

CHEESE BITS



W3CCX

CLUB MEMORIAL CALL

SCANNED TO PDF BY BERT, K3HIV, 2013



ARRL
Affiliated
Club

VOLUME XXXX

November 1998

Number 11

The PREZ SEZ

Leaves. Everywhere I look there are leaves. Orange leaves! Red leaves! Yellow leaves! Leaves all over the roof, the ground, the car, everywhere. Yesterday the poor cat stood still for a moment too long, to size up a tasty little twocpy bird no doubt, and now he is covered with leaves! This can mean only one thing: it's time to do antenna work. What are you going to do this year to improve your station? Are you going to fix that nagging little problem that you have just been putting up with for quite some time or what!? Now is the perfect time of the year to take care of the outside antenna and tower chores before the weather really turns nasty. I know we like to brag how our fingers weld themselves to the icy tower legs and how we fixed that coax connection in a blinding snowstorm, 150 feet up the tower, 2 hours before the contest. It's a man thing I guess. It's also not to smart. Now is the time to take care of business. If you need some help contact the January contest chairman, AA2UK, and he will be glad to get you some "ham-aid".

Last month's meeting featured an excellent talk by WA3NUF on receive system noise figure. This is really an interesting subject that we as VHF and above aficionados need to pay particular attention. It also ties in to your tower work. The noise figure of your receive system can really affect the performance of your station. Maybe it's not so much that you live in a RF hole. Maybe you need to pay a little more attention to your installation. A 0.3 dB noise figure preamp in your shack may be really an impressive little piece of technology. But if you have 6 dB of feedline loss (i.e. maybe 100 feet or so of brand new RG-214 on 432 MHz) in front of the preamp, then your real system noise figure closer to 6.3 dB. You just halved the effective distance that your station can work. Half the distance! 300 miles instead of 600 miles! That's independent of your 20 kW amplifier and the stacked 100 element antennas (sic). It's half the distance you could work with the same station and a real system noise figure of 0.3 dB! Pay attention to the feedline. Measure the loss. It's the only way to find out just how bad it is. Maybe you can expand your "horizon".

This month's meeting features a talk on digital communications. I don't know exactly what the speaker is going to address in his talk, but digital is the future of wireless communications. TV stations have already been testing on at least three UHF TV frequencies in the Philadelphia area. WPVI-DT on channel 64, KYW-DT on channel 26 and WCAU-DT on channel 67. Can ham radio be far behind? This is a technology area to keep an eye on.

73, Ron, W3RJW

MEETINGS

Third Thursday each month at 8:00 PM
Southampton Free Library
947 E. Street Road
Southampton, PA 18966

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MONDAY NIGHT NETS

TIME	FREQ.	NET CONTROL
7:30 PM	50.150 MHz	K3EOD/WA3EHD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW
9:30 PM	1296.100 MHz	WA3NUF/AA2UK
10:00 PM	903.100 MHz	N3AOG


COMMITTEE CHAIRMEN

LADIES' NIGHT: N3AOG 215-443-9965
 JUNE CONTEST: N3ITT 610-847-5490
 HAMARAMA: NK8Q 610-847-2285
 VHF CONFERENCE: KB3XG 610-584-2489

PACK RAT BEACONS - W3CCX/B FM29JW

50.080 144.284 222.065 432.295 903.072 1296.251 MHz
 2304.037 3456.220 5760.200 10.368.200 MHz


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CALENDAR OF COMING EVENTS - NOVEMBER 1998

- 1 Only 84 days until the 1999 January Sweepstakes.
- 3 Election Day
- 7-9 ARRL November CW Sweepstakes. See Oct. QST, page 118 for rules.
- 9 Check into the 2 Meter Net on 144.150 MHz at 8:00 PM EST.
- 9 Check into the 1296 MHz Net on 1296.100 MHz at 10:00 PM EST.
- 11 Veterans Day
- 12 Packrat board of directors meeting at the QTH of Dick, N3AOG. Call 215-443-9965 for directions. All interested parties invited.
- 17-18 Predicted peak of the Leonids meteor shower.
- 16 Check into the 220 MHz Net on 222.125 MHz or 224.58/R at 8:30 PM EST.
- 19 Regular meeting of the Mt. Airy VHF Radio Club at the Southampton Free Library on Street Rd. in Southampton, Pa. Dennis Sillage, K3DS, will speak on digital communications. All VHFers are encouraged to come and enjoy the evening with us. You need not be a member. Do you need to attend this meeting to qualify for club contest minimum attendance? Come anyway and bring a friend.
- 21-23 ARRL November Phone Sweepstakes. See October QST, page 118 for rules.
- 23 Check into the 432 MHz Net on 432.110 MHz at 9:00 PM EST.
- 26 Thanksgiving
- 26 LEAP INTO THE MICROWAVES with the Packrats! 903 and above. Starting on the 4th Thursday of the month and continuing every 4th Thursday of the month operate from 8 to 10 PM local time on any band 903 MHz and above. For coordination on those difficult long haul contacts 144.260 MHz is the suggested liaison frequency. So here's your chance to fix what broke in the contest and work all those stations you missed.
- 28-29 CQ World-Wide DX Contest - CW. See October QST, page 108 for rules.
- 30 Check into the 903 MHz Net on 903.100 MHz at 10:00 PM EST.
- 1999
- Jan. 23-25 1999 VHF Sweepstakes, January Contest
- Mar. 17 Homebrew Night at the regular meeting of the Mt. Airy VHF Radio Club.

CHEESEBITS SUBSCRIPTIONS

Cheesebits subscriptions are available to everyone interested in activities and information from the VHF through the microwave frequencies. Subscriptions are for 1 year of 12 issues. For a subscription, send the following information:

Name: _____ Call: _____

Street Address: _____

Town: _____ State: _____ ZIP: _____

Subscription Rate: \$10.00 per year (USA), \$12.00 (Canada), \$15.00 (Worldwide)

November 1998 Send to: SUBSCRIPTION/ADVERTISING MANAGER:
Bob Fischer, W2SJ, 7258 Walnut Avenue, Pennsauken, NJ 08110

HIGH SPEED METEOR SCATTER EXPERIENCE

By Russ, K2TXB

My first experience on 2 meters using High Speed Meteor Scatter (HSMS) resulted in a QSO with WB5APD in Georgia, but that was done at 1800 hours local time - about the worst possible time for meteors. It took us an hour and ten minutes to complete, but we were running at slow speed, 2000 lpm (letters per minute). We could probably have done it in 45 minutes at 4000 lpm. (The HSMS guys use lpm to specify speed, at 5 letters to the word, 4000 lpm would be 800 wpm CW).

Last night I completed a sked with W8WN in EM77, at 4000 lpm, and then this morning at 1000z I ran with NJ0M in Minnesota, a distance of 1027 miles. Right away we knew that this was going to be great because of the many and strong pings and bursts we were getting. I got full calls in his first transmit sequence, and calls and reports on the second. We were running one minute transmit and receive periods, but we were able to complete the contact in under 15 minutes, including tax 73's, sending names, etc. I thought I was copying him well, but afterward when we compared notes on the 'hot rocks' internet page, it was apparent that he was getting much more from me. He had a burn of 50 seconds on my second transmission - copying "RR FM29" over and over again the whole transmission. I calculate that he copied my report over 500 times in that burst! He sent me a few wave files of what he received, and it was impressive. I also sent wave files to him of what I received.

Keep in mind that this mode is good for working DX on 6 and 2 meters via meteor scatter even when there is no shower - like last night and this morning. We were lucky to catch such nice random meteors, and normally we would have to work harder at it, but it sure was fun getting such good sigs.

The following is a little background info on the mode:

We use our computers to generate the high speed CW, and to record the waveforms of what we receive. Then, while I am transmitting, I use the computer to simultaneously transmit and to play back the received pings at a much reduced speed (I use a 40 times reduction in speed, reducing the received signal to about 20 wpm). If the received signal has the required information I then change the transmitted message to send reports, rogers, or whatever.

I'm having a great deal of fun with this 'new' mode, and I know that Mark and several other club members are working on or planning to get on HSMS too. Mark thought you would want to put a blurb in Cheese Bits.

Also, 4000 lpm is not the limit. This morning after my contact with NJ0M, I copied a couple of short pings from W8WN. He was transmitting to KO0U in FN42 at 16,500 lpm. That's right - about 3,300 wpm CW! I copied both sets of calls several times in two short pings.

By the way, I first attempted to get on HSMS back in the late 70's, using modified tape recorders to slow the speed down. At that time there were reports of hams in Europe using the mode and I wanted to try it. I had a working system, but the only station I could find who was able to run with me was in New Mexico. The distance was too far and we never heard any signals. But I've always been interested in it, and when a group of guys in this country started working on the mode last year, I followed their activity closely. I finally found the time to get my station set up and I'm thrilled with the result. Now to see how many stations I can work <big grin>.

The URL of the web site where people can get more information is at http://www.nitehawk.com/rasmit/ws1_15.html. Also there is an internet mailing list for discussion about HSMS. One can subscribe to the list by sending a request to: majordomo@qth.net, and putting the words "subscribe hsmis" in the body of the message.

THE LEONIDS ARE COMING!

By: Shelby, W8WN

While a few astronomers are predicting a "storm" similar to 1966, most are "guessing" that it will not be that large, but could be *very* good. However, the peak this year is expected to favor Asia. (This is why this is also being put on Moon-Net, as it has much better coverage into Asia and the Pacific area than the MS reflectors have; and world-wide, most EME stations also operate MS. And the Leonid information needs to be relayed to as many VHF operators in the Pacific area and Asia as possible).

So as to keep this short, for a summary with hyperlinks to a NASA Web site and the Web site of the International Meteor Organization, go to the W6/PA0ZN Web site, click on the "Hot News and Announcements", and read or click from there. URL http://www.nitehawk.com/rasmit/ws1_15.html

JANUARY 1999 VHF SWEEPSTAKES

By Bill, AA2UK

Well, guys, here's your "wake-up" notice. It's that time of year again; no, not time to rake the leaves or clean out the gutter, but time to get real serious about this year's January contest **CLUB EFFORT!** We did a great job last year but that was then and this is **NOW**, and as the song said, "What have you done for us lately?", or something like that. This is my second time as contest chairman so let's not disappoint our competition.

This year's contest will be very competitive. The boys in New England are hot on our heels and itching to upset us. But we will not let that happen! This contest promises to be a no-holds-barred cage match for the rats to retain the unlimited title.

This contest will require every willing and able-bodied Pack-Rat to participate. Being in the Pack-Rat's January contest effort is like being in an all out war. All of age must serve the club. Those that can climb must put on their climbing gear, those that are engineers must design and build, any of you caught hoarding supplies will be court-martialed. Every effort, no matter how great or small, must be made by all to top last year's effort and crush our opponents. This year I would like to challenge the club's membership. I want thirty percent of the club to get on a new microwave band. I suggest that everyone that operates the microwave bands get on for the next few microwave activity nights until the contest. All members should check into the **MONDAY** night nets until contest time. This will help you determine what needs fixing or upgrading now when something can be done about it.

Please get on the bands, talk up the Club's contest effort. Encourage new qualified members and past members to come to the next meeting. Maybe we will get some new members before the deadline. I would suggest trying to encourage members to get on a new band. For bands 903 and up the multipliers from one new station getting on can make the Club's aggregate score explode!

When you receive your contest questionnaire, please promptly fill it out and let me know what bands you will be on and any help you will need. A Pack-Rats **SWAT** team will be dispatched to all who answer promptly. Also, I can be e-mailed at aa2uk@bellatlantic.net, or reached by telephone at 609-965-1933 (home), or 609-965-1789 (Nextel phone) during the day. All "Help!!!" replies will be taken care of promptly.

Finally, any member who does not have a station on, find a place to multi-op. Those of you planning to become ill, wait until February. I want results, not excuses, this contest. (Note: A note from your Mother must be accompanied by a doctor's note to be accepted.) Let's get out there, be properly trained and prepared, and kick some tail! See you in the **TEST!**

SWAP SHOP:

(send all ads to the editor)

FOR SALE: Lunar-Link 432 MHz. amp with p/s, complete. Plug and play, \$2100, 6 19 element Cushcraft 719B's 432 yagis, \$450, WD5AGO 432 preamp, \$80, Bird Model 4305 meter and 2500 watt slug 200-500 MHz, \$275, 50 watt Klintzing 432 brick type amp, \$80, ARR 432 preamp SP432VDG, \$75, ARR 432 preamp P432VDG \$50, Mirage 222 MHz. preamp, \$95, All above plus shipping. Email, anytime or call 302-737-7966 before 0300 UTC weekdays and anytime weekends up to 0300 UTC., Rick, KB3PD, Rick.Phillips@dol.net

FOR SALE: Tektronix 531A Oscilloscope with cart, preamp, probes, manual, perfect at \$200. Telchrome 3508 Test Signal/Waveform Generator at \$25. Sencore CR-161 CRT Tube Tester at \$25. Contact Jim Stone, W3FIE at 215-342-9343.

FOR SALE: Rohn 25G tower system. All sections are down, straight, and rust free. Tower was up about 3 years and has been down for 1 1/2 years in dry storage. The package includes: 1 top section with TB-3 thrust bearing, 7 ten foot sections, 1 ten foot section that was cut off (used as bottom section in concrete), 5' remaining, 2 sets of torque brackets (for guying), Various sections of guy wire Assorted insulators, clamps, and turnbuckles. Asking \$675 plus shipping or buyer picks up. Guy wire assemblies will not be shipped. Located in Collegeville, Montgomery County, PA. Call Gene K1NR/3 at 610-831-0868 until 10 PM eastern or email at eugeneb@nmi.com

FOR SALE: CALLSIGN HISTORY. Name and address of each holder since 1912. Cost \$12 plus SASE for printed CERTIFICATE. Wanted CallBooks before 1970 and QST's before 1940 will buy or trade. Also looking for 1x2 Ham Radio License Plates for my collection. Ron Allen W3OR, PO Box 73, Bethel, De. 19931-0073 or call 302-875-1100.

FOR SALE: Kenwood TM-721A DualBand 50 Watt 2 meter/440 Transceiver with Extended Transmit/Receive, Up/Down Microphone, Mobile Bracket, Manual, Excellent Condition, \$325. Ten-Tec Century 21, 80-10 Meter HF Transceiver with CW Filters, full break-in, built in supply/speaker, excellent condition at \$200. Contact: Dennis John Gazak, N3DG at 215-938-8820.

Want: Kenwood TM-742 Triband Mobile Transceiver. Contact: Dennis John Gazak, N3DG at 215-938-8820.

FOR SALE: Four DFM 2304 MHz Loop yagis, \$200.00, Four 3456 MHz F9FT end mounted yagis, brand new with power divider, \$200.00. Contact Herb, K2LNS at 717-472-2230.

FOR SALE: Mint Kenwood TS-440S/AT General Coverage, All-Mode HF Transceiver with Automatic Antenna Tuner, Box and Manual, asking \$650, Contact Aleck, N3DGO, at 610-525-3400 or n3dgo@erols.com.

1998 LEONID MODEL PREDICTION

by Peter Brown, UWO Meteor Group. Issued November 5th, 1998. via Steve Harrison ,K00U/I.

Using a total of 12 different models for the ejection of meteoroids from comet Tempel-Tuttle, a preliminary "best" guesstimate for the location of the strongest peak in activity and its associated ZHR for the 1998 Leonids has been found.

The 12 model approach involves using three major variations in meteoroid density (0.1, 0.8 and 4.0 g/cm³ for bulk density of the meteoroid). For each of these three densities, four different variations in the initial ejection velocities are also employed - one follows the distributed production model of Crifo which produces broad distributions in initial ejection velocity which has a mean velocity lower than the classical Whipple/Jones ejection model. In addition to Crifos distributed production model, a Whipple/Jones ejection velocity model is used, as well as a second variant of the same with a heliocentric velocity dependance of $r^{-0.5}$ in place of the usual r^{-1} . The fourth model is again a variant on the Jones/Whipple model in which the ejection velocity at a given heliocentric distance is not single-valued in the monte carlo generating routine, but rather has a parabolic distribution of probable velocities about the average Jones/Whipple velocity for the chosen heliocentric distance. See Brown and Jones (1998), Icarus, v. 133. pp. 36 - 68 for more details.

The results of the modelling for the Leonids, using ejections at all perihelion passages of the comet back to 1499 AD (ie 15 revolutions of the comet prior to the current epoch). A simple summation of the meteoroids which are then visible at Earth at the present time from this ensemble and which would produce visually observable meteors (mass > 1 mg) was then computed from all ejecta. A meteoroid is defined as being Earth-intersecting if its nodal radius is within 0.005 AU of Earth at the longitude of its descending node. All models suggested a steep increase in activity beginning in December, 1997/early 1998 accompanying the passage of Tempel-Tuttle. The resolution of the modelling is of order 2 months and thus all models suggest that this November will show significantly increased activity relative to 1997 (when the peak ZHR reached just short of 100), and likely activity approaching meteor storm levels (ZHRs of order 1000). Using 1997 as a baseline and taking the peak ZHR to have been 96 +/- 13 at 235.22 +/- 0.02 (J2000) in 1997 we have extrapolated the relative model difference between the activity strength predicted by the model in 1997 to that observed and that predicted for 1998. Using a mean of all models, produces a predicted location for the peak in 1998 of 235.26 +/- 0.04 (J2000) with a peak ZHR of 1200 +/- 280. This solar longitude corresponds to Nov. 17 at 19:20 UT with a 1-sigma uncertainty of 60 minutes. We emphasize that due to the model results sensitive dependance on density of the meteoroids, the range of possible ZHRs extends from slightly lower than the bound given above to nearly 10 000 (the higher values associated with the models using the least dense meteoroids and lowest ejection velocities).

The use of relative modelling difference between 1997 and 1998 implies that the veracity of the prediction in 1998 relies entirely on the accuracy of the magnitude of the ZHR reported in 1997 under full moon conditions. As well as the above, the models suggest that broad activity, persisting for of order a full day centered about this peak should be noticeably above normal Leonid background levels and should be rich in larger meteoroids in 1998 most notably after the time of the peak. The model suggests ZHRs of order 100 or greater in the 3-4 hour window prior to the peak and ZHRs of order 100-200 persisting for many hours after the peak. The mass index near the time of the peak over the visual magnitude range will be near 1.6 +/- 0.1. It is worth noting that a significant decrease in the mass index from 1.8 +/- 0.1 several hours prior to the peak to this lower value and then upward again after the peak is visible in most models.

MAGNETOMETER UPDATE

Dave K1WHS, k1whs@worldpath.net

Hello Packrats, I have a few comments to add to the magnetometer talk I gave at the VHF conference. First, though, I would like to thank everyone involved for rolling out the red carpet for me and demonstrating top shelf hospitality. I really had a good time.

Since returning to Maine, I have hooked up the magnetometer directly to a 486 laptop running Win 95. I found an off the shelf product from DATAQ Instruments (DATAQ.COM), the DI-150RS, or DI-190 starter kits, that include an analog to digital adapter, serial cable, and software to hook up to a serial port on any home computer. The software can be run in Windows 3.1 or Windows 95. The software is simple to use. I have a copy of HP VEE that just confuses the heck out of me. WINDAQ lite on the other hand is a no brainer type program that a yokel like me can get up and running with little muss or fuss. The whole kit is \$99.95.

So, the latest status is that I am now collecting magnetometer data with my computer. The file can be "browsed" and cut and pasted, then printed on your printer. I just wish I had the time to get QRV each time the Earth's magnetic field hic-cups!

1998 MID-ATLANTIC STATES VHF COMMENTS

Tom Whitted, WB8WZG

I just wanted to let you know that I was very impressed by the way that John, KB3XG, and the rest of the "Rats" put on the conference. Since I attend most of the Conferences and Updates each year around the US, I know what it takes to put on a stellar conference such as the one your club put on. The "Rats" should be very proud of not only your club, but the dedicated individuals that put on the Mid-Atlantic States Conference.

After experiencing the "Rats" in action, I am truly looking forward to coming to Microwave Update 2000 that you are hosting. I will also plan on making the conference and "HAMARAMA" one of my "must attend" conferences. Thank you all again for inviting me!!
Tom, WA8WZG@WA8WZG.com.

TID BITS

Congratulations to Packrat Rick, KB3PD, on receiving 432 MHz WAS # 22. Rick drove the cards up to headquarters for checking. His last station worked for the WAS Award was KA0RYT70 for #50.

JANUARY CONTEST: Bill Lentz, AA2UK, has agreed to serve as January Contest chairman again for 1999.

1998 Mid Atlantic States VHF CONFERENCE: There were 81 attendees at the conference including 29 Pack Rats, nine speakers.

EM76 Beacons (New one on 144). Hi All, I have added a new 144 MHz beacon to my site. Now operational are 50.144.& 222. Frequencies: 50.070 0.350 watts to dipole oriented n/s, 144.300 20 watts horizontal omni (this one drifts slightly, sorry). 222.069 MHz, 3.5 watts to horiz. omni, 432.300 MHz on air soon. Call: NS4W/B, Loc: 3000' asl near LaFollette, TN, Grid: EM76VJ.

Noise Figure Measurement Reference Info. To follow up on Phil, WA3NUF's talk on Noise Figure given at the October meeting, you might look into the following sources:

Noise Basics the Noise Com web page <http://www.noise.com/>

Fundamentals of RF and Microwave Noise Figure Measurements, AN 57-1 and Noise Figure Measurement Accuracy, AN 57-2 at the HP web page <http://www.tmo.hp.com/tmo/Notes/English/NotesANumber.html>

VUCC Award Checking: If you want QSL cards checked for your initial VUCC Award or an update, contact Harry, W3LIT at hbrown@voicenet.com or 610-584-4846. I'll do updates (up to 25 additions) at regular club meetings.

WB3JYO 2nd harmonic Date: Sun, 11 Oct. 1998 18:29:57 EDT. We're pleased to announce the addition of a baby girl for a 2nd harmonic at our QTH. Lorna Drexler was born Sunday afternoon, weighing in at 8 pounds, 6 oz. With an 6 hr labor from start to finish, Naomi did quite well. Baby and mama are resting comfortably. Thanks to all the Rats for their interest and concern. 73, Paul WB3JYO.

NEW RAT. Harry Price, K3HZO, became a member of the club at the October meeting. Harry's address is 117 Mt. Penn Road, Shillington, PA 19607. Home phone is 610-777-2265 and work is 610-796-8543. He's on 50, 144, 222, 432 and 1296 (terrestrial and EME).

October meeting visitor: Charles Hummel, K3BEA, 2503 St. Albans Dr, West Lawn, PA 19609.

The 432 and Above Newsletter by K2UYH is at: <http://www.nitehawk.com/rasmit/em70cm.html>.

Updated World above 1000 MHz webpage. Just updated the website. There's a new "Beginners' Corner" with very simple 10 GHz gear described. Yes, it is NOT narrowband! You can't get much easier and cheaper than this on 10 GHz.. Also updated UK contest results, microwave news, etc. Try it! If you don't like the advertising banners on Geocities try the alternative, URL's. 73... Peter, G3PHO amateur microwave radio webpage: (UK) <http://freespace.virgin.net/p.day/ghz.htm>, (USA) <http://www.geocities.com/siliconvalley/vista/7012>. (mirrored at: <http://www.qsl.net/g3pho>), Editor: RSGB Microwave Newsletter

2 METER WEEKLY SSB NET: Wednesday nights @ 9:30 PM on 144.220 USB from EM95 (Charlotte, NC area). We are trying to promote 2 meter SSB activity in the Carolinas & the Southeast. The net control station is Wilton, WB4PCS, he is located just south of Charlotte, in Clover, SC. Wilton is now on email wb4pcs@juno.com ...pls send any comments or questions to Wilton or myself... Bill Fisher / W4GRW w4grw@email.com, Cat Square, NC...EM95.

MORE TID BITS

WORLD 47 GHz RECORD SHATTERED YET AGAIN! 221 Kilometers on 47 GHz.. This email, received from F5CAU says it all! CONGRATULATIONS TO ALL CONCERNED. From: Gil FERAUD [f5cau@wanadoo.fr] Sent: 05 October 1998 To: g3pho@geocities.com. F6BVA and F5CAU have established a new world record on 47 GHz with a two way SSB QSO (report 53 both sides with a light QSB) over a distance of 221 km on October 3rd 1998 at 18 :04 GMT. F6BVA was situated at the top of Mt Chiran JN33DU, 1900 m asl, temp around 0°C and F5CAU at the top of Mt Aigoual JN14SC 1560m asl, temp 4°C, the weather was foggy and wet.

JAPANESE TAKE 24 GHz WORLD RECORD AWAY FROM EUROPE! The following email, received from Toshi, JE1AAH, is our first news of the new 24 GHz world record. This breaks the 400 km "barrier" for the first time by means of a full two-way contact: From: Toshihiko Takamizawa [toshi@kw.ncd.aputa.ac.jp] Sent: 12 September 1998 14:41 Japanese 24 GHzers may have made 24 GHz world record. Date : Sept. 3rd 1998 07:08 AM JST Distance: 402 km REPORTS EXC: RS41 to RS59 Locations: JM3KMO and JR3EDZ made QSO on 24 GHz. JM3KMO was on Mt. Norikura in Honshu island and JR3EDZ was on top of Mt.Tsurugi in Shikoku island. Rig: JM3KMO Specially tuned Maki-denki UTV-24G with single FLR026FH 100 mW. JR3EDZ HB JE1AAH based with DB6NT 2 x FLR026 HPA 200 mW. Ant: JM3KMO 90 cm Chevron made. JR3EDZ 60 cm Chevron made

NEW NORTH AMERICAN 24 GHz RECORD. Congratulations to Chuck, WA6EXV & Dave K6OW on setting a new North American 24 GHz distance record. On July 7th 1997 at 1414z, Chuck from DM06WL, Walts Point and Dave from Heaps Peak, DM14KF, set a new distance record of 166.25 miles (267.5 km corrected) using 100 milliwatt guns and 2 foot dishes. Signals were at times 20 dB out of the noise.

Satellite Companies on Alert for Meteor Shower: Washington area satellite companies are preparing for the worst storm to hit their industry in 32 years: On Nov. 17, Earth will cross orbits with a field of meteoroids that threatens the 600-plus satellites that provide earthlings with phone, TV, paging and other communications, missile-launch warnings and surveillance. The odds of any satellites being damaged by the storm are extremely remote -- less than half a percent once all precautions are in place, industry officials estimate. Just the same, Intelsat is taking unusual steps to minimize exposure to its fleet, as are most other satellite service providers. NASA is turning the sensitive parts of the Hubble Space Telescope away from the barrage, and the crew of Russia's Mir space station will ride out the storm in an attached vehicle used to reenter Earth's atmosphere. Astronomers predict the peak of the storm will occur at 2:43 p.m. on the 17th, which means people in this hemisphere will miss out on the best part of the show, because it will be daytime here. The storm is actually a field of debris that chases the tail of 32-year comet Tempel-Tuttle. As Earth moves in orbit around the sun, it will cross paths with the storm. In 1966, the same comet tail produced 100,000 meteoroids per hour. The danger to spacecraft is twofold: Even the most minuscule flecks could pockmark satellite surfaces, wearing holes in foil solar panels or damaging sensitive equipment. Of greater concern, however, is the threat of electrostatic discharge. A bit of meteoroid that hits a satellite disintegrates, causing an ionization reaction that could make electrical charges "arc" over sensitive electronic components. (Washington Post)

BILL TYNAN, W3XO, TO STEP DOWN AS AMSAT-NA PRESIDENT

AMSAT-NA President Bill Tynan, W3XO, will formally announce his retirement from office during the AMSAT-NA 16th Annual Meeting and Space Symposium October 15-19 in Vicksburg, Mississippi. An announcement also will appear in the next issue of The AMSAT Journal. Tynan, who turns 72 on Columbus Day, helped found AMSAT-NA in 1969 and has headed the organization for the past seven years. "I think it's time," he said, although he expressed regret that he did not get to see the Phase 3D Amateur Radio satellite get into orbit during his tenure.

Tynan said he'll recommend to the AMSAT-NA Board of Directors that Executive Vice President Keith Baker, KB1SF, be appointed to replace him. "He knows the organization, he's been my right hand," said Tynan. He said he plans to continue serving on the AMSAT-NA Board at least until his term expires next year and intends to remain active in AMSAT.

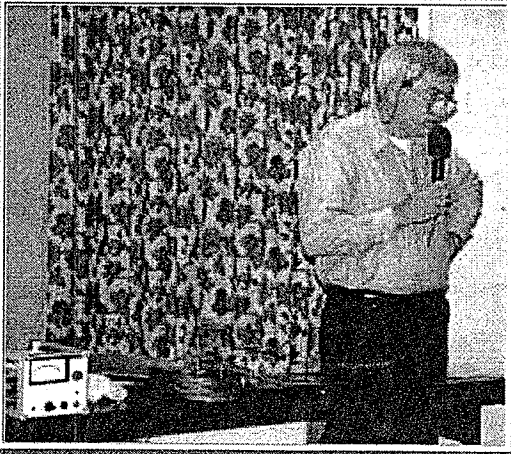
Tynan said the outpouring of support for the Phase 3D project was the highlight of his time in office. "The support of both the League and all our members to get where we are is the most gratifying and significant accomplishment," he said. Tynan noted that the Phase 3D satellite is completed and will undergo some final testing this month in the Washington, DC, area. However, he said there was "nothing new at all" to report on the possibility of a Phase 3D launch opportunity. Tynan said he'll be among those keeping a close eye on the European Space Agency's Ariane 503 test launch set for October 20. "One of our primary hopes is for an Ariane 5 launch," he said. Tynan said he's optimistic about the future of Amateur Radio in space.

Licensed since 1945, Tynan edited the "Above 50 MHz" column in QST from 1975 until 1992. In 1988, he retired as senior engineer from the Johns Hopkins Applied Physics Lab. In 1996, he was honored as the Dayton Hamvention's Amateur of the Year.

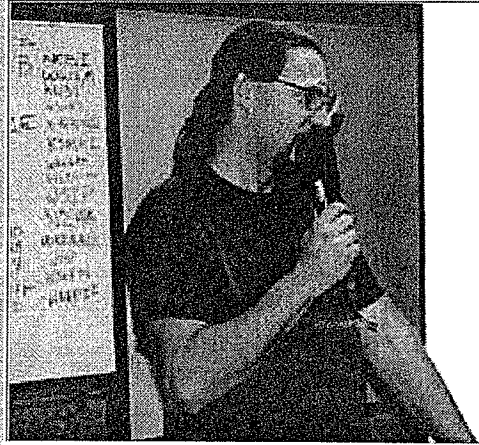
Tynan remains active mostly on the VHF and UHF bands. Once he's free of the day-to-day affairs of AMSAT, he said he hopes to spend more time on the air, especially on 6 meters.

1998 Mid-Atlantic States VHF Conference

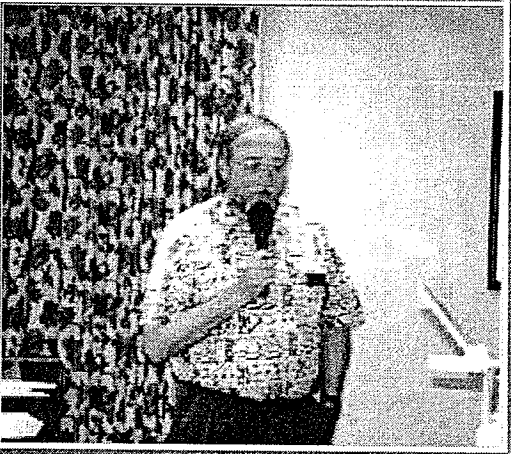
Dave Olean, K1WHS, describes how his home brew magnetometer is used to detect Aurora.



Steve Kostro, N2CEI, discusses some of the new microwave devices and products that can be used by hams.



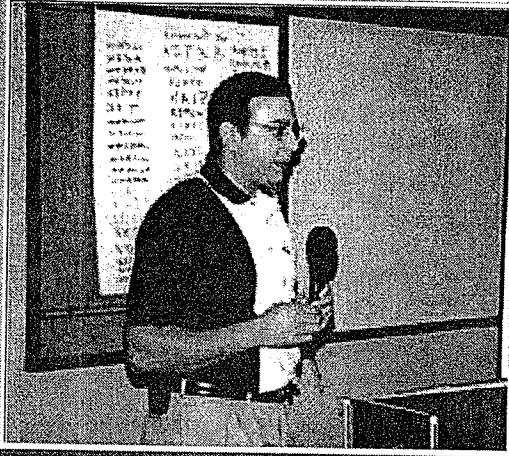
Tom Williams, WA1MBA, shows off some millimeter equipment for ham use and for EHF imaging applications.



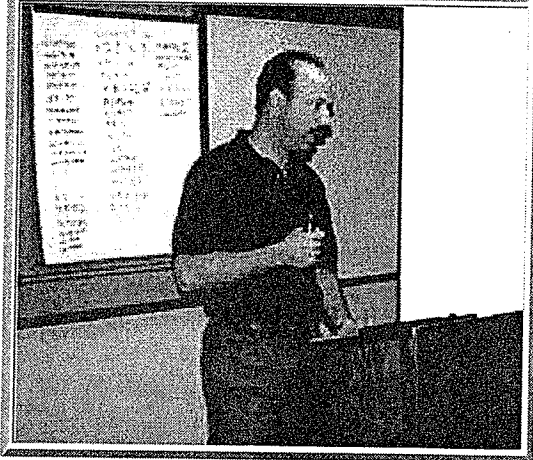
Tom Whitted, WA8WZG, talks about how to squeeze every last dB out of your feedline system.



Chris Fagas, WB2VVV, gave a talk on his use of microstrip patch antennas for use as rover antennas.



High power solid state microwave amplifiers were discussed.



The crowd of VHF/UHF enthusiasts pack the conference room at the Hampton Inn.



The test laboratory was a bit hit with many visitors who brought equipment to be tested on the high class test instruments.



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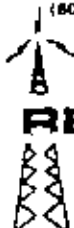
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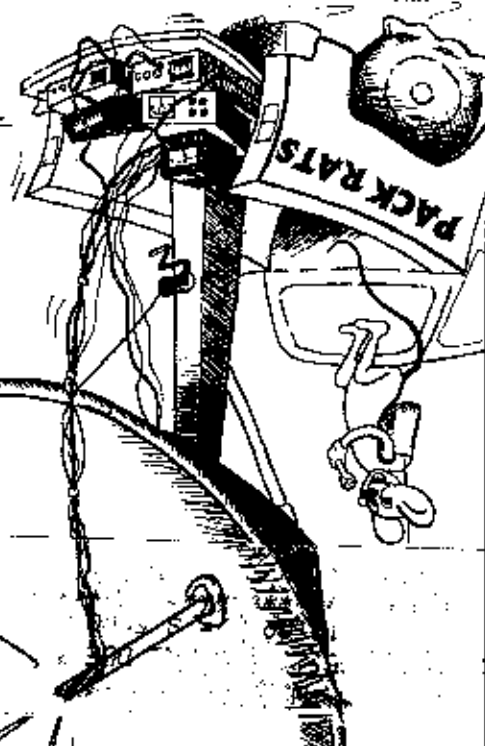
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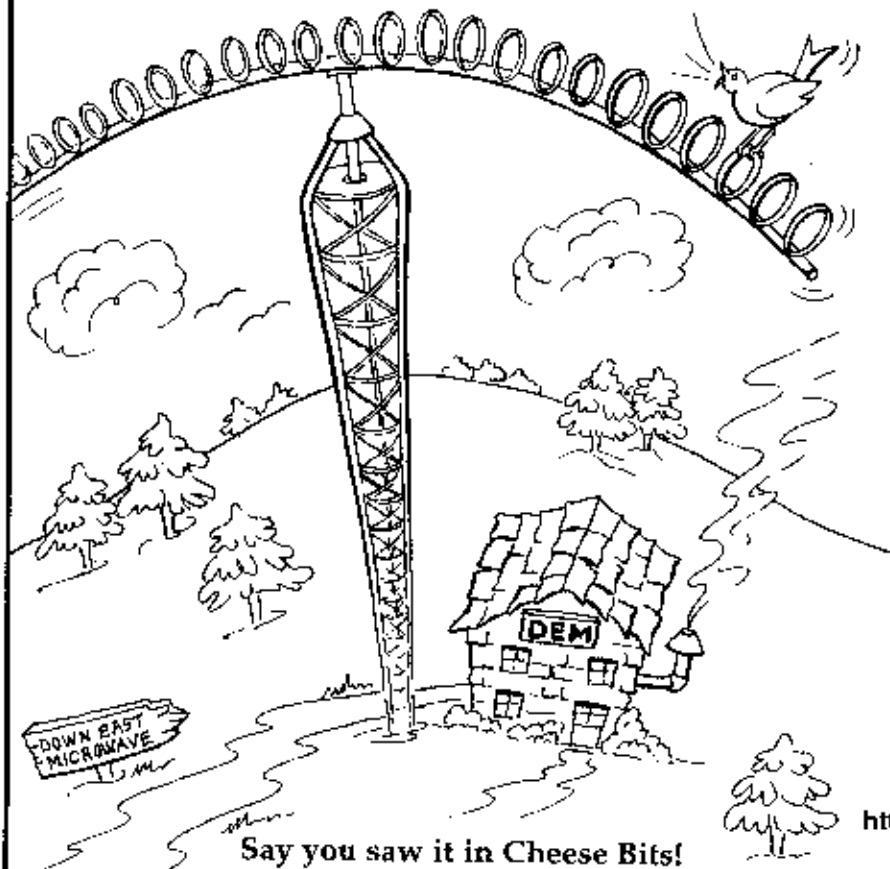
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