

## 432 AND ABOVE EME NEWS APRIL 2006 VOL 34 #4

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

**CONDITIONS:** 70 cm activity and conditions were good during the 70 cm activity period, but mixed the following week during the DUBUS EME Contest. The big problem was Faraday, which required TX at 90 degs to RX on Saturday making operation by fixed polarization station very difficult. On Sunday the polarization was diffuse and signals weak, but improved toward the very end of the contest. Contest activity on the 3 and 6 cm was reported down from past years, but there was still a reasonable turn out on 10 GHz. Despite the focus on 432 and 6/10 GHz, 23 cm was far from empty. The appearance of two new VK stations (VK3UM and VK4TL along with VK4AFL) definitely helped. April will not be a slow month! The focus will be on DUBUS 2.3 and 3.3 GHz EME Contest on the weekend of 8/9 April. – see the complete rules in the Jan NL. The regular activity weekend (AW) will be on 1/2 April and also coincides with the ARI New Modes EME Contest – basically JT65 EME. Full information on this contest can be found at [www.ari.it/vhf/contests/regolamenti/contest-eme-new-modes.pdf](http://www.ari.it/vhf/contests/regolamenti/contest-eme-new-modes.pdf). (The regular ARI EME contest is on 9/10 Sept). The new 70 cm CW Activity Times (ATs) are on 8 April 2300-0100 and 9 April from 1500-1700. DL3OCH also has a 1296 (small station - primarily JT) dxpedition to 9A, T9, YU, ZA and Z3 scheduled for 1-16 April – see Bodo's report.



Attendees at the 2nd JL-GW Mini EME Conference held at K5JL's the last weekend of Feb. Top Row left to right K1RQG, W4SC, K5JL, K0YW, W5LUA and K5GW. Bottom Row left to right WA5WCP, WD5AGO, W4OP and W4TJ. Not shown are W7CNK, K5PJR, K5CBL and WA5ETV.

**7M2PDT:** Shu [pdt\\_umesan@ybb.ne.jp](mailto:pdt_umesan@ybb.ne.jp) writes -- I was active on 70 cm using JT65B during March, but found, activity was quite low. My results are as follows: N9AB (-17 dB), VK3MO (-22 dB) for an initial (#), G4RGK (-17 dB). I copied nil from OK1TEH. I was very lucky to work with VK3MO because he has just a 1 x 35 el yagi with 120 W power – [see last NL]. Please look for me on the 432 EME JT65 chat <http://www.emeham.com/432/default.asp>.

**9A4QV:** Adam [adam9a4qv@yahoo.com](mailto:adam9a4qv@yahoo.com) can be QRV on 70 cm EME. His equipment consists of FT-847 with internal preamp, GI7B power amp with 300 W out and 6 m of 1/2" Cellflex cable to 25 year old horiz pol 21 el F9FT yagi. He has position control with a polar mount actuator. Unfortunately Adam will be working in the Caribbean for the next few months and not available for skeds from home. The good news is that he considering some 70 cm EME dxpedition activity and says that the Dominica republic can issue license very easily and quickly. [I am sure Adam would be interested in hearing from others stations interested in helping generate new 70 cm DX opportunities].

**9HITX:** David [davcut@onvol.net](mailto:davcut@onvol.net) in Malta is setting up for 70 cm operation again. He made a few QSOs in the past on JT65B with a single yagi. Dave is going to try again with 2x26 BVO70 8.5 WL yagis, TE 4450G 140 W SSPA, Icom 706m2g and 25 m 1/2" Heliac feedline. He still does not have preamp up on the mast. Dave will be off 432 in June and July, when he wants to concentrate on 6 m activity.

**DL3OCH:** Bodo [dl3och@gmx.de](mailto:dl3och@gmx.de) has firmed up his plans a 1296 dxpedition to the Yugoslavian area in April -- I will travel through Croatia, Bosnia & Herzegovina, Yugoslavia, Albania and Macedonia with my ham gear and camping equipment between 1 and 16 April. I cannot guarantee that I will be able to activate ZA and Z3. It appears that 23 cm operation is prohibited in ZA. I will go there and try to get a license. If I can't, I will just go to the next destination. Thus, I cannot give you an exact schedule for my journey, but I plan to stay for about two or three days in each country – see my web page for details and updates at [http://www.qsl.net/dl3och/index\\_e.htm](http://www.qsl.net/dl3och/index_e.htm) I will definitely drive to Tirana. Please make sure that you arrange a sked with me for an EME QSO. I will operate JT65C. My station will be an IC-7000 transverter and my 55-element yagi. Everybody will get e-mails from me, who has a sked. I will definitely try to let you know as soon as possible when and where I will be QRV. You can also try to contact me online with the AOL Instant Messenger, my screen name is dl3och.

**DL9KR:** Jan [bruinier@t-online.de](mailto:bruinier@t-online.de) was QRV for the 432 part of the DUBUS Contest for only around 1 hour -- I worked 12 stations and I can confirm conditions were bad. Jan wants to thank KE2N, W8TXT and W7ALW for QSLs. I am still waiting for a QSL from W7EME.

**EA3DXU:** Josep [ea3dxu@jazzfree.com](mailto:ea3dxu@jazzfree.com) writes about his March activities -- The WX did not cooperate for the 432 part of the DUBUS Contest. High winds stopped my activity for several hours. I was finally able to be QRV Saturday evening and Sunday for about 10 hours. I found conditions were excellent at times, with very good echoes for long periods and at others with very poor or no echoes and no signals on the band. I called CQ for a long time and got many replies, but was unable to identify the many of the stations that answered. I am very sorry that I could not pull these stations out of the noise. I finally completed 14 random unassisted QSOs with SV1BTR, VK3UM, SM3BYA, F6KHM, SM2CEW, NC1I, OZ4MM, HB9Q, DL7APV, UA3PTW, G3LTF, KL6M, VE6TA and OZ6OL. I also heard DL9KR. My equipment is 2 x 38 el M2 yagis and GS23B PA



9A4QV's Tonna yagis use on 70 cm EME

**F5JWF:** Philippe [f5jwf@wanadoo.fr](mailto:f5jwf@wanadoo.fr) reports on his 10 GHz operation -- I was active in the 3 cm part of the DUBUS EME Contest. I worked F5JTA for an initial (#), F2TU, IQ4DF, OK1KIR, LX1DB and G4NNS. Echoes from few stations are available in mp3 on my web site at <http://f5jwf.free.fr/Audio%20File%20EME%2010GHz.htm>. It was good fun except for the snow on the antenna, which degraded my RX performance and the activity was low. My station is a 3.7 m dish with 20 W TX power.

**G3LOR:** Simon [G3LOR@aol.com](mailto:G3LOR@aol.com) writes about his March AW activity -- Sam, G4DDK's activity has gotten me back on again. I added a few new ones on 23 cm with ES5PC, HA5SHF, IW2FZR, SM3LBN and LA9NEA, and during the AW W9IIX and N2UO, which brings me initial #103. I heard a test that G4DDK did on the JT mode with WW2R and copied 2 periods ok. Dave was audible as well, so I think I can work him on CW random sometime. I have improved my preamp a little with now 13.5 dB of sun noise at a flux of 76. I can now hear stations to my east through all the towers and buildings so there is hope to work the VKs and Jas. I did hear a little from VK3UM and VK4TL last week, but noise will be a problem - I do hear my echoes at times. The station is pretty much the same: 4.2 m dish with VE4MA feed, NE325 preamp with 4 x 7289 PA at 300 W. I can get more power, but it gets "doggy" with 1700 V on the plates, so I have dropped it back to 1400 V under load.

**G3LTF:** Peter [pkb100@btinternet.com](mailto:pkb100@btinternet.com) reports on his EME recent activity -- I has been on 432 thanks in part to the activity periods organized through DUBUS. On 5 Feb the conditions were good with excellent loud echoes, slow librations and moderate activity. I worked 13 stations and heard a few more in 1 hour and 45 minutes. QSO'd were SV1BTR, SM2CEW, I5CTE, NC1I, G4RGK, OZ4MM, KORZ, I1NDP, SM3JQU, N9AB, G4ALH, F2TU and OZ6OL. I called N4PZ several times, but he could only get "3LT". I obviously couldn't find the right polarization for him as he was (559) copy. I also called DK8VS several times and heard UA3PTW. On 10 Feb I was on 1296 and worked ES5PC, LA9NEA, SM5LE for initial #233, G3LQR and IW2FZR. I looked for 3Y0X on the 14th Feb with no result. I found later they were not able to be QRV. On 4 March I was on 1296 and I very pleased to at last work VK3UM #234. I then worked VK4AFL and another new station VK4TL #235. I then had a second QSO with Doug, with better signals due to my dish clearing the tree blockage, followed by SM3LBN, G3LQR and PA3CSG. On 5 March I was back on 432 and found that during daylight hours there was virtually no peak in polarization, i.e. it was very spread - which always makes for weaker signals. However, 4 hours after sunset, polarization was definitely more sharply defined. I worked SM2CEW, DL7APV, KL6M, G4RGK, W7AMI, VE6TA, N9AB, UA3PTW, OK1DFC for initial #397, EA3DXU and K2UYH. On 6th March, VK4AFL, was worked again on 1296 after he indicated on Moon Net that he would be QRV. On 11/12 March I was operational in the DUBUS 432 EME Contest and when ever possible and I found conditions pretty good (considering that it was apogee). The PA bias supply failed and it took a long time to locate the fault (a shorted transistor) and to get it repaired; so I missed quite a lot of time. Polarization was sharply defined and most of the time, especially Sunday. Faraday was around 45 degrees. As well as listening to echoes, I established this by rotating my feed and listening to my signal relayed by phone from G3LQR, who had a dual dipole feed at 45 degrees in his dish. I worked on 11 March OK1DFC, F6KHM, VE6TA, SM3BYA, SV1BTR, K2UYH, OH2DG, UA3PTW, OK1CA, K4EME, NC1I, KL6M, OZ6OL, K3MF, N9AB, VK3UM, G4RGK, DL1YMK, OZ4MM and GW3XYW, and on 12 March SP6JLW, S51ZO, EA3DXU, VK3UM, SM2CEW, JA6AHB and G3LQR (using his 4.3 m dish). CWN'R'd were SM2ILF, JH4JLV and DL7APV. I also heard F3VS, F2TU, F6HZL, SM3JQU, SM3AKW, DL9KR, JA9BOH and DL9JY. Finally on 13 March on 432, I worked PE1IIR #398 on a sked. He had a very readable signal from his small system. Fortunately, we had virtually zero Faraday rotation. I plan to be on 13 cm with 6 dB higher power than previously with an SSPA at the base of the dish in April. I just have to complete the integration.

**GW3XYW:** Stuart <temporarily no e-mail> was active in Feb on 70 cm during the AW and for the DUBUS Digital Contest -- I worked on 4/5 Feb DL7UAE (O/-16), N9AB (O/-6), OH2DG (O/-8), HB9Q (O/-13) -- Dan was running reduced power and W7AMI (O/-11), and in the contest on 11 Feb DL7APV (O/-17), OK1KIR (O/-17), G4RGK (O/-15) and N9AB (O/-8). All contacts were on JT65B except OH2DG who was temporarily JT65C. I am temporarily QRT on 23 cm because my IMU horn is being cleaned as corrosion built up after many years of service. In March I was only able to be QRV on 70 cm because of WX. Stations were all copied best with a 45 deg pol rotation and worked on 11 March. QSO'd were SM2CEW (449/449), UA3PTW (549/55), NC1I (559/569), SP6JLW (549/559), SV1BTR (569/559) for initial #214 and country 41, G4RGK (549/559), OZ4MM (569/559), DL1YMK (559/559), DL7APV (559/559), G3LTF (559/559). High winds prevented any activity on the 12<sup>th</sup>.

**GW4DGU:** Chris [chris@chris-bartram.co.uk](mailto:chris@chris-bartram.co.uk) is QRV 10 GHz, but made no QSO in the contest -- I worked long and hard to get myself back on 10 GHz with

sensible power for the DUBUS Contest, but was defeated by the weather! We had a lot of rain and wind, which didn't encourage me to put the newly repaired/refurbished 45 W PA/preamp box on the dish. I'm now starting work on a PSU for a 200 W tube I have here. Wind and rain is typical of the British Isles around the equinoxes. There's even a song about it, which starts 'It was in the broad Atlantic, 'mid the equinoxial gales that this young man fell overboard, amongst the sharks and whales!' I wonder if it might be better to run microwave EME contests in the northern summer, or to schedule them in, say, May and September. There are a significant number of 10 GHz operators who have to operate outside and the choice of March could be considered 'cruel or unusual punishment'! I also wasn't too happy with the choice of contest weekend; so close to apogee. Microwave EME is difficult enough without having to fight another 2 dB of path loss! On the microwave bands the sky is pretty quiet, and we don't have problems of background sky noise to anything like the same extent as on 144 or 432. s on the microwave bands aren't really competitive events in the way they are on the lower frequencies. They are much more of an opportunity to concentrate activity, and to provide a focus for newcomers. Path loss is everything! Could contest organizers please take note? Because of house blockage and limitations of my mount, I start to see the Moon again on about 28 March, and I'd be happy to run skeds the following weekend.

**HB9Q:** Dan [dan@hb9q.ch](mailto:dan@hb9q.ch) sends the following activity update -- During the DUBUS 432 EME Contest we were active for only a total of 12 hours. Conditions were at times difficult. On Sunday night, however, they were excellent. We worked a total of 38 stations in 18 DXCC and 5 US states and 1 VE province. It was great to work 2 more states on 432 for a total of 32! Many thanks, especially to Martin, KC3RE, who went portable to Delaware. We had a great CW-QSO even though Martin was QRP! I have updated our band-pages with the detailed logs for March. We were very happy to have worked several new stations on 432! Our next activity will be on 1/2 April. During our activity periods we are always stand-by on the JT-Logger at <http://www.chris.org/cgi-bin/jt65eme> and on <http://www.emeham.com/432>. We can be contacted there for band/mode information and to arrange skeds! If you like a sked in advance you can send an e-mail.

**IW2FZR:** Dario's [dario296@virgilio.it](mailto:dario296@virgilio.it) report for the SSB contest arrived too late for the March NL -- My contest activity was small because of problems with my PA. I did QSO on 2 April at 1049 HB9Q, 1206 F2TU, 1226 F6KHM, 1253 DL0SHF and 1406 G4CCH on CW/SSB for a score of  $(4x2+1)x3 = 27$ . [This report increases the submitted log total to 15].



**K5GMX's array of 4x25 FO yagis on 432 inside the 4x13 13b2 2 m yagis. Bill is QRV and interested in skeds [connerwa@comcast.net](mailto:connerwa@comcast.net)**

**K0YW:** Bruce was active on 1296 in March. He worked VK3UM on both CW (569) and SSB during the AW. The following weekend he QSO'd G3LQR, N2UO, ES5PC, K5GW, K5JL, SM5LE for initial #174 and G4CCH. Bruce reports finding a coax open shield problem that has been around quite a while as his echoes and reports are now generally up about an S unit.

**K3ME:** Wayne <k3mf@aol.com> was QRV during the DUBUS contest, but found conditions not too good -- I worked F6KHM for an initial (#), NC1I (#), G3LTF, N9AB, VK3UM (#), OZ4MM, VE6TA (#) and KL6M for 4 new ones. Also worked during the month [on JT65 I believe] were 7M2PDT (\*), W7IUV (\*), and VK7MO (\*). W7IUV has a single 33 el K1FO yagi running 250 W and VK7MO a single 35 el with 120 W. I am now running 8 x FO25 yagis with 800 W out. I switched the coax from my main splitter from RG8 to LMR400 and it has made a great improvement in my RX. It was very encouraging to be able to finally work the small stations.

**K4EME:** Cowels [candrus@rica.net](mailto:candrus@rica.net) writes -- After getting all my control and RF cables repaired due to a rotor problem, I was able to get on during the DUBUS Contest. I worked the following stations on 70 cm: NC1I, F6KHM, G3LTF, N9AB, UA3PTW, KL6M, K2UYH, HB9Q and OZ4MM. I had a very close miss with VE6TA. I copied Grant's V, the 6 and the A in his call. After reviewing my recording, I was sure it was VE6TA - sorry. I could see a few other stations replying to my CQs, but could not pull them out. Not bad all in all for my few hours of operation on 70 cm. I had a lot of fun!

**K5SO:** Joe [k5so@direcway.com](mailto:k5so@direcway.com) was busy last week working with feed horns and receive performance. He found the VE4MA feed seems to be 1 dB quieter than the Septum feed with the scalar ring. His dish is 0.43 f/d. Horn tests made by W5LUA, WD5AGO and K5GW also show a difference, but these tests were made on the feed without the dish. Joe's tests were for total system performance, not the fundamental difference between the feeds themselves. [See also W4TJ and W1GHZ's reports and TECH material by OM6AA at the end of this NL]. Activity wise on 1296 Joe added initials with LA8LF (579/579) for #67 and VK3UM (569/569) #68. Heard were K0YW and K5JL. He also worked W2UHI and K9SLQ (599)!

**LX1DB:** Willie [wbauer@pt.lu](mailto:wbauer@pt.lu) reports in March - I worked WD5AGO (559) on 13 cm CW and later (44) on SSB. Tommy's signals were good (15 dB over the noise). I also heard F2TU on 13 cm, but think that Philippe may have had a problem. I was seeing 0.4 dB of moon noise at the time.

**N7AM:** Jack is doing a "face lift" on his 1296 EME stations among the projects in progress are: 1) Updating the Prop Pitch Motor for AZ and installing new sprocket on mast for chain drive to the AZ encoder, 2) Wiring up the new tracking system by W2DRZ, 3) Installing new flat screen for MAIN Computer and for Tracking computer, 4) Covering up the new 1 5/8" Helix cable going from shack to Dish, 5) Building up new outdoor cabinet at dish for installation of 1296 YL1050 cavity from Germany and 6) Wiring up 1296 15B amps to N6CA's hybrid combiner.

**NC1I:** Frank [frankp@gcq.net](mailto:frankp@gcq.net) was QRV during the DUBUS Contest on 70 cm -- Although I was unable to get on during the March AW, I was able to put a full effort into the DUBUS contest. For the most part conditions seemed very good, although perhaps not quite as good as in Feb. At times activity was very good and at other times it was surprisingly poor. Other than the last hour of the contest, my station was active the entire time the moon was higher than 5 degs. Bob, W1QA operated with me throughout the entire contest. In addition to his help operating and steering the array, he provided much technical support with various projects around the shack. It is a lot easier to stay awake when there are two people in the shack! Bob and I had operated the ARRL DX contest from my station over the previous weekend and had made 1600 QSOs, so this was an interesting change of pace. We went from rates of over 150/hr in the DX contest to several "zero" hours in this contest! In the DUBUS contest it seemed that either 5 stations would answer our CQs or no one would. Ultimately I think we got to almost everyone that called. We worked every station that we heard/identified and only missed one or two that we could not identify. It was a pleasure to work several new stations and to work some old ones that I have not made contact with in many, many, years. The array and all equipment worked flawlessly throughout the weekend despite the high duty cycle. We found it a bit frustrating not being able to rotate polarity at elevations below 12 degs (guy wire interference) and apologize to anyone that had to call several times due to our inability to peak their signal until our moon was higher. My slow polarity rotator also made things a bit awkward at times. We found that almost every horizontally fixed station was coming in vertical all weekend. TX polarity was often vertical for Europe (a bit unusual), but mostly horizontal for NA. The polarity rotator had a good workout! Activity from NA was sparse at best. Only 12 of our 50 QSOs were with NA! Twice over the weekend we went more than 3 hours without a QSO despite calling CQ continuously at various polarities. Activity out of JA/VK/ZL was also far less than expected. We only worked 3 JAs and one VK. The loudest station heard was F6KHM, followed in order by KU4F, HB9Q and OK1DFC. My own echoes were probably somewhere between HB9Q's and OK1DFC's. EA3DXU had a terrific signal from his two yagi array. The following stations were worked: F6KHM, VE6TA, OZ6OL, UA3PTW, OH2DG, KL6M, F2TU, SM3BYA, K4EME, OK1CA, K6JEY, SM3AKW, OK1DFC, K3MF, G3LTF, N9AB, SM3JQU, SV1BTR, DL1YMK, WA6PY, K2UYH, JA6AHB, W7AMI, VK3UM, EA3DXU, SM2CEW, SP6JLW, I1NDP, YO2IS, LX1DB, GW3XYW, DL7APV, SM2ILF, PE1ETR, HB9Q, G4RGK, OZ4MM, I5CTE, W8TXT, F3VS, S51ZO, S54T, KU4F, DL9JY, KL7HFQ, N8CQ, JA9BOH, JR1RCH, JH4JLV and G3LQR for a total of 50 x 31 and a final score of 155,000. Our entry will be as a Multiop/QRO/Unassisted (all contacts were random, no Internet, loggers, spots, computer aided receive, etc. Hopefully by fall I can get the array set up on autotrack. It can get a bit challenging to manually track the moon with my sharp array, while trying to tune for stations and find the correct polarity (all those switches look

the same at 0300 in the morning local. It sure was nice having W1QA here all weekend sharing the duties. Thanks to all of those stations that got on over the weekend. I will try to spend significant time on EME again next month as well, but not nearly as much as this past weekend! I am often available week nights after 0200, if anyone is looking for a station to get on to test with prior to the next AW. Both W1QA and I are going to try and make the Wuerzburg Conference. It is literally the ONLY weekend this summer that I do not already have commitments. If I can arrange the time off from work, we should be able to get there. My wife and kids (16 & 12) are also interested in going.

**N2UO:** Marc [lu6dw@yahoo.com](mailto:lu6dw@yahoo.com) writes -- On 5 March I worked on 1296 LA9NEA, OZ4MM, OZ6OL, SM3LBN for initial #72, K0YW, G3LQR #73, K5JL and G4CCH. All contacts on random CW. This was my first EME operation with my homebrew software defined radio. In spite of having narrow filters available, I ended up using a 2.3 KHz bandwidth. It seems that I don't need to use a narrower IF filter on 1296, since it does not provide any improvement in weak signal receiving, unless there is QRM from other stations.

**OH2DG:** Eino's [eme.oh2dg@dnainternet.net](mailto:eme.oh2dg@dnainternet.net) 70 cm DUBUS Contest activity -- It was a pleasant and enjoyable time spent in working the EWW 70 cm Contest. Conditions were excellent - no snow storms or even clouds. WX was clear and sunny with a temperature of -15 C °. I worked only "easy periods", not midnight - hi! I succeed in getting 20 QSOs with SV1BTR, NC1I, OK1DFC, KL6M, UA3PTW, G3LTF, F2TU, OZ6OL, VE6TA, SM3BYA, F6KHM, K2UYH, N9AB, SM3AKW, VK3UM, DL1YMK, SM2ILF, OZ4MM, DL9KR and JA6AHB for a total of 2000 x 15 = 30 000 points. Two of them were initials with OK1DFC for #231 and SM2ILF #232. From time to time I called and listened on the JT65B mode without any results.

**OK1CA:** Franta sends his report from DUBUS Contest -- I was active in the second part of DUBUS Contest on 432 and 10 GHz. I tested a new rig on 10 GHz with a 50 W output TWTA. I was QRV on 432 for only 2 hours on the morning of 1 March and I worked 8 stations including initials with UA3PTW and VE6TA to bring me to #139. I started on 10 GHz on the evening of 11 March and I worked IQ4DF (599/O), OK1KIR (559/549) and LX1DB (559/449). During the QSO with LX1DB a strong snowfall began and I had to stop my activity. I had 30 cm of new snow plus 20 cm of old snow on Sunday!

**OK1DFC:** Zdenek [ok1dfc@seznam.cz](mailto:ok1dfc@seznam.cz) had WX problem but still did well in the DUBUS Contest on 432 -- I was looking forward to being QRV during whole weekend, but weather changed my hopes. Starting at midnight Sunday morning we had snow and wind storm that forced me to stop operation. During the first night when I was QRV, conditions seemed strange and were not as good as the previous weekend. I worked UA3PTW, G3LTF, F6KHM (for initial #63), OH2DG #64, SV1BTR, VE6TA, SM3BYA, KL6M, K2UYH, NC1I - unbelievable signal, DL1YMK #66, N9AB and F2TU #67. Before contest weekend I worked 6 March at 1030 VK4AFL (559/559) #62, and on 7 March at 2100 HB9Q (56/54) on SSB - my first ever SSB QSO, 2126 K5GMX (O/O) on JT65 #62\* and 2331 OZ6OL (O/O) on JT65.

**OK1KIR:** Jan [ok1vao@quick.cz](mailto:ok1vao@quick.cz) writes about his team's efforts in the DUBUS Contest -- We were active in DUBUS Digi Contest. It was our first JT65B contacts and used it as test for our 3XOY sked. We worked on 11 Feb at 2118 GW3XYW (O/O), and 12 Feb at 1758 HB9Q (O/O) and 1835 OK1DFC (O/O) - very strong tropo signal as well. We worked in DUBUS 5.7 a 10 GHz contest on 3 cm on 11 March at 0014 F2TU (O/O), 0127 F5JTA (O/O) for initial #33, 0206 WA6PY (O/O), 1956 IQ4DF (569/559), 2338 OK1CA (549/559) and 2357 LX1DB (549/549), and 12 March at 0014 F5JWF (0/0) and 0037 partial VE4MA (0/449) - not completed due to a TWT PS failure. We also heard F3VS (M), IK2MMB (M) both in QSO with IQ4DF. Our 4.6 m dish was cover by ice and snow during the contest. Our 0.7 dB NF LNA and 50 W TWTA with linear rotatable polarization all worked fine, except when we lost the TWT power supply because of high humidity during the heavy snow. On 5.7 GHz we worked on 11 March at 2146 LX1DB (559/559), 2152 F2TU (559/559) and 2222 IK2RTI (559/549). Nil was copied in sked with JA6CZD on 12 March. The 6 cm station is basically the same as on 3 cm except for a 70 W SSPA and circular pool feed.

**OZ4MM:** Stig [vestergaard@os.dk](mailto:vestergaard@os.dk) had some problems during the 432 part of the DUBUS Contest -- I couldn't be on from the start in March as I had some problems with my arm, which gave me a lot of pain. So I decided to use the first night for recovering. I came back on the moon late from other duties on Saturday only to find I had a burned out transformer in my control system, which prevented me from turning the dish. At 2100 I had the power supply repaired and went on 432. Signals and activity were very good during Saturday night. Sunday was completely opposite. There were very few stations active and signals were much weaker than normal. At 2000 I quit, to get some rest for my arm. Stations worked during the contest were UA3PTW, OH2DG, SM2CEW,

G4RGK, SP6JLW, SV1BTR, F3VS, EA3DXU, I5CTE, HB9Q, NC1I, SM2ILF, GW3XYW, SM3JQU, VE6TA, S51ZO, PE1ITR, G3LTF, DL9JY, F6KHM, DK8VS, S54T, W7AMI, OZ6OL, DL1YMK, K4EME, K3MF, N9AB, KL6M, DL7APV, W8TXT, VK3UM, SM3BYA, F2TU, DL9KR, JH4JLV, JA6AHB, JA9BOH, G3LQR and JA2TY. All worked on CW random. EA3DXU was heard the whole weekend very strong with only 2 yagis. PE1ITR also had great signal from his 2 yagis. It appears that my log for the ARRL EME Contest has been lost at ARRL. Only my 13 cm results are shown this year on the ARRL website. I mailed in the same envelope my 13, 23 and 70 cm logs from the first weekend. (I was not QRV on the second weekend). It wasn't a great score as I missed the second weekend due to holiday travel, but it is still disappointing.

**OZ6OL:** Hans [oz6ol@mail.dk](mailto:oz6ol@mail.dk) was active during the 432 part of the DUBUS EME Contest -- I worked the following stations on random CW: NC1I, UA3PTW, SV1BTR, OH2DG, K2UYH, F6KHM, G3LTF, N9AB, KL6M, VK3UM, HB9Q, SM2CEW, G4RGK, DL7APV, DL1YMK, VE6TA, OZ4MM, DL9KR, JA6AHB and EA3DXU. Conditions were good Saturday night, but Sunday was very bad with diffuse polarization (or 45 deg as the signals were the same strength in horz or vert pol) for hours.

**PE1ITR:** Rob [rob@itr-datanet.com](mailto:rob@itr-datanet.com) writes -- On Saturday, 11 March, I was QRV on 432 with 2 x 28 el 8.5 WL yagis in a portable style setup with manual az/el control. I also used a GS35b PA and 0.35 dB NF preamp. The sky was clear, so I could point the antenna visual to the moon. I found signals much weaker than usual and thought there was something wrong with the system. Now I have read other stations reports, I understand conditions were not so good. I worked on random CW HB9Q, NC1I for initial #23 and OZ4MM. The antenna system is staying up till the end of March and I am available for skeds.

**SM2CEW:** Peter's [sm2cew@telia.com](mailto:sm2cew@telia.com) report for March follows -- I was very pleased to see such good activity during the 432 Activity Event on 5 March. I worked the following stations: EA3DXU, KL6M, G3LTF, VK4AFL, DL7APV, SM2ILF, G4RGK, K2UYH, VE6TA, OZ6OL, N9AB, SV1BTR, UA3PTW and OK1DFC. Even more stations were heard. Hopefully we can now spread the word in all circles that there is indeed random activity to be found on 432 and that EME capable stations should turn their antennas to the moon and join the fun. Dates for coming activity events can be found at <http://www.sm2cew.com/dubus-aw-70.html>. We will soon decide on the dates following the April event. I have had a number of indications of new stations coming on in April, but remember it doesn't have to be an initial each time we work an EME QSO. As for myself, I am glad to work any EME station I can hear, especially on random. Unfortunately I could not spend much time on the air on Saturday of the DUBUS Contest and understand that activity was a bit higher than on Sunday. I was pleased to work the following stations: F6KHM, VK3UM, JA6AHB, L1YMK, UA3PTW, SP6JLW, EA3DXU, OZ6OL, NC1I, OZ4MM, G3XYW, G4RGK, SM2ILF, I5CTE, HB9Q, SV1BTR, G3LTF and F3VS. I had one station call me that unfortunately did not stick around long enough for me to get the call - libration took signals in and out of the noise. I love these mystery stations. I hope I can catch him the next time. I feel that conditions were a bit down all the contest weekend. Before the contest I finally found a problem I have had for a long time in my PA bias circuit. It turned out to be an intermittent resistor. After fixing it, the YL1050 amplifier was behaving very well, producing stable power at all times. I shall be looking for W8TXT, WB7QBS and others during the next AW. I also plan to spend more time on 1296.

**SM3BYA:** Gudmund [gudmund.wannberg@telia.com](mailto:gudmund.wannberg@telia.com) was active for the 432 part of the DUBUS contest -- I arrived at the farm Thursday night. The temperature was down around -15 deg C and I was simply too exhausted to bother about turning on the electric radiator in the shack. Friday morning I got organized, powered up the shack, switched on the heaters and tried out the rig - which worked OK. The WX stayed cold all weekend, however, and the shack was still uncomfortably cold most of Saturday. Touching up the PA was decidedly unpleasant - it's in an unheated closet next to the shack, where the temperature must have been close to -10 deg C. In spite of the cold I put in a total of 11 operating hours, which was about what the old body could take - Saturday 0000-0400 and 1530-1830, and Sunday 0000-0230 and 1600-1730. I closed down early on Sunday evening and so missed some good conditions.

Apogee and long periods of stable Faraday lockout didn't make things easy at the time I was QRV. I managed a total of 20 QSOs with G3LTF, NC1I, OK1DFC, VE6TA, UA3PTW, OH2DG, K2UYH, F2TU, KL6M, N9AB, VK3UM, F6KHM, SM2ILF, DL1YMK, SV1BTR, DL7APV, HB9Q, EA3DXU, OZ4MM and DL9KR. I had a partial contact with SM3AKW, who disappeared before we could complete. Heard were SM3JQU, SP6JLW, S51ZO and others. The system is 8 x 21 el F9FT yagis, 750 W and 0.4 dB NF LNA.

**SM3JQU:** Per [perolof.sjlander@telia.com](mailto:perolof.sjlander@telia.com) reports on his 432 DUBUS Contest activities -- After a slow start at Friday night to Saturday morning, I got on at moonrise on Saturday with the feeling of having a lot of time, then all of a sudden the preamp blew in the middle of a CQ. So I only had about 3 hours of effective activity. I managed to work 7 QSOs and identified at least another 10 stations with good signals. Stations worked were F6KHM (O/O), SV1BTR (529/529), NC1I (449/529), KL6M (549/529), HB9Q (539/539), VK3UM (549/529) and OZ4MM (O/O). Stations heard were OK1DFC, SM3BYA (tropo and EME), G3LTF, OH2DG, VE6TA, N9AB, UA3PTW, S51ZO, SM3AKW (tropo and EME) and SM2ILF. I am active on 432 with 4 x 32 el BV yagis, 1 kW GS-35 PA, 0.4 dB NF ATF54143 preamp and an IC706.

**SM5LE:** Sven's [sven.o.nordin@telia.com](mailto:sven.o.nordin@telia.com) 23 cm activity report for 4-5 and 10-12 March -- I worked the following new stations: VK3UM for initial #12, JA4JBL #13, K2UYH #14, PA3CSG #15, K0YW #16, W5LUA #17, LX1DB #18 (almost exact 30 years after my first EME QSO EME on 4 March, 1976 - TNX Willi) and WW2R on JT65c for #19\* (#16 CW and #3\* on JT). It is fantastic to see what is possible on EME with such a "light station". With my 2.2 m dish, it looks like the minimum station I can work on CW is about a 4-5 m dish and for JT65c about a 2 m dish - depending of TX power of course. Please when working me use the "old" reporting system T-M-O for my tiny signals.

**SP7DCS:** Chris [sp7dcs@smrw.lodz.pl](mailto:sp7dcs@smrw.lodz.pl) writes on his effort to become QRV on 70 cm -- During the week before the March part of the DUBUS contest I worked very hard to build a 432 PA to upgrade my station and become QRV. Unfortunately a few hours before start of the contest Murphy visited my shack. My transistor 50 W driver amp went dead. Not was my power not increased, but it was reduced to 10 W! Being disheartened, I went to sleep - hi. The next day (Saturday) I spent a few hours listening on 432 with my 4 x 25 el mod IOJXX array. I heard SV1BTR, HB9Q, KL6M, VK3UM, F6KHM, OZ4MM and NC1I. So still no QSOs, but I will be one soon! PS: I am trying to find where I can buy BLU 45/12 transistor for my 432 driver PA.

**SV1AWE:** Bob [bkou@cpi.gr](mailto:bkou@cpi.gr) have made great progress on improving his 70 cm station -- I am now QRV with 4 x 6 wl Tonna yagis and 2 kW from a GS23b PA by LZ2US. My real problem has been interference/noise on RX. I first worked on my FT-847 and split the RX and TX, so the sequencer could drive my two preamps. In actual operation, I find the FT-847's internal preamp worsens my ability to hear in the presence of noise. Yes, the audio is higher due to the additional gain, but not my ability to recognise cw characters. My guess is the internal GasFet preamp is overdriven by the external preamp. My first preamp is a DB6NT design. After it is a filter from DCI with a 200 kHz BW. My goal is to avoid over-loading subsequent gain stages. After the filter I have a second stage to compensate for the ~ 3 dB loss of the DCI filter, and a length of RG-174 to generate 6 dB of attenuation. My second preamp is a homebrew design by SV1BTR. This second preamp is very crucial because it sees the DCI filter at its input, and must be unconditionally stable - it is! My QTH is in Athens is an urban hell for RX on 432. At a distance of 3 km, I have a mountain where is transmitted the TV stations, radio, amateur repeaters, Police, Pagers, mobile phones, etc. So when I am pointing at this mountain, my first preamp is over driven to the point where there is no RX at all. I thought that the solution was to change my first stage (DB6NT LNA). After long discussions, I purchased a 432 LNA technologies preamp due the design cavity and of course it's marvellous NF. It was terrible (constantly overdriven) in all directions. I then tried a filter in front of my first preamp. This is tricky because a compromise between NF and filter loss/bandwidth is required. I bought a DCI filter wide 10 MHz BW, but with small losses. The LNA tech preamp would not work with this filter in front. It lost > 10 dB and was unstable. The DB6NT preamp worked with this filter in front. So I now have a new box in the antennas to house my HF-400 relays, the wide DCI filter and DB6NT preamp, and am looking for skeds and random QSOs to prove the my improved system.

**VA7MM:** Mark [lunarlink@hotmail.com](mailto:lunarlink@hotmail.com) sends his group's reports on the 1296 SSB EME Contest and DUBUS Digi Contest -- The 4 Feb SSB contest weekend included a two way SSB contact with F6KHM ( 53/51) JN and dual mode (CW/SSB) contacts with LX1DB (44/559) JN, G4CCH (44/559) IO, F2TU (33/449) JN and K2UYH (59/549) FN for a score of (1x2+4x1)x3 = 12 [and our 17<sup>th</sup> log]. We also worked VE6TA (559/449) on CW for a non contest contact. In the DUBUS Digital Modes Contest on 12 Feb we logged JT-65C contacts with VE7BBG (O/O), K2UYH (-10/-13), VE6TA (O/O) and VK7MO (-29/-24). Activity in the digital contest was exceedingly low, however, we did work VK7MO for an initial. Our total operating time was about 8 hours. We intend to be active in the Italian ARI New Modes Contest scheduled for the first weekend in April.

**VE4MA:** Barry was active on 10 GHz in DUBUS Contest and writes -- It has been a long time since I was last on 10 GHz and I forgot sometimes to update the dish pointing in a middle sequence. I am also still running linear polarization

to my 3 m dish with 50 W into 2 dB of TX waveguide loss. I was receiving my normal 1.8 dB of moon noise. During my OK1KIR sked, they had a fine (449) signal, but were almost 20 kHz above where I expected them. Later I heard them call on the right frequency. They copied me (O), but had TX trouble. I copy a number of QSOs in progress. IQ4DF was (569), but I could not get his attention. I also copied LX1DB (439), IK2RTI, and F5JWF.

**VE6TA:** Grant <ve6ta@telusplanet.net> sends his results for the DUBUS 70 cm Contest -- The weather was a bit of a challenge with mother nature dropping another 15 cm of snow on us over the weekend. Polarity was again a big issue on 432, with NA locked out for the fixed polarity guys most of the weekend. The first night there was quite a bit of polarity smearing below about 25 deg elevation for me, and then signals cleaned up and peaked nicely. I mostly TX'd at 90 degs to the RX'd signal pol for intercontinental QSOs and TX'd at 45 degs for NA QSOs. For fixed polarity guys in NA, it must have seemed pretty quiet as most of the variable polarity folks will target the other continents horizontal polarity on CQs. This doesn't do much for stimulating activity in NA I'm afraid. I still managed a respectable 24 QSOs and 4 new initials from out west, so I'm pretty happy with the contest and its format. I also managed to give the new dish and dual dipole feed a good work out, and no fire this time! Stations worked were NC1I (great job of beaming with an outstanding signal), F6KHM, G3LTF, OK1DFC for an initial (#), SV1BTR, UA3PTW, OK1CA (#), OH2DG, SM3BYA (#), K2UYH, KL6M, N9AB, DL1YMK, JA6AHB, VK3UM, HB9Q, OZ4MM, OZ6OL, DL7APV, S51ZO (#), EA3DXU (great job for 2 yagis), K3MF (#), JA9BOH and JH4JLV. I change feeds for the next leg of the DUBUS contest in April.

**VK3UM:** Doug's [tikaluna@ycs.com.au](mailto:tikaluna@ycs.com.au) March activity report -- My dual feeds are now fully commissioned and working satisfactory with my 28' 0.43 f/d dish. On 23 cm I have a W2IMU circular feed with 15 dB of edge taper (well under illuminated) and <0.4 ATF 36077 LNA giving sun noise within ±5 SFU of predicted values by VK3UM's EMECalc (Taurus is 0.6 dB, Cygnus 1.1 dB and CS/G noise 6.8 dB. On 70 cm I have a dual dipole feed with a 13 dB edge taper (under illuminated) and < 0.4 ATF 36077 LNA giving sun noise within ±5 sfu of predicted values by VK3UM EMECalc (Taurus is 1.1 dB, Cygnus 2.3 dB and CS/G noise 5.8 dB. Echo wise on 23 cm I get absolutely Q5 CW echoes down to 12 w TX output (minimum I can get with exciter power turned right off to amplifier). SSB echoes are loud at > 180 W! 432 is working normal with excellent echoes. I am now ready now for a cross band duplex QSO! I am still amazed at what little a change to the feed positioning will do (60mm) and wonder how many other installations are not properly optimized. The following are my first QSOs with the new feed system. All contacts were on random CW unless indicated as SSB: on 4/5 March on 1296 VK4AFL, K0YW, K5SO, K5JL, K0YW on SSB, K5JL on SSB, SM3LBN, G3LTF, SM2CEW, IW2FZR, PA3CSG, SM5LE, G4CCH, G3LTF, K5JL, WA6PY, W5LUA, LA8LF, VK4AFL, JA9NEA, OZ4MM, K2UYH, K9BCT, WA5WCP -- weakest(539) from a 2.2 m dish and 250 W, and during the DUBUS contest weekend on 11/12 March on 432 VE6TA, JA6AMB, KL6M, NC1I, W7AMI, K3MF, UA3PTW, SV1BTR, OH2DG, SM2EKM, DL7APV, F2TU, SP6JLW, DL1YMK, OZ6OL, SM2CEW, SM2ILF, G4RGK, G3LTF, EA3DXU, SM3JQU, SM3BYA, HB9Q, G3LQR, JA9BOH, JH4JLV, W8TXT, OZ4MM, RW3PX, UA6LGH, DK8VS, DL9KR, SM2CEW, G3LTF and F6KHM... You can only work those that come on during your window! Sadly many regular stations were not present this Year. Conditions for the DUBUS Contest provided mixed polarity for most of the time on 70 cm. I even suspected my polarity switching was not functioning as signals were identical in both planes. Signals had little libration on 70, but noticeable on 23. I can now echo test simultaneously on both bands. I considered conditions to be stable and significantly better than normal. Towards my Moon Set on the 12th polarity was ~90 degs. My 'YYY' count was 3 for the whole weekend -- all on 70 cm! I would welcome noise measurements from other stations (all bands) to refine further the aperture figures I currently use, please.

**VK4AFL:** Trevor [thenton@bigpond.net.au](mailto:thenton@bigpond.net.au) writes about his March activity -- I had a fairly productive month working on 23 cm VK3UM for an initial [#], VK4TL [#], PA3CSG [#], G3LTF, SM3LBN, IW2FZR, G4CCH, K5JL, WA6PY, LA8LF [#], W5LUA and K9SLQ [#]. On 70 cm with my yagi array I worked DL7APV, SM2CEW, KL6M, OK1DFC for an initial [#] - all with good signals and with no polarity correction for Faraday required. One of the weekends was very quiet on 23 cm. I heard only K9SLQ with a huge signal, but nothing out of Europe at all although I understand their WX was very severe both days plus some operators would have been working the 70 cm contest. In this part of Queensland state [south] we were not affected by the cyclone, which did considerable damage approx 1200 km north of here. It was the worst in 30 years. I plan to be active again on 1/2 April.

**VK4TL:** John [radcool@tpg.com.au](mailto:radcool@tpg.com.au) is a new station on 1296 EME in QH22ov. He has a 3.7 m dish and about 100 W at the feed. John says his echoes are hard

to find, but at least they are there. He has already worked several stations and is interested in skeds. Look for him during the DUBUS 1296 contest.

**W1GHZ:** Paul [q.w1ghz@verizon.net](mailto:q.w1ghz@verizon.net) writes that has information on improved feedhorns including the new Super-VE4MA feed with measurements by WD5AGO at his web site [www.w1ghz.org](http://www.w1ghz.org). He and WD5AGO have written a paper on the feed which can be previewed [http://www.w1ghz.org/antbook/conf/VE4MA\\_Chaparral\\_septum\\_feeds.pdf](http://www.w1ghz.org/antbook/conf/VE4MA_Chaparral_septum_feeds.pdf).

**W4TJ:** Bill [w4tj@arrl.net](mailto:w4tj@arrl.net) also has some comments of Septum feeds. He thinks the FR losses may be the reason for the additional loss observed in some Septum feeds. He says the polarizing screws could also be contributing to the losses. Bill will be building a 0.45 f/d dish with further info to follow. Bill references W2IMU's notes #11 and #20 in Crawford Hill publication for reference to feedhorn performance.

**W6IFE:** Doug (K6JEY) [doughhelen@moonlink.net](mailto:doughhelen@moonlink.net) wrote that I did not include the OVRO group's results in the SSB Contest log reports. This was an error on my part. They QSO'd SM3LBW (59/59) JF, F6KHM (59/59) IN, DL1YMK (59/59) JN, F2TU (59/59) JN, G4CCH (59/59) IO, DJ9YW (59/59) JO, W7BBM (59/59) DM, OK1CA (59/59) JO, RW1AW (59/59) KP, LX1DB (59/59) JN, ON6UN (59/59) JO, K5GW (59/59) EM, W7UPF (59/59) EM, VE6TA (59/59) DO, DL0SHF (59/59) JO, K5JL (59/59) EM, K2UYH (59/59) FN, OZ4MM (59/59) JO for (2x18)x12 = 432 points [and our 18<sup>th</sup> log].

**W7ALW:** Barrie [barrie@centric.net](mailto:barrie@centric.net) in DN36au writes -- I am just about QRV (can monitor) on 432 again with 4 x 13 WL yagis and 1500 W. Hopefully I will get the XMIT relays working in time for the next AW. I'm also planning to be QRV on 1296 soon. I bought an LT-230S a few years and now cannot find the manual. I wonder if anyone can help me?

**W9IIX:** Doug [iix1@comcast.net](mailto:iix1@comcast.net) reports on his 1296 activity in March -- During the AW I worked on 23 cm K5JL, IW2FZR, G4CCH IK2MMB and G3LQR for initials and bring me to #28. I had a partial with SM3LBN and heard K2UYH, G3LTF, WA6PY and PA3CSG. I also detected N2UO working a 'G' station - a receive first here! I have started testing a 2304 PA and am now waiting additional parts to continue the process.

**WA6PY:** Paul [pchominski@Jaalaa.com](mailto:pchominski@Jaalaa.com) was active off the moon in March-- I was QRV on 1296 on 4 March, but found only G4CCH still on the band. Later I easy QSO'd VK3UM and VK4AFL. On 5 and 7 March, I tried with VK7MO on CW. Rex has good signals and we almost completed a QSO. By mistake I interpreted series of Ts as O reports. Then I sent RM and we exchanged R and 73 at the end. But T report is not good enough for QSO. Rex cans definitely QSO big guns on CW. I could copy his signals if he called me on random. [While in San Diego this month, I visited Paul and his brother, and was treated to a wonderful dinner by his XYL, Marta -- TNX!]

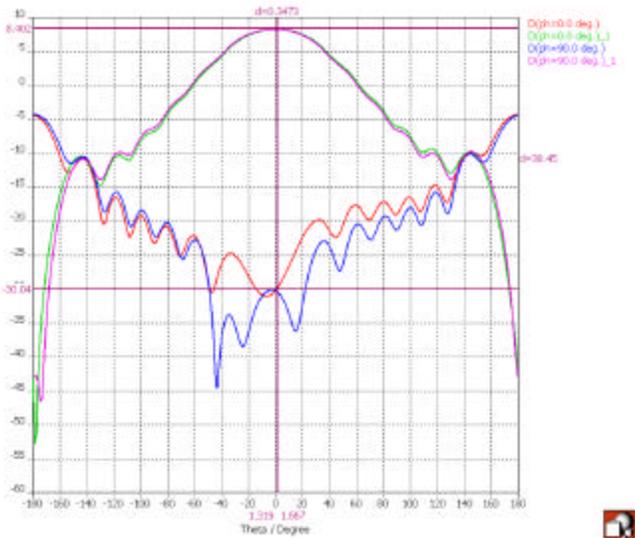
**WW2R:** Dave <robinda@nortel.com> has now installed a 40 mm high 4 digit 7 segment display pulse counter using an Intersil 7217A chip interfaced to his actuator driver box -- I can now see my actuator's position. I can also re-configured my relay box to put resistors across the coils when not supplying power to it. This stops the actuator "running on" when power is removed. Thanks to G4DDK for the suggestion. This change will help the PIC auto tracking project. I was QRV for the AW on 5 March and heard VK4AFL, but not consistently enough for a QSO. I decoded "WW2R G4DDK JO02" at -30 dB from G4DDK when he was setting up for our JT65 sked, but heard nothing during our sked! On CW I heard OZ6OL, K5JL and LA8LF, but only worked G4CCH. On 10 March I decoded SM5LE on JT65C, but he couldn't hear me and QSO'd K5JL on CW to make sure the gear was still working. On 11 March I worked SM5LE on a JT65C sked. Subsequently I got a request from VK7MO for a JT65C sked. I had to change the actuator to the other side of the dish, which took 30 minutes in the dark. On 12 March nil for the first 20 minutes of sked then signals got good and I QSO'd VK7MO easily. I also heard a chirpy K2UYH working VK4AFL (no chirp) on CW. I didn't expect anyone else to be QRV at 2 am local! I changed the actuator back to the other side of dish for a sked with G4DDK in the evening. Took 10 minutes in daylight and worked Sam on JT65C. I heard him before start of sked getting set up. I will be QRV on 2304/2320 for the April AW, possibly even on 3456 as well!

**XO6ET:** Bob [xq6et@yahoo.com](mailto:xq6et@yahoo.com) tells us that he is available for 70 cm test with big stations. He has worked HB9Q on JT65B with just an "old" FT790, which puts out 25 W and a Cushcraft 38 el CP yagi, which he easily convert to 2 x 19 el yagis. Bob plans to up grade his system with a bigger antenna and higher power very soon.

**K2UYH:** [a.katz@iee.org](mailto:a.katz@iee.org) another good EME month in March -- I was on 1296 on 4 March and worked at 1630 SM5LE (-22/O) on JT65C for overall initial

#259\* followed at 1650 by a CW QSO (O/O) for CW only initial #242 and 1720 SM3LBH (559/559). I switched to 432 on 5 March for the activity event to QSO at 1949 SM2CEW (559/559), 2003 SV1B5TR (569/569), 2012 KL6M (569/569), 2037 UA3PTW (559/559), 2052 VE6TA (559/559), 2105 N9AB (569/569), 2112 OZ6OL (549/559), 2156 EA3DXU (449/559), 2205 W8TXT (O/O) for a surprise initial #717\* over all and #689 on CW only and 2225 G3LTF (559/569). I also added initials on 1296 on 6 March at 0345 VK3UM (449/559) for #259\* (also QRZ'd W9IIX - moon in the trees) and on 12 March at 0730 VK4TL (O/O) #261\*, and on 432 on 13 March at 0055 9A4QV (0-23/O) on JT65C for #718\* and DXCC 84\*. I was only able to operate the 432 part of the DUBUS EME Contest during my first moon pass on 11 March and QSO'd G3LTF (569/559), 0110 SV1BTR (559/569), 0116 OK1DFC (559/559), 0137 UA3PTW (559/559), 0149 OZ6OL (449/559), 0210 VE6TA (559/579), 0232 SM3BYA (559/539), 0239 N9AB (559/569), 0246 OH2DG (559/579), 0256 F6KHM (579/559), 0307 DL1YMK (559/559), 0321 NC1I (579/579), 0336 F2TU (559/559), 0403 K4EME (569/559), 0409 KL6M (569/569), 0655 partial VK4CDI (-/-25) on JT65C and 0728 JA6AHB (559/549). I will be active in April, and plan to put a little time into the ARI new modes contest. I will call CQ on 432.048 on JT65B and 1296.065 on JT65C.

**TECHNICAL UPDATE ON SEPTUM FEED BY Rasto, OM6AA** -- I am sending you a technical report as I am not currently active on moon due to total house reconstruction. In compensation for my drop out from EME activity, I have been working on an improved septum feed design. As I published in the April 2004 DUBUS magazine, septum feeds with square waveguide give an asymmetric pattern, with different E and H plane pattern and undesirable corner lobes. To reduce these undesired characteristics, circular feed assembly with the septum polarizer may be used. Some circular models were published by W1GHZ and ON7UN. However neither Paul nor Eddy have optimized the septum dimensions for actual circular waveguide. I have calculated and optimum septum dimensions for actual circular waveguide and septum thickness. Two programs were used. The first one, based on the finite-element method was used to optimize the septum dimensions, and the second one, CST MICROWAVE STUDIO was used to verify and confirm the precision of all calculations. Two feeds for 23 and 13 cm has been simulated so far. A five stepped septum transformer gave excellent results. The circular polarization is very good with cross polarization suppressed 38 dB in the main lobe. Calculated radiation patterns in 2 and 3 D are attached. The circular feed with septum transformer for 23 cm is under construction by me and a feed for 13 cm will be produced by OK1CA. Both feed assemblies will be measured in an anechoic chamber at Czech Technical University in Prague and I hope that I will be able to publish measured results in DUBUS magazine very soon



Calculated Circular Septum Feed radiation patterns in 2D

**NETNEWS BY G4RGK: F2TU** was active in the March DUBUS Contest on 432, 10 and or 5.7 GHz. **K7XQ** is having problems with the GS-15B 23 cm PA. **UA4AQL** had JT65B QSO with OK1DFC on 70 cm. **UA9FAD** worked on 70 cm with SM2ILF and OK1DFC. **N1BUG** will not be QRV on 70 cm as soon as planned. I messed up making parts for the phasing lines! expect A delay on the order of several weeks to a month or two. **K5JL** worked on 1296 in March G4DDK for initial #253, K9SLQ and WW2R. **N8CQ** has GS35B cooking on 70 cm at 1.5kW. Gary worked NC1I during the contest. **WB7OBS** is QRV on 70

cm, but no luck in skeds thus far. He is seeing 3 S-units of sun noise. **K9BCT** heard VK3UM (559) but popped the plate bypass on his PA when started to call. Heard K5JL (589). **W5LUA** worked on 1296 VK4AFL and VK3UM but did not hear VK4TL. In the DUBUS contest AI QSO'd W5LUA worked IQ4DF on 3 cm using SDR and also Winrad. **GM00NN** was not QRV in March due to heavy snow. **WA5WCP** reports completed with VK3UM on 1296 - nice signal. **K9SLQ** completed his 100 TH initial in March with VK4AFL. **W2UHI** March 23 cm activity was limited by bad WX. Frank did QSO K5SO and possibly a few others. **K5PIR** was not QRV on 1296 in March because of the flu. **VE6JW** is trying to get 23 cm EME going. **WA7CJO** could not make it on for the 10 GHz part of the DUBUS contest. **K6DV** hopes to be on 23 cm again for the next part of the DUBUS contest. **G4RGK** was active briefly in the 70 cm part of the DUBUS Contest and worked about 20 stations.

**FOR SALE: K7XQ** is looking for a 10 GHz feed horn and preamp and needs info on these items. **NA2P** reports that Dirk Fisher Electronics has 100 W All-Mode 1.2 GHz (1260-1300 MHz) Model MT-1 3ED100WA continuous full duty cycle SSPAs for sale. They are setup for AVT repeater use and come complete with Astron power supply, blows, etc. Price is \$US1000. **VE1ALQ** is looking for a used Cushcraft 17B2 and a couple of K1FO 432 35EL yagis.

**FINAL: ZS6AXT** under went quadruple bypass surgery this month. I pleased to report that Ivo is doing and hopefully we will be hearing his signals off the moon very soon.

The Central States VHF Society 40th Anniversary Conference will take place in Bloomington, MN on 27-29 July. They are especially inviting EME and M/S stalwarts from the mid 60's onward to Attend this special event.

The SETI EME beacon is back on 1296.000 and copiable off the moon. They have a new DB3NT PA that they are presently running at about 350 W, but still have not changed their antennas, so it is a good test of system sensitivity. (The new antennas are on order). They also appear to have some tracking problems and appear to be better aligned when the moon is high. Info on the beacon and minute-by-minute updates can be found at [www.PriUPS.com/emebeacon](http://www.PriUPS.com/emebeacon).

G4RGK has the latest CW initials lists posted at:

<http://www.zen70432.zen.co.uk/Initials/70cm.htm>

<http://www.zen70432.zen.co.uk/Initials/23cm.htm>

<http://www.zen70432.zen.co.uk/Initials/13cm.htm>

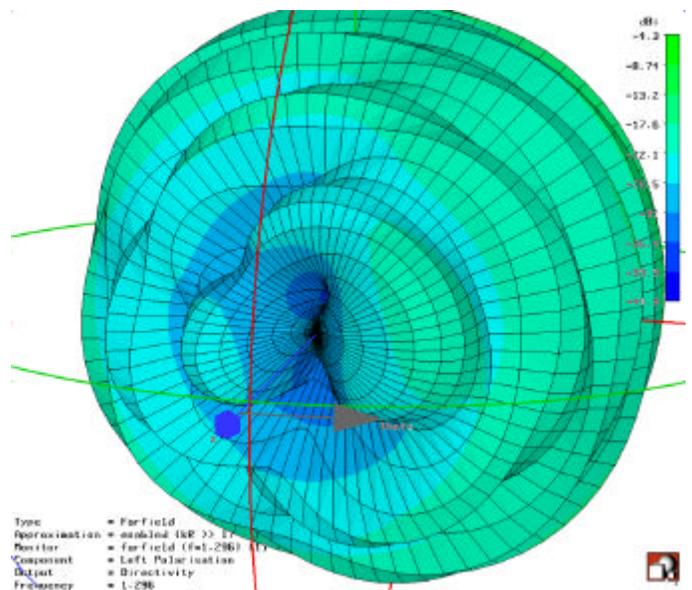
<http://www.zen70432.zen.co.uk/Initials/6cm.htm>

<http://www.zen70432.zen.co.uk/Initials/3cm.htm>

As reported back in the Feb NL, VE7BQH [ve7bqh@shaw.ca](mailto:ve7bqh@shaw.ca) is coordinating feedback to the ARRL on the best dates for the 2006 ARRL International EME Contest. Very few responses have been received by Lionel thus far. Get your thoughts to him, before it is too late!

G4NNS report 10 GHz polarization tests will be conducted on 2 April. If there is anyone who would like to join in with these tests, the TX will be by the Bochum 20 m antenna with high power between 1300 and 1500 on 10368.500 with vert pol (key down to facilitate measurements, with ID occasionally with "DE DK0SB DK0SB JO31OK. The results of the first tests can be found at <http://myweb.tiscali.co.uk/g4nns/Poltests1.html>.

That is the news for this month. TNX to those who helped with the reports. The task of getting this newsletter together seems to be getting longer and longer due to all the information available. CU off the moon. 73, AI - K2UYH



Calculated Circular Septum Feed radiation patterns in 3D

