432 AND ABOVE EME NEWS
OCTOBBER 2011 VOL 39 #10

EDITOR: AL KATZ, K2UYH; DEPT. ELECTRICAL/COMPUTER 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(x)ieee.org
NETNEWS EDITOR OPEN (based Reflector News)
INITIAL LISTS: G4RGK, DAVID DIBLEY, E-MAIL zen70432(x)zen.co.uk, link to list: http://www.nitehawk. com/rasmit/g3sek_op_proc.pdf
EME NETS: 14.345, 10 AM ET SATURDAY AND SUNDAY, NET CONTROL: STEVE GROSS, N4PZ n4pz(x)live.com
NL EMAIL DISTRIBUTION and EMAIL LIST CORD: WARREN, W2WD wbutler(x)ieee.org [TXT OR PDF OR "ON WEB" NOTICE]
THE NL WEB VERSION IS PRODUCED BY REIN, W6SZ AND AVAILABLE AT http://www.nitehawk.com/rasmit/em70cm.html

CONDITIONS: What an exceptional month. I know there are a lot of folks that say EME is not what it used to be. Well it is not, but if anything it is better! The problem is keeping up with everything that is happening. Since the last newsletter (NL), we have had two EME contests, the ARI's CW/SSB EME Contest and the microwave (MW) part (2.3 GHz and up) of the ARRL EME Contest, and a major dxpedition that included activity on both 70 and 23 cm. Coming right up (22/23 Oct) is the first weekend of the 50 – 1296 part of the ARRL EME Contest. There will also be an EME dxpedition to ISO on the same weekend – see the report later in this NL. EA8/G4RGK will be again operating on 432 from IL38 during the Oct contest weekend. It was also announced that DL2NUD will be active from Barbados under the call 8P9HP on 1296 between 7 and 21 Nov using the same equipment as in Lesotho. It appears that F2TU has the lead in the MW contest with 58 QSOs overall. The contact count is down a bit this year because of the low declination (dec) of the contest weekend. We are in a period when high dec and apogee are aligned. I am afraid all we can do is wait a few years until we get better alignment again.

7P8EME and 7P8HP: This dxpedition was obviously a great success with many stations worked. Operation was from Lesotho (KG30uc) between 14-26 Sept using 7P8EME on 432 and 7P8HP on 1296. After several days of operation on 70 cm, they lost the use of their 550 W SSPA and had to operate with about 70 W from their driver. Using this low power they QSO'd DL9KR on CW. I believe this was their only CW contact. They also had problems on 1296 and lost their low noise preamp on this band. They moved their transverter closer to the antenna and continued operation. Unfortunately, I have been unable to locate a list of the stations QSO'd on 432 and 1296.

7P8HP 23 cm 62 el yagi used with 400 W SSPA

CT1DMK: Luis cupido(x)mail.ua.pt reports on his recent MW EME activity -- I have been QRV only on 6 cm and 13 cm lately, while my 23 cm system is undergoing major revisions as some parts have deteriorated over the years and others require technological update. On 6 cm, I missed the SK6OSO operation due to other commitments. In the 6 cm AW, I worked SV3AAF, OK1KIR, LX1DB, PA7JB for an initial (#), W6PY, SQ6OPG (#), G3LTF, SV3AAF, LX1DB, and G4NNS. While in QSO with LX1DB, I noticed in my waterfall display some digital transmission. I spent a bit of time trying to figure the mode and settings. I finally could see SV3AAF calling CQ on Olivia. It was a challenge, first because I have no experience with any of those modes, second because Doppler changes and LO drifts made it quite difficult to keep in tune. We manage to QSO with a (44) report. It was not so difficult in retrospective. I can't really evaluate the relative performance of these modes out of this single QSO. I can say is that it provides a complete different operating experience (comparing with JT modes) as these are character by character modes and let all the garbage pass when signals did not decode properly, so during the course of the QSO, you really have to figure out for yourself and decide what is meaningful. In Sept, I added 9A5AA (#). Dragan was still optimizing his system, and really has it working great now. He was my #36 on the 6 cm band. On 13 cm I was QRV for the ARRL MW Contest. It was not quite as good as the DUBUS contest; more or less the same number of stations were active. I had trouble working JA's and VK's, since I'm considerably west than central Europe and had very little common window. I worked no VK's and only one JA. I've missed a few easy ones, but still finished with 31 QSOs. Two were on SSB and the rest on CW. Worked were JA4BLC, SV1BTR, LZ1DX, SP6OPN, G4CCH, DL1YMK, F2TU, ES5PC, G3LTF, ON5TA, SD3F, SM4DAN (#), IZ2DJP (#), RK3WWF, OH2DG, K5GW (#), SM3BYA, WA9FWD (#), K1JT (#), WD5AGO, S50C, VE6TA, WA6PY, SM4IVE, RK3WWF, OZ4MM, PA7JB (#), LX1DB SSB, OZ4MM SSB, PY2BS and W5LUA. Now I am up to initial #55 on 13 cm.

DK3WG: Jurg dk3wg(x)online.de was active on 70 cm in Aug and worked using JT65B the following initials: W7CE - who was using only a single yagi, RK9AT, OH8MGK - running 80 W, EA3BB, EA7AJ, G8FJG - running 250 W, CT2GUR - 2 yagis and 80 W and W7IUV - l yagi to bring him to mixed initial #551*.

F2TU: Philippe f2tu.philippe(x)orange.fr reports on the ARRL's 2.3 GHz & up EME contest -- In the contest I worked on 13 cm 39 QSOs. New calls were G3WDG, SM4IVE and PA7JB to bring me to initial #121. On 6 cm, I made 11 QSOs with an initial with SQ6OPG for #46 and the first F-SP 6 cm QSO. On 3 cm, I made 8 QSOs and added an initial with UR7D for #63 and the first F-UR contact. I made a total 58 QSOs in the contest and changed feeds 10 times - 2 times on Saturday and 8 times on Sunday! I worked back on 27 Aug on 6 cm 9A5AA (539/559) #44 and DXCC 25, on 28 Aug on 3 cm F1PYR and OZ1FF (O/O) #62 and DXCC 22. I also worked on 14 Oct on 13 cm random F1PYR (55/57) on SSB and LX1DB (56/56) on SSB, and on 16 Oct on 3 cm PA7JB (O/O) #64.

F5SE: Franck kozton(x)free.fr sends news on his recent 1296 activity and plans for the contest weekend -- I was not very active the past two months, but I did manage to work on 20 Aug on random G4CCH (579/589), and on 24 Sept LZ2US (559/559), OK2DL (55/55) on SSB and VA7MM (549/559). During the ARI CW/SSB EME contest on 25 Sept I worked I5MPK (569/569), DL6SH (569/569), IZ1BPN (569/559), IK3COJ (569/569), I1NDP (539/579) for initial #98 and IK1MTZ (559/569) #99. Heard but not called were SM7FWZ (539) and SM6FHZ (569). For 23 Oct with my friend FØDTB, we have organized an EME-ATV demonstration for the general public. We will be on 1296 using a special callsign, TM8POR, provided it is approved in time. If not, the call will be F5SE/P. As the date falls during the ARRL EME Contest, we will operate on a frequency well outside of the EME sub-band (1296.185 MHz) in order to avoid interference to regular contest activity. The TM8POR public demonstration will be located 80 km from Reims. An ATV/full duplex audio link to my dish site will be set-up on 2300. The link will be installed by the team of a radio-club specializing in portable ATV links. This "show" should sound more or less like the "Echoes of Apollo" for EME guys. If some of the operators QRV during the contest would like to have a short chat with us, they just need to monitor 1296.185 and call on either SSB or CW. TM8POR's operating time should take place around 1000 ± 1 hour. We hope the show will be successful. One of our goals is to demonstrate that hams are not only guys "talking in a radio," but also do exciting "high tech things" as setting up a 10 m dish for EME and communicating by ATV.

G3LTF: Peter <g3ltf(x)btinternet.com> sends news of his activity -- I believe I've finally fixed my problems of flashover on 1296 with my 6 x 7289 ring and on 23 Sept worked N4PZ for a nice CW chat. I also copied I1NDP with a good signal for his 8 W, but had to leave before I could call him. For the MW contest weekend the WX was excellent and the winds stayed away. Given the complexity of 3 microwave band operation, it was relatively trouble free considering five changes of feed systems and PSUs at the dish. I worked on 13 cm on 24 Sept LZ1DX, OH2DG, DL1YMK, JA8ERE (XB), F2TU, SP6OPN, CT1DMK, G4CCH, ON5TA for initial #96, ES5PC, S50C, IZ2DZP #97, SM3BYA, SD3F, RK3WWF, SM4DHN, SV1BTR, PA0BAT, K5GW, LA9NEA, G3LQR, WD5AGO (XB), K1JT (XB) and PA7JB #98. I then moved to 9 cm and worked ES5PC. On 25 Sept, I started on 6 cm and worked F2TU and OH2DG. IK2RTI came back to a CQ but never then heard my replies, even though my echoes were there. Back then to 13 cm, where I worked SM4IVE, OZ4MM, LX1DB on SSB and PA7JB (dup). Then a feed change to 6 cm again to work SP6GWN for initial #29, K5GW, SV1BTR, ES5PC and W5LUA. Back again to 13 cm and I worked G4DDK, VE6TA, PY2BS and WA6PY (XB). Finally, I went to 9 cm and worked W5LUA and K5GW. My totals were 31 on 13 cm, 7 on 6 cm and 3 on 9 cm. I was disappointed not to work more of the Jas, but I think that was due to my limited window and the low declination. On 13 cm, I CWNR SM3JQU, NA4N (XB) and WA9FWD (XB), and heard IK3GHY. On 6 cm, I CWNR G4NNS and heard S59DCD. Sun noise measurements during the weekend were on 2320 19.7 dB (SF 151), 3400 17.5 dB (SF158), 5760 16.4 dB (SF190). My 6 cm dish is 4.5 m, and on the other bands 6 m. It was an excellent weekend of EME, but was really crazy having all microwave bands on the same weekend... And whatever the degradation loss, we MUST go for high declination weekends! After the contest I caught on 9 cm PY1KK (569) for initial #35 and DXCC 21. Bruce had an excellent signal. The wind was quite strong here, but eased enough to put the feed in and work him.

IK1MTZ: Diego diego.sibona(x)fastwebnet.it is back on EME; now on 23 cm -- After nearly 10 years of stand bye, I was very stimulated by the activity of the IZ1BPN team. Two 2 years ago started work on my first fully homebuilt dish. The dish is now operational although not totally optimized. The mesh panels need better fitting and to be better tied in place, the feed focus adjusted and the elevation system's accuracy improved. On 9 Sept I made my initial 1296 QSO at 2005 IZ1BPN (559/559) for #1, and worked on 10 Sept at 2034 SV3AAF (559/439) #2, 2044 G4CCH (579/559) #3, 2055 OZ6OL (539/539) #4 and 2134 G4CCH (55/44) on SSB. The equipment consists of my 5.2 m, 0.5 f/d, wire mesh dish with an IMU feed, 2x7289 water cooled PA running 160 W at the feed (a TH338 is in progress) and NE32584 0.5 dB NF preamp (G4DDK is in progress). The station is located in the garden in a 2 x 2.5 m homebuilt wood box near the dish (21 m of ½ inch LDF 4-50A feedline). My activity will be in on CW/SSB only. I plan to be on ARRL EME contest.

IS0/OK5EME: Zdenek ok1dfc(x)seznam.cz reports that all is in place for the Sardinia dxpedition (JN40). Operation will be on 144 through 2320. They will be on 432 for the first Moon pass of the ARRL contest on 065 JT65B (TX first period) and 035 on CW. They will be on 1296 for the second Moon pass on 065 JT65C (TX first period) and 035 on CW. They will be on 2320.100 on 24 Oct and listen XB on 100. They will use a 3.2 m dish with on 70 cm a ring feed and 4CX800 PA, on 23 cm a DFC septum feed and YD1330 PA, and on 13 cm a DFC septum feed and 140 W SSPA. More info can be found at http://www.ok1dfc.com/Peditions/IS0/is0.htm. They will also be on N0UK and HB9Q chat. The team is OK1DFC, OK3RM, OK1NP and DL6SH.

JA1WQF: Kasai's ja1wqf(x)d5.dion.ne.jp 23 cm 2.7 m mesh dish was damaged by a typhoon, and he thus could not be QRV on 23 cm in the ARI contest. He expects to come back on again by the Oct ARRL contest weekend. Using a 2.4 m solid dish he heard OK1KIR on 10368 during the ARRL MW contest. [TNX JA4BLC for forwarding this report].

JA4BLC: Yoshiro ja4blc(x)web-sanin.co.jp reports on his MW and ARI contest activity – I worked on 13 cm ES5PC, SP6OPN, F2TU, OH2DG, SV1BTR, ON5TA for initial #51, G4CCH, CT1DMK, VE6TA, WA6PY, JA8ERE and OZ4MM. Heard were SD3F and LZ1DX. I also joined the ARI EME Contest on 23 cm for one hour on Saturday moonset and worked I5MPK, LZ2US, IK1MTZ for initial #182 and IK5QLO.

JA6CZD: Shichiro ja6czd(x)mx35.tiki.ne.jp was active in the MW contest on 2400. He worked on 13 cm ES5PC, SP6OPN, SV1BTR, F2TU, SM4DHN and WA6PY. He also heard WD5AGO and K5GW. [TNX JA4BLC for forwarding this report].

JA8ERE: Mikio sgl01011(x)nifty.ne.jp was QRV on both 13 and 6 cm during the MW contest. He QSO'd on 13 cm WA6PY, JA4BLC, F2TU, SP6OPN, G3LTF, ES5PC and G4CCH. He heard WD5AGO and K5GW. On 6 cm, Mikio worked SV1BTR. [TNX JA4BLC for forwarding this report].

JA8IAD: Michinori ana11142(x)yahoo.co.jp operated on 13 cm during the MW contest. He worked F2TU, OH2DG, SP6OPN, SV1BTR, ES5PC and WA6PY. [TNX JA4BLC for forwarding this report].

JH1KRC: Mike jh1krc(x)syd.odn.ne.jp reports on EME at Ham Fair in Tokyo on 27/28 Aug. Some 20 moonbouncers got together for an informal meeting. All very much enjoyed talking with each other – see picture. [A JA EME Conference is planned for Nov. 26th – see FINAL section of this NL]. Mike also reports that although 8J1AXA's activities have finished, there is a new URL and QSL manager – see http://gongon.com/8j1axa/index.html. All QSLs should have been received, but if someone still waits for a 8J1AXA QSL, PSE write to the new QSL manger.

JA EME meeting at Tokyo Ham Faire

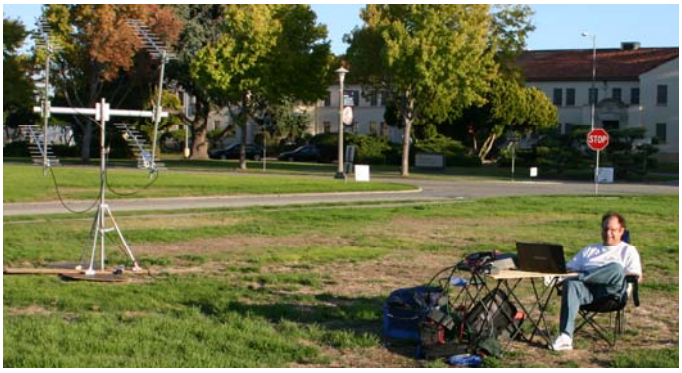
JJ1NNJ: Kouichi jj1nnj(x)extra.ocn.ne.jp participated in the ARRL MW EME Contest as SWL -- It took 10 months for antenna construction. It was a major challenge to add 13 cm to my 70 cm capability. I now can RX on 3 frequencies (2424, 2320 and 2304). I first heard JA4BLC on 2424.096 at 0348 on 25 Sept. I was very pleased. Then I copied SV1BTR on 2320.095 at 0530. Nothing was heard on 2304. My system is 3 m Solid dish f/d 0.25, Super-VE4MA feed (It doesn't fit such deep f/d and I'm thinking of changing to a Chaparral feed) and G4DDK VLNA2. My Converter is HB and goes from 2424 to 144, 2320 to 40 and 2304 to 24. My sun noise is only 7.2 dB at 2424, so some improvement is needed.

JJ1NNJ 3 m dish with Super VE4MA feed for 2424

K1JT: Joe writes on the MW Contest weekend -- We found activity only fair to good on 13 cm; the low moon declination did not help, as it significantly shortened our EU window. The trees at K2UYH's QTH continue to grow. We now need more than 30 degs elevation to the east to be above them, and even more to the west. Activity was very low on 9 cm, at least during the times we were on. We tried both 5.7 and 10 GHz, but made no QSOs. The TWTA in our 10 GHz system went bad and was never installed at the feed. We got on 6 cm late on Sunday with the Moon already in the trees, but were able to copy our echoes (pretty weak) for the first time on this band, and CWNR W5LUA. Al was good copy, but did not hear us. We hope to do better next year. QSOed on 24 Sept on 13 cm were F2TU (559/559), SV1BTR (559/559), K5GW (559/559),

SM2BYA (549/559), SM4DHN (539/559), 1053 LZ1DX (559/549), WA9FWD (549/339) – lost, SP6OPN (579/579), CT1DMK (559/559), G3LTF (559/559) XB, ES5PC (569/559), G4CCH (559/559) XB, DL1YMK (559/559) XB, WD5AGO (549/339), S50T (549/449), VE6TA (559/559), SM4IVE (559/559), W5LUA (559/579) and WA6PY (559/559), and on 25 Sept on 9 cm K5GW (569/569), W5LUA (559/569), then on 13 cm PY2BS (559/559), ON5TA (559/559), W7JM (559/559) and NA4N (549/559), and back to 9 cm WA6PY (559/539) for 22 QSOs on 13 cm and 3 on 9 cm. Our multi-op team includes K1JT, K2UYH, K2TXB, K2QM, K3TUF, K2BMI and K1DS. Hope to see you on the VHF/UHF bands in the next 2 contest weekends.

K6CLS/p: Cliff cls(x)employees.org writes -- On 8 Oct I operated /P at NASA Ames. The Lunar Science Institute sponsored a Moon observation party for the evening, a half dozen folks set up telescopes, and NASA staff were happy to include me and my 432 EME rig. For crowd control and RF exposure reasons I set up away from the 'scopes. The rig assembled quickly, about a half hour thanks to help from my friend Bruce. I started CQing as soon as possible on 432.070 around 0100. Around 0200 the first and only QSO was made with W7IUV. That was great! Unfortunately it was before the crowds showed up. Conditions were not that great and not many folks were on the band, so didn't hear much else. Normally K7XQ and I can hear each other on tropo, but this night neither of us heard anything. The visitors did not seem to mind, everyone was curious about the antennas and rig. Over the evening I decoded W7IUV many times. The thrill for the visitors was to hear the whispery tones, see the spectrograph and watch the laptop decode his TX. I had a lot of fun talking with people and explaining the pieces of the station and the idea of moonbounce. Overall I am happy with my rig, the easy portability. A big pile of 31 batteries easily ran the station for 4 hours. I am looking forward to more activity during the ARRL EME Contest in Oct.



K6CLS's 70 cm EME demonstration

LU1C: Adrian adrian.sinclair(x)multiradio.com.ar listening on 13 cm -- I active on 23 cm with a 3.6 m dish with a RA3AQ Septum feed and G4DDK VLNA to a TS2000X. I plan to do some listening on 13 cm during the ARRL MW EME Contest. I will not be able to TX as 13 cm is not allowed in LU. [No report yet of his results]. I also wonder if anyone might have any suggestions as to why both my and LU8ENU's Sun noise is lower than predicted by the VK3UM EME Calculator. We are seeing about 8 dB with an SFI about 70, we expected to see > 10 dB. Does anyone have any suggestions as to our problem? [1)Are you sure you found a cold sky point to use as a reference for the change in noise when you point to the Sun? 1) I seen problems with a non linear RX response with multiple preamps compressing. Suggest you measure the change using an adjustable attenuator after your first preamp. 3) If your preamp NFR is lower than you believe, this would give similar results. Have you tried to measure cold sky to ground noise (CS/GN) using just your preamps and the feed. (Feed horn out of the dish). Measuring CS/GN this way, you can get a good idea as to what is your NF].

LZ1DX: Ned lz1dx(x)lz1dx.org was active during the 70 cm CW ATP on 20 Aug and QSO'd at 0725 G3LTF (559/559), 0740 SM2CEW (559/559), 0755 OZ4MM (579/559) and 0811 K2UYH (569/ 559). On 432 Ned runs 16 x 15 el yagis, a 1 kW PA and 0.25 dB LNA.

N8CQ: Gary gabercr(x)nc.rr.com reports on progress on his big dish project -- The tower is now installed on the concrete base and hydraulic system (azimuth/elevation) is functional. I have 47 of 51 ribs installed on the hub. Tropical storm Lee made it really tough, but I worked thru the storm to get the rib bolts tightened down. Hope to finish up dish in next two weekends. I am still trying to figure out logistics of how to reach the hub and feedhorn after raising the dish onto the mount.

OK1KIR: Tonda & Vlada vladimir.masek(x)volny.cz send latest EME news – At the end of Aug we worked on 5760 on 29 Aug at 1020 S59DCD for initial #51 and DXCC 23 and 1203 9A5AA (O/549) #52 and DXCC 24. Around 1200 there appeared QRM, but fortunately we were still able to copy Dragan's EME signal. On 30 Aug we had a 24 GHz sked with DL7YC and at 1145 successfully QSO'd Manfred (O/O) initial #9. During the sked we tried 2 feeds. The first, a horn (21 x 16 mm) illuminated only about 2.5 m of our 4.5 m dish. It created a 0.35 deg beam and confirmed the theory (more on "innovated" at www.ok1kir.cz). It produced a better RX signal than the second horn (15 x 11 mm) with 0.22 deg beam [?] that illuminated about 4 m of the dish. Due to summertime, the humidity was high and we measured G/CS 3.2 dB, Sun 14 dB (SF 101) and Moon about 1.7 dB of noise. On 432 while waiting for the 7P8 dxpedition on 17/18 Sept we worked on JT65B DF3RL, RK9AT for an initial (#), K7QX, PE1RDP (#), EA5CJ (#), PY2BS(#), PA0PLY(#), LZ1DX and DL7APV, and on CW LZ1DX. We had no success with 7P8EME due to terrible wideband QRM. However on 20 Sept we worked quite easy for digital initial {#62} and a new DXCC. On 1296 on 16 Sept we QSO'd on JT65C 7P8HP for digital initial {#91} and a new DXCC, OK1CS {#92} and JA6AHB. We also worked OK1CS on CW for initial #321 and LZ1DX. On 19 Sept we added on JT65C VK4CDI. On 2320 in the MW contest we QSO'd on 25 Sept on CW LZ1DX, OZ4MM, ON5TA for initial #112 and PA7JB #113, and on 10 GHz on 24 Sept on CW UR7D for initial #60 and DXCC 24, G4NNS, F1PYR and IK2RTI, and on 25 Sept UR7D, SP7JSG, DLOEF very strong on SSB, F2TU, WA6PY and DL7YC #61 when pol was rotated to horizontal. JA1WQF reports copying us (O) even with trees in front of his 1.8 m dish. Unfortunately he is still waiting for his license approval. The Moon noise was 2.8 dB. On 24 GHz on 17 Sept we tried JT4G with G4NNS. Signals were visible on the waterfall display, but there were no decodes on both sides, probably due to Moon being in apogee – too weak signals and high libration (big spread). There was high humidity during the test time at low Moon elevation that further degraded signals. On 23 Sept the test was repeated in day time (much lower humidity on our side). However still the big spread and high Doppler complicated tuning. G4NNS did obtained one decode, while had none. CW was also tested without success (unable to copy). After the test we measured Moon noise at 1.9 dB (EL 37 degs), Sun 13.6 dB (SF 155, EL 39 degs), G/CS 2.7 dB (lowest value ever measured). During the MW contest on 24 GHz on 24 Sept we completed 3 QSOs, DL7YC, G4NNS and W5LUA, and on 25 Sept added LX1DB (strong signal). Our total score 400 x 4 = 1600 pts. (We must note that after the separate 2.3 GHz and up category was eliminated, we lost the motivation to jump from one MW band to another to catch the maximum QSOs. Changing band in a hurry and with time stress poses a high risk of damage due to errors. So we changed bands slowly seeking only new stations. Operating 5 MW bands with one dish in the relatively short mutual Moon windows is a bit useless and by our opinion almost does not support MW activity, esp. on higher bands. AWs are much better for building activity.

ON5TA: Eric fb812248(x)skynet.be reports on his MW contest operation -- I was QRV for a few hours on 13 cm and enjoyed very much the good activity. I had random QSOs with SV1BTR, JA4BLC, F2TU, SP6OPN, ES5PC, G3LTF, DL1YMK, CT1DMK, G4CCH, OH2DG, SM4DHN, SM4IVE, LZ1DX, PA7JB, OZ4MM, PY2BS, OK1KIR, WD5AGO, WA6PY and K1JT. PA7JB had a good and stable signal with his 2.4 m offset dish. Many TNX to all for the nice QSOs! I believe my QSOs with SV, JA, SP, ES, OH and PY were all firsts on 13 cm from ON. The 13 cm feed will be kept on the 3.6 m dish for a few more weeks. If anyone is interested in a sked, please send an e-mail.

N8CQ progress on his 30' dish

OZ1FF: Kjeld oz1ff(x)mail.dk writes -- After a break of nearly 2 years, I'm back on 10 GHz EME. My power has been increased from 15 to 45 W at the feed, and I now receive nice audible echoes with my 1.8 m dish. Sun noise is 8 dB and Moon noise is 0.7 dB. The feed and tracking still need to be optimized, but all is working. My next project is 24 GHz, where I hope to be ready for testing in about one month with 10 W and my 1.8 m dish.

OZ1FF's 1.8 m offset dish used on 10 GHz

PA7JB: John pa7jb(x)ziggo.nl reports on his first QSOs on 13 cm EME – In the MW contest I worked 19 stations on CW and 1 on SSB (LX1DB). I QSO'd DL1YMK, PA0BAT, G4CCH, SP6OPN, G3LTF, LZ1DX, SV1BTR, SM4DHN, SM4IVE, CT1DMK, ON5TA, LX1DB (55 on SSB), F2TU, OZ4MM, PY2BS, OK1KIR, W5LUA (XB), WD5AGO (XB) and ES5PC. I also copied K1JT, but the moon was to low then. I did hear some others, but too weak to copy. My setup is 100 W at an RA3AQ feed and a 2.4 m offset dish. I am receiving 14.8 dB of Sun noise. I plan to be QRV soon on 10 GHz and 3.4 GHz.

PA7JB's 2.4 m offset dish with 13 cm feed

PE1RDP: Arno arno.bollen(x)onsbrabantnet.nl was QRV on 70 cm in Sept -- The last 2 weekends of Sept, conditions were good so I made some nice QSOs. I worked on 18 Sept OK1KIR (23DB/O) JT65B for an initial (#) and DL7APV (15DB/O) JT65B, on 24 Sept JA6AHB (21DB/O) JT65B and DF3RU (19DB/O) JT65B, on 25 Sept OK1DFC (15DB/O) JT65B, UA3PTW (12DB/O) JT65B, PI9CAM (579/) CW, EA5CJ (23DB/O) JT65B (#), DK3WG (16DB/O) JT65B and SM2A (19DB/O) JT65B (#). My system consists of 4 x 5.5 WL DK7ZB yagis, 500 W SSPA and 2 stage ATF54143 0.3 dB NF preamp from JO21qk.

PY2BS/PY1KK: Bruce bruce(x)zirok.com sends the following report -- Although I had long planned being on 9 cm during ARRL's MW contest, a flu and bad weather prevented me doing so. As a plan "B" I went to 13 cm on Sunday only. I was happy to get 17 QSOs including 2 initials. Worked were PA7JB for initial #59, SP6OPN, ON5TA #60 (first ON-PY QSO on 13 cm), G4CCH, SM4IVE, CT1DMK, SD3F, LZ1DX, SV1BTR, ES5PC, OZ4MM, G3LTF, VE6TA, F2TU, WD5AGO, K1JT and WA6PY. TNX to all for the nice QSOs. I was able to travel to my coastal QTH on 9 Oct, and was back on 9 cm (PY1KK) on 10 and 11 Oct. I had QSOs with K2UYH for initial #13, G3LTF #14 (first G-PY on 9 cm), OZ5OL and S59DCD #15 (first S5-PY on 9cm). This concluded my activity on 9 cm for 2011. The next new band for PY1KK will be 6 cm; probably in the second half of Dec, or even possibly before.

SV1BTR: Jimmy jimmyv(x)hol.gr reports on his MW contest weekend results – - I operated on 13 and 6 cm on random CW with no loggers and no skeds either. On 6 cm I had problems with random pointing errors in AZ-EL readouts, making it impossible to track the Moon in a normal manner. I had to follow Moon noise to maintain my tracking. Of course, initially finding the Moon each time was a big headache with a 0.63 deg beamwidth. I made on 13 cm 37 QSOs (down from 43 in 2009 and 40 in 2010) working OH2DG, SP6OPN, ES5PC, LZ1DX, ON5TA, JA6CZD, JA4BLC, JA8IAD, IK3GHY, JA8ERE, DL1YMK, CT1DMK, SD3F, F2TU, S50C, G4CCH, SM3BYA, IZ2DJP, RK3WWF, G3LTF, SM4DHN, PA0BAT, SM3JQU, NA4N, WA9FWD, K1JT, K5GW, WD5AGO, SM4IVE, LA9NEA, G3WDG, VE6TA, WA6PY, OZ4MM, PA7JB, G4DDK and PY2BS, and on 6 cm 14 QSOs with JA8ERE, SQ6OPG, OH2DG, F2TU, IK2RTI, SP6GWN, PA0BAT, S59DCD, G3LTF, G4NNS, ES5PC, K5GW, W5LUA and G3LQR. TNX to you guys and all QRV., CW EME is the greatest!

UA3PTW: Dmitry ua3ptw(x)inbox.ru added initial QSOs on 70 cm EME in Aug using JT65B with W7CE, EA5CJ, OH8MGK and G8FJG and CT2GUR. No initials were added on 23 cm. [TNX DK3WG for forwarding this report].

UA3PTW's 24 yagi array used on 70 cm (23 cm dish lower left)

VA7MM: Mark and Toby va7mm(x)rac.ca sends news on their 1296 operation during the ARI EME Contest -- We were QRV on 23/25 Sept. Random CW contacts were made with OK2DL, LZ2US, DL6SH, N2UO, DF3RU, F5SE/P and IK1MTZ. Using JT65C we also contacted LU8ENU, PA3FXB, OK1CS, W3HMS and PI9CAM during the weekend. Our station log continues to grow with CW/SSB initial #112 and mixed initial #134* now logged. We intend to operate next on the upcoming ARRL EME contest weekends in Oct and Nov and are otherwise available for scheduled contacts at other times; email us.

VE6TA: Grant ve6ta(x)clearwave.ca on his 13 cm MW contest activity – Well, the weather was great, the gear appeared to perform well, but the Moon was strangely absent up here in the NW corner of NA. Subsequently there was not a lot of stations around to work. The low declination makes it nearly impossible for me on 2320. Shortly after moonrise when aimed to the SE, I get huge QRM from the Sirius satellites and can only work the big guns. When I did have a window signals were quite good on 2304 though. To complicate matters, it appears that most folks abandoned 9 cm this weekend in favor of 6 cm and above, so I didn't even bother trying that band in my limited window. Stations worked/heard were K5GW, ES5PC, WD5AGO, SV1BTR, DL1YMK, SP6OPN, F2TU, CT1DMK, K1JT, W5LUA, SM4IVE for an initial (#), WA6PY, JA4BLC, (heard JA8ERE loud but no response), G3LTF, PY2BS, W7JM and

NA4N. I also heard WA9FWD calling me, but could not complete. The station is a 5.5 m dish, IMU circular feed, twin Spectrian SSPAs at 300-350 W in the shack and a 0.4 dB NF for RX on 2304/2320/2424/2302.

W3SZ: Roger 73w3sz(x)gmail.com has now completed his first 10 GHz EME QSO -- I got on the air for my first attempted 10 GHz EME during the ARRL MW EME Contest, and worked W5LUA. I couldn't see the Moon to track it visually, but found I was able to track it by peaking on the Moon noise on my SDR-IQ that I had running in parallel with my IF radio. I still have a way to go to have everything working the way I want, but am pretty pleased with today's QSO. More information can be found at http://www.nitehawk.com/w3sz/W3SZ-10GHzEME.htm.

WA9FWD: John Jstefl(x)wi.rr.com had planned to be QRV on both 13 and 9 cm during the MW EME Contest, but had lots of problems -- As it turns out I should have stayed on just 2304. I called CQ on 3400 from 1100 to 1230 on Saturday and heard only echoes. I changed the feed late Saturday during a break in the rain, but Sunday was terrible. Heavy rains and lightning. I also lost my window when I turned my dish southeast. My dish is on the north side of my house, and I really need a high declination. I am also almost 44 degrees north latitude, which doesn't help either. I purchased a new septum feed from WD5AGO, but didn't get the scalar ring done. I thus used my old VE4MA screw polarizer feed. I checked sun noise with it, and was pleased with 14 dB. I knew the screws had corroded, but had no other choice for a feed. I got very poor echoes and feel that the polarizer screws weren't working properly. The sun isn't polarized, so that would explain the good Sun noise. I am curious to see if anyone heard me on 3400. I really need to make sure that my transverter is on frequency. I have yet to work someone since I switched transverters. I am working to get something working for the next contest weekend, hopefully on 1296.

ZP9EH/W9CPI: Steve stevezp9eh(x)gmail.com is interested in EME and planning to get on 432 and 1296 eventually from Paraguay. He is setting up for 2 m first with help from KB8RQ. He has an Icom 910H with a 1296 module already installed. When he return to the US in Jan 2012, he plans to a bricks and antennas, and is looking for suggestions.

K2UYH: I a.katz(x)ieee.org was active on 70 and 23 cm besides operating the MW contest with K1JT – see Joe's report. There is a correction from last month I QSO'd on 27 Aug on 1296 using JT65C at 1212 OH1LRY (10DB/9DB) and 1228 LU8ENU (13DB/12DB), then switched to 432 at 1254 PE1RDP (15/DB/15DB) JT65B and partial on CW as Arno did not find me, 1312 partial ON4CGX (21DB/-) JT65B, 1441 OE5MPL (21DB/21DB) JT65B, 1521 OH1LRY (559/559) for CW initial #322 & mixed #393* and 1552 VE6TA (569/579) CW, on 10 Sept on 432 at 0015 PY2BS (16DB/14DB) JT65B for mixed initial #823*, on 11 Sept during ARRL tropo contest on 432 at 0347 K6CLS (21DB/19DB) JT65B and 0406 VE6TA (559/559) CW, on 16 Sept on 1296 at 0345 SV1DNU (O/O) CW – solid QSO [please note that SV1DNU's callsign was incorrectly listed in last month's report], on 17 Sept 17 on 1296 looking for 7P8HP, on 18 Sept on 1296 at 0456 I1NDP (17DB/6DB) JT65C #394* - Nando running only 8 W, 0534 G4DGU (11DB/8DB) JT65C, 0635 IK1MTZ (559/579) CW #323 & #395* and 0726 SM7FWZ (559/559), on 19 Sept on 1296 at 0530 nil 7P8HP, on 20 Sept on 432 at 0756 LZ1DX (10DB/8DB) JT65B, on 21 Sept on 432 at 0722 7P8EME (14DB/O) JT65B but disappeared before heard Rs!, on 22 Sept on 1296 at 0800 7P8HP (18DB/-) JT65C – CWNR for several hours, 23 Sept on 1296 at 0947 7P8HP (15DB/24DB) JT65C #396* & DXCC 79*, then switched to 432 at 1016 7P8EME (25DB/O) JT65B #824* & DXCC 106*, and finally on 10 Oct on 3440 PY1KK (559/559) CW for initial (#). I do not remember ever working so hard and having so much bad luck trying to work a dxpedition station. I had them on 70 cm (O/O) when their SSPA blew up and had to wait several days to work them on their driver. On 23 cm, they lost their preamp before they were on during my limited window. When they finally showed up, they had a very strong signal, but could not copy me without their preamp. The next day I switched from my circular horn feed to a linear feed. Fortunately, they were on again and I made the QSO. TNX for all your effort. Dxpeditions like this one are what keeps things exciting!

MORE ON 13 cm WIFI INTERFERENCE from CT1DMK: Interference was not so severe when I had my antenna pointing up to the Moon high in the sky, but as soon as moonset approaches the band became useless (<30 degs or so). On the spectrum analyzer the 2304 and 2320 segments look clean, but in the EME setup they were not. I can only explain the interference from insufficient image rejection and/or from intermodulation. Since the image frequency band was heavily populated, image rejection was a strong possibility, nevertheless a few calculations would not explain the spectrum contamination I see on the IF, so inter-modulation was not discarded. I built a few filters (interdigital with 4 sections with high Q in air (no PCB stuff) and could obtain a razor sharp 10 MHz bandwidth at 2320 with more than 90 dB of attenuation at image frequencies. I placed it after the LNA that is before the transverter, and the problem disappeared completely and I got a clean 2320 segment. This is however not a solution as I would need to preserve the 2304 and the 2424 MHz segments. Also I really needed to understand if the major cause was the inter-modulation or the image rejection. A simple filter that just provided considerably attenuation at image frequencies was tested and the results were elucidative. The burst noise was considerably reduced, but the variable continuum noise floor rise was still there, but only at the lowest antenna elevations. So it was really a combination of the image rejection and inter-modulation. As for the image rejection, it should come as a surprise that I needed more than 80 dB and the 55-60 dB provided by the transverter was by no means enough. As for the intermodulation, it is quite understandable since the overall setup happens to be a two stage LNA followed by a transverter that has two stages (albeit not so high gain) before the image rejection filter and mixer. All of that gain accounts for about 38-40 dB broadband gain that is clearly not a good idea to have. I then tried to compromise and designed a wider filter probably not so good as the 4 section interdigital one, but in the hope to preserve the RX in the 4 desired bands (VK, US, EU, JA). I ended up with a 3 sections Interdigital, a compact design with copper strips and capacitors. It was tuned to have the starting 3 dB points at 2301 and 2425 MHz. If this fails to solve the problem, I will have to switch between the 3 interdigital filters. This would be an extra effort and weight, since I have it all at the feed point, including the transverter, PA, etc. Only the 144 IF runs to the shack. I installed it, and it worked out very well and now I have a clean 13 cm band.

NETNEWS: **I4BER** planned to be on 3 cm on Sunday of the MW Contest with 3 m dish and 50 W. **JA4HZN** has 5 m mesh dish, which he used on 23 cm EME. During the MW contest he heard F2TU on 2320. **ON4CGX** is QRV on 70 cm with 4 x 9 el DK7ZB yagis and 100 W and taking skeds on JT. **TI2AEB** reports progress on his dish. He hopes to be on 23 cm soon. **WA2FGK** has a 12' dish mounted and a 500 W SSPA that he is planning to use on 23 cm EME and eventually also on 13 cm.

FOR SALE: **K0RZ** has for sale Henry 2004A 432 amp for $US1200, KD5FZX GS-15B 1296 MHz cavity amplifier new as delivered for $US350, VE1ALQ 1296 circular polarized feed new $US350. All items prices plus shipping. Contact Bill at k0rz(x)comcast.net or tel 303-499-1936. **K1RQG's** 10 m dish and mount (feeds too and other goodies) are available free for the taking. Joe's wife would prefer it to go to a non-profit organization (ham radio club) so that it can be a tax write off. Contact Norm, W1ITT at wa1ivb(x)att.net. **WD5AGO** has for Sale 2 CP 13 cm feeds and 1 CP 9 cm feed. These are all the remains from the last batch he made. He also has LNAs for 70, 23, 13 and 9 cm available.

FINAL: This NL is arriving later than I had planned. I simply ran out of time. To get the NL out, I am delaying printing some technical material, which should now appear next time.

Plans for the 15th International EME conference to be held at Churchill College, Cambridge on 17/18 Aug are moving along. The web site is http://www.chu.cam.ac.uk/. The University City of Cambridge is a world famous centre of scientific learning that has played a major part in mankind's scientific advances. See http://www.cam.ac.uk/univ/history/ for more information. Before the conference there will be an optional tour on Thursday 16 Aug to Bletchley Park, the WW2 code breaking center and home of the world's first computer with a working replica. There are many other great exhibits of historic radio and code breaking interest. The tour package will include transport, guided tour and a light lunch. See http://www.bletchleypark.org.uk/. The two main conference days will feature a full program of lectures, the usual test and measurement facilities and displays of EME related hardware and software products. On Friday, partners not attending the formal sessions are free to visit the many attractions in the Cambridge area and your hosts will be pleased to advise on things to do; see http://www.visitcambridge.org/VisitCambridge/WhatToSeeAndDo.aspx. Lunch can be taken either in Cambridge or at Churchill College. On Saturday, there will be a tour for partners to the historic town of Saffron Walden; see http://www.visitsaffronwalden.gov.uk/, and a visit to the historic house and gardens at Audley End, see http://www.english-heritage.org.uk/daysout/properties/audley-end-house-and-gardens/. The tour package will include transport, a guided tour of Saffron Walden and entry to Audley end house and gardens. There are a variety of restaurants in Saffron Walden where lunch can be taken. Accommodation has been booked at the conference venue, Churchill College Cambridge, and is available to delegates from the afternoon of Wednesday 15th, (before the pre conference tour) through to the morning of Sunday, 19 Aug. We will be offering a range of inclusive packages so that delegates can book accommodation according to their needs. The booking page will open in January 2012. The accommodation at Churchill College is of a high standard and has been approved by the XYL of a leading

EMEer! College facilities include good quality restaurant and bar, free wired high speed internet access in all bedrooms (bring a network cable) and free wireless internet access in public areas. The lecture theater and AV facilities are excellent. We believe that having everything on one site with all facilities within easy walking distance (150 m) will make EME2012 a very enjoyable conference for all attendees.

OK1CA - there is good news, Franta is out of the hospital and recuperating at home. He is doing much better now.

The 20 m 70 cm and up EME net is now being run by N4PZ. Steve starts the net at 1400 on 14.345 Saturday and Sunday, but would like to see more participation. WA4NJP fills in for Steve when he can't make the net.

The dates of Italian ARI EME events in 2012 are as follows: 21/22 April 21st ARI EME Meeting at Marina di Pietrasanta, 26/27 May ARI "New Modes" [JT65] EME Contest, 29/30 Sept ARI CW/SSB EME Contest, and their World Wide ARI Marathon EME Contest spanning all of 2012. See http://www.eme2008.org/ari-eme/contest.html for more details. TNX to I5WBE for sending this info. Hopefully there will be minimum conflicts with other EME activity.

SM4IVE is planning another regional EME meeting on 11-13 May (preliminary) in Örebro City, Sweden (JO79OG). The meeting is aimed at active EMEers on 432 & UP that shares the same interests. The main purpose of this meeting is socializing, but technical measurements will also be made.

VK3UM has a new version of his Atmosphere program available. It has been considerably expanded to provide for Dry Air, Water Vapor, Rain, Cloud and Fog attenuation. It now includes both Home and DX Station calculations. The layout and format is now similar to the EME Calculator program. A comprehensive Help file has been added and the EMECalc Help file updated as well. Doug has also provided an integration option in his EME Calculator program (Ver 14) downloadable from his web site www.vk3um.com. where, when you select 10 GHz and above, it provides an option to input the Home and DX Loss values calculated in the Atmosphere program.

There was considerable discussion of EME contest rules during the past month. I fully agree that contest rules should not be changed after a contest has taken place. At the same time we all must appreciate that the folks organizing the EME contest are volunteering their time for all of us, and as humans [I know microwave EMEers are perfect] do make mistakes. Please let's be considerate of each other.

I have more tech material than I have had for a long time, but PSE keep it coming along with the reports! I wish everyone great luck during the EME contest, and will be hoping to work all of you on 70 and 23 cm under the call K1JT. CU off the Moon. 73, Al – K2UYH

MW EME Contest fun – changing feeds at G3LTF.