432 AND ABOVE EME NEWS
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CONDITIONS: This might have been just another *between contests* month, but the V5/KT6Q dxpedition really livened up the bands around and during the activity weekend (AW). TNX to Dan and his team for a job well done despite numerous problems – see their report later in this newsletter (NL). The Jan AW should have been one of the best of the year as clearly shown by F5SE's Moon chart (in the last NL). Judging by the reports, it seems to have met expectations. However, moving the 70 cm CW activity time period (ATP) a week before the AW to improve the hours and avoid conflict with the 2 m ATP does not seem to have resulted in increased activity, and at least this in Jan produced reports of less than optimum conditions. This scheduling will be repeated in Feb with the 70 cm CW APT on 31 Jan from 1900 to 2100 for Eur/NA and 1 Feb from 0930 to 1130 for Eur/JA-VK. The Feb AW, the following weekend, will include the annual 23 cm EME SSB Contest from 0600 on 7 Feb to 0600 8 Feb, which I hope everyone will give a try. It is mean to be a fun event – see the following rules. There is also news of dxpedition for 70 and 23 cm EME to Nigeria – see DL3OCH's report.

1296 EME SSB CONTEST RULES: This event is intended to be fun. You do not need to transmit on SSB to participate. CW to SSB and vice verse exchanges are encouraged and count for points. (Only one QSO between stations is allowed, i.e., you cannot work a station SSB to SSB and SSB to CW for extra points). The contest starts on 7 Feb at 0600 and end on 8 Feb at 0600. Everyone one should have one common moon pass with operation moving from NA to VK/Asia to Eur and back to NA. Operation is on 23 cm only. Scoring is contact points times number of two letter Grid Sectors (IO, JM, FN, EM ...) worked. SSB to SSB contacts count as 2 points. SSB to CW (or CW to SSB) count as 1 point. The exchange is your Sector (IO, JM, etc.). Only the 2 sector letters need to be sent and copied by EME. The exchange of signal reports and/or 4 character grids in not required. Operation may be by single or multiple operators from one location. No distinction for scoring will be made. Assisted operation is not encouraged. All skeds/operational announcements should be made prior to the start of the contest. Logs should be sent to the "432 and Up EME NL" by email to a.katz@ieee.org ASAP after the end of the contest. The top scoring station will receive an attractively framed certificate that will be presented at the next International EME Conference (Dallas 2010).

BX1AD: Edward edward.yhi@gmail.com is working on improving his modest 70 cm EME system consisting of 2 yagis [see picture in the last NL] and about 70 W. On 10 Jan Edward added PI9CAM (24DB/21DB) on JT65C for his 4th initial. He also ran with K2UYH without any success.

DL3OCH: Bodo dl3och@gmx.de sends news that he will very likely be able to put Nigeria on EME -- I will be working in Abuja/Nigeria from March to July. This will give me the opportunity to bring EME to the Nigerian Amateur Radio Club. Please remember that I will be there for work reasons, so I cannot be on air as much as on my other dxpeditions. However, I will take all of the equipment there and try to be on the bands as often as possible. The call sign for EME activities could be 5N0EME, but this is not confirmed. The EME activities will be focused on 2 m and 23 cm, but I will also try to be on 70 cm. Equipment plans for 23 cm are a 2.4 m dish with patch feed (similar to used at BY4RSA) with IC-706mkIIg (modified) with transverter (by DJ9YW) giving about 100 W. On 70 cm I will have a 19 el yagi (tnx to DL8YHR), IC-706mkIIg (modified) and PA as yet to be determined. If any of you have equipment that I could use during the dxpedition, I would be happy to take it there and maybe leave it as donation for the radio club. I will let you guys know when I will be active from Nigeria. Please watch this EME NL, my website www.dl3och.de or www.mmmonvhf.de for further information.

DL4MEA: Guenter guenter.koellner@nsn.com during Jan completed the first DL-SV QSO on 13 cm by contacting SV3AAF on CW. The QSO quoting Petros was "under really difficulty conditions: winds at 80 kph kicking dish off target and bending dish's extension every few seconds, high libration according to almanac, high path loss, high sky noise, and low declination. On my side, I had to remove several "liters" of water from the TX cable, which is not waterproof. But the signals were (549/449), so quite easy copy. At the moment my time for radio is very, very limited.

JA4BLC is preparing for the EWW microwave contests by covering the center of his dish with solid AL foil.

DL7APV: Bernd had lots problems on 432 in Jan -- I had bad VSWR due to rain and snow that caused my power to be reduced in half. I had to replace my preamp due to mechanical problems and was running with a backup preamp. Then my transverter died on the TX side and I went to another backup rig. I also had aiming problems due to my horizontal rotator, which I could not work on due to the extreme cold (-20°C). Despite all these difficulties I was able to QSO V5/KT6Q with JT and also GM4CXM for his first EME QSO. I was looking for KA7V on random and skeds, but could only copy him (T) and did not hear LX1DB and DK3WG in their skeds. I only copied WA4NJP calling KA7V. I am working on an SSPA for 432 to replace my TH327 in the future.

DL9KR: Jan Bruinier@t-online.de reports problems with ice in early/mid Jan but that the sky was blue and the preamp well chilled at minus 12 deg C – I worked on 7 Jan KA7V on sked (549) - random wouldn't have been any problem, and on 10 Jan DG1KJG, IK6EIW, LZ1DX (15 seconds exchange), VE2ZAZ (559) - easy, S53RM, OK1DFC, I1NDP and an exciting one with V5/KT6Q on CW for DXCC 102. I had been looking for Dan throughout our window, but only started to hear assorted doodle tones around 432.093 at 2300 when our geographical offset went thru zero degrees. I called Dan on 093 and immediately heard Os about 250 Hz below my echoes. In a second sequence both calls plus Os were identified easily at a (549) level and thence the Q was completed. This contact again shows that searching plus/minus 5 kHz from the "expected" frequency is worthwhile. I remember my first Q with LU7DZ when Eduardo inadvertently was 5 kHz low and lately 8J1AXA, who was on 028 instead of the announced 030. I add on 11 Jan UK/DL9LBH (549) for initial #882. Searching the skies for stellar sources, I detected a broad 5 dB rise at about 215 az/45el. This was just about the moon position during my failed skeds with HK1DX. Exchanging the ATF58143 with my old MGF4919G preamp proved the presence of an artifact. I can only assume that the very broad input response of the ATF was/is responsible for the pickup of out of band big signals. There is a high power TV station in about 10 km line-of-sight and at 215 az the back lobe "flower" is pointing there. Obviously the high IP3 of the ATFs is of no help. Therefore, I've ruefully returned to the PHEMTs. I wonder if others had similar experiences.

F6CGJ: Louis (no e-mail) writes that he been busy with other projects and not very active on EME lately. He was QRV in the ARRL EME Contest for a short

time on 23 cm. He was surprised to work more than 30 stations in less than 3 hours. He was especially pleased to QSO VK3UM, who he has been looking for over many years. Louis promises to be more active in 2009.

G3LTF: Peter g3ltf@btinternet.com sends a short report this month – I have only a little to report this month as we were on holiday from 10 to 22 Jan. I don't think I missed much. I suspect the V5 would be below my threshold on CW anyway. On 4 Jan I had a test on 432 with VE2ZAZ and copied him (O) but he could only get (T) copy from me despite my 5 dB more power. We will have another go as the WX improves. On the same day also on 432 I worked I5CTE and DF3RU and heard SM4IVE. I plan to be on for the SSB day in Feb and also to be on 13 cm, WX permitting.

HB9BBD: Dominique was QRV during the Jan AW on CW and SSB on 23 cm –- I had 2 initials since my last report to bring me to #290. The first was LZ1DX (429/579) for the first LZ-HB9 QSO. Ned was quite loud, but his CW was a bit too fast which made it very hard to copy. I thought my 50 Hz digital IF-filter might not be fast enough, but widening it did not help. It sounded as the dots and dashes were an endless string with no structure. The second was SM5FHZ (579/579).

HB9MOON: Christoph hb9hal@hb9gr.ch reports that his EME group now has a club call, HB9MOON. Hopefully this will eliminate some of the confusion over the use of multiple calls – [see HB9HAL's report in the last NL for a discussion of this problem]. Obviously HB9MOON will not count as an initial if you have already worked HB9HAL or any of the other club members on 23 cm.

K0RZ: Bill wmccaa@comcast.net was QRV on 432 for the CW ATP – I worked K1RQG, LU7DZ for an initial (#), LX1DB, SM2CEW and N4GJV. I also CWNR W8TXT and heard WA4NJP but did not call.

K1RQG: Joe's k1rqg@aol.com was on 70 cm EME in Jan – During the ATP weekend, on Saturday 3 Jan despite high winds, I worked LU7DZ, SM2CEW (QLF), N4GJV, K0RZ and WA4NJP. During this time I also heard LX1DB, W8TXT and VE6TA with excellent signals, but had to park the dish due to the winds. All these contacts were the first using my new HPSDR software defined radio (hpsdr.org) and the contact with WA4NJP was on SSB. Later I achieved another first, an HPSDR to HPSDR EME contact with WW2R. The following week I worked KA7V.

K2DH: Dave k2dh@frontiernet.net was on 1296 for a while during the AW –- On 11 Jan my echoes were excellent even while the Moon was in the trees. I contacted G4CCH and VE3KRP, who answered my CQ. Unfortunately a little later while calling CQ, I had a major explosion and the power FETs for control and OVP blew off the board in my new 500W+ SSPA. I have added an ICOM PRO II for EME IF and anxious to get it on line as well as to resolve the problems with my SSPA.

K6JEY: Doug dougnhelen@moonlink.net sends news on his 1296 activities -- We should be on for the 23 cm SSB contest, but probably stick mainly to CW and JT modes during the weekend. We are planning to be QRV starting at 2300 6 Feb (Friday), which is our moonrise. If anyone wants to schedule or work us on either mode, we should be listening or CQing. I'll aim for 1296.025 CW and .076 JT. We are still using a 10' dish, 0.2 dB NF LNA and 300 W PA. We do have a new transformer with higher KVA rating and more water in the cooling system. See our web page at www.nitehawk.com/k6jey/.

K8EB: Erv mrdxcc@sbcglobal.net is a new station on 1296 EME from EN73cb. His station on 23 cm consists of a 3 m dish with homebrew septum feed, DEM preamp and DB6NT transverter with 10 MHz OCXO ref. [He does not mention his PA power]. He is also trying 902 MHz and has put a dual dipole feed in his dish. He has an SSPA and 902 DEM transverter with DDK LNA for use on this band.

KA7V: Barry vihraw1@gmail.com has a good signal on 70 cm from OR (DN14ma) with 4 x Cushcraft 719B 5.8 wl yagis, 1.5 kW Lunar-Link LA70B PA and ARR SP432VDG preamp. Barry has a MKU 0.38 dB NF LNA yet to be installed. So far on 432 he has worked on CW KL6M, K1RQG, VE6TA, DL9KR, K2UYH, WA4NJP and N4GJV. Nil was copied from LX1DB and DK3WG in skeds. Barry is interested in more skeds and is also working on 13 cm EME.

LA9NEA: Viggo la9nea@online.no was QRV during the Jan AW on 1296 – I was only on for a short time, but QSO'd on CW W4OP (559/579), N0OY (559/559), N2UO (549/559), W9IIX (559/5590, N9JIM (539/559) and VE4MA (559/559), and on JT65c PY1KK (O/16DB) and VE7BBG (O /16DB). I am running 500 W on CW and 150 W on JT65c.

N4GJV: Ron qstdemb@yahoo.com writes on his 432 operation in Jan -- Conditions during the 3/4 Jan ATP weekend seemed to be quite poor with a great deal of deep and rapid QSB. On 3 Jan I was QRV for the ATP and contacted WA4NJP, K0RZ, K1RQG, and W8TXT. SV3AAF was called without success. I also heard SM2CEW, LX1DB, DL7APV, LU7DZ and VE2ZAZ. On 4 Jan, QSOs were completed with DF3RU, SM2CEW, I5CTE (it was great to work Piero again after many years!), and DL9KR, whose signal was awesome! I also heard G3LTF. Conditions were better during the 10/11 Jan weekend. Only VE6TA was heard and contacted on 10 Jan. Activity was much better on 11 Jan and contacts were completed with W8TXT, W7CI and K1RQG. Heard and called were DJ7GK (many times, but only QRZs), VE6TA, K0RZ, KA7V and WA4NJP. Also heard were VE2ZAZ and K2UYH. On 12 Jan I completed with KA7V via a sked arranged by K1RQG (TNX Joe). Heard were W8TXT and WA4NJP. I will be looking forward to NC1I's return in Feb and I hope that the activity weekend coincides with good WX and EME conditions.

NC1I: Frank frank@nc1i.com is back in operation on 70 cm -- We were able to swap out the AZ prop-pitch and get the array turning again. My station is now operational again and I expect to be on for the Feb ATPs, (48 x 15 el K1FO yagis with rotatable polarity and 8938 final with 1500 W). I will also make it a point to call CQ whenever I have time over that weekend. The only thing I have left to do is tweak the calibration a bit, but it is pretty close right now. I am seeing a new problem that I will need to look into. There appears to be about 1 dB of thermal power drift. I believe it is in either the TS2000 or the SS driver amp (it does not appear to be in the 8938 final). Hopefully this will be resolved before the Feb AW, but even if it is not it won't keep me off the moon.

KA7V's 4 x CC 5.8 wl yagis arry for 70 cm EME from OR

OK1KIR: Tonda (OK1DAI), Vlada (OK1DAK) and Jan (OK1VAO) ok1vao@o2active.cz report on their group's Jan EME activity –- On 70 cm on 11 Jan we So'd I1NDP (O/O) for JT initial {#4}, and decoded V5/KT6Q (20DB) with vert pol, FR5DN, F2TU, and RW6AG on JT65B, and on 14 Jan14 at 0046 finally V5/KT6Q (22DB/21DB) JT {#5} with pol 90 deg at moonrise and 45 deg during QSO and 0129 decoded EA3XU (27DB) but then lost. Unfortunately 432 remains very interfered; viewing in S-E direction the big tower of digital TV transmitter (previous analogue TV with out interference - hi!). On 23 cm using the JT65C, we worked on 9 Jan at 1800 HB9HAL (2DB/5DB), 1910 V5/KT6Q (20DB/22DB), 2133 G4CBW (O/O) and 2255 LZ1DX (O/O). We used our linear rotatable feed for these QSOs. V5/KT6Q's signal was exact vertical pol. Then we changed feeds for circular and worked on 10 Jan at 0027 W3HMS (O/O) and 0100 PY1KK (O/O) for {#34} on JT. After mounting the feeds at -18 deg C, Tonda found when defrosted that he had left some of the skin from his fingers on the feed. Probably a metal *flash-eater* at the dish focus. It was cold - hi. Among JT65 QSOs were CW contacts on 9 Jan at 2223 G4CBW (O/O) for his very first CW QSO on 23 cm EME and on 10 Jan 0043 W3HMS (O/O) for CW initial #270. We also heard on CW DF3RU, G4CCH a K4QI. On JT we were able to decode DJ9YW, ES5PC, ES6RQ, G4CCH, HB9HAL, HB9MOO, K2UYH, OK1DFC, PA3CSG, RW3BP and W5LUA. On 13 cm we worked on 10 Jan on sked at 1901 SV3AAF (549/549)

for initial #79, KN field and DXCC 31. This QSO is our anniversary 100th first worked OK to... EME contact (122th first OK to if you including tropo contacts). Petros is using a 3.9 m dish and 300 W SSPA. We were able to somehow recover operation on 2304/2320 MHz after some success in fighting QRM the last half of year. However flying curtains on SDR remain and Moon noise is deteriorated to about 0.15 instead of the previous 0.7 dB. Unfortunately the Japanese 2424 band remains out of reach due to WiFi QRM with no prospect of a solution.

OZ4MM: Stig vestergaard@os.dk sends news on his recent CW EME operation -- In the 70 cm ATP the first weekend of Jan, I was on late, but worked a few stations anyway. The following weekend, I found quite good activity on 432 and worked several stations including 9H1TX, who had a fine signal. Probably the activity was up because of the Namibia dxpedition. I got them on CW 13 Jan for DXCC 57 and initial #313. They were very easy to work on CW, and I am sure many more could have worked them on CW. But I expect many people gave up because of the mainly a JT65 operation and even worse; the polarization to Europe was vertical most of the time that I heard them. On 1296 I also got them to on CW (DXCC 60 and initial #320), but it was a very difficult contact. I was surprised that their JT tones were more audible than then their CW! Anyway, many thanks to the group; they did a great job getting Namibia on EME! Back on 4 Jan, I worked SV3AAF on 13 cm for DXCC 30 and initial #82. Petros was very loud.

PA0PLY: Jan pa0ply@pa0ply.nl reports on his station data base and radio astronomy at PI9CAM -- I have adapted my EME database a bit as several people claimed that they are not using MS ACCES. On my website I can no provide PDF files for active stations on 70, 23 and 13 cm and up – see www.pa0ply.nl. At PI9CAM we have moved forward into the wonderful world of radio astronomy. During the last period of 2008 we were able to detect our first Pulsar and more recently we mapped a part of the hydrogen line at 1420 MHz using our OM6AA septum feed – see the CAMRAS section of my web site.

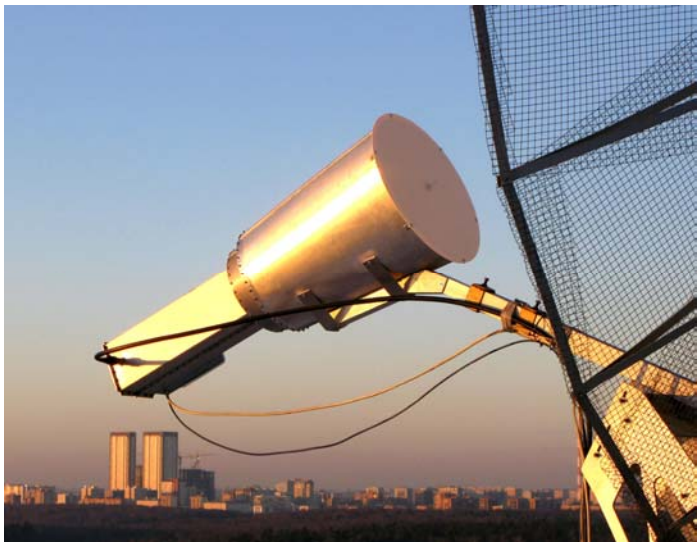
RA6DA: Vitaly rd3da@list.ru had an initial QSO on 23 cm in Dec with DJ9YW on JT65C. He is using his 23 cm tropo system on EME, which consists of a 2.1 m dish with hor pol feed and an 80 W PA.

RW3PX: Yuri RW3PX@yandex.ru back in Dec added on 23 cm CW QSOs with RD3DA, SV1OE, partial UR5LX, ES5PC, PA3CSG, HB9IZ, OK1KIR and GW3XYW.

PY1KK: Bruce (PY2BS) bruce@zirok.net was able to activate his second station on 23 cm in Jan -- In these a few days I had QSOs with DJ9YW, G4CCH, VE7BBG, K2UYH, HB9HAL, PA3FXB, OK1DFC (JT and SSB), G4CBW, RW3BP, ES5PC, OZ6OL, OK1KIR, W5LUA, PI9CAM, OE9ERC, LA9NEA and PA0BAT. I did receive OE5JFL's beacon and could even detect it at the 1 W power level. Since I have no internet access, the beacon was activated for me by Jan, PA3FXB, all coordinated exclusively thru EME. It was very interesting to prove that EME + WSJT goes well beyond exchanging call signs and signal reports for valid QSOs and is useful for general communication as well. I should return to PY1KK QTH soon and in the future will try 70 cm from there as well.

PY1KK – PY2BS portable location for 70 and 23 cm EME

RW3BP: Sergei rw3bp@co.ru has taken the next step in improving his RX capability on 23 cm band – The V5/KT6Q dxpedition was a good motivation to improve my RX system even further. First of all, I switched to a new feed with 400 mm aperture. It was designed by Dmitry RA3AQ and is optimized for my 2.4 m offset dish. The previous RA3AQ feed was 300 mm (same aperture as for an IMU feed). To use the old feed effectively, I had to extend the bottom of the dish with steel mesh. I still use this extension, but really only part of it is still illuminated. As a result some tenth of dB in gain were lost, but the noise temperature of my antenna is much lower. It is very important for me that the antenna now is more immune to man-made noises of the big city. The second problem was loss in antenna relay. A few relays were tested, but even the best were 0.07 ~ 0.08 dB with connectors. In my case this loss results in about a 1 dB reduction in signal/noise ratio. I removed relay and now use only the TX to RX port for isolation. Isolation was improved by "coin" method I suggested before. [Do you have a reference?] I achieved the following results: Equivalent dish size is about 2.7 m, Sun noise/CS = 15.0 ~ 15.2 dB at SFI=68, Moon noise/CS = 0.22 ~ .0.25 dB, CS/R = 11.2 dB (R=50, T =275) and Tsys = 22 K. The signal level from V5/KT6Q was 24DB ~ 26DB (22DB peak). I believe that I am close to optimum. For a NF = 0.2 dB, the noise temperature of antenna is only 8 K. This is one more confirmation that NF is really 0.2 dB or even better.



RW3BP's new 1296 feed system

SM2CEW: Peter sm2cew@telia.com was on 70 cm in Jan – During the CW ATP I heard LU7DZ very well. He called Eduardo, but he disappeared after he completed with K1RQG. We have worked before, so it would not have been an initial, but it was exciting to hear Eduardo again. I did QSO DK8VS, K1RQG, VE6TA, WA4NJP, K0RZ and DG1KJG before the moon got too low and the noise came up. I heard N4GJV with excellent sigs, and was looking for W8TXT but did not hear Mike. Later (Sunday) I worked VE2ZAZ on CW. Bert's signal is really impressive considering the ERP he is running, so he certainly has got his station working very well. Compliments to Bert are in order. The following weekend (Saturday) I looked for the V5 expedition on 70 cm and heard them call CQ many times on JT65. I called them on CW for more than 30 minutes. My echoes were huge, and the V5/KT6Q doodle tones were very easy to copy by ear, but I got no response to my calls on CW, possibly because I was coordinated via a reflector. Finally I transmitted one period of calls on doodle mode. The expedition immediately replied and voilá, I now have a JT65 QSO with them. However, a CW contact was my goal, as I do not count doodle for DXCC or initials.

SM6FHZ: Ingolf ingolf.fhz@gmail.com reports on 1296 in Jan -- Another AW, another try. This time I tried my new G4DDK NE325 84 preamp(s). Yes, I built two of them. They both measured very good on the bench (seams to be a very reproducible design - good work Sam). It sure made a difference both on solar noise, CS/G and EME signals. CS/G went from 4.5 dB (old preamp) to >6 dB (new preamp). This also showed very nicely on my own echoes as well as on all EME signals. Unfortunately I blew both of them. The first was on Saturday at 1900 and the other at 2100. I guess I need to check the sequencing, etc. Repair work is ongoing. Even if I blew them both, the improvement looks very promising for the future receive capability. When in business, I worked on 10 Jan at 1517 SM4DHN, 1656 SP6JLW, 1715 SP7DCS, 1745 SP6JLW on SSB, 1754 IW2FZR, 1845 IK3COJ, 2012 HB9BBD and 2049 G4CCH. All on random CW unless indicated otherwise. A getaway was IK5WJD (nice signal). I am not sure if I will be able to be on during the Feb AW due to other commitments.

SV3AAF: Petros sv3aaf@yahoo.com is now QRV on both 23 and 13 cm – 13 cm is the fourth band to be activated since I returned to EME 18 months ago. This goal was achieved sooner than I anticipated TNX to help from ES5PC and SM0DFP. Improvement is on going, although the system is already performing quite well. I worked OZ4MM, ES5PC, OK1KIR, W5LUA and OE9ERC. All had loud signals. On 70 cm, I mostly checked my RX and adjusted the antenna aiming. I found low libration condx with QSB during ATP. I heard SM2CEW, UA3PTW, DL7APV, K1RQG and DL9KR, and CWNR WA4NJP. After the ATP period I QSO'd VE6TA. On 23 cm I worked UT5JCW, DF3RU, I5MPK and SP7DCS, and heard HB9BBD and SM6FHZ. I plan to be QRV for the 1296 SSB fun test in Feb.

V5/KT6Q: Dan's **dan@hb9q.ch** dxpedition to Namibia was a big success. Most QSOs were on JT although a number were completed on CW as noted. On 432 they worked DF3RU (14DB), DL7APV (28DB), DL9KR (529) on CW, F2TU (15DB), FR5DN (17DB), HB9Q (14DB) and (529) on CW, I1NDP (24DB), K2UYH (15DB), LZ1DX (19DB), OK1DFC (23DB), OK1KR (21DB), OZ4MM (539) CW, PA3CSG (13DB), PI9CAM (22DB), SM2CEW (19DB), UA3PTW (19DB) and (529) CW, VE6TA (14DB), and WA4NJP (25DB) and (529) CW for total of 18. On 1296 they worked DF3RU (27DB), DJ9YW (24DB), ES5PC (25DB), ES6RQ (25DB), F2TU (22DB), G4CCH (24DB), partial HB9BBD (419) CW, HB9HAL (19DB), HB9MOON (19DB), HB9Q (20DB), K2UYH (21DB), LA9NEA (26DB), OE9ERC (24DB), OK1DFC (18DB), OK1KIR (22DB), OZ4MM (319) CW, OZ6OL (28 DB), PA3CSG (23DB), RW3BP (28DB) and W5LUA (24DB) for a total of 18. On 432 they used 8 x M2 432EME-12 yagis manually rotated, TE Systems 160 W SSPA and an ARR preamp. On 1296 they had a single 59 el yagi manually rotated with 90 W and no preamp. Getting to the operating location from South Africal, where they arrived by air was no small feat. Since they had much equipment to carry, they travelled by road. They had one minibus towing the 144 EME trailer and one pick-up truck towing a second trailer. The roundtrip was 3200 km for took a total driving time of 40 hours in 4 days, 2 days each way. The location was Diaz Point, Luderitz, Namibia (JG73ni). Luderitz is on the Atlantic cost just south of the Namib Dessert. It is nestled in a very nice bay. The town still has a German touch. To get to Diaz Point they drove 20 km on an unpaved road. At Diaz Point (about 2 km west of Luderitz) there is just one house that is available for rent, a second house is being renovated, one very nice café, a couple other buildings (unmanned weather-station), a few camp-sites and a light-house. The landscape of Diaz Peninsula looks like the moon-surface. Hills of black rugged lava, different rock-formations, sand and only a very few small plants make it a very special and mystic place. Diaz Point is surrounded on almost 360° by the Atlantic Ocean. Only a narrow double sided sand beach connects it to the peninsula. Lot's of birds, seals and dolphins can be spotted there. Dan says if you visit Namibia, this is definitely a place you should see! When they arrived they had no power, only solar cells and one car battery on the site, despite a written confirmation that 220 V power-service would be available. The owner of the Bay View Hotel helped them to get a generator, but they still were limited in operation, since more energy was needed to operate 3 EME stations plus the tropo station at the same time. The 144 power-supply went QRT when switched on. 2 and 6 m yagis were crashed during tower erection when a cable let go. This put them out of business on 6 m EME. They also lost the main 144 antenna for the tropo-ducting test. Fortunately no one was hurt. The 144 preamp burned out during the first attempt to work CW on 144. During several days they had to withstand gusty winds peaking more than 100 km/h. The wind blew sand everywhere. The shack was covered with sand! To avoid damage they had to lower the antennas to ground several times. The 144 cross-yagi for satellite was damaged due to a very strong wind gust, so satellite activity was limited to the handheld antenna and the egg-biters. Due to all the problems, they had to cut-back on activities. They could only be QRV simultaneously on 2 EME bands. But overall I think everyone will agree Dan and his team did a tremendous job! QSLs should be sent to HB9Q, Box 133, CH-5737 Menziken, Switzerland. Please include an SASE. Any contribution, even small ones are very much appreciated and will be forwarded to the project "EME for Africa"! Dan expresses his great thanks to his team, which consisted of ZS6OB and XYL Erika, ZS6WB, ZS6JR, N7BHC (transatlantic-tropo-ducting) and Bob (the driver and owner of the minibus).

VE2ZAZ: Bert ve2zaz@amsat.org has moved from primarily JT operation on 432 to CW -- I am looking for large 70 cm EME stations for CW skeds. I can adapt my daily schedule for a QSO. My stations consists of 4 x 13 el DK7ZB yagis, 300 W PA and a 0.3 dB NF preamp. I am good to go from horizon-to-horizon.

VE3KRP: Eddie eddie@tbaytel.net was on moon for on 1296 for the Jan AW. I QSO'd on 11 Jan K2DH with big signal, and wore out my relays and keyer trying to work W9IIX and vE4MA. I finally gave up in frustration. I was hearing them fine, but I apparently need more power [or they need better preamps]!

VE4MA: Barry ve4ma@shaw.ca is now QRV on 23 cm with 300 W – I did get on 1296 on 11 Jan for a while and worked LA9NEA, N0OY, W5LUA and W4OP. All had good signals. Other weaker ones were also calling, but I had no luck with them. The libration was causing me much grief. I am also setting up for 902 and may try this band for next month.

VE6TA: Grant ve6ta@clearwave.ca was on 432 in Jan -– I worked during the CW ATP weekend SM2CEW and LU7DZ for a initial #131 and later heard traces (saw) from VE2ZAZ on CW. 70 CM was a bit strange with a lot of strong QSB as others have reported. LU7DZ was RX -45 degs, but required vert on TX. SM2CEW seemed down a bit as well as my own echoes. During the AW I added initials with SV3AAF, KA7V, LU7DZ and VE2ZAZ.

VK4CDI: Phil moat@usq.edu.au has been QRV on 432 and will now also be active on 1296 – I just about have my 1296 setup operational. I have a 3.6 mesh dish, 0.43 f/d with an OK1DFC septum feed, G4DDK preamp and a 55 W SSPA mounted at the back of the dish. I should have completed sun noise measurements by the time you read this and with luck QRV for the Feb AW. I am not giving up on 70 cm, and now have a new PA running 400 W.

UA3PTW: Dmitrij ua3ptw@inbox.ru was active on 70 cm EME in Dec and QSO'd on CW 8J1AXA (579). He was also on JT65B and made initials with PE1RDP, EB3DYS, YL2HA, EA3XU, RW6AG, VK4CDI, ES3RF and ZS6WAB.

UA9FAD: Victor rosmet@perm.raid.ru continues to add QSOs on 23 cm. In Dec he worked on JT65C K2UYH, RW3BP, RD3DA, ES6RQ, PA3CSG, G4CCH, ES5PC, DJ9YW, OK1DFC and also a CW QSO with OK1DFC.

UR5LX: Sergey ur5lx@uy0ll.ampr.org added initial QSOs on 1296 in Dec with SV1OE, UT5JCW, SM6FHZ, HB9IZ, PE1HNG and SP7DCS. I believe all these QSOs were on CW.

UK/DL9LBH: Hans DL9LBH@darc.de is now active from Uzbekistan from the capital Tashkent, locator MN41OG. He has worked a number of stations on JT65B, but has also QSO'd DL9KR on CW.

W3HMS: John, W3HMS@aol.com is now QRV in 23 cm from near Harrisburg, PA in FN10mf using a 3 m dish and 120 W PA – My LNA has a 0.27 dB NF and 37 dB gain and was made by WD5AGO. My feed is a VE4MA dual probe horn soon to use a super scalar ring. I made my first QSO with HB9Q on 24 Aug 09 on CW. My current total is up to mixed initial #26* using CW and JT65C and DXCC 7*. I was pleased to work W5LUA for my JT65C QSO number 1 and then K2UYH on JT65C during the Jan AW. Near term enhancements are a DB6NT transverter with 10 MHz oscillator, a W2DRZ automatic tracker, and a pair of 7289s. Although licensed in 1951 and for several years now a microwave rover through 24 GHz, I have a found EME to be a real thrill, which puts so much fun into ham radio!

W3HMS' 3 m dish with 1296 feed

W8MQW: Chuck maccluer@math.msu.edu is returning to EME after a sabbatical. He was QRV on 70 cm and very briefly on 23 cm EME. He is aiming

to be QRV on 10 GHz by May and back on 70 cm EME by the end of this summer.

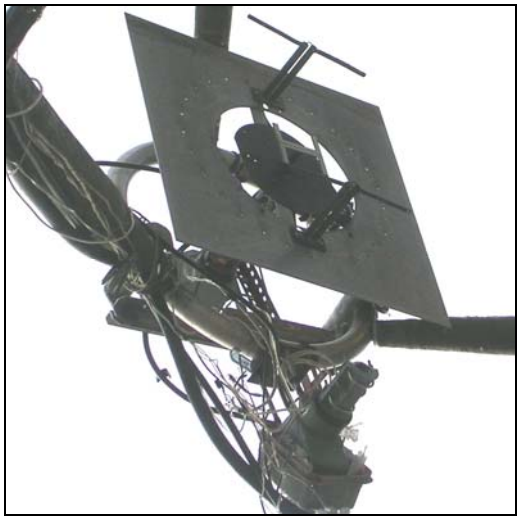
W8TXT: Mike (no e-mail) reports on his Jan and contest activity -- I operated the ARRL EME Contest results on 432 with 8 x 6.9 wl yagis with fixed hor pol and 600 W at the array and made 25x21 QSOs. This result was down from last year's score. In addition to QSOs I heard the following stations (O) or better: N8CQ, W7CI, G4RGK, JA9BOH, K3MF, JS3JIM, UT5DL, W7AMI, KE2N, VE6TA and VE2ZAZ. My echoes were fair to good throughout the contest, but I only worked 5 additional stations the Nov contest weekend. I think bad luck with polarity and Faraday affected my score. Even so, I had fun as usual. I was also QRV during the 70 cm ATPs in Jan. I had no luck with LU7DZ, conditions did not seem good, but I did work N4GJV with difficulty.

W9IIX: Doug w9iix1@yahoo.com was QRV on 23 cm in Jan – I worked during the pre AW OZ6OL and heard a few others. In the AW (10 Jan) I QSO'd HB9HAL, K4QI and DF3RU, and heard G4CCH, NA4N, OK1DFC and OZ6OL. During the evening I had burning smell from my GS15 PA, but kept going. The next evening (11 Jan) I added LA9NEA and W4OP, and heard W5LUA, parts of VE3KRP and a W4QG? I also tried with VE4MA for a long time with no luck.

WA4NJP: Ray wa4njp@bellsouth.net was QRV on 70 cm in Jan – During the pre-AW, I only had a partial with LU7DZ. I copied him fine and did work him back in 2004. On 11 Jan I QSO'd K2UYH, VE2ZAZ and K1RQG on CW, and V5/KT6Q on JT. I'm now on 432 at initial #231 initials and DXCC 47, and on 1296 initial #99 and DXCC 25.

WW2R: Dave ww2r2@g4fre.com brings us up to date on his Moon activities – In Nov, I was not QRV for the second leg of ARRL contest from Texas as I was in England for the microwave roundtable. I met with a dozen EMEers there (see photo in the Dec NL). While in the UK, I did hear OH2PO on 432 at moonrise with single indoor 21 el F9FT yagi (IO82)! In Dec after returning from UK, I was QRV on 23 cm trying out a Elecraft K3 as an IF. I worked on 13 Dec W5LUA on CW and W3HMS for initial #104 and the state of PA, PY2BS #105 and DXCC 31 on JT65C, and on 14 Dec DF3RU, W4OP #106, SM6FHZ #107 all on CW and W3HMS and RD3DA on JT65C. In Jan, during the ATP on 3 Jan, I had hardline connector problems. The PTFE in two brass L45W connectors melted. The first occurred when water got in. The second occurred when a cheap N type barrel couldn't stand the power. The moral is to only use mil spec ones. I did hear LX1DB, WA4NJP, K0RZ and K1RQG. The HPSDR easily outperforms the SDR1000 system. The good news is that after resorting to a spare TX feeder, I was able to use the newly assembled HPSDR Transceiver to drive the DEMI transverter to have an HPSDR to HPSDR QSO with K1RQG, just before his moonset. On 11 Jan I heard on 432 K2UYH, W7CI, K1RQG, K0RZ, WA4NJP and KA7V.

K2UYH: I a.katz@ieee.org had both frustration and good success this month. One highlight was QSOing V5/KT6Q on both 432 and 1296. Both QSOs were made on JT. Signals seemed weaker here in NA than reported in Eur. I did copy Dan on CW, but weaker than necessary for a QSO. On 1296, he disappeared before I could try CW and was grateful that I was able to work him at all. I had tried a previous night without ever finding their signal. The other highlight was working KG6DX on 432 after several months of hearing nil. This QSO was also on JT65. There always seemed to be a problem. The day before, I had some strange preamp problems. The dc 12 V supply to my preamps kept intermediately shorting. I took time off from work to check out and rewire preamps connections at the feed. All look FB. I checked echoes earlier in evening. I started calling at about 0615. At 0628 the preamp dropped out and I found dc shorted again! I ran outside and lower dish to make repairs as quickly as possible. In the direction the dish was pointed, my ladder was not set sufficiently high. It just barely reached the feed ring (almost straight vertical). I climbed to the feed with shaking legs in freezing WX. Of course it was my best preamp. I had to make the trip 3 times. I replaced it with an old ARR preamp with about 0.9 dB NF - clip leaded in place. I was back on about 0648. Echoes were back although not quite as strong as before. I called for the last 10 minutes with nil heard. Later with the moon even more into the trees, I tried with BX1AD. While calling him, KG6DX decoded and we easily worked! I QSO'd on 2 Jan on 1296 at 1952 PY1KK (18DB/17DB) JT65C for mixed initial #335*, on 3 Jan missed the 70 cm ATP – thought it was the next day, on 4 Jan on 432 at 1940 OE3SJA (21DB/O) JT65B 1950 for mixed initial #754*, 1950 OH4LA (19DB/O) JT65B #755*, 2019 ES3RF (19DB/O) JT65B #756*, 2040 WA4NJP (12DB/8DB) JT65B and 2110 UA4AQL (19DB/O) JT65B lost – no 73, on 9 Jan on 432 at 0728 KG6DX (28DB/O) JT65B for #757* and mixed DXCC 89*, 0740 nil BX1AD on sked, on 10 Jan on 1296 at 0256 W3HMS (21DB/O) JT65C 0305 John #336* and 0306 partial LZ1DX (22DB/O) – lost, on 11 Jan on 432 at 0010 V5/KT6Q (21DB/O) JT65B #758* and mixed DXCC 90*, 0100 VE2ZAZ (449/O) for CW initial #706, 0225 OK1TEH (M/M) CW #707, 0310 W7CI (559/569), 0355 KA7V (559/O) #708, 0435 WA4NJP (589/569), 0940 nil BX1AD JT65B, 1036 JA6AHB (10DB/15DB) JT65B and on 1296 at 2340 G4CBW (24DB/10DB) JT65C, and on 12 Jan on 1296 at 0058 V5/KT6Q (25DB/O) JT65C for #337* and DXCC 68*. I have a new feed arrangement in my dish. I have two dual dipole feeds, one for 432 and the other for 1296 concentrically mounted (and rotatable). This way the 432 feed is not offset. Unfortunately it does not seem to have made much difference. The noise is still there and bad. I will probably return to my old arrangement with my circular horn feed for 1296 in Feb for the SSB contest.



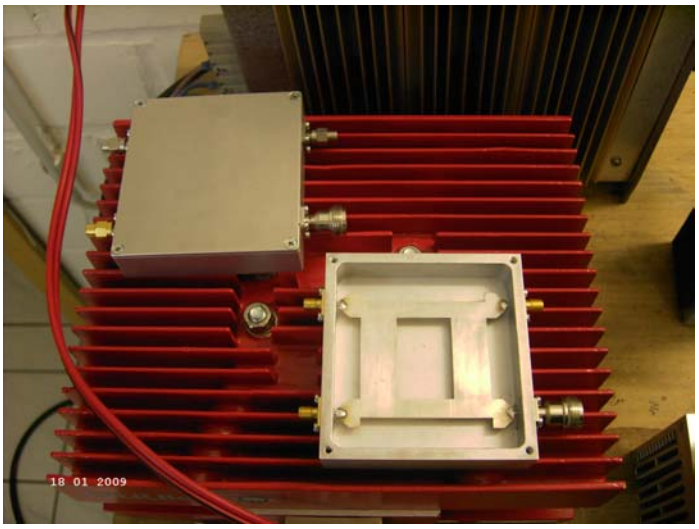
K2UYH's rotable linear feed for 70 cm (hor) & 23 cm (vert)

NETNEWS: **K5JL** is still QRT on EME due to problems with his dish. Jay expects to be back in operation soon. **WA8RJF** is setting up for 902 EME with a dual dipole feed. **KL6M** is back in operation. Mike had rather poor luck. His elevation motor burned out while trying to free up a frozen (iced) drive. It warmed up enough to get a new motor installed. He plans to be on 70 cm and possibly 902 in Feb. **WB7QBS** hear nil from LU7DZ in 70 cm sked on 3 Jan. **W5LUA** is set up for 902 EME with 500 W and hearing his own echoes. Al is also interested in 24 GHz skeds. **WD5AGO** is working on 5.7 and 24 GHz EME. **LX1DB** was on 70 cm in Jan, but had some noise and ice problems. He did work K0RZ and WA4NJP, but was not on later as could not move the dish due to cold. **W7MEM** is QRV on 70 cm EME. **K5PJR** has his new drive motor and should be back on 23 cm EME by now. **N4PZ** is setting up for 1296 EME. He is finishing up a GS-15B driver for his GS-35B final, but still needs a dish. **W4OP** was on 23 cm during the Jan AW and heard 5 and worked G4CCH. **W7CI** was QRV on 70 cm EME during the Jan AW. **W4TJ** copied on 11 Jan on 70 cm K1RQG, W7CI and K0RZ with his single yagi. My sun noise is 5 dB and CS/GN 5.5 dB. **WB2BYP** is still trying to get set up for EME at his new QTH. **PA3CSG** was not active during NA window in Jan, but did work V5/KT6Q on 23 and 70 cm (and 2 m) on JT. **VE6BGT** in DO32 is reported to be coming on 1296 EME with 2 x 4 tube 7289 PAs combined and a 12' dish.

FOR SALE: **N4PZ** has a newly rebuilt, pristine N6CA 1296 amplifier complete with spare tubes and power supply that is ready to plug in and operate. All you need is the water cooling system. Price is $250 plus shipping. Steve is looking for a 16' dish. Contact him at n4pz@juno.com. **K6JEY** is looking for a 1296 feed, either scalar septum type feed for a prime focus 15' dia dish with about a 0.375 f/d. **Mike Steffler** in Port Perry, north of Oshawa, Ontario Canada, has a 10' satellite dish available for the taking. If interested, e-mail him at mikesteffler@hotmail.com. **W9IIX** looking for 1000pf/4kv blocking cap. **VE6TA** is looking for a 90 deg splitter for 3400 MHz and a source for MGF 1302 devices. **WS0F/5** in NM has a disassembled Pariclypse 4 m dish available for $200. Contact Donzil at djw@zianet.com. **WA9FWD** is looking for a spare TH-328. **VE4MA** is looking for a source for Mitsubishi 57762 1296 18 W hybrids. **K9SLQ** has for sale HB9BBD preamp. It can be view on his web site www.k9slq.com and follow the For Sale Stuff tab. **WW2R** has for 23 cm a GS-15B cavity and 2 spare tubes (with water cooling) for sale - pictures at http://g4fre.com/sale.htm and also an EME Electronics 2 x 2C39a PA with tubes but no power supply. Contact Dave at g4fre@g4fre.com.

TECHNICAL: DL1YMK sends the following note for people interested in generating high power on 13 cm EME. Recently I got a surpus CDMA amplifier from DB6NT, which was produced in the US by a company called Paradigm. During the past few weeks I extracted the two amplifier modules from the original (very huge) unit and tested their power capability. After having

exchanged the on-board Anaren hybrids to 200W-types, I was surprised that both modules generated a very respectable 225 W each at 800 mW of drive. My next challenge was to combine them for 2 x 225 W reliably and safely. As I did not trust to combine these power levels with a 90° hybrid on a Teflon substrate, I searched for a more rugged solution. Again it was DB6NT, who give me the hint to just redesign a 23 cm-DJ9BV style branchline coupler with dimensions adapted to the 2300 MHz range. After some calculations to adjust the triplate impedances in the right way, I had a prototype hybrid laser-cut from a 1 mm copper sheet, silver-plated it and mounted it in a milled AL box. Network-analyzer evaluations revealed a return loss on all ports of >30 dB over a broad frequency range. The isolation was at least 29 dB between 2300 and 2350 MHz with 3.08 dB and 3.10 dB coupling factors, which is excellent. In the meantime I have reproduced those figures with two more couplers. It seems that I will have a significantly improved 13 cm signal strength for my upcoming 2009 microwave EME-dxpedition, hi!



DL1YMK's 13 cm quadrature hybrids & 13 cm PA module

ECHOES OF APOLLO: AA6EG (Jamesburg Moon Bounce Team) is organizing an EME celebration of the 40th Anniversary of the Apollo 11 Moon landing in conjunction with Australian Telecom/Hams. It will involve a world wide effort to perform amateur radio moonbounce communications on 23 cm with Australian earth stations at Parkes and the former Honeysuckle Creek dish at Tindinbilla, and at other large dish sites around the world**.** Astronauts, school children and world leaders will be involved in 2-way EME voice communications during the event with extensive media coverage. A major objective of the celebration will be *Science Outreach* – to get younger people, particularly school students, interested and involved in science and technology. The target dates are early/mid July; the anniversary of the Moon landing is July 20, 2009. For additional information and to get involved contact Pat, AA6EG at AA6EG@k6bj.org, tel (530) 878-7056.

GUEST EDITORIAL BY K6JEY: I was thinking about the idea of "random" contacts and came up with this metaphor: QSO's are like hunting moose. Most of us wouldn't put a gun by the door and wait for a moose to walk by. Instead, we would find out when and where moose were most likely to be and go there to intercept them. For our first few times out hunting we may go with an expert who would show us the best way to do things and help us with the moose. By the same token, even though it is done by some, we might want to go to a moose farm, rent a gun and shoot a moose. What you do might depend on your goal. If you simply want a moose trophy on the wall, then the moose farm might be a choice. However, if you like hunting, then planning out the trip and studying the habits of the moose are all part of the excitement of finally being successful. It is probably the most rewarding scenario. But, if you are not really into hunting and would be embarrassed if one walked by and you didn't get it, then you are in the gun-by-the-door group. You would bag most of your moose in a really random manner. Since we have no known moose sightings in Long Beach going back 150 years, hunting sounds like my best option for moose. The same with EME, what we may need is a new set of terms. We have "Random" and "Assisted", but we need a third term. On HF they use the term "Hunt and Pounce" or HP contacts. Is there a better term? Finding that term may clarify some of our discussions. (As an aside, it seems easier to skin a moose than get a QSL card from some stations).

K6JEY EME operating position (W6SZ top, KJ6HZ below)

FINAL: I gave up printing schedules in the NL almost 10 years ago. It seemed to makes sense with almost everyone having access to e-mail with its ability to make schedules directly. There are still times that help with scheduling is useful. In this regard, K1RQG is offering to arrange skeds for anyone desiring them. Please email Joe at k1rqg@aol.com if you want assistance.

With sadness I report the loss of another EMEer, W5RCI on 9 Jan. Rex was 81 years old and a true VHF/UHF pioneer. He was only briefly active on 70 cm EME, but is well remember by his many NA friends.

I had some questions on JT – SSB QSOs in the SSB contest. I do not see how JT can be made to fit with the SSB contest. I guess it is possible to have a cross mode QSO, but for now only SSB-SSB, SSB–CW or CW–SSB count for contest points. In regard to JT, I was disappointed to see that the REF/DUBUS are not sponsoring a Digital EME Contest this year and even worse that the ARI Digital EME Contest is on the same weekend as the 23 cm REF/DUBUS Contest.

Spring is contest season, in March will be the EWW EME Contest for 432 and 6, 3 and 1.25 cm, in April 13 and 9 cm and in May 23 cm.

I hope see you all on for the EME SSB Contest. PSE keep the reports and tech material coming. 73, Al – K2UYH

WA1DMV's 1296 EME New England ice storm disaster – Bill had a complete functioning 3 m dish and feed before the storm