432 AND ABOVE EME NEWS
May 2007 VOL 35 #5

EDITOR: AL KATZ, K2UYH; SCHOOL OF ENGINEERING, THE COLLEGE OF NEW JERSEY, PO BOX 7718 EWING, NJ 08628, TEL (W 609-584-8424) OR (H 609-443-3184), FAX (609-631-0177), E-MAIL a.katz@ieee.org
PROD/MAIL: BRIAN MULLANEY, KB2TIS/TOM KIRK, KA2VAD (609-584/8424), E-MAIL mullaney@mccc.edu/kirkt@lintech.com
NETNEWS EDITOR: G4RGK, DAVID DIBLEY, E-MAIL g4rgk@btinternet.com (based on K1RQG's Netnotes and Reflector News) & CW LISTS
EME NETS: 14.345, 10 AM ET SATURDAY AND SUNDAY (AFTER VARO NET ENDS ON SUNDAY)
NET CONTROL AND SKEDS CORDINATOR: JOE, K1RQG, TEL (207-469-3492), E-MAIL k1rqg@aol.com
EME DIRECTORY: http://www.dl4eby.de/, DL4EBY/DK0TU, KLAUS TIEDEMANN, TEL (49-30-7955467), E-MAIL: tklaus@snafu.de
NL EMAIL DISTRIBUTION and EMAIL LIST CORD: WARREN, W2WD wbutler@ieee.org [TXT OR PDF OR "ON WEB" NOTICE]
EME STANDINGS: DAN GAUTSCHI, HB9CRQ/HB9Q E-MAIL hb9crq@hb9q.ch OR SEE HIS WEBPAGE AT www.hb9q.ch.
THE NL WEB VERSION IS PRODUCED BY W6/PA0ZN AND AVAILABLE AT http://www.nitehawk.com/rasmit/em70cm.html

CONDITIONS: They did not cooperate for this year's 70 cm CW part of the European World Wide EME Contest (also know as the DUBUS/REF Contest). Aurora, libration fading, wrong Faraday, noise all seemed to conspire to make 2007 a real challenge. Despite the difficulties, the turn out was reasonably good except for Northern American participation. I do not know why the W/K turnout was low. It was not the WX. Possibly interest in the 8N1EME 5.7 GHz EME tests, which was on the same weekend and a great success – see the report below. The 5760 activity did not seem to affect 3 cm EME contest activity that was also taking place this same weekend, and was at an excellent level. Coming up is the 13 cm and 9 cm parts of the DUBUS/REF Contest on 21/22 April – see info on 3.4 GHz EME activity near the end of this newsletter (NL), the ARI's New Modes (Digital) EME Contest on 12/13 May – see rules near the end of the NL and the 70 cm CW Activity Time Period (ATP) on 28 April from 1600-1800 and 2200-2400.

DXPEDITION SEASON: April/May also have a full share of wonderful dxpedition distractions! The KH7X 23 and 13 cm dxpedition to Hawaii starts on 19 April – see report and skeds at the end of the NL. Overlapping Hawaii is a 23 cm dxpedition to OY and TF by DL3OCH starting on 23 April. Then in May is DL1YMK's big 70, 23 and 13 cm dxpedition to TF between 12 and 24 May – see Michael's report in the April NL and preliminary sked info at end of this NL, and a new 23 cm dxpedition just announced by DL3OCH to China, BT4EME, on 20-22 May – see Bodo's report. I am still scheduled to put WY6G on 70 cm EME in June, probably starting on 13 June as K0YW has asked if I also might be able to put KH7X on for an encore on 23 cm for those who may have missed QSOs in April. This would be on 16/17 June.

Michael & Monika will bring you TF/DL1YMK in May

8N1EME: Mike (JH1KRC) jh1krc@syd.odn.ne.jp of The JA Project Big Dish Group reports – We finished all EME activity on 31 March. Tentatively we are reporting 323 EME QSOs were made during our activities from Feb to March. On 432 67 QSOs were made with 34 on CW, 2 on SSB and 31 on JT65. QSOs by country were JA 16, VK 3, PA 2, OK 3, G 2, OH 4, S5 2, UA 5, DL 8, SM 5, EA 3, HB9 2, F 3, ZL 1, OZ 1, W 2, SP 1, UT 1, FR5 1, ZS 1 and KL 1. On 1296 71 QSOs were completed with 50 on CW and 21 on SSB. QSOs by country were JA 14, VK 3, KL 1, ES 3, F 4, OZ 1, PA 2, SM 3, OK 3, HB9 2, ON 3, DL 10, LA 3, LX 1, UR 1, W 11, VE 1, I 3, and G 2. On 5760 31 QSOs were made with 23 on CW, 6 on SSB and 2 on SSB/CW X-MODE. QSOs by country were JA 9, W 4, UA 2, VK 1, ES 1, VE 1, HB9 1, F 2, I 1, LX 1, OE 2, DL 3, OK 2 and GM 1. On 5760 a 1 m dish was enough to receive 8N1EME's CW signals. QSL cards be issued in a few months. Please send in your detailed reports.

DK3SE: Salvo dk3se@gmx.de has just completed a new 2.2 m dish on 23 cm with 100 W at the feed. He is still experimenting with different feeds. He is an f/d = 3.3 and is currently trying a patch feed. Before he installed the new dish, he QSO'd K2UYH on JT65C using a 1 m dish and a TH326 PA giving 200 W in the shack, but only about 100 W at feed and a 0.9 dB tropo preamp. He should have more power (800 W) from a YD1332 and a 0.3 dB NF soon. Salvo is also QRV on 70 cm EME. [Salvo later reported that he did not have his polarization correctly connected during our QSO. He apparently had the same circular sense on both TX and RX].

DL3OCH comparing dish and yagi in prep for BT4EME

DL3OCH: Bodo dl3och@@gmx.de sends more dxpedition news -- It's been a while since my last dxpedition to C6ARI. Since then I have planned a whole bunch of new 23 cm dxpeditions. These will be 23 cm only operations using JT65C with my single yagi and my transverter with about 100 W output. Everybody that worked me from C6ARI should be able to work me with my yagi. I also performed some tests with my new 1.8 m portable dish with patch feed. The signal is about 5 dB better than with my yagi. It is not decided yet where I will use the dish and where the yagi, since it is quite some more work to put the dish up. My dxpedition plans are as follows: 23 April, 1100-1600 OY/DL3OCH (Faroer Island IP61 or 62), 24-27 April 1700~2100 TF/DL3OCH (Iceland likely from IP05, IP06, IP15 and IP16 – my apology to DL1YMK, but my plans were made before he announced his dxpedition location), and 20 May 0030-1400, 21 May 0200-1430, 22 May 0300-1500, BY4RSA (YES, China!). You can see that I will be in Iceland before DL1YMK goes there in May. I am not doing this to be the first from Iceland on 23 cm. I discussed my plans to go to TF at the EME conference in Germany. I had originally planned to go in Oct, but my schedule changed and I moved the date to April long before I knew of Michael's trip. I intend to operate from at least three new grids and will operate JT65 to lessen the overlap of my 23 cm operation with DL1YMK's plans. Regarding China, I have received my license and some local Chinese OMs who are interested in EME have offered their help. My friend DL2JRM works in China and has all the necessary connections to the make this dxpedition a reality. We were able to locate a 1.8 m dish. I will take my transverter and the patch-feed for the dish. Unfortunately the conditions are quite bad on the possible dates. The elevation will be low for everyone, but I believe it can still work out and I want to give it a try. I plan to operate from 20 to 22 May as these

are the best dates with a window to NA and EU. Furthermore it is possible to activate not just 23 cm. There are further EME activities planned on 2 m and 70 cm even after my visit. The callsign, BT4EME, has been applied for and will be issued this coming summer. Please check my website, www.dl3och.de, for further news as everything is still not firm. [Just before completing this NL, Bodo sent info on tests he made with the 1.8 m dish. He appears to be getting 5 to 6 dB improvement over his yagi. I copied him at -16 dB on JT65C and believe we could have worked on CW].

G3LTF: Peter pkb100@btinternet.com has been traveling but was on for the fun in March -- We were away on holiday in N. Italy for the big activity weekend in Feb, so missed 8N1EME and the W6 James valley boys on 1296. I did catch 8N1EME for #401 on 432 on 19 Feb before we left. The next opportunity to operate EME was the DUBUS contest on 432. I worked on 24 March VK3UM, SP6JLW, KL6M, VK4AFL, RW1AW, UA3PTW, SM3AKW, SM2CEW, FR5DN, JA6AHB, JA9BOH, SM3BYA, OH2DG, OZ6OL, SV1BTR, F2TU, G4RGK, DL4MEA, EA3DXU, YO2IS, DF3RU, F3VS, W8TXT, K1FO, SM2A, VE6TA, K2UYH, DL1YMK, OZ4MM, I5CTE and SM3JQU, and on 25 March RW3PX and G3LQR for a total of 33x20. Heard were DK3WG, DL9KR and DL7AFB. Its a list of all the 432 stalwarts! Great to work them all, but no newcomers and the N American activity is vanishing! I found conditions good to very good; there was variation but at times, near moonset on 25th especially, the signals were as good as I've ever heard. I know the Northern guys had bad absorption. Having variable polarization was a big help. On 25 March I changed the feed to 13 cm a couple of times, once to work IW2FZR for initial #42 and also for another attempt with NA4N. I could hear Greg (559) on 2304, but he couldn't find me on 2320. We are beginning to suspect WI-FI noise as the reason. Finally on 26 March I had a nice QSO with VK4AFL near moonrise (above normal signals) and then with LA9NEA (549/539) using his 2.7 m dish. That was it for March as the following weekend we had gales that were too strong to allow me to undo the dish.

G4RGK: Dave g4rgk@btinternet.com reports on the 70 cm part of the Eur EME Contest -- Conditions for the 432 CW contest were very unstable, making it tough going. I heard around 45-50 stations over the weekend, but many wiggled off my hook. I even struggled with K2UYH, it took nearly an hour to work Al. Getaways were YO2IS, JA9BOH, VK4AFL, SP7DCS, DL4MEA, UA6LGH, SM2A, JA9BOH, DL5FN, DL7AFB and JH0WJF. I called JH0WJF for nearly 45 minutes before giving up. I had one disaster. I had remade the lines that join the two groups of 4 yagis. I routed them further back towards the mast. When I tilted the antenna to 66 degs the lines hit the winch cable, which put a dead short across them. As soon as I hit key, there was a big bang and the lights went out! I lost 30 minutes figuring out what had happened and fixing it.

GM4ISM: Mark gm4ism@blueyonder.co.uk reports on 5.7 GHz from GM -- Almost exactly 1 week before the 24/25 March 8N1EME tests, I decided to throw a 6 cm EME station together. The aim was to christen my transverter with a first EME QSO. My main dish is positioned such that it never sees the moon soon enough to have a common window with JA. I had to put up an entirely separate antenna. I used an old 1.8 m dish that I had previously used on 10 GHz EME (12 years ago!). There was not enough time to do any thorough testing, but once I got the equipment assembled and repaired, I ended up with 50 W of TX power and a 1 dB NF. System performance was not as good as it could have been with only 4 dB of sun noise and 0.2 dB of moon noise. This system still had plenty of margin for 8N1EME! They were a genuine (579) at one point, and I exchanged (559/449) reports with them. This is believed to be the first GM to JA QSO on 6 cm. It was also my first QSO ever on this band, and the first signals I ever heard on 6 cm. Thanks to the Big Dish guys. They made my day! Following the QSO, I tried with several larger European stations, but no QSO resulted. Both F2TU and RW1AW reported hearing me and I could hear Alex (O) copy at times. I had only a limited time before the moon was obscured. I heard OK1KIR (M) and some weak signals from F2TU. Another station was heard (possibly OE9ERC), but not positively identified. I should have quite a few dB to gain when I install the feed on my 2.4 m dish and go circular. The power amp is also capable of 100 W at 6 GHz. My temporary system is now dismantled, but I hope to return to 6 cm EME soon.

GW4DGU: Chris' chris@chris-bartram.co.uk report on 10 GHz during the DUBUS Contest – I was QRV on 24/25 March only on 10 GHz random CW. My impression is that activity was down, possibly because of the 8N1EME operation on 5760 MHz. Nonetheless, I had some nice QSOs and it was a good excuse to fire-up the system after a winter of amateur radio inactivity due to work pressures. Conditions weren't at all bad with narrower than usual spectral spreading all weekend. The path loss seemed more like perigee than average, probably due to the narrower received signals. I was able to detect my SSB echoes on more than one occasion. I comp leted QSOs with IQ4DF (539/519), F2TU (O/O), OK1CA (559/559), W5LUA (559/449), RW1AW (539/539) and HB9BHU (539/539). CWNR were HB9SV and DF9QX. I heard F3VS when he was in QSO with IQ4DF and I think F5JTA came back to my CQ, but I lost him. OK1CA and HB9BHU were initials. My little 2.4 m offset dish continues to work well. I can hear my echoes at any time with the 35-40 W I currently have at the feed. I did have a few problems with the gear due to the lack of use. This included a 2 m length of LDF2-50 in the 10 GHz feed to the TWT developing 20+ dB insertion loss (it should have been 3 - 3.5 dB!) -- This was very confusing. Also a DIL-socketed PIC microcontroller out at the dish end of the tracking system was intermittent due to corrosion. As a result I wasn't able to spend as much time operating as I'd planned. I've recently had my big (150 W+) TWTA running and my main project is to finish the new all waveguide 'focus box' to allow me to run the higher power. Quite a few of my sub-projects are well under way, but I'm not sure when they will be finished and on the air. Apart from the extra 6 dB or so on transmit; I should also see about 3 dB improvement on receive. The new system is being designed allow the use of CP with a few easy to make changes around the feed.

HB9Q: Dan's (HB9CRQ) dan@hb9q.ch activity report for March –- I had another great EME month! I added several initials on 432 QRP stations on 432 random. They were using only around 50 W and single yagis down to a 1.2 m boom! On 432 hams are starting to understand the potential of WSJT. The activity, number of new stations is growing! We have worked since 6 Feb 2004 #222 initials on JT65B! Due to a heavy QRL-load we will not be QRV very often during April and May. However we will try to be QRV during weekdays and weekends as much as we can. Look for us on 432.077 JT65B first. During our activities we are always stand-by on the jt-logger at http://www.emeham.com/432. We can be contacted there for band/mode information! If you like to know our activity times in advance you can send an e-mail.

K5SO: Joe is k5so@valornet.com is QRV on 23 cm again with a somewhat stronger signal and a more sensitive receive system than before. He worked K5JL and SM5LE during the AW and plans to remain of 23 cm for the near term. In response to requests for information Joe has updated his www.k5so.com web site to describe on the sun noise page his recent VE4MA-style feed horn performance improvements. The new information is included in the hope that it will provide a useful and practical example as to how the sun noise chart that Frank W2UHI and he have been working on for the past year can be used by stations seeking to monitor their EME station's receive performance over time or by stations seeking to evaluate the effectiveness of modifications made to their stations.

GM4ISM's 1.8 m dish used to work 8N1EME on 5.7 GHz

KH7X: Bruce (K0YW) k0yw@frontier.net and the KH6 Gang (KH6ND, KH7U and KH6YY) report that plans for their dxpedition are on track. At this writing Bruce should already be in Hawaii. Operation will be from BL11cg

commencing on 23 cm at moonrise on 19 April. Operation will be CW with a few shifts to SSB when signal strengths warrant. No digital operation will be done. Operation will also take place on 13 cm. The latest skeds list is at the end of this NL. They will TX on 1296.020 and listen plus or minus several kHz. On 13 cm operation will be primarily by sked for all 3 RX frequencies with some random calling after a sked is completed. The operating pattern will be similar to that used on 23 cm. They will TX on 2304.050. In addition to always receiving on 2304.050 plus or minus Doppler, they will also be listening on 2320.050 for Eur and 2424.050 for JAs plus or minus Doppler. The 23 cm equipment will consist of a TS-2000 with INRAD RX filter for the 144 MHz IF driving an SSB engineering LT-230S 23 cm transverter to a KD5FZX GS-15B PA at 400 W neatly packaged into a Dentron MLA-2500 case. A 12' dish with a round waveguide Septum feed and VE4MA design scalar ring will be used with a WD5AGO 0.28 dB NF preamp. On 13 cm the equipment consists of a DEM 2304 transverter interfaced on 144 to a TS-2000. The RX preamp is by WD5AGO with a 0.4 dB NF. The feed is also by WD5AGO and a VE4MA design cleverly adapted for easy replacement into the 23 cm feed support. The PA is 150 W. The 23 cm system has been tested and hears its own echoes reliably in a 10' dish. QSLs will be managed by K2PF.

KL6M: Mike kl6m@qsl.net had a fabulous time in the DUBUS contest on 70 cm -- I was very disappointed by the poor showing from North America. Only K2UYH, VE6TA, W8TXT, K1FO were heard. This was depressing and embarrassing. I worked 31 QSOs the first day. Overslept this morning, but still managed 4 more the second day. I added 3 initials with F3VS, SP7DCS and UA6LGH. An intermittent relay at the antenna caused me to miss a couple of QSOs. Quite a few were heard but not worked.

OK1CA: Franta ok1ca@ges.cz writes -- I was active during the DUBUS Contest on 10 GHz with my 4.2 m dish and 25 W SSPA. I measured Sun noise of 18.8 dB (SF73) and a moon noise of 3.4 dB. I worked SP7JSG (559/559) for an initial (#), G4NNS (559/569), IQ4DF (589/559), HB9BHU (579/569), GW4DGU (559/559) (#), W5LUA (579/569), F3VS (559/559) (#), HB9SV (579/559) (#), WA6PY (559/549) (#), OK1KIR (569/559), RW1AW (579/579) (#), DF9QX (559/529) (#), VK3NX (O/O) (#), F5VKQ (549/559) (#), F5JTA (559/559) (#), F2TU (559/559), DL2LAC (O/O) (#), LX1DB (589/569) and F/DJ2DY (549/539). There was very good activity and the weather was pleasant for microwave.

OK3RM: Zdenek z.hofbauer@centrum.cz is a new EME station in OK now QRV on 432. He has 4 x 38 el yagi array 300 W PA and an LNA. Zdenek is looking for skeds. Please e-mail him. [TNX OK1DFC for this report].

OK1KIR: Jan (OK1VAO) jelinek@ges.cz updates his club's activity – On 432, we worked on 2 March at 1750 8N1EME (549/559) for initial #361. On 1296, we worked on 24 Feb at 1022 VK3UM (569/559), 1107 VK7MO (-19/O) on JT, 1121 IK2MMB (-10/-12) for JT initial {#10}, 1143 HB9BBD (56/55) on SSB, 1152 SM5LE (-22/-16) on JT, 1205 OK1CA (569/559), 1212 KL6M (539/559), 1242 JR4ZZS (569/579) for #231, 1259 LA8LF, 1316 JA6CZD (449/549), 1400 LA9NEA (549/559), 1421 IK3COJ (549/539), 1442 ES5PC (O/O) on JT {#11}, 1459 ES6RQ (-8/-8) on JT {#12}, 1509 PE1HNG (O/O) on JT {#13}, 1523 PA3FBX (-17/-18) on JT {#14}, 1539 G4RGK (O/O) on JT {#15}, 1600 GW3XYW {-13/-7} on JT {#16}, 1617 OH3MCK on JT {-22/-19}, 1649 G4DZU {-14/?} on JT, 1810 K9SLQ (579/579), 1820 VE6TA (559/559) and 1907 K2UYH {-6/-7} on JT {#17}, on 4 March at 1708 8N1EME (589/559) #232 on moonrise and 1722 8N1EME (55/59) on SSB, and on 18th March at 1435 LA9NEA (559/559), 1515 WA6PY (549/449), 1524 K9SLQ (579/579) and 1535 N9JIM (579/559) #233 on moonset. On 5760, we worked on 24 March at 0755 8N1EME (579/599) for initial #24 and QM field, 0824 VK3NX (M/O), 0848 RW1AW (559/569), 0858 IK2RTI (559/559), 0945 F2TU (559/559), 1051 ES5PC (M/O), 1258 8N1EME (57/59) on SSB, 1357 LX1DB (559/559), 1459 OE9ERC (559/549), and on 25 March at 1033 JA6CZD (549/549) #25, 1103 JA4BLC (O/O) #26 and 2024 WD5AGO (M/O) #27.

RW1AW: Alex rw1aw@appello.de writes on his Eur Contest results -- I was active on 3 bands (3, 6 and 70 cm). It was very difficult to equally divide the available time between these bands. I decided to concentrate on the SHF bands, especial 5.7 GHz. On 432, I had problems with my LNA. It worked badly with my big city QRM and caused me to answer with many QRZs. In 2 hours, I made only 15 QSOs. The loudest stations were SV1BTR, DL9KR, OZ4MM, VK3UM and KL6M. I was pleased by the high activity on the 5.7 and 10 GHz bands! Aurora and Faraday were not a problem on the SHF bands, but were major problems on 70 cm with my northern QTH. My new 70 cm rotary feed has very good QRM selectivity. Logged on 5760 were VK3NX (559/559), 8N1EME (599/599) for an initial (#), ES5PC (539/579) (#), OK1KIR (569/569), IK2RTI (569/569), F2TU (569/569), 8N1EME (59/59+20) on SSB, LX1DB (58/55) on SSB, OE9ERC (569/569) (#), WD5AGO (O/O) (#). WD5AGO's signal level grew 2-3 dB when he switched to his circular feed on 25 March! On 10,368 I worked VK3NX (559/559), OK1CA (579/579), F5JTA (559/559), HB9BHU (559/559), SP7JSG (559/559), F5VKQ (559/559), F/DJ2DY (O/549) for an initial (#), GW4DGU (539/539), IQ4DF (599/559), G4NNS (559/539), DF9QX (569/539), LX1DB (569/569) and OK1KIR (55/55) on SSB. Also heard was DL2LAC, but nil from W5LUA. I was active on 13 cm on 30/31 March and worked on the 30th at 1722 DL4MEA (569/549) and on the 31th at 1823 IK2RTI (569/559) an initial (#) and the first RUSSIA/ITALY QSO on 13 cm and 1902 IW2FZR (569/569) (#). Oll contacts were on random. The 13 cm system consists of my 6 m HB dish, f/d = 0.51, W2IMU feed and ~ 300 W at the feed with a 0.4 dB LNA.

RW1AW's 70 cm dish

SM2CEW: Peter sm2cew@telia.com was on 70 cm for the DUBUS Contest and made 23 QSOs. He reports signals were quite good, but that he did have some problems with Aurora in the middle of the contest and a few did get away. W8TXT was solid and consistent as well as VE6TA with a very good signal. Peter says that he needs to do a bit of repair on his dish when weather permits.

SV1BTR: Jimmy jimmyv@hol.gr sends a summary of his activity in the European EME Contest (DUBUS & REF) on 70 cm CW – I had a guest operator, who has come in my shack for the last months and has decided to stay. This is Mr. Murphy. The latest incidents included: elevation actuator stopped working right at moonrise on Saturday, later my 15 year old mobile transceiver went completely dead and switched off, and I had flashovers in my amp (old, problematic tube) every 50 seconds or so! I lost 5+ hours of activity time on Saturday because of these problems. My RX is still 2 dB down in receive, compared to my past array, and noise pickup is 4-5 dB higher than before. I was disappointed by the near NO activity from US/Canada, except 6 stations. Congrats to them and a big thank you! For those absent, please remember that despite its title of EU EME Contest, this is a first class worldwide, truly random, EME Competition. So do not get confused by the (EU) name – hi. There was also much less activity on Sunday. I worked only 1 station in 4+ hour period of CQs. For these reasons I was only QRV in total for half my moon window. I QSO'd 29 on Saturday and only 3 on Sunday for a total of 32 compared to 37 in 2006 when I had only H pol. Contacted were: KL6M, SP6JLW, UA3PTW, VK3UM, EA3DXU, OH2DG, SM3AKW, RW1AW, F3VS, G4RGK, FR5DN, F3RU, G3LTF, RW3PX, OZ6OL, GW3XYW, JA6AHB, YO2IS, DL9KR, K2UYH, VE6TA, SM3JQU, DL1YMK, SM3BYA, W8TXT, K1FO, DL4MEA, OZ4MM, F2TU, JH0WJF, SM2CEW and NC1I. It was extremely rewarding to see, not a single self spot, not a single online sked request or any online chat/QSO exchange info during the 70 cm cw section OF THE Contest weekend. I wholeheartedly congratulate all the 70 cm Contest participants! It is the best proof that CW EME works truly on random WITHOUT ANY prior knowledge or information required. It has been a pleasure to participate in such a RADIO, focused, EME COMPETITION for one more year. By the way, during the digital part of the contest there was > 400 logger and cluster web pages containing new data, refresh-reloaded during the contest weekend alone! No need to make any comment, the comparison speaks for itself. I want to thank all those who I worked and those who I did not manage to pull out of the noise.

VE4MA: Barry ve4ma@shaw.ca sends his thanks to the 8N1EME group for the nice 5.7 GHz QSO and for first JA-VE contact on 5.7 -- My dish motor broke and I had to manually point the dish. I had a very limited window for this QSO and was in a hurry to finish before the moon moved to far. I manually peaked the dish by listening over my cell phone in the back yard. It was difficult to hear

a peak because they were very strong - at least 30 dB over the noise and probably stronger if I could find a peak. I also copied their SSB QSO with WD5AGO, but the moon was already moving away.

VE6TA: Grant ve6ta@clearwave.ca reports on his 432 DUBUS Results – I had an enjoyable time again in this contest despite the substantial ionospheric disturbance at high latitudes and the shortfall in active stations. The auroral effect caused polarity spreading at low elevation angles and extreme QSB on the weaker stations. Despite this, I managed to work 3 new initials to bring me to #122 on this band. The following stations were put in the log: G4RGK, JA9BOH, JA6AHB, KL6M, W8TXT, SV1BTR, SM3AKW, RW1AW, G3LTF, SM3BYA, DF3RU, OH2DG, UA3PTW, K1FO, K2UYH, F2TU #120, OZ4MM, VK3UM, SM2CEW, SP6JLW, FR5DN, OZ6OL, F3VS #121 and I5CTE #122. My score was 24x18. Stations went from extremely weak to extremely strong within an hour's time. Heard but not worked were: EA3DXU, SM2A, DK3WG, VK4AFL and DL7AFB. All in all quite enjoyable but at the risk of repeating what others have said, we need more stations on to keep the critical mass going.

VK3UM: Doug tikaluna@bigpond.com was active 432 CW during the DUBUS Contest on 24/25 March – I was unfortunately unable to stay for my NA window on Saturday due to extremely high winds (> 80 kph) that came with a cold front just after I commenced operating. I had a nervous 20 minutes or so attempting to raise the dish to the parked (bird bath) position as the wind was even two strong for the two 12 ton hydraulic rams to get it past the 30 degree mark. The noise of the wind roaring through the mesh was quite alarming, but the dish survival was theoretically never in doubt as the construction is designed for 125 Mph, but I did not wish to prove the point! The conditions were the worst I have experienced for a very long time. Polarity was changing rapidly and over a wide range, deep fading was evident for the whole period as well. On top of all that libration was most significant as well. It required considerable patience with the smaller stations to wait until pol and QSB combined favorably. There always is a threshold where signals above 4 yagis and 1 kW are normally easy to work, even under such conditions. Unfortunately those below this EIRP pose a challenge even with my installation. I learnt later from SM2CEW that there was considerable Aurora activity. This came as no surprise! I did not get the opportunity to measure Sun noise but I would expect it to have been quite elevated. I regretfully have to make mention about the lack of activity from NA (in my single window). It was the worst I have seen in > 20 years. Two USA stations was a little disappointing. As usual the operating procedure and patience shown by all the operators I worked was just exemplary. And that's what I enjoy most about this mode of EME, the total random nature of all QSOs and the technical challenge of physically making the QSOs under adverse conditions with no outside electronic help. There was only one caller I failed to drag from the noise and that was between 1111-1135 on 25 March. Whoever it was, thanks for your persistence and my apology for not making it. I QSO'd on 24 March were JA6AHB (549/569), UA3PTW (559/569), SM3AKW (559/539), SP6JLW (559/559), RW3PX (549/449), SM2A (439/539), SM3BYA (539/539), OH2DG (559/559), KL6M (559/559), EA3DXU (559/449), G4RGK (559/449), SM2CEW (559/559), DL5FN (549/559), JA9BOH (539/549), G3LTF (559/569), SV1BTR (559/549), OZ6OL (549/559), DL1YMK (549/549), OZ4MM (559/559), FR5DN (569/559) and DL9KR (579/579), and 24 March K2UYH (559/559), VE6TA (559/579), RW1AW (559/559), SM5IOT (339/549), S53J (339/559), F3VS (559/569), SM3JQU (549/569), DL4MEA (439/O) and DL7AFB (539/O) for 30x27 or a total claimed score of 81,000 points. I had in 2002 33 contacts (in one window), 2003 44 contacts, 2004 17 contacts (only one hour), 2005 44 contacts, 2006 34 contacts. My conclusion is still very strong, but US active stations diminished significantly.

VK3MO: Rex rmoncur@bigpond.net.au recently made some 23 cm JT echo mode measurements of the Losses through what I thought were light trees as the moon rose. The echoes after correction for libration and averaged over 50, started out at -36 dB and finished up at -24 dB, once I was clear of the trees. We had some light misty rain, so I guess the trees were damp – but even so -12 dB is a lot too loose. I guess some of this is absorption both on TX and RX and some of it is the increased RX noise due to the trees, which I estimate at around 4 dB. So that looks like absorption of around 4 dB one way -- a lot more than I thought.

W5LUA: Al al.ward@avagotech.com reports working 8N1EME on 5760. 8N1EME was at > 40 dB above the noise. He was able to see 8N1EME on Spectran with a 18"x 11" horn. Al also reports working in March VK3NX on 10 GHz on 5760, and on 902 EME K5JL.

WA6PY: Paul pchominski@maxlinear.com has been very busy at a new job, but still found some time to be active in the DUBUS Contest -- I was not very active during last period of time, and concentrated on new initials on 1296 and 10 GHz. QSO'd on 1296, on 25 Feb were AD6IW, LA8LF and K9SLQ, on 18 March OK1KIR, NA4N and N9JIM. On 10 GHz, on 9 March I added VK3NX and during the contest on 24/25 March OK1CA and IQ4DF. I heard very loud DF9QX and LX1DB and few weaker signals, but due to emergency at home I was forced to QRT. I plan to be on 13 cm in April. I built very sharp Diplexer Band Pass Filters for 2304-2320 MHz rejecting 2400 MHz more then 60 dB and narrow band 2424 MHz BPF which will limit spectrum and total power of interfering signals. I will do some performance measurements before the contest.

WD5AGO: Tommy wd5ago@hotmail.com writes -- Our group was on 5760 for the 8N1EME tests on 23-25 March. The first day on 5.7 GHz we worked 8N1EME (559/439). We were horz pol. The following day we heard several Eur stations, but were not copied with our 25 W. We started and completed a 6 cm CP feed just in time for the JA window. 8N1EME was (599). We made a quick (599/579) CW contact and then switched to SSB (55/43). We had some friends over from our 6 cm grid chasing days (20 years ago). They could not believe the signals. The next moon pass we worked all the stations we heard the first day; RW1AW, F2TU, OK1KIR and OE9ERC, and on the next day LX1DB. I feel this was pretty good for 2.5 m dish and 25 W. The RX was 1.2 dB NF and giving 0.3 dB moon noise and 9.2 dB of sun noise (~ SFU 70). The 5760 feed is now out of the dish and I will be moving back to 13 cm for the DUBUS Contest.

WW2R: Dave's ww2r_eme@g4fre.com March EME report -- On 23 March I heard 8N1EME on 5760 on a 1.2 m solid dish. On 24 March I put the 13 cm feed in my 10' dish. A new ATF36077 preamp increased the sun noise 1 dB. I worked W5LUA on JT65c twice. I believe these are the first 2300 JT contacts. On 25 March I put the 23 cm feed in dish and worked K5SO on CW. CWNR was AL7RT, who was as loud as K5SO. I also worked PA3DZL on JT65C for #64*. While working on restoring the yagis in my 432 array over the weekend, I decoded K2UYH, KL6M and HB9Q. Four bands in a weekend is tiring! I agree with RW1AW comments about the inappropriate adjustments by the ARRL's adjudicator of the EME entry categories. I submitted a single band entry for 13 cm and a separate 23 cm entry. When the results were published, these had been combined into a single multiband entry, i.e., the same section as the 144/432 entries! I will not be submitting any entries next year! [Dave also heard 8N1EME on 1.2 m dish and worked K5JL on 902 EME].

WW2R 10' dish and dog house for PAs

YO2IS: Szigy yo2is@9a0tcp.ampr.org sends news of his March EME activity -- I was pleased to run again the annual DUBUS contest on 432. My rig, antenna, etc, and... the op in good shape, and Murphy stayed away. Conditions were mixed with spectacular "ups and downs". On Saturday I was able to make 4 QSOs in one hour. Two were on my CQ! I was hearing no echoes at all! By surprise, I heard KL6M to the eastward and was able to get a solid QSO on Sunday. Mike really did move the S meter! Saturday results between 1415 and 1455 were SV1BTR (O/O), FR5DN (O/O) - always solid copy, DL9KR (579/559) and G3LTF (569/539). During the evening, I found good activity, but

all where CWNR: G4RGK, K1FO, K2UYH, UA3PTW, RW1AW, DF3RU, SM3AKW and SP6JLW. Most of these were\m called for 30 minutes without a single QRZ! I also heard VE6TA during his QSOs with RW1AW and OH2DG. On Sunday, the story was the same way. Again only 4 QSOs were made between 1320 and 1520 with OZ4MM (O/O), KL6M (O/O), SM2CEW (559/439) and JA6AHB (O/O), then nothing more in the evening. For the first time I was able to work 4 continents during an EME contest Eur, AF, NA and Asia. For my downtown location with more than a dozen loud birdies in the first 25 kHz of the band, I think this is quite an accomplishment, but I had 42 QSOs back in the 1992 ARRL EME contest! After the contest I measured the system performance again. All was fine with SWR 1:1.1 on 4 x 27 el BV yagis with open wire feedline, transmitter - K2RIW 2 x 4CX250B with 500 W out, and MGF1402/BF960 KR LNA giving up to 10 dB of solar noise - not bad for > 16 years in service and 800 EME QSOs. I am still working on 23 cm EME. Progress is slow. I just ruined a GI7B when the PA fell a couple of cm and destroyed a tube. Most of the antenna is ready and the MGF1400 preamp tested. My TX frequency will be somewhere around 1296.015 - sorry no TVRT yet. I hope to get QRV in a month or two.

K2UYH: I a.katz@ieee.org had terrible noise problems on 70 cm for the DUBUS/REF CW Contest. Something has changed in my neighborhood. I am getting more than an S-unit of noise that is polarization sensitive. I think this may be the end of serious 70 cm EME from my QTH. I tried a new cavity preamp (0.25 dB NF) from WD5AGO, but it did not help. I also had my TR relay fail. Activity seemed low and conditions poor, but with my noise problems this assessment may not be accurate. I worked during the contest on 24 March at 0214 KL6M (559/569), 0255 W8TXT (339/559), 0304 K1FO (559/?) – lost due to T-R relay failure, 1736 SV1BTR (559/559), 1812 UA3PTW (449/569), 1817 SM3AKW (559/569), 1822 OH2DG (539/559), 1832 SP6JLW (559/O), 1842 G3LTF (559/579), 1928 G4RGK (449/559), 1940 VE6TA (559/579), 2005 K1FO (559/559), 2058 OZ6OL (559/559) and 2119 W8TXT (459/559) dup, and on 25 March at 0329 JA6AHB (449/449), 0410 VK3UM (559/559), 1848 FR5DN (559/449), 1902 OZ4MM (559/569), 1935 K4QI (449/559), 1947 DK3WG (559/559), 2000 SM3BYA (559/459), 2015 DL4MEA (449/O) and 2125 I5CTE (559/569) for a total of 21x19. I also QSO'd on 1 April at 0230 DK3SE (27dB/O) on JT65C for mixed initial #290*. Salvo was using only 1 m dish at the time of this contact. I am looking forward to seeing the skeds for the dxpeditions. The long yagi (M2 WL13), I ordered for the 432 dxpedition has arrived in Hawaii. K1RQG is coordinating the sked. I will have full details in my next report.

NETNOTES BY G4RGK*: **F6CGJ** is still QRV on 23 cm and hopes to be on 3 cm this year. **LX1DB** was on 5760 and worked 8N1EME with a lot of QSB. Willie also copied RW1AW, OE9ERC, F2TU and OK1KIR. He plans to be active in May and June on 24 GHz. **CT1DMK** is working to get back on EME. **K5JL** worked K5SO and SM5LE on 23 cm, and W5LUA and WW5R on 902 EME in March. **WA5WCP** is getting ready for the KH7X operation. **AL7RT** was on 23 cm during the March AW for 5 hours, but heard no stations only his own echoes. **VE3KRP** is making good process on his 23 cm EME station. While manually pointing his dish he heard K5JL working SM5LE. The feed has not been optimized yet, but the received signals were very encouraging. **W2UHI** is having problems with his tracking system, but is making progress in getting back on the moon after a rough winter. **N2UO** expects to be back on 23 cm EME from NC in about a month. **W4TJ** hopes to get the dish repair completed and mounted in the next week or so. **WB0GGM** is doing good. John is recovering from a stroke. He can still send CW, and the use of hands is back. He plans to get back on 432 EME soon. **DK3WG** was on 432 during the DUBUS contests, but worked not new stations on CW. Jurgen did QSO on JT65B with 8N1EME, ZS6WAB, RK3WWF, DF4UE and F1NWZ to bring him to initial #422*. **I5CTE** was active in the DUBUS Contest and worked VE6TA for an initial. **K0RZ** has not be QRV on 70 cm EME since July as he is recovery from surgery, but still has more scheduled. Bill need KH6 on 70 cm. **N2IQ** has the found problem with his 23 cm driver. Marc's PA appears to be working fine.

FOR SALE: **N7AM's** family is looking for a good home for Jack's 30' aluminum-mesh dish. Someone has already offered to take it down for its salvage value in Aluminum. They would rather it went to a ham that could actually use it. If you are interested, please contact Jack's son-in-law, Ben Pedersen at (360) 377-2259 to discuss and make arrangements. There is a set of pictures of it in the photo gallery at: http://www.kkn.net/~tree/gallery/n7am. It uses a prop-pitch motor for azimuth rotation and a hydraulic system for elevation. These components would be included with the antenna and mount, but there is no tracking electronics/computer/software. **W2MPK** w2mpk@dreamscape.com wants to know where he can get plans for a KW 432 PA using either an American or Russian triode. **WW2R** is looking for a GR-1236. **DL8YHR** is looking out for a 432 PA with around 300 W out that is not to heavy to use on his next dxpedition. Contact Frank at FRANK@aol.com. **WI6M** has 1296 30 W amp kits available for $US55 including shipping anywhere in the world. The amps operate from 28 V with typically 10 ~ 13 dB power gain. The kit contains all required surface mount components, but does not include a heat sink or T/R relay. The device is PTF10021. See http://kahuna.sdsu.edu/~mechtron/hamshack/1296Amp/1296%20Inst%20V4Written.doc for details. (70 W 23 cm PAs are also available for $US250 at http://users.innercite.com/kj6ko/forsale.htm). **W2DRZ** has 2 10' solid dishes with 6 GHz feeds available for the taking. Contact Tom at w2drz@madbbs.com.

WHO's ON 3456 CM? BY G3LTF: With the 13/9 cm leg DUBUS/REF EME this month knowing who is QRV is of prime importance -- Putting together info from W5LUA and NA4N plus a few web page visits, I think the following truly shows the state of activity on 3456. In the QRG column "T/R both" means the station can make QSOs on either band and work cross band. The good news is that it looks like most people can work 3456 and so crossband may not be needed very often. The bad news is that the polarization is pretty mixed and if we are ever to get this band into the shape that 13 cm is now, i.e., QSOs with 3 continents in a single day's moon pass, we surely all need to go circular.

CALL	QRV status	QRG	Polarization
LX1DB	QSOs	T/R both	linear?
G4NNS	QSOs	T/R both	Circ + lin
OK1CA	QSOs	?	?
OH2AXH	QSOs	3408	?
W5LUA	QSOs	3456	Horizontal
WA9FWD	QSOs	3456	Horizontal
VE4MA	QSOs	3456	Linear
OE9ERC	QSOs	3456	Circular
G3LTF	echoes	T/R both	lin, building Sep.
G3LQR	heard sigs	T/R 3400	Linear
VK3NX	building	Undecided	
W6BY	building		

A.R.I. 2nd Italian EME Contest "New Modes" 2007 Rules from Mario, I1ANP, ARI EME Coordinator

Period: 12 and 13 May from 0000 to 2400

Bands: 50 MHz and up, only via Moon reflection

Modes: Those modes in which message decoding is charged to a computer, whilst validation and QSO management are effected by the human operator. If during the contest no information has been received or exchanged, specifically regarding frequency and/or calls, the QSO is considered "random", otherwise "assisted" (for that QSO and subsequent ones). "Self spotting" is considered assistance. During a QSO all information must be obtained only via EME.

Categories for 432 MHz band: Stations are subdivided by power and type of antenna employed. For yagis the total length in wavelengths is considered (distance from reflector to last director multiplied by the number of yagis in the array), for parabolic reflectors the dish diameter is considered. At 144 1 wl = 2.08 m = 82" = 6' 10", At 432 1 wl = 0.694 m = 27". Class A with yagi <= 18 wl and power <250 W and Class B if power > 250 W. Also Class B if power < 250 W with yagi >18 wl but < 36 wl or dish < 3.05 m and Class C if power > 250 W. Also Class C if power < 250 W with yagi >36 wl but < 72 wl or dish < 4.57 m and Class D if power > 250 W. Also Class D if power < 250 W with yagi over 72 wl and dish > 4.57 m and Class E if power > 250 W.

Categories for 1296 MHz and above bands: There is one category per band independently from power and antenna.

Downclassing: If the first of each category scores less than the first of the lower category, the whole category is moved into the lower.

Points for 2-way QSOs: Random is 10 points, but with Italian stations 31 points, and between Italian stations 10 points. Assisted is 3 points, but with Italian stations 10 points, and between Italian stations 3 points. Italian stations (and foreign stations operating in Italy) will be classified separately from the rest of the world.

SWLs: The station heard can be inserted as correspondent twice maximum. Points are 10 for each station heard in QSO, 31 if Italian.

Prizes: To the first of each category will receive a prize. A certificate will be sent to all the participants who sent in the log. If somebody wins more than one category, he gets only one prize and certificates for the other categories won, while the prize for these categories goes to the second place winner and will be so inscribed.

Logs: Send by e-mail to mario.alberti8@tin.it (will be confirmed upon reception) or by postal mail to Mario Alberti, Via Privata Maralunga 12, 19126 La Spezia, Italy. Logs should be sent within 30 days of the contest. The log must contain a general section with the Call, Name, Address (including e-mail if had), QTH Locator, Band, Category, PA Power, Antenna dimensions and type. The QSO log must contain Date, Hour, Mode, Call, R (for random) or A (for assisted), Points, and Total Points. Comments and other info are welcome.

FINAL: There is no lack of EME related activities for the next few months. The problem for many of us will be how to fit everything in! With so much going on, try not to miss the 70 cm ATP – especially those of us in NA.

? The ARI has started work on the XIII International EME Conference. It will be held in August 2008 in Florence, Italy - [One of my favorite places]. The dates has been tentatively set for 8-10 Aug. To help in planning the conference the ARI committee has prepared a questionnaire available on at www.ari-crt.it/eme2008/questionnaire.html and would very much appreciate your assistance by filling it out. Your answers do not commit you in any way.

? There has never been a time when more 432 & up EME related activities where happening. But, I am troubled by recent disagreements among members of the EME community. As humans we have great ability at perceiving patterns. Unfortunately as a result we sometimes see bad intentions when none where meant. I hope cool heads will prevail. It would be a shame to lose what we have because of disagreements among ourselves!

? Please keep the reports and especially the technical material coming (I need more tech material). I shall be looking for you off the moon and will try to catch as many of the up coming contests and dxpeditions as possible. 73, Al – K2UYH

KH7X Skeds:

19 April
Time 1296.020
1800z KH7X -DJ9YW
1830z KH7X -F2TU
1900z KH7X -HB9Q
1930z KH7X -G3LTF
2000z KH7X -OE9ERC
2030z KH7X -PY5ZBU
2100z KH7X -CQ USA

20 April
Time 1296.020
0000z KH7X -CQ USA
0630z KH7X -OK1KIR
0700z KH7X -OH2DG
0800z KH7X -NO MOON
1930z KH7X -WB2BYP
2000z KH7X -LA8LF
2030z KH7X -DL4DTU
2100z KH7X -OK1CA
2130z KH7X -DL4MEA
2200z KH7X -G4RGK
2230z KH7X -W2UHI
2300z KH7X -K5PJR
2330z KH7X -KL6M

21 April
Time 1296.020
0000z KH7X -CQ USA
0600z KH7X -JA6CZD
0630z KH7X -VK4AFL
0700z KH7X -G4CCH
0730z KH7X -PA3CSG
0830z KH7X -NO MOON
2030z KH7X -WB2BYP
2100z KH7X -OZ4MM
2130z KH7X -LA9NEA
2230z KH7X -SM2CEW
2300z KH7X -WW2R
2330z KH7X -K2UYH

22 April
Time 1296.020
0000z KH7X -WA5WCP
0030z KH7X -VE4MA
0100z KH7X -VE6TA
0130z KH7X -KA0Y
0230z KH7X -WA6PY
CHANGE TO 13 cm
Time 2304.050
0430z KH7X -JA8ERE
0500z KH7X -JA8IAD
0530z KH7X -JA4BLC
0930z KH7X -NO MOON
2130z KH7X -OZ4MM
2200z KH7X -OK1CA
2230z KH7X -F2TU
2300z KH7X -WW2R
2330z KH7X -WD5AGO

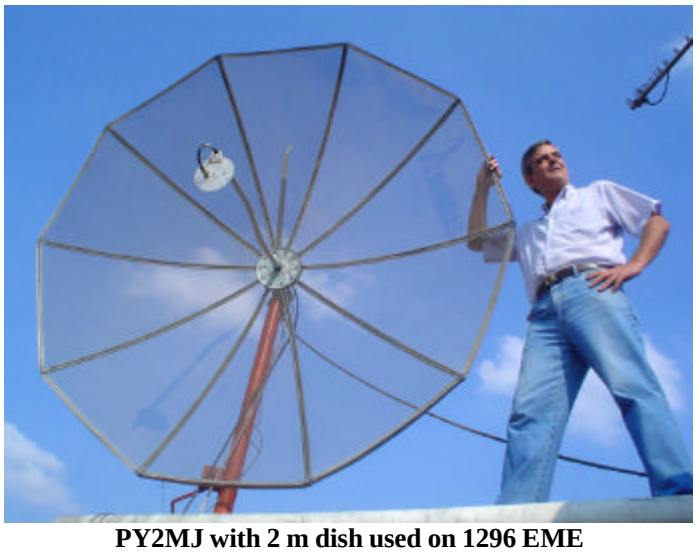
23 April
Time 2304.050
0000z KH7X -WA5WCP
0100z KH7X -KL6M
0130z KH7X -VE4MA
0200z KH7X -VE6TA
0300z KH7X -WA6PY
0330z KH7X -CQ
0500z KH7X -JA6CZD
1000z KH7X -OH2DG
1030z KH7X -NO MOON
2230z KH7X -OK1KIR
2300z KH7X -G3LTF
2330z KH7X -OE9ERC

24 April
Time 2304.050
0000z KH7X -DL4MEA
0030z KH7X -LX1DB
0100z KH7X -CQ
0500z KH7X -JA6CZD
Change to 23 cm
25 April
Time 1296.020
0000z KH7X -LX1DB
0030z KH7X -G4CCH
0200z KH7X -W2UHI
0300z KH7X -N2UO
Change to 13 cm (1200z)
27 April
Time 2304.050
0400z KH7X -WB5AFY

Preliminary Info (approx. window times) for TF/DL1YMK:

First day of operation will be Saturday, 12 May

12 May	0500 - 1000	23 cm	only random	1296.035MHz
	1000 - 1400	23 cm	skeds	1296.045 MHz
13 May	0500 - 1200	70 cm	only random	432.035MHz
	1200 - 1600	70 cm	skeds	432.045MHz
14 May	0500 - 1800	70 cm	skeds	432.045MHz
15 May	0500 - 1900	23 cm	skeds	1296.045MHz
16 May	0600 - 2000	23 cm	skeds	1296.045MHz
17 May	0700 - 2200	13 cm skeds	TX/RX 2320.045/RX 2304.045MHz	
18 May	0700 - 2000	13 cm	skeds	see above
19 May	0000 - 2359	23 cm	DUBUS contest random only	
20 May	0000 - 2359	23 cm	DUBUS contest random only	



PY2MJ with 2 m dish used on 1296 EME