

## 432 AND ABOVE EME NEWS MAY 2004 VOL 32 #5

EDITOR: AL KATZ, K2UYH; ENGINEERING DEPARTMENT, THE COLLEGE OF NEW JERSEY, PO BOX 7718 EWING, NJ 08628  
TEL (W 609-584-8424) OR (H 609-443-3184), FAX (609-631-0177), E-MAIL [a.katz@ieee.org](mailto:a.katz@ieee.org)  
PROD/MAIL: BRIAN MULLANEY, KB2TIS (609-883-6390), E-MAIL [mullaney@mccc.edu](mailto:mullaney@mccc.edu)

NETNEWS EDITOR: G4RGK, DAVID DIBLEY, E-MAIL [g4rgk@btinternet.com](mailto:g4rgk@btinternet.com) (based on K1RQG's Netnotes and Reflector News)  
EME NETS: 14.345, 10 AM ET SATURDAY AND SUNDAY (AFTER VARO NET ENDS ON SUNDAY)

NET CONTROL AND SKEDS CORDINATOR: JOE, K1RQG, TEL (207-469-3492), E-MAIL [k1rgq@aol.com](mailto:k1rgq@aol.com)

EME DIRECTORY: <http://www.dl4eby.de/>, DL4EBY/DK0TU, KLAUS TIEDEMANN, TEL (49-30-7955467), E-MAIL: <[tklaus@berlin.snafu.de](mailto:tklaus@berlin.snafu.de)>

NL EMAIL DISTRIBUTION and EMAIL LIST CORD: WARREN, W2WD [wbutler@comcast.net](mailto:wbutler@comcast.net) [TXT OR PDF OR "ON WEB" NOTICE ]

EME STANDINGS: DAN GAUTSCHI, HB9CRQ/HB9Q E-MAIL [hb9crq@hb9q.ch](mailto:hb9crq@hb9q.ch) OR SEE HIS WEBPAGE AT [www.hb9q.ch](http://www.hb9q.ch).

THE NL WEB VERSION IS PRODUCED BY W6/PA0ZN AND AVAILABLE AT <<http://www.nitehawk.com/rasmit/em70cm.html>>

**CONDITIONS:** There have been a lot of complaints on the various reflectors and nets about the lack of activity, but it is going to be hard to find a better month than the past one for activity. The 3B9C expedition generated lots of interest in 70 cm. Although conditions may not have been the best, there seemed to be plenty of stations on 1296 for the second part of the EWW EME Contest. The Dec 2003 NL clearly lists proposed activity weekends for 2004. It is unfortunate that there is no clear best EME weekend. This tends to spread out activity. The use of the Internet for skeds rather than a published Skeds List also has the same effect. The truth is if all the different bands are considered, there is probably more EME activity now than at any time.

**MICROWAVE EME CONTEST:** Al, W5LUA [al\\_ward@agilent.com](mailto:al_ward@agilent.com) has made the following proposal, which he believes will be accepted by the ARRL's Contest Committee: "Based on the comments I have seen posted on Moon-Net it appears that the Oct 9/10 and the Dec 4/5 weekends are good potential candidates for the traditional ARRL EME Contest in 2004. If that is the way the vote goes, then I would like to suggest the following: 1. Since it appears that most 2 meter operators would like to have the 2 weekend contest, then I propose for 2004 that we have a Microwave EME contest on a third weekend specifically Oct 30/31. The Microwave EME contest would start at 13 cm and encompass all bands higher in frequency. The higher declination would give more moon time and the additional path loss would only amount to a dB or so. If the vote that Lionel is taking happens to favor the Oct 30/31 weekend for the traditional EME contest then we can pick another date for the third weekend. 2. I would then be interested in knowing what you folks think about limiting the Oct 9/10 and Dec 4/5 weekends to all bands up through 23 cm and leaving the third weekend for 13 cm and higher." Al needs your comments ASAP as the decision need to be made by June to get the changes into QST. These are important changes that can increase EME activity on all amateur frequencies. Please let Al know how you feel about these proposed changes and he will forward them on to the league.

**HIGH EWW CONTEST SCORES ON 1296:** Based on the reports it appears that the F6KHM team has the top score with 48x32, OZ4MM appears 2<sup>nd</sup> with 44x?, K2UYH has 43x30 and G3LTF reports 41x28. I suspect that K5JL also did very well, but I do not know Jay's overall tally. In Asia JA6AHB ended with 26x17.



**F6KHM Crew at the French VHF Gathering in Seigy**

**3B9C DXPELITION:** What happened? Unfortunately I have not received any report from the 3B9C group. From what I have been able to piece together, they had problems with blockage to the west and difficulties with moon tracking party due to WX that limited optically tracking of the moon. They QSO'd HB9Q, DL9KR, OZ4MM and SM2CEW on CW and PA3CSG on random JT65B. They also had good copy from G4YTL and OH2DG on JT65, but did not have time to complete a QSO.

**9H1ES:** Fortunato [fbonnici@hotmail.com](mailto:fbonnici@hotmail.com) reports that 7 stations were worked during the contest including HB9BBD, who had a very big signal. He notes that it was the contest operator's, 9H1JT, first experience on EME, but they had a good time. Fortunato had a problem during some of his skeds with other stations calling and causing confusion. He confirms sked QSOs with G3LTF, W2UHI, KOYW, F6KHM and SM3AKW, but NG on F5VHX.

**DL0SHF:** Chris, DF9CY, [christoph.petermann@pasd.panasonic.de](mailto:christoph.petermann@pasd.panasonic.de) sends info on the latest DL0SHF/DK7LJ activity – On 31 Jan I went to Per's station to see, if I could work some of the EME guys on 1296. WX was very lousy with very high winds that forced me to QRT after 2 hours of operation. Activity was low, but I wanted to the "feel" of his new transistor PA in preparation for the EWW EME Contest. I have never heard such big echoes before. Even FM echoes were almost noise free! I worked K5JL (569/599), VE6TA (549/579) and OZ6OL (449/569). For the contest, I wanted to be QRV for a longer time, but I could not use the station on Saturday. So I was limited to Sunday 28 March from moonrise until about 1400. Even the PA is mounted at the feed, but there is still noise enough in the shack, which is a sort of a container beside the dish. After two hours the headphones ceased functioning on one side and I had to listen to the speaker. This made life really hard. Nevertheless, I worked 20 stations. I thought QSO'd OM6AE, but latter learned that OM6AA was QRV, and thus was only a partial. Per, DK7LJ wanted to be on with the DL0SHF call in the evening, but decided to go to bed, as he was coming down with the flu. In the future I will make the station ready for WSJT. At home I am only QRV for 2 m with a marginal station. Stations worked were at 0916 SK6UX (449/579), 0939 OZ6OL (449/569), 0948 F1ANH (449/559), 0956 JA8IAD (339/559), 1015 partial OM6AA (O/559), 1022 OZ4MM (569/579), 1030 IK3COJ (449/559), 1035 HB9Q (569/579), 1054 F6KHM (569/579), 1100 HB9BBD (569/599), 1107 G4CCH (559/579), 1114 OH2DG (559/569), 1128 SM3AKW (559/569), 1137 G3LTF (559/589), 1151 JF3HUC (549/559), 1159 JA6AHB (449/579), 1206 DF3RU (549/579), 1210 LA8LF (549/589), 1210 ZS6AXT (449/589), 1245 F6CGJ (569/579) and 1300 DL1YMK (439/539) for 20x12. Also heard were HB9JAW and UR5LX. [I believe DL0SHF was active during both the DL0SHF and DK7LJ callsign. Only one should be counted for contest points.]

**F5WE:** Philippe [f5jwf@wanadoo.fr](mailto:f5jwf@wanadoo.fr) is newcomer on 3 cm EME -- I am now QRV on 10 GHz. My signal is not strong, but I can hear my own echoes about 0.5 dB above the noise. I tried to listen during the contest in March, but I have no idea which frequencies are usually used. I am looking for 3 cm skeds and am interested in hearing from other stations active on the band via e-mail.

**F6KHM:** Xavier, F5TTU [f5ttu@club-internet.fr](mailto:f5ttu@club-internet.fr) reports on his group's contest results – We scored 48x32 during the second leg of the EWW EME Contest on 1296. On 17/18 April, the annual French VHF meeting took place in Seigy. Most of the French EME operators were present. This year, Rainer DF6NA was there. I think for the first time. We took a photograph of all the EMEers (F8PKC, F3VS, F5HRY, F4DRT (F6KHM), F2TU, F1ANH, F5FLN, F5MZN, F5VHX, F6CGJ, down F5TTU (F6KHM) and DF6NA - [see below]).

**G3LOR:** Simon [G3LOR@aol.com](mailto:G3LOR@aol.com) write about his 23 cm activity – I did get on for while for 26/27 March contest weekend and worked 16 stations on 1296. I only connected with 2 on Saturday as PA went bang at end of a QSO with G3ITF. I blew the 22 ohm resistor in HV line. I think it was due to a water leak.

I got the PA going later, but gave up early. I tried harder on Sunday, but signals sounded weaker than normal... after a bottle wine with my dinner, there were some strange call signs in log. Sorry to miss a few CQs to east. I could not copy replies as there was much noise from my tropo tower and buildings. On 9 cm, I am now getting 15 dB of Sun noise with a G3LTF preamp in front of mine. On 13 cm I am measuring only 12 dB so it seems that the 13 cm RX must be deaf and another job to fix. I am working on a YD1336 PA for 23 with the loan of a tube from G4DDK. Sam is now hearing signals on 23 cm with is 2.3 m dish.

**G3LTF:** Peter's [g3lff@btinternet.com](mailto:g3lff@btinternet.com) March EME report follows -- Although the moon path loss was high, activity was moderately high on 1296 during the contest weekend and the WX here in the UK was good for a change. I worked the following on 27 March: SK0UX, LA8LF, LX1DB, JA6AHB, IK2MMB, G4CCH, SM3AKW, OM6AA, DF3RU, F1ANH, ZS6AXT, OK1CA, OZ6OL, 9H1ES (I thought this was an initial, but we had worked back in 1998), GW3XYW, F6KHM, OH2DG, F6CGJ, G3LQR, PA0SSB, K2UYH, ON5RR, K0YW, HB9Q, W2UHI, K5JL, K4QI, VE6TA, OZ4MM, WA4NJP, VA7MM, NA4N for initial #205, W2DRZ and K5GW, and on 28 March: DL0SHF (not sure if this was an initial), JA8IAD, DL1YMK, K9SLQ #206, N2IQ, IK3COJ and WA6PY for a total of 41x28. CWNR were JF3HUC, IK1MTZ and N2UO. Heard was UR5LX. I had several tries with 3B9C on 432. On my sked on 2 April, they reported hearing me, but as the moon was obstructed by trees the noise was high and I heard Nil. On 4 April, I heard them from 2015 to 2105 at up to M copy, but couldn't attract their attention. On 2 April, I did work PA0PLY on 432 for initial #379 with a good signal and VK3UM at (559/559). All of this was on CW. Most of the rest of this weekend was disrupted by gale winds again! Earlier in the month Dave, GOMRF, came to visit and I demonstrated 1296 and 432 echoes including polarization rotation effects. I can rotate my 432 feed during an echo period. My 3.4 GHz work continues to progress. I now have 18 dB of sun noise from the 6 m dish with a 0.7 dB preamp. This indicates that the HB dish is still at least 50% efficient at 3.4 GHz. My rebuild and realignment last year paid off! I also see 0.65 dB of moon noise. This is with a VE4MA type feed, linearly polarized. I am now working on the TX PSUs. Finally, I want to remind everyone of my new email address.

**GW3XYW:** Stu's [gw3xyw@thersgb.net](mailto:gw3xyw@thersgb.net) EME report for March and April -- On 23 cm, on 27 March I worked OZ4MM, F6KHM, G4CCH, OZ6OL, SM3AKW, F1ANH, LA8LF, SK0UX, ZS6AXT, JA6AHB, G3LTF, K5JL, K2UYH, DF3RU, K0YW, WA6PY and IK3COJ. On 10 GHz, on 27 March at 1715 I heard I5PPE calling CQ - CWNR, the back on 23 cm on 28 March I worked DL1YMK, OH2DG, OZ6OL (dup) and F6CGJ. In all I made 20 contacts with 11 countries. On 10 GHz, on 28 March at 1750 I heard unidentified signal QRZ? Back on 1296 on 3 April, I worked G4CCH, OE9XXI, IK3COJ and F2TU. I also copied the W2ETI beacon using JT65B at -24 dB. (W2ETI was visible on the 'Big Screen' red trace as a small peak one minute after 2210, 2215, 2220, etc. The 'dB' printout for these periods was -26, -25, and -24 dB. All other periods showed -33dB. WSJT is on a separate computer in the EME shack. The Internet machine is in the house, which is not very convenient). I plan to QSY to 13 cm for the May activity weekend.

**HB9JAW:** Michel [hb9jaw@bluewin.ch](mailto:hb9jaw@bluewin.ch) reports that on 3 April -- At about 2200 I lifted my dish to the moon and heard 3B9C crystal clear (519) calling CQ. Many stations were calling him, but he kept on calling CQ. By the time I had my equipment ready, at about 2225, he was gone. This was a little frustrating and I switched to 1296 and worked G4CCH on SSB and IK3COJ on CW. My echoes were extremely loud. During the March contest weekend I changed from an IMU Horn to a new Septum Horn. The WX was very cold. I worked just before moonset on Saturday some very loud stations as follows HB9Q (53/55) on SSB, K4QI (559/579) for an initial #, N2IQ (579/599), K2UYH (579/579), VA7MM (539/559) #, F6KHM (55/55) on SSB and G4CCH (55/55). CWNR were LX1DB, JA6AHB, ZS6AXT, DL0SHF, G3LTF, DF3RU and SK0UX. The strongest stations heard were DL0SHF and LX1DB. On Sunday afternoon during my work break, I wanted to show to some EME friends how well my system works. I turned the dish to the moon and there were very weak echoes! It stayed like this till midnight when my echoes were again booming... The next day I found water inside my TX 1 5/8" Flexwell feedline. Apparently on Saturday and after midnight Sunday the temperature was below zero and the water was frozen [good low loss dielectric].

**HB9Q:** Dan, HB9CRQ, [hb9crq@hb9q.ch](mailto:hb9crq@hb9q.ch) sends the following update -- I very much enjoyed the March contest weekend. I had to operate all bands myself as Mark was on holidays and therefore HB9Q was single operator! I had to split my activity time on 3 bands. Never the less I could work some very nice stations on all bands. The detailed logs for all bands are on [www.hb9q.ch](http://www.hb9q.ch). 432 was again the highlight! Working several QRP station on random and sked was very exciting! I worked the following stations on JT44: JH6VAX/4 with 4x25 el and 50 W, JK1KTY with 8x25 el and 50 W, UA4AQL with 2x24 el and 70 W, WB2SIH with 1x19 el and 90 W, ZS5Y with 1x8.5 wl and 90 W, IW4DHN with

1x29 el and 90 W, JH0MHE with 8x27 el and 100 W, OZ/OH3MCK with 2x18 el and 120 W and N9LR with 1x30 el and 150 W. All the above were first time 70 cm EME QSOs. We are definitely capable of working 1 yagi 100 W stations on JT44 random and 4 yagi 50 W stations on CW random. It is possible to work stations even 3 dB weaker, but there we need good conditions. If anybody feels like trying, please contact us at [dan@hb9q.ch](mailto:dan@hb9q.ch). On 1296 it was nice to work 3 initials with K9SLQ, NA4N and DL0SHF to bring us to initial #145 and a contest score of 37x24. Conditions seemed to be quite OK, but activity was low and on Sunday extremely low!

**IK2MMB:** Sergio [ik2mmb@email.it](mailto:ik2mmb@email.it) reports on the 2<sup>nd</sup> leg of the contest on 23 cm - I started too late to have a time to work the JA window. I did hear JA6AHB, but he got away. Everything was ok until 2130 on Saturday. After a QSO with K5JL, the PA left me! The explosion was so bad that the current meter came completely off the front panel... Just like *shooting a 38 special* in house! I spent the rest of the evening rebuilding the PA. Sun morning after a short night of sleep, the PA was back in service, but had to replace the ac power lines. Tnx to my XYL for help pulling new wires from the ac switchboard. I was back on the air at 1200. I was so tired that I closed down at 2200 with some window left to NA. What a weekend! I ended with about 27 QSOs, no JA's and only a few from the USA. I heard IK1MTZ, my new 23 cm neighbor. Gotaways were K5GW and HB9BBD. Please don't ask me about condx - hi!!!

**IO4DF:** Vico, I4ZAU, [ig4df@crbr.it](mailto:ig4df@crbr.it) reports that his club is QRV on 10 GHz EME. They are looking for a skeds. The station consists of 7 m dish, 90 K preamp and 60 W RW2135 TWTA. Their moon window is limited to AZ between 120° and 300°.

**JA6AHB:** Toshio [ja6ahb@nifty.com](mailto:ja6ahb@nifty.com) reports the following contacts in the REF-DUBUS EME Contest -- On 432 I worked at 0921 K2UYH (559/559), 1024 VK3UM (559/539), 1056 JA2TY (549/449), 1110 J11NNJ (O/O), 1736 OZ4MM (559/549), 2016 SM2CEW (559/559), 2026 HB9Q (579/439), 2052 F6KHM (O/O), 1026 VK4AFL (549/549), 1038 K9SLQ (559/559), 1052 (559/559), 1118 JH4JLV (O/O), 1904 DF3RU (559/549), 1916 UA3PTW (549/549), 1951 DK3WG (549/449), 2021 G3LQR (539/539), 2030 DJ6MB (539/539) and 2136 EA3DXU (O/O) for a total of 18x14 or 25,200 points. On 1296 I QSO'd 0143 K2UYH (559/559), 0149 N2IQ (559/559), 0212 VE6TA (O/O), 0218 K4QI (559/559), 0235 K5JL (569/559), 1102 HB9Q (579/549), 1115 HB9BBD (579/569), 1128 G4CCH (559/559), 1134 LA8LF (559/549), 1139 SK0UX (559/559), 1151 G3LTF (559/559), 1206 OK1CA (559/559), 1219 OZ4MM (569/549), 1233 SM3AKW (559/559), 1240 F6KHM (579/559), 1407 ZS6AXT (539/559), 1426 GW3XYW (559/559), 0339 K0YW (579/559), 0250 JR4ZZS (569/539), 0305 JA8IAD (549/429), 1159 DL0SHF (579/449), 1218 DF3RU (559/549), 1228 F1ANH (559/449), 1303 F6CGJ (569/559), 1406 DL1YMK (559/539) and 1445 OH2DG (569/559) for a total of 26x17 = 44,200 points.

**K0YW:** Bruce [k0yw@frontier.net](mailto:k0yw@frontier.net) reports success on his two 1296 skeds during the AW on 4/5 April despite wind and rain. He QSO'd 9H1ES (559/349) - plus lots of M's and O's, and NA4N (559/559) once he found the right frequency to TX on.

**K4QIF:** Russ' [K4QI@aol.com](mailto:K4QI@aol.com) 1296 DUBUS contest results -- The following were worked on 1296 on 27 March: K5JL, K2UYH, WA4NJP, VE6TAA, JA8IAD, N2IQ, JA6AHB, F6CGJ, F6KHM, HB9Q, LA8LF, G3LTF, SM3AAKW, ZS6AXT, F1ANH, G4CCH, WA6PY, PA0SSB, K0YW, DFR3RU, OZ6OL, OZ4MM, DL1YMK, SK0UX, VA7MM, W2DRZ and OK1CA. I thought activity was below par with many old calls missing.

**K5JL:** Jay worked before the contest K9SLQ to give Wayne his initial 1296 EME QSO. In the contest Jay again worked K9SLQ, 9H1ES and many more. HB9Q was on, but no OEs were heard. He did copy on the following weekend OE9XXI and K9BCT calling CQ a lot.

**K6JEY:** Doug [doughhelen@moonlink.net](mailto:doughhelen@moonlink.net) is setting up for 1296 EME -- The JT mode is pretty much what I am aiming at. I should be able to go on JT and CW by May. I am just about done with 432. The interference in my area is so strong that running relatively QRP is nearly hopeless. I can transmit a good signal, but just don't have the RX sensitivity. It was a pleasure to hear EME signals on 1296 during the contest. The station is currently 2 x 55 el loop yagis, .4 dB NF LNA and 135 W PA.

**K7XQ:** Jeff's [k7xq@elite.net](mailto:k7xq@elite.net) 432/1296 EME Report -- Well looks like VE4MA was correct. After 3 failed attempts on 432 using the 10' dish, I have concluded it is not worthwhile to continue the struggle. I plan to revert back to yagis for 432. I would like to have a reliable CW level station on 432. The dish was good enough to complete with WA4NJP on JT65B and KL6M on CW on the first attempt! I have 3 432 M2 9 WL yagis and would like to find one more. I put the

scalar choke back on the VE4MA 1296 feed and configured it so that the choke edge is flush with the opening of the feedhorn. I am measuring about 16 dB of sun noise. I tried a 1296 CW sked with VA7MM. He is the smallest station I have ever heard on 23 cm. Mark peaked 10 dB S/N easy copy, but we did not complete. He was only giving me "T" reports. I also heard some very loud JT-65 signals on 1296.040. One of those stations was peaking well over 20 dB over the noise, but I couldn't get them to sync.

**K9BCT:** Randy had problems during the DUBUS Contest-- Murphy visited big time! First of found that I was only getting about 1/4 the normal sun noise. I finally determined that my TR relay was giving about 10 dB of loss. After that, I found that my FT-1000, which I use as an xverter IF was having problems. The audio on RX was distorted. But worse was whenever I keyed TX with my external switch, I immediately got a 40 W carrier. I will probably have to ship it off for repair. I switched to my FT-736R, but it only gives enough drive to get about 500 W from my PA.

**KL6M:** Mike [kl6m@qsl.net](mailto:kl6m@qsl.net) was not QRV on 23 cm for the EWW contest weekend – Murphy absolutely destroyed me. I got the 23cm amplifier and power supply completely finished in time for the contest, but not without many problems. I blew fuses, burned out resistors, transistors - lots of fun! I got things working up to the point of applying RF. It also snowed over a foot here in the last two days. The best decision I made was to wait on all the outside work until I had the system finished and tested inside. Because, the final Murphy attack was on my FT-736R. It is fried. I will have to send it to Yaesu for repair. I checked it out as best I could, and it appears that the problem is in the microprocessor. I have isolated the 736 problem to the main microprocessor. I plan to try to change this myself. Burghardt's is sending me a replacement chip. I am still trying to find a socket for this chip. If anyone knows a source please let me know. This puts my 222 and 1296 projects on the waiting list. I am QRV on 70 cm using my FT-767. I tried 3 times with 3B9C and copied them very well on first and third tries, but they heard no signal from me, even though I was fully QRV with 1500 W. The 2<sup>nd</sup> time, they reported they could not find the moon. I did worked UA3PTW (559/559) right after my attempt with 3B9C.

**LA8LF:** Anders' [LA8LF@tiscali.no](mailto:LA8LF@tiscali.no) report from the DUBUS/REF contest – I worked 32 stations on Saturday and 3 on Sunday as I had only 1 hour available that day. Three were initials: VA7MM, K0YW and JA8IAD. Worked were DF3RU, DL1YMK, DL0SHF, F1ANH, F6KHM, F6CGJ, G3LTF, G3LQR, GW3XYW, HB9BBD, HB9Q, IK2MMB, IK3COJ, JA8IAD for initial #150, JA6AHB, K2UYH, K4QI, K5JL, K0YW #151, LX1DB, N2IQ, N2UO, OH2DG, OK1CA, OZ4MM, OZ6OL, PA3CSG, PA0SSB, SK0UX, SM3AKW, VA7MM #152, VE6TA, W2UHI and ZS6AXT. CWNR were WA4NJP and IK1MTZ. 9H1ES was heard in QSO with G3LTF, but too weak for a contact. My VE4MA feed position had changed during winter and was 6 deg. off in AZ and 4 deg. in EL. I was not able to lower the tower to get to the feed as my right shoulder is still not useable after operation in Nov. I would not have been able to raise the tower after feed alignment. I hope to become QRV during the summer on 3 cm EME with my 3.8 m solid dish, DB6NT 0.59 dB WG-90 LNA and 10 W TWTA all located at the feed.

**OM6AA:** Rasto [om6aa@stonline.sk](mailto:om6aa@stonline.sk) took part in EU WW EME Contest on 27/28 March -- It was my first EME transmission this year. I have worked on 1296: HB9BBD (559/549), HB9Q (559/529), PA3CSG (559/M), OZ4MM (559/549), G4CCH (549/439), SK0UX (O/O) for initial #28, G3LTF (339/O), F6KHM (559/O), K5JL (559/549), SM3AKW (O/O), K2UYH (559/449) and DL0SHF (559/M) #29. Conditions produced weaker than normal signals. I CWNR F1ANH, OH2DG – for about 30 min, LX1DB, LA8LF, JA6AHB, K4QI and DF3RU. I think the contest weekend was not a good choice for small EME stations because of the extra attenuation. I am preparing a detailed article for DUBUS magazine about the Septum feed. I am planning to use a modify Septum feed for my new bigger dish. I have added a multi-collar rings to the Septum feed to improve feed efficiency. Tests conducted using the anechoic chamber at the Czech Technical University in Prague are promising – [see information at the end of this NL].

**OZ4MM:** Stig [vestergaard@os.dk](mailto:vestergaard@os.dk) reports on his March EME activities – In the last leg of the DUBUS EME contest I worked 44 stations on 1296. Less activity than expected, but OK. New stations worked on 1296 were NA4N (429/559) for initial #217, JF3HFC (549/O) #218, IK1MTZ (O/O) #219 and K9SLQ (429/559). After the contest I worked SK7MW (429/539) #221, who I missed in the contest. Other getaways during the contest weekend were 9H1ES, W2UHI and K5GW. The big event after contest was working the 3B9C (O/O) on 432. In my first sked I heard nothing, but they were fine copy in the DL9KR sked.

**PA0EHG:** Hans [pa0ehg@amsat.org](mailto:pa0ehg@amsat.org) is QRV on 3 cm, but is also to become QRV on 23 cm – I am looking for a mesh dish between 5 and 6 m for use on 23 cm. I almost had one, but it fell through. If I don't find a dish, I can use my 3.1

m solid dish and try to enlarge it with mesh but then the F/D ratio will not be optimal. On 10 GHz, my station is only operational during dry weather. I plan to be QRV during the DUBUS contest. I also have done some echo testing on 24 GHz but have not heard anything yet. I have 3 to 4 dB too little power with only 12 W at the feed. The receive side seems OK, but I never seem to know when there is testing going on between the operational stations.



**PA0EHG's 10 GHz Station**

**UR5LX:** Sergej [ur5lx@vhf-dx.net](mailto:ur5lx@vhf-dx.net) is making noise on 1296 – I QRV for the DUBUS contest on 1296 EME. I contacted OZ4MM, K5JL, HB9Q, G4CCH, K6KHM, SK0UX for initial #20 and the first UT-SM 1296 QSO, SM3AKW #21, K2UYH and LX1DB #22 and the first UT-LX QSO. CWNR were F6CGJ and OH2DG. I am still using a 3.2 m dish, 150 w and a FHX35 LNA, and am very interested in skeds.

**VA7MM:** Mark, VE7CMK [lunarlink@hotmail.com](mailto:lunarlink@hotmail.com) sends news on his and Toby, VE7CNF club station's activity – On 1296 during the EWW EME Contest, on 27-28 March, we worked 17 stations. QSO'd were K5JL, F6KHM, HB9Q, OZ4MM, LA8LF, K2UYH, K4QI, G4CCH, F6CGJ, G3LTF, SM3AKW, K5GW, HB9JAW, K0YW, LX1DB, OZ6OL and DF3RU. We have also implemented JT65 at the station and ran some tests with VE7BBG and K2UYH. Signals were strong so it was difficult to draw any conclusions about the relative merits of the three modes. With VE7BBG, we found it easier to decode on JT65C than JT65B. JT-65B failed more times on decode, most commonly failing to decode "R" and to a lesser extent "RO". Other text seemed to decode usually on the first go around. On K2UYH, the relative signal strengths were JT-65B -20dB, JT-65C -21dB, JT-44 -15dB and JT-44 (K2UYH at 25 W) -25dB. I do note the following about JT-65B & C: The 1 minute cycle reserves the last 12 seconds for decoding. With a fast computer for decode, one has enough time to read the message and select an appropriate preprogrammed response before the transmit cycle begins. JT-44 does not really afford this possibility because it runs on a 30 second cycle. JT-65 also provides generally clean complete decodes whereas JT-44 yields partially decoded messages with characters that may not be correct. We are open to skeds using both CW and the JT modes. We intend to be active in the ARRL June VHF contest (12/14 June) on 1296 single band and are seeking both EME and terrestrial QSOs.

**VE6TA:** Grant [ve6ta@telusplanet.net](mailto:ve6ta@telusplanet.net) reports on his DUBUS contest result s-- I spent the first pass on 2304 hoping to pick up several new ones on this band. I had worked both W5LUA for my initial QSO #1, and F2TU #2 the weekend before the contest. I have 90-100 W to my 5 m dish. During the first pass, I worked the following stations: F2TU, OZ4MM #3, OE9XXI #4, and OE9ERC #5. Signals were weaker than expected. I have constructed a Septum feed and plan to compare it with the VE4MA feed. I have little test equipment for 2304, so by eliminating the need to tune the horn for circularity, I hope to be further ahead. For the second pass, I switched feeds to 432. I found very poor activity and worked only 6 stations: F6KHM, S52CW, OZ4MM, HB9Q, K4QI and KL6M. I am still stuck at #99 initial on this band and looking for the magic 100. In the 23 cm segment of the contest, I was hampered by high wind during Eur windows, but was able to get on for both Asian windows. Conditions seemed quite unstable, however I managed to work the following stations: K5JL, K4QI, K2UYH, N2IQ, JA6AHB, VA7MM partial, G4CCH, LA8LF, HB9Q, OZ4MM, F6KHM, K0YW, K5GW, JR4ZZS (#90), SM3AKW, OZ6OL, ZS6AXT, IK2MMB, SK0UX, LX1DB, F6CGJ, DF3RU, F1ANH and DL1YMK. CWNR were JA8IAB, K9SLQ and GW3XYW. All in all it was a good contest. I hope we can encourage more participants to get on 1296 EME next year.

**W2UHI:** Frank is QRV again on 23 cm and tried to be active in the EWW EME Contest, but was forced to QRT by thunderstorms. He QSO'd OH2DG, K5JL, K0YW, LA8LF, F1ANH, G3LTF, ZS6AXT, IK0UX, G4CCH and possibly 9H1ES – copied 73s, but not sure.

**WA6PY:** Paul [pchominski@jaalaa.com](mailto:pchominski@jaalaa.com) worked on 1296 during the Eur WW EME Contest F6KHM, OZ4MM, K4QI, GW3XYW, G4CCH, K2UYH, SK0UX, K5JL, K0YW, ZS6AXT, DF3RU, OZ6OL, IK2MMB, F6CGJ, G3LTF and N2IQ. I am working on replacing my 8' dish with 12' dish, which I have gotten from Gary, K6CYS. I hope to improve my performance especially on 13 cm. Maybe this dish will also work on 6 cm.

**ZS6AXT:** Ivo [zs6axt@global.co.za](mailto:zs6axt@global.co.za) reports on the Second leg of the Eur Contest – Conditions and WX were better, but my AZ/EL indicators were still not 100% and thus it was a bit of a battle on occasions. On 23 cm on Saturday (27<sup>th</sup>), I worked G4CCH, SK0UX, LA8LF, HB9Q, OK1CA, OZ4MM, G3LTF, DF3RU, F6KHM, OZ6OL, F1ANH, SM3AKW, DJ9YW, IK2MMB, JA6AHB, GW3XYW, F6CGJ, PA0SSB, OH2DG, K2UYH, K0YW, W2UHI, K5JL and K4QI. CWNR were ON5RR, WA4NJP and WA6PY. On Sunday I added DL0SHF, DL1YMK, G3LQR, IK3COJ, VE6TA, WA6PY and LX1DB. CWNR were K9SLQ and JF3HUC. Conditions were bit funny during second half of the Saturday pass. I believe there was aurora. I certainly missed quite a few stations due to my problems – especially with the EL indicator. My 31 QSOs is 7 less than last year, but there were less stations participating and my moon window was really short, never mind the 6-10 dB disadvantage against most of the stations. However, the Eur EME contest is certainly more fair to smaller stations and us in the south than the ARRL one. I hope to be also on the 3 cm next year. On 1 April I had a partial with 9H1ES (M/?) and worked on 5 April UR5LX (O/O) for initial #192 and a new country. Speaking of initials, I believe it is good idea to divide initial counts between analog and digital contacts. I notice that this is not happening. I thought this policy was agreed upon? I am from the "old school", hi, and prefer to make any QSO by the use of my hands, mouth and ears. If somebody uses for this his computer, this is his problem and I am not going to stop him. I just do not like to be compared with him – Hi. [The discussion at the last EME Conference (2002) primarily dealt with the count of QSOs for DXCC and if digital mode QSOs were valid for DXCC. Little was said specifically about initials. I believe the feeling was that what counted for DXCC also would be applied for initials. The ARRL rules makes not differentiation of mode for a "general" DXCC Certificate, but do recognize DXCC achievements for specific modes, i.e., DXCC for all CW QSOs or DXCC for all SSB QSOs, etc. When people send reports to the NL, they are pretty much on the "honor system" to report their standing accurately. If they indicate their initial count as #xxx CW and/or #xx JT44/65, I always indicate these specific achievements. If they simply say I have so many initials, I assume it is a mix of all modes. You might want to indicate that you initial count are exclusively achieved on CW.]

**K2UYH:** I had a great time in the contest. I operated single op and worked on 27 March at 0018 K4QIF (559/559), 0025 K5JL (579/579), 0100 NA4N (559/559), 0123 VE6TA (559/559), 0144 JA6AHB (559/559), 0223 N2IQ (579/579), 0310 JA8IAD (O/O), 0335 JA7BMB? (O/O), 1628 ON5RR (449/559), 1632 G3LTF (559/569), 1642 SK0UX (559/559) for initial #223, 1655 G4CCH (569/569), 1700 F1ANH (559/559), 1707 ZS6AXT (559/579), 1710 SM3AKW (559/569), 1714 F6KHM (579/569), 1720 K0YW (559/559), 1751 F6CGJ (579/569), 1758 OH2DG (569/569), 1806 LA8LF (569/569), 1819 DF3RU (559/559), 1841 OK1CA (559/559), 1854 OZ4MM (579/559), 1902 GW3XYW (559/569), 1920 PA3SSB (559/569), 2010 VA7MM (449/449), 2026 DL1YMK (559/559), 2047 IK3COJ (559/549), 2056 OM6AA (449/569), 2115 NA4N (449/559) DUP, 2128 HB9Q (579/559), 2152 VA7MM (559/559) DUP, 2217 WA4NJP (549/559), 2233 W2DRZ (549/449) and 2332 HB9JAW (579/579), and on 28 March at 0252 K5GW (579/579), 0302 JR4ZZS (559/559), 1726 OZ6OL (559/559), 1759 UR5LX (549/559), 1849 IK2MMB (559/569), 1920 G3LQR (559/559), 1942 WA6PY (559/559), 2040 K9SLQ (447/559) #224, 2111 LX1DB (559/569), 2130 N2UO (559/559) and 2314 K7XQ (449/439) for a total of 43x30 and 2 initials. I was not as successful with my skeds. I took off time from work to make skeds with 3B9C. Because of my very poor window to the east, I knew it was not going to be easy. I was hopeful when I was able to hear good echoes through the trees at 15 degs moon elevation. I tried on 31 March at 2030 and 1 April at 2100, but heard nil both times. Both K1FO and K5GW who were on before me on the 31<sup>st</sup> seemed to have similar results. I had a yagi array ready to try on the horizon, but never heard anything back from 3B9C regarding additional skeds. I also ran some interesting tests using JT44/JT65 with VA7MM and DL3OCH. These tests are not conclusive, but they seem to indicate that there may be advantages to using T44 over JT65C on 1296. However more tests with JT65 are needed.

**NET/REFLECTOR NEWS BY G4RGK (BASED ON KIROG'S NETNOTES):** **DL8YHR** will be soon on 70 cm EME. Frank can be reached at [www.dl8yhr.de](http://www.dl8yhr.de). **WA9FWD:** is looking for skeds on 3.456 GHz particularly with G3LTF. He can also be on 23 and 13 cm. **WA3DJG** has started construction on 6' frame for a dish. **NA4N** was active on 1296 in the contest and worked G3LTF and many more, but had bad WX and only achieved a partial with K0YW, but QSO'd the following weekend. **K2DH** has acquired W4HHK's old dish and is working on a 23 cm PA to enable him to become QRV off the moon again. **PA3CSG** was on 23 cm for the contest but made only 3 QSOs. Geert worked 3B9C on JT65B. **KM5A** is back on EME. He has repaired wind damage to the array and much improved his RX system. He recently worked DK3WG and UA3PTW. **DK3WG** reports nothing heard from 3B9C, but a QSO with KM5A on 31 March. Jurgen has a new e-mail address [dk3wg@nexgo.de](mailto:dk3wg@nexgo.de). **DL9KR** after 2 days looking for 3B9C, on 2 April at 2000 worked then (O/O) peaks (549) for initial #799. **SM2CEW** copied 3B9C never got a reply from them on the 2nd, but worked them the following day. **SK7MV** is QRV on 1296 with a 5 m dish and low power. **K0YW** had bad WX for a few days, but ended the contest with 37x26 and 4 new initials. **K4EME** on 432 worked UA3PTW and tried with 7M2PDT but heard nil on both CW and CW. **UA3PTW** is running 30 x 15 el DJ9BV yagis! **N2IQ** was active on 1296 during the contest and worked quite a few. **K6DV** is making progress on getting his big dish back in operation. The jackscrew is repaired and plans to the surface and the 2 damaged ribs fixed by May. **F5VHX** has a problem with his TX feed line and is presently not QRV. **9H1BN/M** can hear on 23 cm EME with a 3 m dish. He is not yet QRV on TX, but may be on later this year. **LX1DB** is looking for activity on 3400 TX/3456 RX. Willie is getting .8 dB of moon noise and has 250 W out. He also has a new Andrews 3 m dish for 24 GHz. **9H1PA** may be on 432 EME with 100 W. **DL7UDA** in JO62uu will be QRV on 70 cm during the May AW with 4 x 21 el yagis and 800 W from a new GS23b PA. **WORAP** has sold his dish and PAs because of health problems. Bob has no more EME stuff left and is looking for a place to move that offers assisted living.

**FORSALE: KD4LT** is getting rid of all his EME stuff soon. If anyone wants my 22' 23 cm or my 32' 70 cm dish, I'll give them away for the taking. This includes mounts, feeds systems, relays, preamps, controllers... the works! Also his BIG 432 amp is available. **UR4LL** has quite a few Russian electronics parts and some equipment for sale. He has new NOS metalceramic final tubes: TRIODES: GS35b, 1500+W thru 432 (electrically close to 8877) for \$US105, GS31b, 1200 W thru 432 for \$US75, GS9b >100 W on 13 cm (K9EK cavity design) for \$US25, GI6b, 300-400 W on HF to 6M) - \$10 without cooler, GI7b & GI7bT, 300-400 W on HF to 135 cm; 250W thru 23cm for \$US15-25 and G811 (= 811A) for \$US25 per pair; TETRODES: GS15b, 500+ W on 23 cm in KDSFZX PA design for \$US25, GS23b 1.5 kW on 70 cm N7ART, KDSFZX, K5GW PAs (same as 4CX1600U; similar to YL1050) for \$US150, GU43b ok for HF - 6m (similar to 4CX1600) 1600 W up to 100 MHz for \$US50, GU74b (= 4CX800A) for \$US60, SK1A socket for \$US25, and GU84b (4CX2500) 2500 W to 250 MHz for \$140. Sockets not available. Also RELAYS: REW-15 1500 W (thru 650 MHz) 75 ohm coaxial relay with 3 cable connectors for \$US23, and REW-14 1500 W (thru 650 MHz) 50 ohm coaxial relay with 3 cable connectors for \$US33. CAPACITORS: HV door knob capacitors in 470, 680, 1500 @ 10-20 kv and 6800 pF values, K15-4 RF Capacitors 470 pF, 30 kV, Vacuum Variable capacitors 4 - 100 pF, 5 kV for \$US50 and 10 - 500 pF, 10 kV for \$US100; Vacuum Relay B1B, 3KV, 10A for \$US20; and ZENER DIODES: Approximately 8W, 815A 5.6V @1.450 A & D815B 6.8V @1.150 A for \$US0.25 each. Note all parts are "new off shelf, old stock," never used. All prices on tubes, relays, vacuum variable capacitors, etc., include shipping. Delivery period is about 2 weeks. Contact Alex at [ur4ll@bk.ru](mailto:ur4ll@bk.ru) or see <http://www.nd2x.net/ur4ll.html> **DL8YHR** has for sale a 5CX5000A. Contact Frank at [www.dl8yhr.de](http://www.dl8yhr.de). W4TJ has a TH-327 cavity available.

**FINAL:** I am sorry, but this NL is a week late (the official activity weekend is 1/2 May) and not as complete as I would like it to be. I have some great technical material, but I have run out of time. I will try to catch up next month. The June AW is the weekend of the 12/13<sup>th</sup>. There is no skeds list for the May AW. I am not sure why.

EME2004 plans are in place. We have a great technical program, an ideal location, wonderful support facilities, a terrific spouses program... All we need is for you to come – see the conference webpage at <http://www.gsl.net/eme2004/>.

The dates have been set for another fine conference, Microwave Update 2004. It will be held in Dallas, Texas on October 15 and 16.

Thanks for your support! The technical contributions are appreciated. I hope to CU off the moon! 73, Al – K2UYH