432 AND ABOVE EME NEWS
April 2007 VOL 35 #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: We are now into the contest season. This month was the European (DUBUS/REF) Digital EME Contest which had super conditions, but not a huge amount of activity, at least not on 70 and 23 cm. The start up of the 8N1EME Big Dish EME operation and the excellent conditions may have drained away some of the activity to the CW portion of the band. The low end of 1296 was booming! AD6IW using the 30 m Jamesburg Dish also chose to initiate operation on 1296 this weekend - [see picture on next page]. The following weekend when the 70 cm CW activity time period (ATP) was scheduled had much poorer conditions and activity. Hopefully the 70 and 6/10 cm part of the Eur EME Contest on 24/25 March will spike up 432 activity. But there will again be a conflict with the 8N1EME EME test on 6 cm on this weekend. 8N1EME will be QRV on 24/25 March on 5760.100 MHz CW, SSB even possibly FM (experiment only) with 63.84 dBi gain from their 32 m dish and 500 W output at the waveguide feed point!

DXPEDITION SEASON is also fast approaching. On 19 April KH7X will begin operation on 23 and 13 cm EME from Hawaii with a 12' dish. K1RQG K1rqg@aol.com is coordinating skeds and asking for requests. Then, starting on 13 May TF/DL1YMK begins operation on 70, 23 and 13 cm. K1RQG is also requesting skeds for this dxpedition. On 15 June WY6G will be QRV on 70 cm.

AD6IW 30 m dish is bigger than a 10 story building

8N1EME: Shu (7M2PDT) j_eme_7m2pdt@ybb.ne.jp reports — On 70 cm our 32 m antenna is V-pol fixed no H-pol. The PA power is only 500 W with a 50 m cable (loss ~ 3 dB). The antenna gain is about 34 dBi, the same as 16 yagis. We had expected more, but we cannot feed at best focus and the resulting efficiency is only 13%. This is why our 70 cm signal appears relatively weak. However the efficiency on 1296 is better. The feed is 2.4 m dish with septum feed. We worked on 23 Feb, 8 stations on 432 (JA6AHB, VK4AFL, PA3CSG, OK1TEH (JT), G4RGK (JT), OH3KLJ (JT), S54T (JT), S53T (JT), UA3PTW, G3LTF and SM3AKW), on 24 Feb on 432 15 QSOs and on 1296 16 QSOs - SSB on 432 with HB9Q was my first experience with SSB off the moon. On 3 March we had an open-house and lectures on EME with some 100 attendants. Several school boys and a girl who came to the EME class listen to the echoes of their names returned by USA EMEers. In spite of the late hour (after midnight in N.A.) K2UYH, K9SLQ and K5JL came on for the EME class. Their efforts contributed to the success of this part of the project. An eleven-year old boy with a first class amateur license(!) joined us to contact K5JL on 1296 SSB. Perhaps this is the world record for EME operation by the youngest amateur. By now all of the antenna feeds are removed in preparation for the next experiment on 5760 MHz on 24 March. We have already heard our echoes on this band, but not as strong as we would like. I think we need more receiver gain, or to adjust the feed antenna position. Overall we worked about 200 QSOs in total on 144, 432, and 1296 MHz EME.

9A4QV: Adam adam9a4qv@yahoo.com (JN75BB) was active again on 70 cm -- I would like to tell about my 432 activity during the end of the Feb. I was on for the DUBUS/REF Digital Contest on 24/25 Feb. I tried a newly built 27 el 9 wl YU7EF yagi. My previous two contacts (HB9Q and K2UYH) were completed with an old 21 el Tonna yagi and 300 W. The new setup was quite simpler except for the new yagi. I have 300 W from a Gi7b amp and a barefoot FT-847 without any LNA. Coax length was 18m of 1/2" hard line. My results were encouraging. I QSO'd on 24 Feb HB9Q (-18 dB), PA3CSG (-25 dB) and OH2PO (-20 dB). Despite the big dish, I did not copy 8N1EME's signal at all. I was trying for two days, but nothing on my screen even though HB9Q was good copy. I hope to try again on 70 cm in the near future.

AD6IW: Jim (N9JIM) <n9jim-6@pacbell.net> reports that the "big" 30 m Jamesburg dish is now QRV 1296 EME report -- The dish has an estimated gain of 46 dB on 23 cm and echoes were as high as S9, with S2-S5 average The dish was on during the end of Feb AW. Contacts were made with 19 different stations in Japan, North America, and Europe under several calls. AD6IW contacted JR4ZZS (CW/SSB), KL6M, VE6TA, K9SLQ, W6YX, LA8LF, ES5PC, WA5WCP, WA6PY, IK3COJ, WW2R, UR5RX, M0OY, W5LUA, DF3RU (CW/SSB), K5GW (CW/SSB) and SM5LE. W6BY contacted JR4ZZS and N9JIM contacted JR4ZZS, JA6AHB and JR4AEP. It took lots of help to make this first weekend work. TNX to AA6EG, W6BY, N9JIM, AD6IW, KK6MK, N5XSA, KF6ZEO, WB6DCE, AA6IW, AD6FP, Rico, Andre, Jeff, and many more! We were running: a 29.7 m dish with 60 W (AD6IW's amp) to feed (VE1ALQ circular horn (courtesy of W6YX) modified by N9JIM to a Cassegrain sub-reflector). On RX was a 0.7 dB LNA, but located after about 2.5 dB loss through LMR600 line. Our Sun noise was 20 dB. We had planned to move the LNA to the feed, but the weather was bad. On our next trip, the LNA will be moved up to the feed and perhaps the PA increased to 100 W as well. Dish positioning was done manually by reading the F1EHN's software and twisting the control knobs on AZ and EL. Our best tracker was Rico with 0.01 deg accuracy for an extended period. Amongst all the dial tweakers, we averaged a < 0.05 deg error. Operation is next planned for 17/18 March. Our Website is under construction at http://www.jamesburgdish.org/. We plan to post some new pictures, video, and wave files.

EME School at 8N1EME

DK3SE: Salvo dk3se@gmx.de is now QRV on both 432 and 1296. On 70 cm he is running 4 x 21 el FT yagis and 500 W and QSO's a number of stations including K2UYH this past month. On 23 cm he has a relatively modest system only a 1 m dish and 100 W at the feed and has QSO'd G4CCH and had a partial with K2UYH on JT. In the spring Salvo plans to expand to a 2.2 m dish. One limitation is that his maximum elevation is limited to 50 degs.

DL1YMK: Michael DL1YMK@aol.com sends in up dated information on his equipment plans for his dxpedition to Iceland (12/24 May) reported on in the last NL. He hopes to have a kW on 70 cm, 500 W on 23 cm, and 200 W on 13 cm with a second LO for multi sub-band operation. He will look for JAs on the second weekend. The moon will not set then and he will have a long moon window. He has now repaired the storm damage to his dish and worked 8N1EME during the AW on 1296 SSB and had another QSO ON7UN.

DL4MEA: Günter guenter.koellner@siemens.com announced that he worked VE4MA (O/O) on 2304/2320 crossband in Feb. Echoes and Barry's signal seemed a little down, so he expects that conditions were not tremendous. A sked with VE6TA failed, probably because Grant wasn't able to operate. Someone also called on 2304, but disappeared before Gunter was able to get the callsign.

DL7AFB: Bodo's Bodo.Woyde@web.de March activity report follows -- I've completed the improvements to my 70 cm RIW PA. Without any problems I replaced the 4CX250's with Svetlana GS-36Bs (4CX400s). Because of the larger anode radiators the plate line was redesigned. Compared to the original design, the line had to be shortened by 8 mm (1/3") to compensate for the bigger anode capacitance. The output power increased by nearly 2 dB and the thermal drift was eliminated. TNX to W7AMI and K3MF for useful hints. Details can be found on my web-page. During DUBUS Digital Contest on 24/25 Feb, I worked on JT65b HB9Q (O/O -12 dB), OH2PO (O/O -15 db), OH2DG (O/O -22 dB), PE1ITR (O/O -24 dB) - Rob operates with 2 x 16 el yagis and 800 W, DL7APV (O/O -13 dB), SM2ILF (O/O -20 dB), K3MF (O/O -24 dB), DK3SE (O/O -27 dB), G4RGK (O/O -19 dB), K2UYH (16dB/18dB), OH4LA (28dB/23dB) - Pasi used 4x21 el yagis and just 150 W, EA3DXU (O/O -23 dB) and KI0LE (O/O -23 dB). On 3 March I had the pleasure to QSO 8N1EME (25dB/19dB). This QSO was amazing since I had to work right through a forest of trees at moonrise. Many thanks to the team, they did a great job! By April I'll going to break EME operation until autumn/winter and disassemble everything, since the field-day contest season starts. My web page is http://www.dl7afb.homepage.t-online.de/eme/eme.htm

F2TU: Philippe f2tu.philippe@orange.fr sends news of his Feb/March moon efforts – I was QRV on 13 cm on 3 Feb and QSO'd LX1DB (54/55) on SSB and DL4MEA (559/559). I was on 10 GHz and worked on 24 Feb RW1AW (559/559), and on 3 March LX1DB (559/559). I also QSO'd on 24 Feb on 23 cm LA8LF, IK2COJ, JA6CZD, F5JWF (549/599) and (33/55) on SSB for initial #261, G4RGK, KL6M, LA2Z, W7UPF, K9SLQ, DF3RU; and on 25 Feb VK4AFL, VK4TL, HB9BBD (57/57) on SSB and OK1CA. I contacted on 2 March on 70 cm 8N1EME (559/579), and on 2 and 3 March on 1296 MHz (59/59) SSB - a broadcast! I will be QRV for European Contest on 5.7 & 10 GHz. My schedule is on 5.7 GHz: 24 March 0930 - 1200 for Asia and Eur, 25 March 2100 - 2200/2300 for NA and Eur. The remainder of my time will be on 10 GHz and possibly on 70 cm, if the activity is weak on 5.7 and 10 GHz.

F5JWF: Phil f5jwf@wanadoo.fr reports on his station -- During the weekend of 24/25 Feb I worked the following stations on 23 cm: On CW VK3UM, HB9BBD, JA4ZZS, F2TU, LA9NEA, DJ9YW, K9SLQ, VE6TA, KL6M, OK1CA, 8N1EME, LA8LF and OZ4MM. Except OK1CA already worked in Jan all these stations were initials. I also worked F2TU on SSS – I was amazed that such a good SSB QSO was possible! On JT65C I QSO'd only SM5LE. I am sorry to all stations that I was not able to decode. I plan to improve my NF, which should help. There was a lot of rain on my side, but hopefully my new station (3.7 m dish, 120 W SSPA at the focal point, 0.7 dB NF LNA) is now more or less waterproof.

FR5DN: Phil fr5dnpm@wanadoo.fr reports – At the time of the Feb AW we had a cyclone warning (Gamede - 940Hpa) that did bad things on the island. Two people died and about 100 were injured. My home did not suffer as we are somewhat protected by the mountains. The roads are not in good shape and I will have much trouble going to work. One of the main bridges that I use everyday on the south coast has been destroyed. We had 50,000 cars/day on that one. I secured my antennas and dismantled the whole array. I hope to be ready for the March contest. I missed 8N1EME. Winds were up to 205 km/h on the north cost hills and the cyclone did not get closer than 240 km from the island's coasts! If it was closer or went directly over the island, I can easily imagine what the situation we would be. Some areas still don't have water and electricity after 6 days. I participated in providing emergency with some of the other hams. Some parts of the island did not have any communications. Here in Avirons, we were somewhat lucky.

G4RGK: Dave g4rgk@btinternet.com was active on both 70 and 23 cm in Feb/March -- I worked around 35 stations in the DUBUS Digital Contest. Activity on 70 seemed very light and on 23 there was far more going on down the CW end of the band than there was at the digital end. I worked on 1296 CW on 24/25 Feb OK1CA, F2TU, K9SLQ, PA3CSG, OZ4MM, LA9NEA and ON7UN. The following weekend 8N1EME, SM2CEW, F2TU and LA9NEA were all worked again on CW. The dish rotator still has tracking issues causing by excessive backlash. I plan to build a larger dish this summer and will be getting rid of 8 yagis for 70 cm later on.

HB9Q: Dan (HB9CRQ) dan@hb9q.ch summarizes his recent EME activity -- We are very happy to report several new initials. On 432 we worked FM5CS for DXCC#76 and W1JJ for WAS 39. Due to a heavy QRL-load, we will not be QRV very often until May. However we will try to be QRV during weekdays and weekends on 432 as much as we can. Look for us on 432.077 on JT65B first. During our activities, 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.

KL6M: Mike kl6m@qsl.net had planed to operate multi band during the Feb AW – I left the 23 cm feed in primarily due to severe back pain and subzero temps. I am glad I did as I had a great time on 23 cm. I worked about 20 stations including 7 new ones - SM5LE, VK4TL, F5JWF, JR4ZZS, AD6IW, 8N1EME and RW3BP to bring my initials total #57. I had almost 10 "heard but not worked" due to my low power. I heard K5JL, W5LUA and K9SLQ gobbling up the ones I missed!

LA8LF: Anders Anders@LA8LF.com sends his 23 cm EME CW/SSB report – The last AW was very good EME wise. I worked 6 initials to bring my total to #194. I worked on 24 Feb HB9BBD (589/589), VK4TL (549/569), VK3UM (569/569), JA4ZZS (569/589), OK1KIR (559/569), F2TU (589/589), JA6CZD (549/569), DL1HYZ (549/569) for initial #, on 25 Feb VK4AFL (549/559), OK1CA (589/579), PA3CSG (559/559), 8N1EME (599/599) # and (58/59) on SSB, SM2CEW (559/559), F5JWF (549/559), LA9NEA (549/559), AD6IW (549/449) #, WA5WCP (549/559) #, LA2Z (549/559) #, IK3COJ (559/569), WA6PY (569/569), DF3RU (559/559), WW2R (549/559), KL6M (549/569), W6YX (449/559) #, K5JL (569/579) - Jay was testing the 400 W cavity for the KH7X EME expedition, W5LUA (559/579) and K9SLQ (589/579). CWNR was DL2HWA and heard were JA8IAD and JR1EFA. I still have no EL indication. I elevate dish to max signal and run out to the dish now and then to measure tilt by using the LIDL digital level meter. Next month I will be back to full autotracking.

LX1DB: Willy wbauer@pt.lu reports worked during the Feb AW 8N1EME on 23 cm SSB (59/59). No digital activity was heard. He now also has 70 MHz [4 m band] and he can now work all bands from 160 m to 48 GHz. He has no antenna for 72 GHz.

NC1I: Frank frank@nc1i.com sends word on his recent moon activity -- I only worked three stations during the March ATP - SV1BTR, K2UYH and SM2CEW. SV1BTR's signal does not seem to be quite as good as it was before he added polarity switching (although it is probably well worth the trade-off). Conditions seemed fair to good, but activity was down from previous months. It may be that European stations are not getting up at such early hours to work the same 2-3 NA stations every month. I did have at least one other station call me during the ATP, but his polarization was 90 degs from my xmit polarity and every time I got the polarity around he would finish calling. His signal was actually pretty good, but this is an issue with my slow polarity. It can take me close to 90 seconds to rotate from H to V. I will try and get on for a couple of hours during the upcoming contest, but will not be able to put in any kind of serious effort like last year. This will most likely be my last ham radio activity until late Oct or early Nov.

OK1DFC: Zdenek ok1dfc@seznam.cz is making progress repairing his dish -- I am working on a new version of dish produced from stainless steel ribs. The rib is welded, no rivets anymore. I am also changing the azimuth gear drive, which is now in workshop. The torque moment on the output is 11900 Nm and with no backslash! I have received requests for the dimensions and details of my dishes ribs. I have put this information on my web page at http://www.ok1dfc.com/eme/10mprojekt/documentation/rib.pdf. I have also put up details about my LNAs for 1296 and 432. You can find this information at http://www.ok1dfc.com/EME/Technic/ATF54143/index.html. I am now also preparing a septum feed for DL3OCH's dxpedition to Peru.

OZ6OL: Hans oz6ol@mail.dk was hit by an ice storm at the end of Feb and is now temporarily QRT. The actuator for elevation was broken due to the weight

of the ice and the wind. The dish went to negative elevation and its rim hit the ground. Hans does not know if his dish is distorted. He will try to make repairs when weather improves and the ice melts.

PA3CSG: Geert geert.st@gmail.com sends news that he has completed 70 cm WAS -- I worked K4TO for my last state. I received a card from KA0RYT for Nebraska, but am still missing a card for Louisiana. Hopefully it will arrive soon. K4TO was a horizon only shot. We tried 4 times on CW and heard each other each time. On the 4th try we finally completed. Dave was running 100 W and 4 yagis. He had a very stable signal and he sure knows what he is doing! Dave will show up on 1296 EME sometime this or next year. During the end of Feb/March activity I QSO'd 8N1EME on 3 bands and added KL6M on 1296 for another new one!

PA3FXB: Jan jvmmap@bart.nl writes -- I took part in the European EME Digi Contest during the Feb AW, and so had no logger activity. Signals were strongest EME signals ever heard here. K2UYH measured an incredible -8 dB and G4CCH was -9 dB. I was pleased ended up with 11 QSOs for my first EME contest. In between the contest activity I had a sked with OK1CA on CW. We worked for my 2nd CW initial. My overall initial total is now 22*. I have finally completed a sequencer, so I can now make normal CW QSOs. This form of CW operation is more convenient than the JT CW mode I was limited to before.

PE1HNG: Ton ritterbex@ltt.rwth-aachen.de reports his first EME QSO on 23 cm with JA6AHB on 3 Feb. Signals were (-22 dB) on JT65C. Ton is using one of W2DRZ's tracking systems with two incremental encoders. [TNX W2DRZ for this information].

RW1AW: Alex rw1aw@appello.de has now completed both the first 5.7 and 10 GHz EME QSOs between Australia and Russia –- I made random 3 cm QSOs on 18 Feb at 1225 with F6HGQ (539/549) and 1325 DL2LAC (559/0). On 22 Feb I heard very loud signals from F5VKQ testing with VK3NX, but VK3NX was not audible and I was only able to work F5VKQ (559/559). On 27 Feb at 1230 I added VK3NX (559/559), who was good copy on my TS-2000 loudspeaker, and on 18 March at 1051 IQ4DF (59/59+) on SSB and (599/599) on CW and 1102 G4NNS (539/539). I will be QRV in the DUBUS Contest on 24 March on 5760 and 432, and on 25 March on 10368 and 432. My rig on 3 cm is a 6 m dish with 50 W in V pol to a scalar feed and a 0.65 dB LNA, on 6 cm a 6 m dish with 120 W at the feed and a 0.7 dB LNA, and on 70 cm a 8 m dish, with 1.2 kW at the feed and a 0.4 dB LNA. [Alex also expressed disappointment that his 10 GHz ARRL Contest score was not listed separately. He operated the contest on 5 bands, but was especially pleased with his 3 cm results of 16 X 11 = 17,600 points. He wanted his results for 2 m – 13 cm listed as check logs, but wished to compete as a single band 3 cm entree. He is listed in the ARRL results as a multi-band station and took second place in this category].

SV1BTR: Jimmy jimmyv@hol.gr has finished his new 70 cm crossed yagi array, but is experiencing some receive problems that he is still trying to resolve. He plans to be active on 70 cm during the DUBUS CW EME Contest in March. Jimmy has also located a 3.6 meter dish that he plans to use for 23 cm EME. He hopes to be QRV by June.

VE6TA: Grant ve6ta@clearwave.ca reports has joined the world of high speed internet and has a new address. During Feb he was on 13 cm and worked VE4MA for #31, but had some problems. During the Feb AW Grant was on 1296 where he found good activity and added 3 initials with 8N1EME, F5JWF and AD6IW. He also worked K5JL while Jay was testing the KH7X GS15B PA. In March he added VE4MA on 2304.

VE4MA: Barry ve4ma@shaw.ca is QRV again on 13 cm and also somewhat on 23 cm. He was on 13 cm on 4 March and worked DL4MEA and VE6TA for initials #34 and #35. Later he worked VE6TA for #36. These are Barry's first initials on 13 cm in 10 years. Murphy did not visit Barry. He is available for more skeds on 13 cm with 150 W and will be increasing power soon. He is still fighting with his 23 cm 2 tube final and can only get 100 W out no matter what.

VK3NX: Charlie ibnkarim@bigpond.net.au reports on his 10 GHz EME activity on 4 March – I heard nil in skeds with F5VKQ and F2TU, but worked LX1DB (529/449) for initial #2 - great signals. I have a 3.7 m dish with 26+ W at the feed (switchable between linear V or H pol) and a 0.7 dB NF LNA in QF21EX. Any stations wanting skeds, please e-mail me!

W9IIX: Doug w9iix1@yahoo.com [note: this is new e-mail address] is making progress rebuilding his station, but asks for help recovering his EME QSL collection -- I needs your help to rebuilding my 23 and 13 cm QSL card totals. On 3 Oct of 2006 my radio shack and machine shop was totally destroyed in a late night fire. All radios, equipment and records were lost. My totals at the time were 50 initials on 23 cm and 10 on 13 cm. I have reconstructed the following list from memory and while there may be omissions and errors, I needed to start somewhere. Look over the list and if you find yourself listed or know you worked me and are not listed, find me in your log and send the information via email and I will respond with a new QSL card and return postage for your card. I hope to be active again by the fall. The dish and feeds are ok and I am rebuilding everything else. (23 cm K5SO, LA8LF, HB9SV, LA9NEA, F2TU, IK2MMB, N7AM, F6KHM, K0YW, SK0UX, G3LTF, K2UYH, OK1KIR, G4CCH, K4QI, HB9JAW, HB9BBD, K5GW, DL0SHF, HB9Q, K5JL, KA0Y, KL6M, OE5JFL, N2IQ, OE99ERC OH2DG, OK1CA, OK1DFC, OK1KIR, OZ4MM, OZ6OL, PA3CSG, SM2CEW, SM6CKU, VE1ALQ, VE4MA, W5LUA, K9SLQ, VE6TA, W7BBM, VK4AFL, WA6PY, W2UHI and W2DRZ, and 13 cm F2TU, OK1CA, OK1KIR, W5LUA and WA6PY).

WD5AGO: Tommy wd5ago@hotmail.com was on 13 cm to work VE4MA (M/M) for initial #24 -- Barry's signal is actually a little better than the (M) report indicates as the conditions were poor. I am going to install my 6 cm station for the 24/25 March Big Dish weekend. I will be using a new feed that is a clone of my 13 cm feed, but with linear pol for now. It will not stay in long as I will switch back to 13 cm on 26 March.

WW2R: Dave ww2r_eme@g4fre.com brings us up to date on his Feb EME –- I now have my TH-338 running at 350 W out. On 24 Feb I looked for 8N1EME on 1296. My preamp was giving more noise on the antenna than on a load. This is not normal! I found an open inductor in the preamp causing oscillation at 1.6 GHz - (drove 8970 NF meter crazy). I repaired quickly and was rewarded by immediately hearing and working 8N1EME (579) for initial #51. I also CWNR JA6AHB. On 25 Feb, I was not active in EU window due to 60 mph winds, but did work later JR4ZZS (still need a QSL). They were the only station heard in Asia window. On 26 Feb I worked PA3FXB on JT65, AD6IW #52 at the 30 m Jamesburg dish, KL6M – 30 minute struggle, VE6TA, DF3RU #53, and later in the evening N0OY #54 for a new state. During the next AW, I will be on 13 cm trying out a new preamp.

SV1BTR's new 70cm cross yagi array

K2UYH: I worked during the AW on 24 Feb on 1296 at 0406 8N1EME (579/579) on CW for initial #289* {#260}. Later on the 24th, after moon set and rise, I operated the Eur Digi Contest and QSO'd on 23 cm at 1855 GW3XYW (8dB/9dB), 1909 OK1KIR (7dB/7dB), 1917 SM5LE (12dB/11dB), 1926 ES5PC (10dB/3dB), 1934 OH3MCK (18dB/14dB), 1950 PA3FXB (15dB/18dB), 2000 G4DZU (13dB/O), 2006 G4RGK (25 dB/O), 2017 ES6RQ (10dB/4dB) and partial 2032 LA2Z (26dB/?) – disappeared, I then switched to 70 cm at 2204 OH2PO (11dB/10dB), 2212 PE1ITR (24dB/O), 2227 DL7AFB (18dB/O), 2237 DK3SE (23dB/O) for initial #733* and 2251 G4RGK (17dB/O) for a total of 14 QSOs. I later tried a JT sked with DK3SE on 23 cm. He was able to copy me, but I never detected him. The following weekend, on 3 March I was on the moon to work 8N1EME again to provide some demo signals for their EME School program. They had an excellent signal and we QSO'd (57/57) on SSB. But it was a little confusing as to where to look for them. I do not have Internet

connected in my shack and based on their past operation I assumed they would be on 1296.030. Both Jay and I were up on 1296.030 calling at 0800. BTW Jay had an exceptional signal (589) - the best I have heard him in months. I almost missed them and was about to go back to bed when I found Jay working them near 1296.015. There were a number of stations on so I think they should have had a good demonstration. I was on 23 cm earlier in the evening, during the Eur window and was disappointed by the activity. I called CQ off and on for about an hour and only heard and worked DF3RU. Karl also had an excellent signal - the best I have heard from him as well on 1296! The next day I was on 432 for the ATP, but again found little activity and only contacted at 0454 NC1I (579/569) and 0520 SM2CEW (559/569). At moonset at about 0945 I caught 8N1EME for initial #734* and {#695}.

NETNOTES BY G4RGK: **SM2CEW** worked 8N1EME on 70 cm and 23 cm on both CW and SSB, and G4RGK on 23 cm during the Feb AW. **UR5LX** worked during the Feb AW on 23 cm PA3DZL, G4RGK and 8N1EME on JT65C, and AD6IW for initial #68 on CW. **N0OY** tried on 23 cm with W7UPF, but was not complete. **K5JL** was active during the JA window on 1296 at the end of Feb/beginning of March. He talked to 8N1EME (59/59) on SSB and also heard K2UYH, WA5WCP and K9SLQ. There were quite a few JA stations on as well. **WB2BYP** worked F2TU and K9SLQ during the Feb AW and N0OY in early March. **G0SXC** is interested in EME, and trying to decide which band would be best to start off on. Kevin has quite a bit of land and good window. **W7MEM** is working on a 12' dish and could have it on 23 cm in a month or so. **AL7RT** was on 23 cm with his 12' dish and 250 W. He is hearing his own echoes and will be looking for QSOs during the AWs. **DL9KR** was not on for the March ATP because of high winds, but plans to be on for the DUBUS 70 cm CW contest later in March. **N1BUG** has to go QRT on 432 EME. **K9KFR** has new email address k9kfr@earthlink.net. **N2UO** has moved to Greensboro, NC in FM06. Marc plans to be back on EME very soon as he has his dish in one piece. **W5LUA** worked during the Feb AW on 1296 8N1EME, VE6TA, VK4TL and VK3UM. **N0OY** is back on the moon [use to be WB0DRL] on 23 cm. **KL7HFQ** was on looking for activity on 3 March, but only heard his own echoes. **WA5WCP** worked 8N1EME on CW and SSB on 1296. **WI6M** is testing on 23 cm with a linear feed in his dish and looking for activity information.
FOR SALE: **N1BUG's** 432 EME array is for sale. The interested party would have to pick it up. The antenna is 8x21 modified Tonna yagis with open wire feed, stacking frame, 16' tower, rotors, cables, preamp, relay (Amphenol 320-10931-3). New and used spare parts for the yagis. The only problem is a glitch with the azimuth indicator, which should be easily fixable. It's not very convenient to dismantle the array right now, but I would like to get it out of here in the spring. Detailed info and pictures available. Contact Paul at paul.kelley.n1bug@gmail.com. **SSPAs** at 902 and 1296 see http://users.innercite.com/kj6ko/forsale.htm. **DL9KR** is looking for an EIMAC SK-306 chimney. **N0OY** is looking for a GR-1236 IF meter. **G4RGK** is looking for an BFQ68.

TECHNICAL: If you are using a square septum feed or considering adding or modifying your feed the paper by W1GHZ at the following link is must reading. It contains Paul's latest research on Septum Feeds: http://www.w1ghz.org/new/septum_feed_with_ring.pdf. - [TNX G4RGK for this info].

THE WA5WCP/1 STORY: The mobile station was mostly created by a team of three of us: K5GW, W5LUA, and I with some help from a few others. We started in the spring of 2005 and had many questions to solve to see if a portable EME 23 cm station was possible. The antenna is a 10' TVRO antenna f/d 0.4 designed and built for private home television reception at C-Band. The scheme to tilt over a single section of Rhon-45 tower and a simple azimuth/elevation drive was designed and built by K5GW. A Yeasu rotor controls azimuth, and the elevation is controlled by the linear actuator that was part of the original TVRO setup. The web page has a more complete description of the station, http://home.comcast.net/~wa5wcp/emedxpedition2006.html. The feed is a square Septum feed although recently I have been trying the more traditional VE4MA style feed. The square feed was used on the New England Expedition as it was very simple to fabricate and adjustment was very easy. With a receive preamp of 0.25 dB NF designed and built by W7CNK, and an isolation relay for transmit, the system gets about 10 to 11 db of sun noise relative to cold sky depending on the solar flux (for SF =80 to 100). The big issue of making the whole station portable also involved planning for disassembly and stowing for travel. Tilting over the tower using a small winch seemed easiest, and this scheme has worked well. There is a removable metal post that the winch is mounted to that can be seen in the pictures. After assembly, the post is temporarily removed for EME operation. We thought that disassembly of the antenna was best for the least risk of damage to the dish as it is rather fragile. For travel the tilted over tower is bolted to a 6 cm x 6 cm x 2.5 m piece of lumber to the trailer and the dish tied below it for protection. So that is the thinking about how we came up with the portable antenna. The mobile shack was mostly my execution of the team designed system: We needed a way to have minimum setup time at the portable locations. So using two 1 m tall racks for all equipment seemed sufficient. One rack is for antenna power supplies for rotors and actuator, It also includes the high power transmitting amplifier (4 X 7289 amplifier build by WD5AGO). The station uses 2 computers for tracking and control of the antenna and for CW sending and logging tasks. I put together the station in my front living room at home first to see about what size space was needed, and then went looking for a suitable addition to the truck. What is termed a "camper" for the truck as this configuration is usually used for weekend over night travels. I figured it was an easy way to have the EME station and have a place for food and rest wherever we might operate. As the moon was above the horizon mostly after 0000 local time on the New England expedition, this arrangement worked well. Installation of the station into the camper took about 1 week, and everything is bolted down except the computer monitors that are stowed for travel. Essentially three groups of cables are re-attached at each location. The whole thing takes about 3 hrs from arrival to "moon ready" status. One of the biggest questions was how difficult it might be to calibrate the antenna's position and heading at each new location. A compass gets a rough calibration, but our method is to use at least one clear shot at the sun or visual shot at the moon after assembly. Local references to North were close enough to get near the moon, and listening to sun noise or moon signals and peaking the signals then allows the computer tracking to be calibrated. The tracking software was written by K5GW and both calculates the position of the sun or moon, and will control the antenna position after calibration to North. I can detect my own echoes most of the time, but it is not reliable enough for 100% operations. The total station from conception to final configuration took about 3 months with improvements still continuing. We were very nearly ready for portable operations in the Autumn of 2005, but it was too late in the year for getting all the logistics done and weather issues were an important consideration. K1RQG Joe and W5LUA identified the four locations and got all four guys to agree to host me when I arrived. It took a few weeks after we realized that it was a doable project to get all the "local" people signed up and could trust that the location would be "moon friendly". Having a relatively clear horizon and enough room for my truck and 17' long trailer was required. So the EME expedition was delayed until Aug 2006. As for power, each location had some 110 vac power through long extension wires. But if the power was not enough, I carried a 5 kW generator with me. Long runs of wire sometimes have significant voltage sagging and most of the equipment had no problem down to maybe 90 vac except for the high power amplifier. At a couple of the locations, I used the generator for the high power amplifier, but I have operated the complete station from the generator. As I am only running about 200 W RF at 23 cm, the generator was very adequate. The computers, power supplies and the radio (ICOM - 910H) all seemed happy with slightly reduced voltage and the generator was used for the high power amplifier only if needed. I would very much encourage anyone that is interested to try this method for EME. The antenna is very simple and aiming at the moon is very easy - (half power points are probably 8 degrees) but aiming to with in a 5 degree window will let you work lots of stations. My computer tracking setup is not necessary for EME success. Also, very low noise preamps at 23 cm are very available now. With as little as 50 W and a 0.3 dB NF preamp many stations are workable with a 3.3 m class 0.4 dish. I worked about 35 stations for over 100 contacts at the four New England locations. During the fall 2006 EME contest, the band sounds more like 20m! I have had SSB contacts with the larger stations. Perhaps there are 25 stations I would class as very large with very loud signals, many from Europe. All run circular polarization, which also makes it much easier than 2 m or 70 cm where Faraday causes much difficulty. This kind of station allows operating from any location, and I like it as I get away from the big cities for some interesting experiences, and to meet new radio amateurs. Finally, I would say that the "fun vs. work ratio" is very high for 23 cm EME. This project was done to encourage new activity and to show that a small station can have big success on 23 cm EME.

FINAL: I am sorry to report that another old friend has passed away. DJ8QL became a silent key in Jan at age 87. Franz started on 70 cm EME in 1978 and added 23 cm EME without much delay. He was an avid experimenter and also a member of the Marconi-Award-winning DF0EME group (23 & 13 cm EME). Franz will be remembered as an outstanding partner and friend.
? There have been no additional logs received, so it is now official that OK1CA with a score of 380 points is the Top Fun Maker for the 2007 EME SSB Contest.
? There are two up coming events worth noting. The first is the 2007 Central States VHF Society Conference in San Antonio, Texas. The dates are Thursday, July 26th thru Sunday July 29th. Details for the 2007 conference are at http://www.csvhfs.org/conference/. The second is Microwave Update 2007, which is being hosted by the Mt. Airy VHF Radio Club in Philadelphia, PA on Oct 18 - 20, 2007. Information on MUD2007 can be found at http://www.microwaveupdate.org/.
? Please keep the info coming in. I shall be concentrating on 70 cm in the Eur EME contest and hope to find many of you there. 73, Al – K2UYH