432 AND ABOVE EME NEWS
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CONDITIONS: There should be no complaints about activity on 23 and 13 cm this month. Conditions were very good for the 13 cm part of the European EME (DUBUS/REF) Contest with a number of new stations including IW2FZR and KL6M. Of course the big attraction was KH7X, who worked 43 stations on 23 cm and 9 on 13 cm! Bruce and company did a great job – see Bruce's report later in this NL. DL3OCH also had successful trip to OY and TF and provided JT 1296 QSOs to 5 stations in OY and 7 in TF. Bodo's report (see OY) is also in this newsletter (NL). 70 cm did not do as well, but what can you expect with so much happening on the higher bands (including 3 cm – see IK2MMB's report). May/June is a bit better for 432 ops, but will provide no reprieve on dazzling attractions! The fun starts with DL3YMK's dxpedition to Iceland with a big signal 70, 23 and 13 cm beginning on 12 May – see skeds at the end of the NL. Dl3OCH is off to China in May and plans to be QRV on 23 cm starting 20 May with 70 cm activity also possible – see below. These is also my modest 70 cm dxpedition to Hawaii (WY6G) on 13-16 June – see my report, a 3.4 GHz activity day on 17 June and of course the 1296 leg of the DUBUS/REF Contest on 19/20 May. There is no 70 cm CW activity time period (ATP) in May because of the 23 cm contest – [I am not sure this is a good idea]. The next ATP is on 17 June 0700-0900 and 1700-1900. Let's not forget the ARI's New Modes (Digital) EME Contest on 12/13 May – rules were in the last NL. The weekend of 9/10 June is also an ARRL's VHF contest and offers good moon conditions. Unlike Eur VHF Contests, the ARRL contests allow EME QSOs for contact and section points and thus may offer an opportunity to pick up some initials.

3.4GHz EME Activity Day: It is proposed to run an activity day for 3.4 GHz EME on 17 June. Frequencies will be 3400.050 +/- and 3456.050+/-. Stations who wish to participate should announce their capabilities, frequency, polarization, etc. in advance. Data on all known active 3.4 GHz EME stations can be found at http://www.moonbounce.info/act_eme.htm. Please update your info by emailing to Rainer, DF6NA at df6na@df6na.de. Two QRO stations: LX1DB and W5LUA will be active and will provide a focus of activity. Their station details are as follows: LX1DB 11 m dish with 200 W CP, and W5LUA 5 m dish with 200 W and (hopefully) CP. K1RQG very helpfully has agreed to organize a sked list. E-mail him at k1rqg@aol.com. GL to all, hope to work you, 73, G3LTF, W5LUA and LX1DB.

BY4RSA: Bodo dl3och@@gmx.de will travel to China on 18 May to activate the 23 cm band and maybe 2 m and 70 cm as well. There is already equipment there to make this operation successful. Since the conditions during my stay are very bad for EME, I will operate on 20 May, 21 May and possibly 22 May. Please see the schedule on my website with moon windows and more news (www.dl3och.de). We may have a 1.8 m dish up for 23 cm operation, but I will take my yagi as a back up. The local hams from Nanjing will operate after my stay on 2 m and 70 cm EME. We will have an internet connection via GPRS while operating so please watch the EME logger: www.emeham.com/1296.

DD1PC: Marco marco.scholz@citi.com is another new station on 1296 EME from JN49ax. He is currently very marginal with 170 W and a single 48 el Flexayagi (18.5 dBd) – similar to DL3OCH but with more power. He has copied K2UYH, G4CCH and HB9Q and is interested in skeds. In the past he has made EME QSOs on both 2 m and 70 cm.

DL1YMK: Michael DL1YMK@aol.com is working on his final prep and packing for his TF dxpedition. He is leaving on 10 May and hopes to be operating from HP84us on the 12th. Skeds are listed at the end of this NL, but Michael warns that with the unpredictable Iceland WX, he may have to deviate. Fortunately he expects to have a high speed Internet connection available to him and will e-mail details to K1RQG and on the European Moon-reflector. On 13 cm he will be able to work NA on 2320/2304. The only thing still missing is a high power SSPA for 70 cm, but he is expecting to have something in time.

DL4MEA: Günter guenter.koellner@siemens.com reports on his KH7X attempts -- I must have chosen the wrong band… In order to get ready for the Hawaii dxpedition, I installed my tropo equipment in my shack. I have a little bit less power. I can barely get 750 W, which is followed by around 35 m of LCF1/2" cable, but it works! I am using a 4.5 m dish, cavity preamp and seeing 8 dB of sun noise with a diagonal waveguide feed. During test I worked K5JL (579/539). Now I am QRV on three bands. I can change between 23 cm and 13 cm in a few minutes. 70 cm is only on special request and for those with good ears. I worked on the 13 cm during the DUBUS Contest OE9ERC, W5LUA and WA6PY, and later two on crossband. Actually a little bit disappointing from NA side. I am now up to initial #17. CWNR from my 2320 freq were HB9SV, K2UYH, WW2R and K5GW. Also heard were IK2RTI, VE4MA, NA4N and LX1DB. Lots of fun, but if I may ask: please try to improve your crossband behaviour! To work G3LTF, G3LQR, DL0SHF and DL4MEA, you needed to listen on 2320. My rig on 13 cm is a 4.5 m dish with 150 W at feed and 10 dB sun noise.

KH7X 12' dish with 23 cm feed

G3LQR: Simon G3LQR@aol.com reports on his recent moon activity -- Using my 4.2 m dish and about 100 W at the feed, I managed to work 15 stations in the DUBUS EME contest on 13 cm. QSOed were F2TU, OK1KIR, ES5PC, G3LTF, HB9SV, DL4MEA, SM3AKW, OH2AXH, OK1CA, OZ4MM, OE9ERC, OH2DG, RW1AW, VE6TA and IW2FZR. I only heard JA4BLC in my blocked east window. My west window has decreased too with trees growing larger and making a short window in that direction. Tracking manually was difficult with total day operation and the inability to use my video camera.
I will try to test 9 cm in June and have rebuilt my 432 yagi array to make a bigger noise on that band.

G3LTF: Peter g3ltf@btinternet.com writes – It's been an interesting month with an excellent showing on for the 13 cm contest, and the KH7X expedition as well. On 15 April I had a nice SSB QSO on 2320 with F2TU. Phillippe was testing his new feed system. On the 20th on 1296 I QSO'd OK1KIR when we were both looking for KH7X at moon set. The next day, 21 April, still on 1296, I managed to work KH7X for initial #252 on his CQ just after my moonrise with still some tree blockage - [Peter is the only one who had Hawaii on 23 cm. He QSO'd KH6UK more than 35 yeas ago!!]. I then chatted on CW with G4CCH followed by a QSO with JR4AEP #253 and DL0SHF on SSB. Later on (x = cross band) I worked OZ4MM, ES5PC, F2TU, OK1KIR, RW1AW, DL0SHF, HB9SV (x), DL4MEA, OE9ERC, SM3AKW, G3LQR, OH2AXH, IW2FZR, OH2DG (x), VE6TA, K2UYH (x) and KL6M (x) #43, and on 22 JA8IAD (x), JA4BLC (x), F2TU, OK1CA, WA6PY (x), WD5AGO (x), W5LUA (x) and

WW2R (x). Heard were NA4N, IK2RTI and WA5WCP. My final score was 24x19. There are more and more stations on 13 cm for every contest. On 23 April I was copying KH7X FB on 13 cm on his moonrise, (549) at best, but sadly it turned out that he did not have 2320 receive capability. On 24 April on 23 cm I worked VK4AFL and JA4BLC and heard SM5LE. Later on I had a sked with WA5WCP on 13 cm and made an easy QSO. Paul has an excellent 13 cm signal and could copy my SSB. Finally I was on 432 on 28 April for the 432 CW activity periods and worked FR5DN, SM2CEW, SM3AKW, OZ6OL and G4RGK. Condx were poor with 90 degs o Faraday rotation. I'm busy working on putting CP into the 3400/3456 MHz system for the activity day on June 17; let's hope for good WX.

G4RGK: Dave g4rgk@btinternet.com is back from his holiday and was active on both 23 and 70 cm EME in April – On 23 cm during the AW I worked OK1CA, called K9SLQ but only had a partial as K9SLQ replied to "K4RGK", and added F6KHM in the log. Heard were AL7RT, IK2RTI and LA2Z.

F5VKQ: Hermann F5VKQ at wanadoo.fr reports on his first 3 cm EME QSO –I worked on10368.130 MHz VK3NX (519/529) on the 16 April at 0500. Both signals were very accurately on frequency, thanks to GPS and a Rubidium lock. VK3NX has a 3.7 m dish and 25 W. F5VKQ has a 3.1 m dish and 35 W. I later QSO'd DF9QX and G4NNS. I am now looking for skeds. Please e-mail me.

IK2MMB: Sergio ik2mmb@email.it is now QRV on 3 cm as well as 23 cm and writes -- I had a successful 10 GHz EME QSO with IQ4DF. Most interesting is that I used my home-made mesh dish that normally I use for 1296. The antenna is doing quite badly on 10 GHz, but I still achieve a 40 dB gain, which is equal to a 5 to 6% efficiency for a 12' dish - basically the average performance of ~ a 6' dish. The antenna pattern is obviously full of sidelobes, but I still wanted to give it a try. After few failed attempts, we were able to have a good QSO. The contact merit goes to IQ4DF of course with the excellent gear on their side, but I'm still very proud of it. I consider myself like a 'single yagi' station for 10 GHz, hi. BTW the weekend before the QSO, I also heard another station. It must have been RW1AW, but the weather was so bad and echoes were very marginal. The receiver here is pretty 'sharp' with a 0.65 dB NF in WG. My power used was only 27 W. My 60 W brand new TWTA seems not working anymore. Both the RX and TX are unfortunately behind a 0.5-0.6 dB waveguide loss (for now). I will post pictures and recordings on www.crbr.it, and am dreaming of a better dish. Tnx to all my friends and clubmates at IQ4DF!

K5SO: Joe k5so@valornet.com sends info on his sun noise information -- As there apparently continues to be some degree of misunderstanding about what the sun noise graph on my website www.k5so.com/Using_sun_noise.html represents and how the graph shown there can be properly used, I have expanded the text description of the graph on the website in an effort to make things more clear. The text now describes in more detail how the sun noise graph can be used to good effect by any station with an arbitrary dish size. Anyone attempting to use the sun noise graph should READ the text description carefully before attempting to draw any conclusions from the curves shown on the graph regarding his own system performance or before forming an opinion regarding the accuracy of the curves that are shown there. I am happy to discuss further with anyone, any aspects of the data shown on the graph, if the purpose of the graph itself and/or the curves shown thereon are still not completely clear. On 23 cm, I completed with KH7X in April.

KL6M: Mike kl6m@qsl.net had a terrific time on 13 cm during the DUBUS Contest — I made the first 13 cm EME QSOs from Alaska and my first 11 initials with F2TU, RW1AW, SM3AKW, ES5PC, VE6TA, K5GW, G3LTF, WD5AGO, WW2R, OK1KIR and JA4BLC. Heard were OZ4MM, NA4N, K2UYH and OK1CA on Saturday. Since then I added W5LUA, OZ4MM, HB9SV, OK1CA, IW2FZR, WA5WCP, NA4N, KH7X, OE9ERC, VE4MA and WA6PY. The KL6M - KH7X QSO was the first 2304 EME for both ends, and the first Alaska and Hawaii on 2304. My 2304 rig was quite a mess. It was strung out from one side of the room to the other. You wouldn't believe it could have worked. I used a signal generator to supply the mixer LO for the IF radio, and I didn't have a good way to reduce the IF radio power. (I plan to use a 30 dB directional coupler and dummy load for this purpose in the future). I really could have used a bit more frequency agility. I missed quite a few contacts due to having to dash across the room and change the generator. I spotted by holding a long stick against the cw key! I had car batteries strung together to provide the DC last weekend. (I have six 26 V 15 amp switching supplies that I am paralleling for my permanent installation). My positioning is a problem at 13 cm (and at 1296 too). It takes barely a touch of the switch to get off the moon. I have 1.2 dB of moon noise, which I tracked by. Otherwise I would not be able to work 13 cm at all. I had a sked on Thursday with WA6PY and never did find my echoes before sked time. I had to sweep the antenna for Paul and finally found him. I plan to have a new position indicator by next month's 1296 contest and I am building a sprocket for #25 chain, 19" diameter, to drive a 2540 pulse incremental encoder. We'll see how that goes. 2304 is a Great band! After the contest, I tore down the TX converter and will put it back together in a permanent fashion.

KH7X: Bruce (K0YW) k0yw@frontier.net is to be congratulated on an extraordinary EME dxpedition. He completed 60 QSOs with 49 on 23 cm and 11 on 13 cm from Pupukea, Oahu, Hawaii (BL10xp). The stations QSO'd were on 20 April on 1296 at 2357 K5JL (569/559) – the first QSO, on 21April at 0007 K2UYH (569/559), 0011 VE6TA (569/559), 0025 W5LUA (569/559), 0044 KL6M (559/559), 0105 WW2R (O/O), 0113 K9SLQ (579/559) and (55/55) on SSB, 0125 N0OY (559/539), 0135 W7BBM (569/559), 0241 JA4BLC (539/O), 0304 VK3UM (559/559), 0553 WA5WCP (539/O), 0614 OZ6OL (559/559), 0626 JR4ZZS (559/559), 0630 OK1KIR (559/549), 0645 VK4AFL (559/549), 0652 OK1CA (579/559), 0656 JR4AEP (559/559), 0708 VK3UM (569/559), 0711 HB9BBD (579/579), 0719 DL0SHF (579/559), 0745 OZ4MM (569/549), 0748 F2TU (569/559), 0752 HB9Q (569/559), 0756 G4CCH (559/549), 0808 OE9ERC (569/559) and 0813 G3LTF (559/549), 2117*LA8LF (559/549), 2123 RW1AW (569/559), 2127 LX1DB (569/569), 2130 LA9NEA (559/559), 2133 ON7UN (569/559), 2140 IK3COJ (O/O), 2146 K4QI (569/559), 2148 SM2CEW (569/549), 2151 DF9QX (559/529), 2159 K5GW (579/569), 2220 AL7RT (O/O) and 2228 N2IQ (O/O), on 22 April at 0040 VE4MA (449/549), 0052 K5SO (579/559), 0134 KA0Y (569/559), 0138 WA6PY (559/559) and 0204 W2DRZ (559/549), then switched to 13 cm on 23 April at 0239 W5LUA (O/O) for #1 QSO 2304 to KH6, 0246 VE6TA (O/O), 0259 WA6PY (O/O), 0325 W5LUA (549/549), 0334 KL6M (O/O), 2246 OE9ERC (549/449), 2310 F2TU (559/539), 2321 OK1KIR (449/449) and 2330 K5GW (559/559), and on 24 April still on 13 cm at 0104 WD5AGO (O/O), 0116 WA5WCP (O/O) and 2334 K5GW (559/559) by Alex (KH6YY - host for KH7X). [*There was a discrepancy in the log times. The time indicated for QSOs starting on 21 April at 2117 where impossible. I have modified the times to ones that seem likely based on the available moon window. The times in question continue through W2DRZ at 0204]. The QSL manager for KH7X is K2PF, Ralph Fariello, 23 Old Village Rd, Hillsborough, NJ 08844-4008 USA.

LA8LF: Anders anders@LA8LF.com had another good AW on 23 cm CW in April – I made 5 initials to bring me to #199. On Friday I worked Dl4DTU #, W2UHI and SM3AKW, and on Saturday SM5LE, WA5WCP, N2UO #, G4RGK, WB2BYP, DF9QX #, F5HRY #, K9SLQ, K4QI, SM2CEW, K5JL and KH7X #. I listened on .020 for Bruce from 2030 to see if he came on for WB2BYP sked, but heard only WB2BYP calling him for 30 minutes with no reply. I was therefore expecting that Bruce had problems, but was really surprised when he came back immediately after my first 1 minute into our sked at 2115. When I finished with Bruce, I expected hell to break loose and was correct. He worked RW1AW and finished on time to work LA9NEA on sked, whilst many stations kept on calling. I will be back for the 23 cm DUBUS EME Contest in May.

N2UO: Marc lu6dw@yahoo.com is back on 23 cm EME from a new grid -- I am pleased to announce that I finished setting up my station in our new home in Summerfield, NC in FM06. Every QSO from here will count as an initial. The station is the same I had in NJ. I have plans to build a larger dish in the near future since now I have more room for antennas. I have worked K9SLQ, LA8LF, G4CCH, K5JL and WA6PY, all on random and with good signals. I also heard KH7X. There was a pileup of 6 stations (with my 10' dish, there might have been more), and it was the time of a sked. I have some noise in my azimuth potentiometer, so sometimes the dish goes off by 5 or 6 degrees. I will have to work on this. Right now I am weatherproofing all the connectors.

OK1CA: Franta ok1ca@ges.cz was QRV on 13 and 23 cm in April -- On 1296 I worked on 20 April SM5LE, W2UHI, DL4DTU #176, G4RGK, DL4MEA #177, AL7RT #178, and on 21 April KH7X (559/579) #179 - very nice signal and easy QSO with my antenna only 2 degrees over ground. I was QRV during DUBUS Contest on 2.3 GHz and worked IK2RTI, RW1AW, ES5PC, IW2FZR #41, DL0SHF #42, HB9SV, DL4MEA, NA4N, OH2AXH, VE6TA, G3LQR, SM3AKW, WA6PY, F2TU, K2UYH, JA4BLC, JA8IAD #43, W5LUA, KL6M #44, OZ4MM, G3LTF, VE4MA #45, OK1KIR, WA5WCP #46 and on 23 April KH7X (549/559) #47 and the first OK-KH7 QSO. The activity during the DUBUS Contest on 2.3 GHz was high with 32 stations heard.

OK1TEH: Matej ok1tehlist@seznam.cz is now QRV on 1296 with a QRP station -- I'm on with a good >100 W PA and 17 dBd WIFI dish with horizontal pol only and an MGF1302 preamp in shack. I QSO'd on 24 April K2UYH (-26dB O/O) on JT65C and am interested in skeds. I have heard HB9BBD and 8N1EME on CW.

OY/DL3OCH and TF/DL3OCH: Bodo had a very successful trip to OY and TF – I QSO'd from OY/DL3OCH in IP62nb the following stations: HB9Q, G4CCH, DJ9YW, PA3CSG and OE9ERC. This operation was pretty difficult

because of heavy fog. The moon and the sun were not visible. Additionally my compass stopped working, so I was very lucky to find the moon. (I looked at the orientation of the streets and estimated the direction for the moon). Also the operation time was very limited due to the ferry schedule. I arrived the following day in Iceland. It is a wonderful country. Unfortunately I forgot my antenna mast in OY (but I picked it up on the way back to DL). I used road signs as a mast. The weather was very nice. It was very warm, the moon was visible and there was no wind. I was able to work the following stations in JT65 from IP15it: OE9ERC, PA3CSG, G4CCH, OH2DG, HB9Q, DJ9YW and K2UYH; and from HP95up: OE9ERC, PA3CSG, G4CCH, OH2DG, DJ9YW and K2UYH. I decided not to operate on the third day because that would have been HP84 where DL1YMK will operate from in May.

TF/DL3OCH on the road EME from Iceland

OZ4MM: Stig vestergaard@os.dk reports on his April activity -- During the KH7X activity, I found great activity on 1296, but I had very limited time so just contacted him on 21 April through my tree blockade. Bruce did a outstanding job in Hawaii. I am very pleased to log him on 23 cm. I missed him on 13 cm, as to leave for Copenhagen for work. During the weekend I put in some hours on 13 cm. The activity keeps growing on this band TNX to the surplus SSPAs. I worked 25 stations. QSO'd were ES5PC, HB9SV, OK1KIR, JA4BLC, DL0SHF, F2TU, OE9ERC, G3LTF, DL4MEA, RW1AW, SM3AKW, IW2FZR for initial #60, OH2AXH, VE6TA, WA6PY, OH2DG, K2UYH, NA4N, G3LQR, KL6M #61, OK1CA, WW2R, W5LUA, K5GW #62 and W5AGO. Gotaways were JA8IAD, VE4MA and others. I did make a good compromise between 13 cm EME and the house building. I plan to be QRV for a limited time period on 23 cm for DUBUS Contest, and of course during Monika and Michael's TF dxpedition and also your [K2UYH] Hawaii mission.

PA3FXB: Jan jvmmap@bart.nl is QRX on 23 cm EME for the summer – On 1 May I took my dish apart and stored it in my attic. After 7 months, my wife and I can again sit in our garden – hi. The 3 m dish will we undergo some little mechanical improvements during summer. It is possible to put it together inside for maintenance (that's the advantage of a small dish...). The dish will be in the garden again in Sept and I hope to be ready for the ARRL EME Contest. I considered this first EME "season" a learning experience. I never thought I would make many QSOs. In the end I made 41 QSOs. I am now up to initial #24*. Most are on JT with 4 initials on CW. The first months I could not make CW QSOs properly because of a unreliable sequencer. I kept a list of the stations heard in CW and JT. This list is 41 stations long. Most of the stations I heard and did not work were on CW and during the period my new sequencer was still under construction. Initials in March and April were DJ9YW JT65B (-14/-16) and finally HB9Q JT65C (-11/-12) and CW and almost SSB. During the SSB try my dish was partially blocked by trees, so under better conditions it should be possible on SSB.

RW1AW: Alex rw1aw@appello.de concentrated on the DUBUS contest and was on 2 m and 13 cm – On 2300 I made 27 QSOs and 2 initials. I QSO'd OE9ERC, HB9SV, OK1CA,IK2RTI, F2TU, DL4MEA, DL0SHF, G3LTF, OK1KIR, OZ4MM, ES5PC, OH2DG, IW2FZR, OH2AXH, SM3AKW, VE6TA, NA4N, WA6PY, K2UYH, KL6M for an initial (#), G3LQR, W5LUA, WD5AGO, LX1DB ,K5GW, VE4MA (#) and WW2R. I also broke my contest effort to QRV on 1296 and 5760. On 6 cm, I QSO'd JA4BLC for an initial (#), IK2RTI and DF9QX, and heard JA6CZD (559-569). On 23 cm I had a fast random QSO on 21 April at 2126 KH7X (559/559) with fast BK CW. Back on 13 cm on 23 April I worked at 2205 OE9ERC (57/55) on SSB, 2357 KH7X (559/559) at only 6 deg moon elevation. I want to tnx Bruce for the professional way he operated his very short Eur windows. I now have my new QSLs and am sending them to all my 70, 23 and 13 cm QSOs – sorry for the delay. I also finished a new 23 cm feed for my 8 m dish (F/D 0.55) using an IMU design with the OK1DFC/RA3AQ polarizer. I will test it in the DUBUS Contest in May.

SM2CEW: Peter sm2cew@telia.com was active on 70 and 23 cm in April -- On 15 April I had a very nice contact on 432 CW with OK3RM my CW initial #422. Zdenek is a new station on 432 EME and is running 4 x 38 el and 300 W. He has a really good signal via the moon. During the 70 cm CW ATP on 28 April I had strong aurora making signals swing quite wildly in polarization. Signals appeared to be down by at least 3 dB from normal. Still there was some nice activity and I worked VK4AFL (moon in the trees), SM3AKW, FR5DN, G3LTF, G4RGK and OZ6OL. After a couple of months of absence on 23 cm I was active on 14 April and worked K9SLQ. Wayne has a colossal signal on 23 cm - congrats! On 15 April I worked K5SO, K5JL and N0OY. Working N0OY was a nice surprise. We worked the first time on 2 m in 1986 when I had just started EME. The picture of all Pete's antennas on that hilltop in Kansas is to say the least very impressive! On 21 April I got on in anticipation of working KH7X. Before their moonrise I worked W2DRZ and LA8LF. At 2149 I had an excellent contact with KH7X, a bit before my sked time. Bruce was working stations HF style, one after the other in grand style. Compliments to Bruce of course, but also thanks to everyone involved in making this dxpedition a success, no one forgotten! This fine expedition proved without a doubt that CW in a pileup situation is most effective. My focus now is on putting together an EME station for 13 cm. My goal is to be QRV at the end of the summer with my 8 m dish, W2IMU feedhorn and about 200 W (SSPA).

SP7DCS: Chris' sp7dcs@o2.pl DUBUS Contest report [the original was sent some time ago, but lost] – I am a QRP station, but I still had a great time this year on 70 cm CW during the DUBUS Contest. After an RX failure some months ago, I switched to a new much improved preamp – TNX to DL9KR for the FHX35 help. The station is still 4 x 25 el yagis (open-wire feed) and 200 W at the shack. I estimate that I have a maximum of 150 W at antenna and probably only 100 W when the PA is warm. I found my new RX worked, so now I only need more power! I managed to 2 QSOs with at 2403 OZ4MM (O/O) for initial #5 and 2403 KL6M (O/O) #6. I also heard SV1BTR, VK3UM, DL9KR, K1FO, G3LTF, K2UYH, UA3PTW, SP6JLW, DL1YMK (?), VK4AFL, FR5DB, SM2CEW, RW1AW, DK3WG, VE6TA, SM3BYA and G4RGK. The strongest signals on the band were DL9KR and OZ4MM. Unfortunately DL9KR was busy working stronger guys when I heard him. VK3UM also had a great signal. I was called Doug a long time and was getting QRZs. I am sure we can make it next time. I was disappointed with the absence of some regular big gun stations in this contest. I will continue work on my QRO as even with my current power, I have TVI problems on lower elevations. It seems that 70 cm will be a 'night band' for me my QRO condition ends.

VE4MA: Barry ve4ma@shaw.ca made it back on both 1296 and 2304 for the KH7X dxpedition and the DUBUS Contest. During the contest he worked 5 initials on 13 cm: RW1AW, OK1CA, K5GW, KL6M and WA6PY to bring his total to #41. Also QSO'd were WB5LUA, F2TU, HB9SV, OE9ERC and VE6TA. Barry was successful with KH7X on both 23 and 13 cm.

VE6TA: Grant ve6ta@clearwave.ca sends his DUBUS 13 cm results -- Definitely one of the best 13 cm weekends I have experienced in my limited time on the band. Conditions were good for the most part. As well as a dxpedition and lots of new activity really got things cooking. Stations worked were WA6PY, OK1KIR, HB9SV, ES5PC, RW1AW, G3LTF, DL4MEA for initial #32, OH2AXH #33, SM3AKW, DL0SHF #34, F2TU, OK1CA, OE9ERC, OZ4MM, OH2DG, NA4N, KL6M #35, K2UYH, WW2R, WD5AGO, JA4BLC, IW2FZR #36, G3LQR, W5LUA, K5GW and VE4MA. Heard but not worked were LX1DB and WA5WCP. I understand IK2RTI, GW3XYW and JA8IAD were on but perhaps not in the NA window. I had intended to have a pair of Spectrian PAs combined for the contest, but work commitments kept me from finishing the project. I felt my new homebrew round septum feed with large scalar ring was well worth the investment as contacts were much improved this year. After the contest I had the extreme pleasure of working WA5WCP and KH7X #37. My appreciation goes out the group who made this dxpedition take place.

VK3NX: Charlie ibnkarim@bigpond.net.au had a successful contact with F5VKQ after an unsuccessful attempt due to wind at our end. We worked very easily on 16 April at 0500 (O/O) and then RST. Hermann's signal was very easy to copy now that he has more power and the freq was +30 Hz on 10 GHz! I am available for skeds, but soon will build a new feed for 10 GHz and assemble a feed for 3.4 GHz.

VK3UM: Doug reports on his KH7X QSO and sends a timely note on TX frequency -- I did work KH7X (O/O) despite Murphy's presence. Bruce was 10 dB/noise on my SDR panadaptor. Before my sked, I had to repair my HV supply due to a tube short. My HV fuse was a little large and it did not blow. I lost 3 of 4 current limiting resistors in the diode legs. I was running about 450 W out 1300 V @800 ma, which is backed off from normal so I would not blow it. A reminder is needed of the long time convention that the frequency quoted for skeds is the station's transmit frequency (no Doppler correction). Lately confusion is being caused by some believing it is the received frequency. When someone says they will be on 010 then that is where they should transmit. When you quote hearing a station on "X" frequency, remember to adjust it to your Doppler shift so we all will know where the station is actually transmitting! (KH7X was transmitting within 100 Hz of .020 on Eur moonrise). It is also convention (and good manners) not to call repeatedly, if you cannot hear the other station. It was obvious to me that during the KH7X dxpedition many stations in Eur were suffering from ground noise and were not hearing to their full potential!

VK4AFL: Trevor tbenton@bigpond.net.au writes of his problems during his sked with KH7X -- I came up on time only to be greeted by someone else on the frequency trying to work Hawaii. I waited and then someone else called. The frequency went clear for a few seconds only to be occupied once again by no less than 3 stations echo testing. I put out a call and at last heard KH7X calling me. Before I had even a chance to go back absolute bedlam broke loose with at least four stations swooping in over the top of me (two prominent operators) and completely ruined any chance I had of completion. The sked list has been published EVERYWHERE in recent weeks, so there was no excuse for not knowing who was scheduled at what time. This behavior is very disappointing and totally unnecessary. There are more stations out there than I thought that simply want the contact without any consideration of others whatsoever. I hope others with skeds have better luck than I did but they will find it difficult with the current spate of rudeness. I was also on for the 1600 70 cm ATP and worked FR5DN, SM3AKW and SM2CEW. Signals were not as strong as usual due to apogee and especially poorly defined polarity, but it was good to hear some activity.

W2DRZ: Tom w2drz@madbbs.com is active again on 23 cm after a winter hiatus -- After fixing the preamp power cable at feed, I now am hearing well off the moon. I have 16 dB of sun noise and about 0.4 dB of moon noise with my 16' dish. During the AW I worked KH7X and others.

W8TXT: Mike <no e-mail> is now up to initial #33 with 18 countries and 89 QSOs on 70 cm with 4 yagis and 800 W station. Mike says "there is still life on 432". He worked 15 during the March leg of the DUBUS Contest. He is working on expanding to 8 FO24 yagis and hope to complete at the earliest in June and the latest in Oct. While making up the new phasing lines, he discovered another use for cutting die (Andrews) - it makes a perfect coil form.

WA6PY: Paul pchomins@san.rr.com reports KH7X created high activity on 23 and 13 cm!!! -- On 20 April on 1296 while waiting for KH7X, I QSO'd VK3UM, JR4AEP, JR4ZZS and KL6M. During the contest weekend of 21-22 April on 13 cm I worked VE6TA, SM3AKW, OK1KIR, RW1AW, HB9SV, F2TU, OK1CA, OZ4MM, ES5PC, OE9ERC, IK2RTI, DL4MEA, G3LTF and OH2AXH. I heard IW2FZR, but could not catch Dario. On 22 April on 23 cm I QSO'd KH7X - very good signals, and N2UO, N0OY and K5AZU. The next day on 13 cm I QSO'd KH7X. After the weekend in additional skeds, I QSO'd on 13 cm VE4MA and KL6M. On 24 April I also QSO'd on 10 GHz WC8VOA. They had a weak signal, but very impressive for 4 W output. On 13 cm my new very sharp diplexer filter (modified DCS-1800 diplexer) for 2304 -2320 MHz helped me to lower the interference from 2400-2484 MHz band. On 2320 I do not measure cold sky to ground degradation anymore. I still have work to do on the 2424 band. I will send a technical description in the near future.

WB2BYP: John storyavenue@hotmail.com was active during the April AW on 1296 and worked WA5WCP (10' to 12' dish), LX1DB, K9SLQ and LA8LF. He heard N2UO and LX1DB in QSO, but unfortunately was not available when KH7X was active. John will have his dish down to work on it a bit. He is putting in a new AZ bearing and also working his on the EL readout.

WC8VOA: Mike (KA8ABR) murph@erinet.com writes -- Jim and I worked W5LUA and IQ4DF from WC8VOA for our first contacts since getting our 10 GHz EME station on the air. Unfortunately, we missed F2TU due to some problems on this end. We will try to work Philippe soon. After making the contacts, we heard W5LUA and IQ4DF work on CW and then switch to SSB. Both stations were an easy copy on SSB. Now we are waiting for the Jamesburg station to come on the air.

WW2R: Dave's ww2r_eme@g4fre.com April report follows -- I worked on 20 April on 1296 AL7RT on CW for initial #55, K9SLQ and WA5WCP #56, and on 21 April KH7X #57 on random thereby not needing the prearranged sked. Investigating my 2304 feed in preparation for the DUBUS Contest, I noticed that the screws were nowhere near the recommended starting position, so I retuned the feed and put the feed on my dish with a new preamp (0.35 dB NF) and reliably heard echoes for the first time on the band (6 dB out of my noise). I worked in the contest on 21 April F2TU, SM3AKW for initial #13, VE6TA, K2UYH and OK1KIR. Then I worked KL6M #14 on my third attempt. The first time my Spectrian PA had a fault, the second time I had an EU station calling over me after he came back with my call, and the third time lucky (moon had set in EU!). I only heard one signal on 2320 before the moon came up on 22 April and my Spectrian broke again. I replaced the output isolator and worked ES5PC #15 and OZ4MM. While replying to a call from K5GW, the Spectrian terminally broke, precipitated by a bad Heliax connector which got hot! In desperation I hooked up my 60 W tropo amp and was surprised to still work RW1AW and G3LTF on 2320. CWNR (at 200 W) were OE9ERC, HB9SV and LX1DB, OK1CA, OH2AXH and OH2DG. In the evening I heard KH7X with very good signals on 2304 for over 60 minutes, but despite calling many times did not get his attention. [Last month I erroneously reported that WW2R had worked K5JL on 902 EME. This QSO was on tropo. Dave is not QRV on 902 EME]. [**Late news**: Dave's dish was damaged by 81 mph winds. He is not sure if it is repairable].

YO2IS: Szigy yo2is@wa7v.ampr.org is ready to make his first 23 cm EME QSO -- I have just finished the extension of dish to 2 m and readjusted the preamp. So far am restricted to a single TX QRG of 1296.018 (+-KHz) generated by an XO with only CW, no digitals yet! The PA is a single GI7B, driven by a 2C39BA and varactors. The feeder is 3 m Celflex 1/2" hardline and 7/16" connector at the TX port of a Septum feedhorn. RX is 2 x MGFs up on the feedhorn with a 23 cm/2 m BFR91 converter. I hope that my tests will tell how well my setup runs and if it is usable in the coming DUBUS 23 cm EME contest. Skeds and advice are welcome, but I have no 'online' Internet connection, no access to EME-net's, just an e-mail via the packet-radio network.

K2UYH: I was active only on 13 and 23 cm this month. On 21 April I looked for KH7X and first heard him just after 0000. We QSO'd at 0007 (559/559) for #291* and #261 on CW as will as DXCC 57 and I believe WAS 45. Bruce made a very nice Video Clip of our QSO that can be seen at http://aditl.com/ham/kh7x-eme-2007/index.html. Catching KH7X early allowed me to set up for the DUBUS/REF Contest on 13 cm and QSO on on 21 April at 1907 IW2FZR (449/559) for initial #34, 1914 OK1CA (569/569), 1917 F2TU (569/559), 1921 OZ4MM (559/549), 1925 SM3AKW (559/559), 1932 RW1AW (559/569), 1944 OK1KIR (559/549), 1956 OE9ERC (569/569), 2029 G3LTF (549/549) X-band, 2051 OH2DG (569/559), 2055 HB9SV (569/559), 2125 VE6TA (559/559), 2138 ES5PC (559/559) and 2205 WW2R (O/O). Unfortunately I had some social conflicts that limited my operating time and prevented any operation on the 22nd. I switched back to 23 cm to work on 24 April at 2020 TF/DL3OCH (–25dB/O) on JT65C for mixed initial #292 DXCC 58 and 2058 OK1TEH (O-29dB/O-26dB) on JT65C #293* - this was Matej's initial 1296 EME QSO, and on 25 April at 2036 TF/DL3OCH (–27dB/O) on JT65C in a different grid for #294*. I also had a partial with on 1296 JT with DD7PC who has single yagi. Unfortunately, I was not able to make it on for the April 70 cm CW ATP because of my responsibilities as chair of TCF2007, which occurred the same weekend. The good news is I may have found some of the cause of my 432 noise problems. I am completing preparation for my own trip to Hawaii. I will have a single 13WL M2 yagi and at least 100 W. I am still trying to arrange for a high power PA. Operation will be by WY6G on 13 June from 1600-0300, 14 June 1700-0400 and 15 June 1800-0530. Operation on 16 June is also possible, if needed. K1RQG is arranging the skeds. I plan to be on for the ARI Digital contest. Look for my CQ on.048 and on 1296 for the DUBUS/REF Contest.

NETNOTES BY G4RGK: **W2UHI** is QRV again on 23 cm. **K5JL** worked KH7X on 1296, and complements Bruce's operating Procedure. Jay also worked a bunch of other stations including N2UO, VE4MA and SP5JLW. **N0OY** worked KH7X on 23 cm and suggests 5N9SJA for his next 23 cm dxpedition. **VE3KRP** is now listening on 23 cm EME and heard many including K9SLQ SSB during the AW. **LX1DB** confirms QSO with WB2BYP. **AL7RT** worked on 1296 N0OY, KH7X, DF3RU for new ones. He tried to work WA6PY but others were calling. Later he completed with WA5WCP. Overall he worked 10 stations and a partial with SM3AKW during the April AW. **F6KHM** (F5TTU) was QRV on 23 cm for KH7X. **K0RZ** is much doing better health wise and planning to attend Dayton this year. **WA9FWD** plans to be on for the 3456

activity day in June. He still wants to redo his 23 cm system and notes that WiFi is a big bother on 2304. **WB0GGM** is trying to be on for TF/DL1YMK on 70 cm. **WD5AGO's** 13 cm operating time during the DUBUS Contest was limited on Saturday (1.5 hours), but he was able to be more active on Sunday and picked up a few new ones. **OK3RM** is a new station on 432 using 4 x 38 el, 300 W and a LNA. He is looking for skeds. **OH2DG** was active in the contest on 13 cm, but missed his chance to QSO KH7X. **KA0Y** was on 23 cm in April. He worked KH7X and heard WA6PY. **WA5WCP** did not complete with KH7X, but congratulates Bruce on his operating and the success of his dxpedition.

FOR SALE: N7AM's 30' dish and mount described in the last NL is still available. W7IEW, Jerry at w7iew1@comcast.net is offering to help with the move. [It would be a tragedy not to see this dish destroyed]. **DL4MEA** is looking for a restive chip for a Narda 150W 20dB attenuator, Model 769-20. The one is his was damaged due to excessive heat. **W7MEM** has an FT-920 for sale. **W1GAN** has for sale a 432 2 KW amplifier with Eimac 8938 west coast ½ wave line design on 7" panel with meters bias and filament supplies, TR switching controls and relays. Three spare 8938s, one unused and the others good are included. The HV plate supply is in separate enclosure. It was built by W4ODW with first class construction and available for $US2500. Also Thompson triode 1296 amplifier water cooled with power supply and 2 Spare tube that was also built by W4ODW with first class construction for $US1000. All units guarantied to be complete and work. Tubes are pull outs except one 8938 which is unused and are usable. I will not separate Tubes, but will ship or deliver east coast in May. 8938 power supply is 22"x22x12" is 220 V, variac controlled 1.5A 4000 V on casters and weighs approximately 250 lbs. (Buyers will have to sign statement that he or she understands that the HV used in these amplifiers can be lethal and assumes complete responsibility for their safe operation). Contact John Bilodeau W1GAN 334-558-8362 or e-mail wn1ivw@rcn.com. **K5CBL** reports US Digital announced the MAE3, a miniature absolute magnetic kit encoder that provides shaft position information over 360° of rotation with no stops or gaps. This magnetic encoder is designed to easily mount to and dismount from an existing shaft to provide digital feedback information. It is available in two output versions, analog and pulse width modulation (PWM). The analog version outputs a voltage that is proportional to the absolute shaft position. The PWM output is available in 10-bit (1024 positions) and 12-bit (4096 positions) resolutions and outputs a variable pulse width proportional to the shaft position. Pricing starts at $49 with quantity discounts. See US Digital at www.usdigital.com **N1BUG** has to leave EME and has for sale his complete 70 cm EME array, and also some medium power amplifiers for 70 cm and other bands, also other items. These items are big and any buyer must come pick them up at his QTH in Milo, Maine. If interested, please look at: http://mysite.verizon.net/pnkelley/FS/FS2007.html.

13 CM CROSSBAND OPERATION: G3LTF writes -- **The Problem:** 2304 is the main allocation in the US and used for both eme and tropo, in Europe tropo is at 2320 and in most European countries EME is at 2304 in order to be compatible with the USA. In the UK, G, GW,etc, PA and DL 2304 is not available and so there EME tropo is on 2320. In JA operation is on 2424. In Europe ALL the active 13 cm stations can now operate either dual band, that is 2320 and 2304, or crossband between them and most can operate cross band to 2424 as well. All active JAs can operate cross band to 2320 and 2304. **Who are you missing if you don't operate crossband?** At least G3LTF, G3LQR, G4DDK, GW3XYW, DL4MEA, DK7LJ, DL1YMK, DL0SHF, PA3CSG, JA4BLC, JA6CZD, JA8IAD, JA8ERE and probably more. **Cross band reception:** This appears now to be almost solely a US problem as in Europe almost all stations already have receivers on 2320 for tropo operation. Q1, Will my dish feed work on all the allocations? Answer, almost certainly yes. My CP VE4MA feed, tuned up on 2320, gives the same sun noise at 2304 and 1.5dB less at 2424. However, wideband septum feed designs are now available for F/D from 0.35-0.6, see OK1DFC web site. Just check sun noise on the other bands to find out how your feed is working there. Q2 Will my preamp work on all bands... Yes 5% bandwidth will not be a problem unless you have specifically added filtering. Q3 How do I receive 2320 and 2424? If you use a converter with a 144 MHz IF then the 2320 signals are already coming out of the IF port at 160 MHz. You can either hook on a general coverage receiver and tune to 160 MHz or build a simple converter (like we used to do for 144 MHz years ago... remember) to convert 160 MHz to some IF like 28 MHz. If your general coverage receiver doesn't have enough sensitivity then add a simple preamp stage with a gain block. Alternatively of course you can build a second LO and retain the 144 MHz IF. You can locate 2320 from the 16th harmonic of 145 MHz, use a few mW and a diode. For 2424 the best solution seems to be a modified satellite segment receiver. See also DUBUS 3/05 for a 3 band converter by JA4BLC. **How to work Cross Band?** When calling CQ add an XX in after the CQ. If you are in the US then listen 16.000 MHz above your frequency for replies from Europe or 120.000 MHz above from JA. After you finish a QSO listen on the corresponding frequency for tail-enders on the other bands. This procedure may not be the ideal but it is definitely working. (See my report this month). **The QRM problem:** The 2304 region has already been allocated to other services in G and DL and these are likely to roll out Europe wide, so that eventually it is probable that all European EME activity will have to be on 2320. This will mean that in Europe we might have QRM while trying to receive US stations, but we don't at the present time. ISM is a potential problem in Europe, but I've not heard of anyone encountering it. I have found it necessary to include a 6 pole Interdigital filter after my 2 stage preamp to remove QRM at low elevations from nearby GSM base stations at 2100 MHz. In the US there is already potentially QRM in the 2320 segment from the Sirius satellite system and in the 2424 segment from WiFi type services. We need more published information on experiences of dealing with this QRM from active US 13 cm operators. There is work going on to develop new front end architectures, for example those described by Paul, WA6PY at the Wurtzburg conference, and we will all need higher dynamic range 13 cm front-ends in all regions in the years ahead with filtering after the first stage. Direct conversion SDR is another possible approach. Obviously the good sidelobes that we obtain from dish antennas at this frequency are a big help when the moon is away from the horizon, but they are not enough in some circumstances. One simple test to make is to measure the sky/50R termination ratio, using your protection relay, at different elevations and bearings and then to think about what filtering might improve the performance in the areas where is degraded. There are ceramic filters available covering the Sirius band, which have high attenuation at 2424 but only about 1 dB at 2304. These might help between preamp and converter in reducing WiFi/ISM overload interference when receiving on 2320. **Finally,** it seems to me that we need to do more to share what works on 13 cm, especially from the US stations, for instance by putting block diagrams of 13 cm systems that actually work here in the NL. This band is not a take it out of the box and plug it in band like 1296 MHz has now become.

FINAL: ? I find it upsetting to read all the grumbling about EME on the Internet. We are all getting older. Expressing dissatisfaction and criticalness may be part of the aging process. What we really need to is to recruit more new blood, who will do less complaining! Finding new EME enthusiast should be the real topic of discussion. As far as activity goes, overall 70 cm and up activity is the highest it has ever been!!! This is definitely true. But activity is spread out over several bands. 23 cm has as much - really more activity then 70 cm ever had. But there is still activity on 70, granted we all would like to see more. 13 cm is also getting larger, and what about 9, 6 and 3 cm?

? I discovered a error in the EME Calendar (Dec 2006 NL). The weekend of 16/17 June shows a lot declination, but it is near max – see the following chart from F5SE that is correct.

? Don't forget the VHF gathering at Dayton on 18 May. Unfortunately I miss Dayton this year. (It also conflicts with the 1296 contst)!

? I am not sure how I will get through the month. I plan to be on for the ARI Digital contest as best I can without using the reflectors and definitely the 1296 CW Contest, and the dxpeditions. I also want to be check out my 70 cm Hawaii system (probably on the weekend of the 12th/13th) - what a busy month! Please keep the reports and tech info coming. 73, Al – K2UYH

12 MAY Skeds 1296.045
1130z TF/DL1-HB9Q
0900z TF/DL1-OZ4MM
0930z TF/DL1-PA3CSG
1000z TF/DL1-DJ9YW
1030z TF/DL1-IZ1BPN
1100z TF/DL1-OE9ERC
1130z TF/DL1-G4RGK
1200z TF/DL1-N2UO
1230z TF/DL1-VE4MA
1300z TF/DL1-W5LUA
1330z TF/DL1-VE6TA

13 MAY Skeds 432.045
1130z TF/DL1-HB9Q
1200z TF/DL1-OE9ERC
1230z TF/DL1-G4RGK
1300z TF/DL1-SM2CEW
1330z TF/DL1-DL7APV
1500z TF/DL1-KL6M

14 MAY Skeds 432.045
0530z TF/DL1-OZ4MM
0600z TF/DL1-PA3CSG
0700z TF/DL1-EA3DXU
0730z TF/DL1-DK3WG
1200z TF/DL1-K2UYH
1500z TF/DL1-OK1KIR

15 MAY Skeds 1296.045
1200z TF/DL1-DJ9YW
1230z TF/DL1-K2UYH
1300z TF/DL1-WW2R
1600z TF/DL1-WA6PY
1730z TF/DL1-KL6M

17 MAY Skeds 2304.045 2304.100
0800z TF/DL1-OE9ERC
0830z TF/DL1-LX1DB
1230z TF/DL1-K2UYH
1300z TF/DL1-WW2R
1430z TF/DL1-W5LUA
1500z TF/DL1-VE4MA
1530z TF/DL1-WA6PY
1600z TF/DL1-VE6TA
1630z TF/DL1-OZ4MM
1830z TF/DL1-KL6M
1900z TF/DL1-OK1KIR
2000z TF/DL1-WD5AGO