENSES	
Awards (2) Plaques	97.93
Education Class Materials	174.35
Newsletters May - Nov. & Ballots	769.16
PA QSO Plaque NARC	35.00
Telephone	30.83
TOTAL EXPENSES	**$1,107.27**
Balance 10/31/01	**$2,706.76**
C D 12 Month	$2,000.00
Overall Total with 1 C D	**$4,706.76**

de, Dick, KA3MOU, Treasurer

Dues reminder for 2002

If your DUES are not paid by FEBRUARY 7, 2002 membership will be terminated. Reinstatement to membership by the **MARCH** meeting will be accepted without penalty. Thereafter, Reinstatement application shall be the same as for a new member. Dues Reminder for 2002 Dues are due check you're mailing label. If the label is **EXP. 12/31/01** your dues are **PAST DUE.** Here is the dues amount and how to pay your 2002 dues.

Membership 18-65 years of age	**Jan.-Dec. $17.00**
	July - Dec. $8.50
Under 17 years, 65 years or Retired (no age limit).	
	Jan. - Dec. $12.00
	July - Dec $6.00
Additional family Member, each	**$3.00**
Associate Membership	**$10.00**

If paying your dues at a meeting. Use an envelope with your call on the outside of the envelope. If paying dues by check make the check out to **DLARC.**
If you mail your dues, mail the dues to:

RICHARD A DECH / KA3MOU
120 MCILHANEY AVENUE
BATH PA 18014-1612

Any questions about dues you can call Dick / KA3MOU at 837-1585.
de Dick Treasurer of DLARC W3OK

DLARC in the Nazareth ScienceFest

by Bob KE3AW

On Sunday, October 7, 13 DLARC members enjoyed the amateur radio station operation at the Bushkill Township Elementary School, Nazareth School District, as part of their annual ScienceFest

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We had hundreds of visitors, and as you might guess, some stayed briefly, others were deeply interested and intrigued, and stayed longer, asking a battery of questions. Some of the students had the experience of talking to places including Newfoundland, California, Georgia, Wisconsin, and listened to numerous other QSOs with Italy, England, Canada, and other stateside locations. As typically seen, moms and dads encouraged their kids to talk on the radio, but most were mic shy when it was their turn! We do have the interest of at least one person who can't wait for the Spring, 2002, DLARC license classes!

The club's rig, with the R7 mounted on the school's roof, performed well. Handouts about ham radio and discussions about the hobby were frequent; a highlight being **Sarah/K3OOO's** world map with pins sticking in 163 countries which she has worked in the past 2 years!

This demo station operation was successful, thanks to the following **DLARC members; Ken/N3IYX, Barry/N3NVA, Glenn/N3ULW, Sarah/K3OOO, Jim/KA2ZQI, Jill/N3ZSR, Charlie/N3VUO, Bud/W3BUD, Bryan/AA3WM, Ben/KB3GOU, Rich/N3NXF, Rick/K3OO, and Bob/KE3AW**

Emmaus Holloween Pareade

by Bob, KE3AW



With perfect parade weather, over 60 units in the Emmaus Halloween parade were enjoyed by thousands of onlookers Saturday evening, October 20, 2001. Once again, DLARC provided 'eyes and ears' from 13 locations in the parade, helping to insure a safe activity. Additionally, Bob/N3QQ, was net control and always in contact with the parade marshal.

We appreciate the use of the W3OI repeater in Allentown, which provided us with good local radio coverage.

The amateur radio operators in the activity, including those who rode 'shotgun' with other hams, and those on standby were: **Bob/N3QQ, Ray/W3TDF, Jeff/N3QZT, Bruce/KA3ONZ, Glenn/N3ULW; Jill/N3ZSR, Jim/KN3DZY, Dick/KA3MOU, Bruce/KB3FIH, KB3FMI/Barry, Mark/WA3KIF, Larry/K3LAR, Malcolm/N3XRL, Bill/N2DH, Thalia/KB3CSR, Joe/KE3DZ, Dave/N3EYT, Joe/W3JD, Mitch/WA1LLD, Jim/KB2QZI, and Bob/KE3AW.**

At the conclusion of the parade about 25 of us enjoyed a nice social gathering at Bob Evans restaurant. I must conclude that their staff enjoyed it, too, because they even brought the cooks out to meet us!

The Emmaus Halloween Parade Committee presented DLARC with a generous donation for our service.

Thanks to all who helped make this event run so well.

de Bob KE3AW

Ham sailor sets sail for home

Ham radio's senior sailor **David Clark, KB6TAM,** set sail this week from Trinidad to complete the final leg of the adventure of his lifetime. Clark, who is 77, is attempting to become the oldest person to sail solo around the globe. He plans to arrive back in Ft Lauderdale, Florida, on December 7. Clark has been using Amateur Radio aboard his vessel to keep in touch with his family and friends.

His immediate goal is St Croix in the US Virgin Islands, said his wife, Lynda, but if the weather cooperates and everything goes well he may proceed directly to Great Inagua in the Bahamas. "This is technically the completion of the goal, since his outgoing and incoming paths will cross again--where he checked out and will check in again," Lynda Clark said. "However, we will feel he has finished the goal when he reaches Ft Lauderdale where we all said good-bye to him two years ago."

Accompanied by his dog, Mickey, Clark departed South Florida in December 1999 in the 44-foot steel-hulled sloop, the Mollie Milar--named for his mother. Mickey was lost and Clark himself nearly died after the vessel sank last February off the coast of South Africa. Not one to give up that easily, Clark was able to purchase another sailboat--a smaller one that he named Mickey--and resumed his quest in April. He's been sitting out the Atlantic hurricane season in Trinidad, where he arrived in July.

Clark was expected to be checking in on the 20-meter Seafarer's Net on 14.313 MHz. The final leg from Trinidad to Fort Lauderdale is approximately 1500 miles.

For more information on Clark's journey, visit these Web sites **<http://www.dclark.com>** and **<http://www.captainclark.com>.**

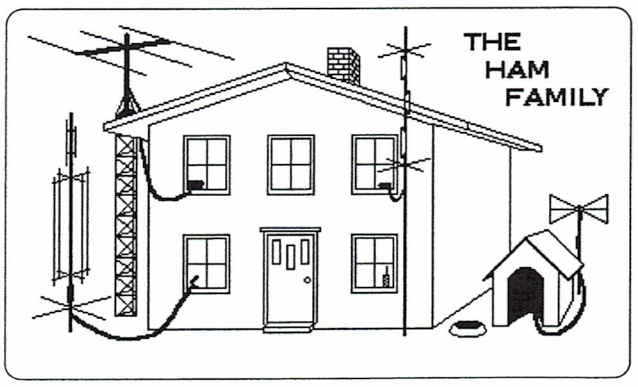
The ARRL Letter

Looking to Buy

Charlie, WA3RSQ is looking for anyone who has a 233mhz or better computer. Possibly with a R/RWCD/rom.

Give him a call, at his home or on the Internet at

wxdatata @enter.net.com



Just the Minutes

by Jill Brodt, N3ZSR

President Jeff Keller, N3QZT called the November 1st club meeting to order at 7:32 PM, with 40 members and 1 guest present.



After a correction to the call sign of Norm, K3NZ a motion to approve the October meeting minutes was made by Bill, N2DH and seconded by Mark, K3MP. Motion passed.

The Treasurers Report shown elsewhere in this newletter was accepted with a motion from Bob, N3SNZ and seconded by Barry, KB3FMI.

Barry, N3NVA had nothing to report on the repeaters.

The VE Session for November has 2 registered people to take the test. Bill, N2DH has 2 VEs plus himself for the evening.

Jeff welcomed the following guest to our meeting: **Joel Gilly, N3GXY**

The following application(s) will be voted on at the December meeting: **Kurt Chambers, KB2QYS Joel Gilly, N3GXY**

The following new members were voted in: **Joe Palma, N3TMK** on a motion from Bruce, KB3FIH and 2nd by Malcolm, N3XRL **Jeff Berger**, **(no call sign)** on a motion from Bob, N3SNZ and 2nd by Barry, N3NVA **James Woodhead, KA2ZQI** on a motion from Dave N3EYT and 2nd by Bill, W3FYK

We lost the court case on the phone line. Some of the reasons mentioned in the letter are that there are no windows, no rest rooms, the building is not livable. Barry, N3NVA made a motion that we give the county the phone bill since the bill is in their name. The motion passed. Bill, K3ANS is going to write an article for QST about the phone line court case.

Bob, KE3AW talked about the Emmaus Parade. They gave us a $200 donation. Everything went well. The after the parade get together (attended by most of the club participants for the parade) at Bob Evans was also very enjoyable.

The Club is in need of a Program Chairman. You do not have to do the entire year. Several people could take 1 or 2 months each year. The Board is running out of ideas for programs.

The Associate Membership dues will be raised from $7 to $10 for the coming year, on a motion from Bruce, KB3FIH and 2nd by Malcolm, N3XRL. The motion passed with 3 people opposed. Upcoming events that were announced are as follows:

November 17 Lehigh Valley Radio Club, at Lehigh Valley Hospital to view the taping of Reilly Hollingsworth speaking at the Reading Club.

December 15 & 16 Xmas City Special Event Station, from 9am to 9 pm each day, with set-up on Saturday, December 15th at about 7:30 am. Bob, KB3CSS is taking sign-ups on the forum for 2-hour sessions.

We will not have a program for the December 6th Club meeting. In place of the program we will have a small social gathering. The Club will be providing coffee and tea for the gathering. The Board is asking the members attending that evening to bring cookies.

The Board is now looking for nominations for the Amy Zimmerman Award to be present in the March Meeting. Please make your nominations known to any board member.

The program for the evening was from **Lamar, N3AT** on QRP.

The meeting was adjourned at 8:05 PM on a motion from Bob, N3SNZ and 2nd by Barry, KB3FMI

Jill, N3ZSR, Secretary

For Sale

MJF 9020 CW QRP rig with optional audio filter and **Curtis Keyer** installed.

Also included with the package is a 20 meter QRP dipole that is only 12 feet long. Everything is in excellent shape and well taken care of. Go to the club's web page for more information and pictures of the above package.

Price is: $125.00

You can call me anytime at 610-317-9779 or leave
E mail at bgkx@juno.com
Barry G. Kery, KU3X

CIT visit

by Bill K3ANS

I visited the electronics laboratory and classrooms at the Career Institute of Technology, Forks Township, Easton, November 7, 2001, during an open house. I was there for another meeting. I found a Kenwood TS-930 sitting idle but hooked up to an unknown antenna. It was dark so I could not see it. The instructor, Mr. Donald DiNaro, invited me to please turn on the TS-940 and transmit. They often listen, but do not understand completely how to use it. For example he thought the meter position "SWR" stood for "short wave radio". He also had an iCOM IC-737, an ARRL Handbook, and a Radio Shack receiver. The lab is really impressive with many advanced instruments. I wish I had the time to take some of their classes to fill in the electronics knowledge I lack. Anyway, DiNaro and some students gathered around while I tuned the radio. I found minimum SWR near the 14.000, but the antenna probably resonated below 14.000, but the TS-940 shut down at the band edge. SWR was 2 to 1 in the middle of 20 meters, and very high on other bands. So I assume it was a 20 meter dipole which was detuned by nearby objects. He said that is high and clear, suspended between two poles on the roof. He did not know the exact dimensions. He said the antenna is probably around 66 feet long, so it is probably a 40 meter dipole with one side disconnected. Thus it resonates as a poor 20 meter end fed long wire, with the other half acting as a poor reflector. Probably the feedline came off the center insulator, water got into the coax, or the connection in the building is bad. I did not examine it. The antenna was erected about 10 years ago. Unfortunately one of the students fell through a skylight and caused about $1400 of damage. So now they are not permitted back on the roof, hi. They will have to make arrangements to repair and replace that antenna. I sent a message via E-mail from CIT to Hy-Power Antennas based in Bethlehem, owned by DLARC's KU3X, to request information for CIT on buying a new antenna. The existing antenna received fine, including SSB signals on 75 meters around 59+40 dB! Those Kenwoods have always been too generous on their signal reports. I wonder if anyone is less than S 9. It heard strong signals on all bands, including 10 meters DX. That is surprising since the CIT is below a hill to the North and West. I live on top of that hill about one mile NE.

I am telling all of you this because DLARC has a wonderful opportunity to take CIT under its wing and bring many new hams into our hobby. DiNaro is interested in our classes, but he has never attended. I suppose he is burned out at night. In the past 12 years I have met a few hams who were students or graduates of CIT. DiNaro had a flyer for the 2000 DLARC classes posted on the bulletin board. We need to get to him current information. I strongly recommend that DLARC place CIT on the mailing list for the W3OK Corral. We should probably send those same newsletters to the other technical high schools in the Lehigh Valley. I can provide the mailing address to the appropriate official, who I think is KA3MOU. We should invite the instructors and students to attend DLARC meetings at the IU-20.

I also hope some other local hams can volunteer to coach them. I simply do not have the time to devote to this worthy cause. Many DLARC members live near CIT. I will be taking over some frequency charts and other information. They were confused by and did not understand "USB, LSB, RTTY, CW, SWR, RIT, XIT" and other ham nomenclature. They are fans of Tesla, and had a Tesla coil operating during the open house. They also showed the effects of RF on fluorescent lamps.

CIT many times offered to host DLARC meetings and club station, but DLARC never accepted that invitation. We also held the DLARC hamfest there several times and had record crowds. CIT helped promote our hamfests because it brought visitors and publicity to CIT. They have wonderful facilities there which are not well known among many Lehigh Valley residents. They have extensive adult technical education, including electronics and computers. When I was the volunteer Chairman of the DLARC hamfests held at CIT, some cruel members accused me of receiving kick backs or commissions from CIT for bringing the hamfest there.

I strongly objected and resented that accusation. ver since, I have decreased my participation in DLARC activities, but I do not want this opportunity to pass by. You should know that many hamfest vendors and NJ based buyers and hams have told me that they really liked the CIT for the hamfest, but they will not go to Schnecksville. I told them I am neutral and no longer involved or in charge of the hamfest. They should contact the current officers or directors. I avoid the controversy.

de Bill K3ANS

Prez Sez

by Jeff N3QZT

December 2001

I believe that the cooler weather will be here soon and we might even see some snow flakes. That is a signal that indoor radio pursuits are not far behind. These include things like the Christmas City Special Event Station WX3MAS, radio contests for DX ing, demo stations, and various other things. It is also a time when we should check out our stations to be ready for the possibility of being called into emergency service in case of inclement weather.



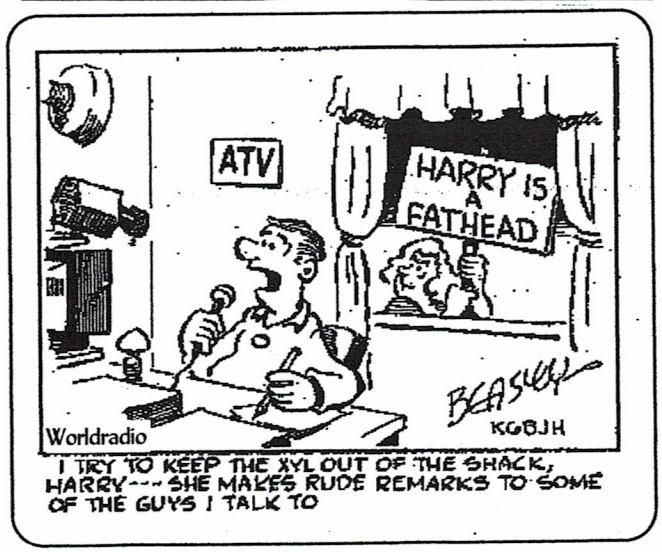
But this is also the beginning of the holiday season a time for thought and spending time with family and friends, and eating way too much!

Every year the club honors one of its members for outstanding service and dedication to amateur radio and the DLARC. So once again the DLARC Board will be accepting nominations for the Amy Zimmerman award to be given in March. I urge you to contact any board member and give hi or her your nomination.

Id like to thank all the club members for helping out with the various events and project the we worked on this past year. It truly takes a group effort to make things work.

Have a happy holiday everyone.

de Jeff, N3QZT





Joseph Daday

Joseph M. Daday, K3DVF died on November 10th. He was a long time member of our club.

Joe was an Air Force veteran of World War II serving from 1937 to 1945.

Joe was chief of operations for the Lehigh County Authority for more than four years before retiring in 1983. Previously he was chief electrician for the city of Bethlehem for 29 years until 1978.

Contest Calendar

Compiled by Bruce Horn, WA7BNM

December, 2001

TARA RTTY Sprint 1800Z, Dec 1 to 0200Z, Dec 2
Tennessee QSO Party 1800Z, Dec 2 to 0100Z, Dec 3
QRP ARCI Hol. Spirits Sprint 2000Z-2400Z, Dec 2
ARRL 160-Meter Contest 2200Z, Dec 7 to 1600Z, Dec 9
Six Club 1st Winter Contest 2300Z, Dec 7 to 0300Z, Dec 10
PSK31 Death Match 0000Z, Dec 8 to 2400Z, Dec 9
ARRL 10-Meter Contest 0000Z, Dec 15 to 2400Z, Dec 16
OK DX RTTY Contest 0000Z-2400Z, Dec 15
28 MHz SWL Contest 0000Z, Dec 15 to 2400Z,Dec 16
Croatian CW Contest 1400Z, Dec 15 to 1400Z, Dec 16
AGB Party Contest 2100Z-2300Z, Dec 21
DARC Christmas Contest 0830Z-1059Z, Dec 26 RAC
Winter Contest 0000Z-2400Z, Dec 29
Stew Perry Top Challenge 1500Z Dec 29 to 1500Z, Dec 30
Original QRP Contest, CW 1500Z, Dec 29 to 1500Z, Dec 30

PSK 31 on a Shoestring

by Jim KB3BYU

PSK31 has to be one of the most exciting developments in ham radio in many years. In just a little over 2 years it has gained a devoted following due to its superior performance at low power levels and in poor signal conditions. In addition to being a lot of fun, PSK31 requires little or no additional investment in equipment. Since you already have the radio, the only other major piece of additional equipment you need to run PSK31 is one most hams already have, a personal computer with a sound card.



The first step is to get a copy of DigiPan software, which you can download free, at **http://www.members.home.com/hteller/digipan/**

One of the great things about DigiPan is that it allows you to view a continuously scrolling waterfall display covering a receive audio bandwidth of about 2000 to 3000 Hz. Signals appear as yellow lines, which vary in intensity according to signal strength. To tune your radio, just click on the signal of your choice, and the QSO will appear in plain text on your computer. Since the PSK signal has a bandwidth of only 31 HZ, your display can look like a meteor shower of signals when band conditions are right.

Another piece of equipment that is nice to have is a sound card interface to connect your radio directly to the computer sound card. You can either build you own, or purchase a commercial brand. One of the more popular models is the RIGblaster, which you can learn more about at **http://www.westmountainradio.com**

Here is where the shoestring part comes in. After downloading the DigiPan software, I was eager to get on the air with PSK31 as quickly as possible, but I was also reluctant to commit to purchasing a sound card interface until I had done some additional research. It was then I noticed that my radio and my computer each had a speaker and a microphone. My solution would make Rube Goldberg proud and still keeps Riley Hollingsworth from knocking on my door. I dangled the microphone from the computer over the speaker of the radio and set the microphone from the radio in front of the computer. I then use the transmit button on the radio to hold the microphone open while the software transmits. It demands a little more manual dexterity but it works.

So how have I been making out on PSK? Let me preface this by saying my other commitments have kept me from erecting an all-band antenna, so I am currently restricted to a single 10-meter dipole at just 20 feet high. When I first got on PSK31 and started calling CQ, I had very limited success. PSK is a low power mode, with most operators running about 25 watts, so I needed to develop a competitive advantage. I quickly surmised that the nice bright yellow signals on my display looking like the stripe on the highway meant the other ham is using a beam antenna. So, like a patient fisherman I just click on these signals and wait for him to call CQ. I have also expanded to working the fainter signals. Since the PSK frequencies are still relatively uncluttered, pile-ups are few and far between. My results have been great so far. Even with this modest setup, in just 3 sessions I have already worked 20 countries and I have a good start on WAS. Imagine what Ill be able to accomplish when I have access to the other HF bands and Santa brings me a RIGblaster?

I urge everyone to give PSK31 a try. I guarantee that you will find it to be both fun and challenging. For more information about PSK31 you can check out back issues of QST or visit the

Official PSK3 Homepage at
http://aintel.bi.ehu.es/psk31.html.

de Jim, KA3BYU

November VE Session

Mary Rafferty	KB3DVK to Extra
Jeff Sunnergren	no code tech
Ernie Donovan	no code tech
Bob Barrall	no code tech
Joe Moskalski	Tech w/ HF
Dan Madsen	KB3GHT to General

VE's at session

WF3H
AA3WM
N2DH

de Thalia KB3CSR

FCC Announces Mail Changes for Gettysburg Office

The FCC's Gettysburg, Pennsylvania, office has moved its mailroom offsite. Effective immediately, all overnight couriers--including FedEx and UPS--require the "ship to" address for the FCC Gettysburg office to be Rear entrance, 35 York St, Gettysburg, PA 17325.

The FCC said it's trying to balance accessibility with the need for heightened security and encouraged its customers to make full use of the Commission's electronic filing systems. The Gettysburg office is where Amateur Radio applications are processed and licenses issued by the Wireless Telecommunications Bureau. It's also where Special Counsel for Amateur Radio Enforcement Riley Hollingsworth has his office.

The change does not affect US Postal Service deliveries. The FCC said the USPS will continue to accept and will divert all mail addressed to 1270 Fairfield Road, Gettysburg--the office's physical location--to the off-site mailroom. Until November 30, the FCC itself will divert overnight courier deliveries to 1270 Fairfield Road to the new off-site mailroom.

"This new off-site mailroom facility does not affect applications or any other filings requiring a fee," an FCC Public Notice said. Unless paid online using a credit card, amateur vanity call sign fees go to the FCC's contractor in Pittsburgh. Requests for amateur fee refunds, however, are sent to Gettysburg.

The FCC also said the staff at the Gettysburg filing counter at 35 York Street will not accept hand-delivered documents enclosed in envelopes. The filing counter is open weekdays 8 AM until 4:30 PM. Originals and copies of each official filing must continue to be addressed to the Commission and held together with rubber bands or fasteners. "Stamp and return" copies will be provided as long as they clearly accompany each individual filing.

Filings requesting confidential treatment under the Commission's rules must also be filed without envelopes. The staff at the filing counter will enclose such filings in an FCC envelope labeled "confidential."

Questions concerning the FCC Public Notice should be directed to the Building and Facility Management Specialist, rhewitt@fcc.gov or 717-338-2535..*via ARRL Bulletin*

David Clark KB6TAM, Offically completes global sail

Ham-sailor officially completes global sail

Ham radio's senior sailor **David Clark, KB6TAM,** this week officially completed his solo round-the-world sail--becoming the oldest person to do so. But Clark does not plan to celebrate his accomplishment until he returns to his starting point in December.

Clark, who's 77, arrived in Great Inagua, the Bahamas, earlier this week, technically completing the circumnavigation that began in Fort Lauderdale, Florida, in December 1999. He had spent much of the Atlantic hurricane season in Trinidad. Clark is due back in Fort Lauderdale on December 7 for a gala celebration. He was scheduled to depart Great Inagua November 15 on his way to Nassau. Earlier in the month, he managed to avoid a confrontation with Hurricane Michelle, which raked Cuba and parts of the Bahamas.

Clark has been using ham radio while under way. He's kept in touch with Eric Mackie, 9Z4CP, whom he got to know in Trinidad. Clark's wife, Lynda, reports that Fred Moore, W3ZU, has been able to patch calls via ham radio to her a couple of times.

Among those greeting Clark when he arrived in St Croix last week was ARRL Virgin Islands Section Manager John Ellis, NP2B. Ellis, who says Clark "gets around like someone who is 37," had dinner with the ham-sailor during his St Croix stopover and introduced him to the amateur community there.

Once in Nassau, Clark plans to again play clarinet for his friend Eloy Roldan at the Poop Deck restaurant until it's time for him to leave for Gun Key or Bimini--a scant 12 hours from Fort Lauderdale.

"It's getting really exciting!!" Lynda Clark enthused in an e-mail dispatch this week.

Clark's sailing companion--his dog Mickey--was lost and Clark himself nearly died after his first sailing vessel, the Mollie Milar, sank last February off South Africa. Clark bought another sailboat that he named Mickey and resumed his quest in April.

For more information on Clark's journey, visit the David Clark Web site,

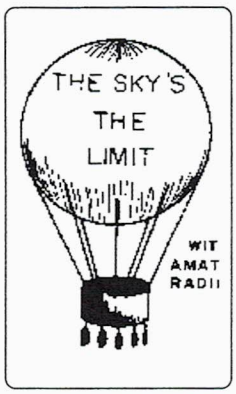
<http://www.dclark.com>

. ***The ARRL Letter***

Atmospheric Optics

Charles A. Giannetta
Meteorologist - Professor
WA3RSQ

Atmospheric Optics is the study of the optical characteristics of the atmosphere, which includes the study of refraction, reflection, diffraction, scattering and polarization of light produced by the atmosphere.



One of these is the appearance of the sun some 2 minutes before it actually rises. Similarly, after setting the sun appears to linger on the horizon. This phenomenon is caused by refraction. The sun's light is gradually bent as it enters the outer air and passes through the denser air below. What we see is a mirror-like image of the sun prior to its actual rising and setting, thus, giving us a few more minutes of sunlight.

The orange and red colors of the rising and setting sun are caused by an increase in length of the path the rays must travel before light reaches are eyes. The shorter (blue tones) become scattered by the lower atmosphere's thick impure-filled depths, and only the red tones remain. As the sun rises higher in the sky, its light passes through less distance of denser air so it loses its redder tones. The effect is the same for the moon. As the moon is low on the horizon, the light must pass through the same impure atmosphere, which cuts off the shorter waves of light, given a reddish color.

One of the strongest of optical illusions is that of the rising moon and sun are larger than when they are higher in the sky. The illusion is so that it is difficult to accept the fact that every kind of measurement shows them to be just as large when they are high in the sky.

It is a psychological phenomenon, based on the appearance of the sun or moon by the apparent measures or distance with respect to the horizon and clouds.

Twilight is another phenomenon, which is a period of incomplete darkness following sunset (evening twilight), or preceding sunrise (morning twilight). Shortly after the sun sinks below the horizon, its rays of light are reflected from the gas molecules and impurities of the atmosphere to produce a faint luminescence. The broad high arc of radiance or glow seen in the western sky in deepening twilight is call the afterglow. It is caused by the scattering effect of very fine particles of dust suspended in the upper atmosphere. The limit of twilight is the height at which the density of the air is sufficient to cause a perceptible amount of scattered sunlight. The height is about 40 miles above the earth.

"Merry Christmas & Happy New Year To All"
From Gini & Charlie Giannetta..

ISS Commander bouys spirits at NYC "Ground Zero" school

International Space Station crew commander **Frank Culbertson, KD5OPQ**, has fielded questions from students at seven schools since the end of November. These included a morale-boosting contact with New York City's Public School 234, whose students are in temporary quarters after the September 11 World Trade Center attacks.

Ten students in Francine Cornelius's computer class posed 20 questions during the 10-minute contact November 7. Student Renee Otto asked Culbertson how New York City looked from space on September 11. Culbertson described the smoke from the site as it looked from space. "It's sad that you've had to move from school to school, but we're proud that you're continuing to work and take your education seriously," Culbertson told the students. PS 234's normal campus is only two blocks from "Ground Zero."

The nearly 700 students and faculty had to be evacuated on September 11. Principal Anna Switzer said the students were grateful for the opportunity to chat with Culbertson, who operated at NA1SS.

The previous week, on October 29, 17 fifth graders at Protsman and Kolling elementary schools in St John, Indiana, spoke with Culbertson, who told one student that sunrise "is gorgeous from outer space." John Gianotti, W9WY, acted as control operator for the direct QSO.

On November 1, Culbertson spoke with 10 mostly teenaged students at Sanilac Career Center in Peck, Michigan. Electronics teacher Ted Davis, KF8ZO, pulled double duty as radio operator for the direct contact.

Students at Carmel, Indiana's, Woodbrook Elementary School, including Culbertson's nephew, Tom, were up November 2. Culbertson told Woodbrook students that while he will miss the International Space Station when he leaves in December, he is looking forward to being reunited with his family.

On November 6, students at Kenosha, Wisconsin's Tremper High School enjoyed their 10 minutes with Culbertson, who later praised the students' intelligent questions and thanked ARISS relay Tony Hutchinson, VK5ZAI, in Australia, who facilitated the contact.

The ARRL Letter

All Amateur Radio Operators are invited to
Participate in the DLARC, RACES & ARES nets
146.70 and 444.90 W3OK/RPT (pl 151.4) with an alternate of W3PYF/RPT 145.11
W3OK trustee Chris Hornaman, NU3L
The Nets are held on Wednesdays at 7:00PM

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CLUB MEETINGS

All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month
7:30 PM at IU 20 Building in Palmer Township
TALK IN ON 146.70
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