432 AND ABOVE EME NEWS
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The group shot at the 14th International EME Conference at Dallas

CONDITION: There is certainly much to talk about this month. The 14th International EME Conference was a great success with 164 registrants! Al, W5LUA deserves our recognition and thanks for the superb job he did in leading this effort. The hospitality activities, surplus deals and tours were truly outstanding. The only complaint I heard was that it was too short a time. There was certainly at lot lost sleep as the hospitality suit kept going into the wee hours. See W5LUA's report later in this newsletter (NL). Just 2 weeks after the conference was the microwave (MW) leg of the ARRL EME Conference. QSO counts on 13 cm are pretty similar to last year, although activity on the higher bands seems a little down. This drop can probably be attributed to the shorter Moon window in the northern hemisphere, which limited time for band switching and activity on the different bands. There was also a reasonably good showing on 70 and 23 cm despite the focus on the MW bands. There is no 70 cm CW activity time period (ATP) in Oct because of the 50 – 1296 EME Contest weekends. Both occur in Oct, on the 2nd/3rd and 30th/31st. There should be plenty of activity and new stations to work during these weekends, the first of which corresponds to the official EME activity weekend (AW). There is also some dxpedition activity taking place. DK2ZF will be putting Chile on 432 EME for the first time over the contest weekend – see the following report. [I am trying to organize 432 skeds for Rolf. If you would like a sked, PSE e-mail me ASAP and I will confirm by e-mail]. Additional dxpedition activity by DL3OCH is planned for Nov, but it appears that OK1DFC's dxpedition may have to be delayed until March.

DL9KR: There is some tragic news this month that at least appears to be ending positively. Jan had a very serious fall on 5 Sept while hiking in the Italian Alps. He tumbled down a very a 30-50 m steep rocky slope. One of his friends is a doctor and was able to quickly administer first aid. A helicopter arrived in about 12 minutes and flew him to the hospital in Bolzano. A few days later he was moved to a hospital in Wiesbaden where he has had extensive surgery. A critical neck operation was a full success and he is not wearing a fixed neck support any more. He also had extensive surgery on his left arm (CW fist), which apparently was also a success. Jan is up and walking without any support or cane. He is in a very good mood and will probably be going home this coming week. [Jan has the wishes and prayers of the EME community for a speedy and full recovery].

CE/DK2ZF: Rolf niefind.rolf@t-online.de will be QRV from Chile on 50, 144 and 432 EME. The call will be CE2 or CE3/DK2ZF. Operation on 432 is planned for 1 Oct from 10 to 1245, 2 Oct from 1800 to moonset, 3 Oct 1800 to moonset and 4 Oct from 1200 to end of activity. All 70 cm operation will be on 432.090 with him always TXing first period. The rig on 432 is 2x19 el xpol H/V DK7ZB-yagis, BEKO HLV-550 500 W SSPA, DB6NT preamps FT-847. The grid will be FF46. Internet access is not expected (as in OH0), but he will have daily updates from DL8EBW and/or DK3WG. If GSM-coverage exists, DL8EBW will publish his Chilean cell phone number. [I will try to coordinate 70 cm skeds for Rolf. Please e-mail me sked requests (if possible for the 1st and 4th as Rolf would like to keep operating time during the contest as open as possible), I will send confirmation by e-mail. [See Rolf's report on his OH/DK2ZF dxpedition results later in this NL].

DL7APV: Bernd dl7apv@gmx.de reports that his antennas are still bent, but that his Sun noise is only down by about 0.5 ~ 1 dB – In Aug with the damaged array, I Worked on 432 OH0/DK2ZF, ZL4DK, YO6OBK, K6LG and DK5SO - all on JT. I am still working on my new vert array, but progress is slow. I hope to get the tower in placed before the winter. On 28/29 Aug there was very good EU-EU conditions and very strong echoes.

ES5PC: Viljo viljo@comnet.se was on for the MW EME Contest -- It was an exciting weekend for me being active on a new band for the first time from Estonia. Before Thursday afternoon I was not even sure if I could finish my 3.4 GHz setup this weekend. But after some busy hours everything was finally ready and installed. The only problem was the preamp, which needed some tweaking to avoid self-oscillation when connected to the septum feed. As a result of the tweaking the noise figure went from about 0.5 dB up to about 0.8 dB. But it was still usable. After everything was setup, I heard my echo on the first key-down. The first ever QSO on the 9 cm band from ES was completed on Friday morning with OH2DG and followed immediately by OK1KIR. I then tried JT4G with OK1KIR and it worked fine. After a break, I worked G4NNS, G3LTF, OZ6OL, LX1DB (both on CW and SSB) and W5LUA. On Saturday I added DF9QX, VE4MA, WA6PY, PA0BAT and WW2R for a total 12 initials in just two days! Many thanks for all stations active during this weekend. Also my best regards to ES1CW, who has helped make the 9 cm band available for amateur radio use in Estonia! Tomorrow I will travel to Latvia for whole week of visiting and will see their 32 m radio telescope near Ventspils http://www.virac.lv/en/info.html. I hope it may be possible to use the big dish sometime in the future for MW EME operation. When I get back home I plan to catch up on a lot of overdue QSL cards. I'm sorry about the long delay in sending out these cards.

F5SE: Franck kozton@free.fr hopes to be on for the Oct ARRL EME Contest despite some recent health problems -- Things are going slowly on improvements to the big dish. I did manage to install a new azimuth drive with a rail track and cast iron wheels. Later (in Sept), I will add an extra 1/25 coaxial gear reducer to the elevation drive. This gear resulted from the "merging" of two former "scrounged" gears, the "new" one being fitted with a custom machined axis. If all goes well I should be QRV on 1296 for the contest.

G3LTF: Peter g3ltf@btinternet.com writes -- The Dallas EME Conference was a great success in all respects: Margaret and I much enjoyed seeing so many old friends again. And the technical and social programs were excellent. It was a great credit to the organizers. The UK 432 and up EME gang is look forward to welcoming you all to Cambridge, England in 2012. On 6 Aug I was on 9 cm and worked OH2DG, ES5PC for initial #34 and G4NNS. The next day I added DF9QX, G4NNS, W5LUA, OK1KIR, WA6PY, WW2R and LX1DB. On 10 Aug I had a sked on 432 with SM7SJR and we worked easily for initial #436. Back from Dallas and visits to old friends in San Diego and to family in VE6, I was on for the 432 ATPs and worked on 28 Aug DL7APV, DG1KJG, I1NDP and G4RGK, and on 29 Aug OZ4MM, K2UYH, K5SO #437, W8TXT, DJ7GK, N4GJV and SM2CEW. Conditions on the two days were completely different.

On the 28th, it was great and the 29th abysmal! On 30 Aug I was on 1296 and worked VK2JDS for initial #320, OZ6OL and JA1WQF #321. In the ARRL EME MW Contest I was not able to be active beyond 1000 on Sunday, so missed most of the US window that day. I also made some poor selections of which band to operate on for the second pass, but I did work stations on 3 microwave bands, and the gear worked 100%. I QSO'd on 4 Sept on 13 cm (crossband QSOs to 2304 and 2424 are denoted by *) ES5PC, SP6OPN, OK1CA, OK1DFC, OH2DG, JA8ERE*, LZ1DX, JA4BLC*, JA8IAD*, PA3DZL, HB9Q, SV1BTR, G4CCH, F2TU, DL1YMK, OK2DL, 9A5AA, F5JWF, DLOSHF, LA8LF, PA3FXB, VE6TA, G3LQR, SM2CEW, SV3AAF, WD5AGO*, K5GW*, K1JT*, OZ4MM*, G4DDK and W5LUA*. Heard were IK2RTI*, N8OU*, W7JM* and K7XQ*, and CWNR were IW2FZR, WA6PY* and W9IIX*. On 5 Sept on 9 cm I worked ES5PC, OK1CA and K1JT and on 6 cm OH2DG, ES5PC, OK1KIR, SV3AAF and IK2RTI. On 6 Sept I was very pleased to work G4BAO #89 on 13 cm. With only a 1.4 m dish, he had a fine signal (549) copy here. I'm back working on the 3 cm dish and mount and have also integrated the 6 cm system fully into the rest of the station. Finally, just before the contest, I modified my G4DDK 13 cm preamp to put in an MGF4919 and the rest of the VLNA2 modifications (see http://www.btinternet.com/~jewell/G4DDKVLNA2B2.pdf) and saw a 0.6 ~ 0.7 dB improvement in Sun noise, which I think puts the NF below 0.3 dB. One more point... Talking to people at the conference following my paper on the use of EMECalc, I found that some people were using years old versions of the program. There have been major improvements in the last year and it is important to keep up to date as Doug, VK3UM issues updates, see http://www.sm2cew.com/download.htm.

G4BAO: John john@g4bao.com is now QRV on 13 cm -- After 2 years of planning, building, testing, despair, elation and wanting to hurl it all in to the river, I got my backyard 13 cm EME system up and running for the EME MW Contest. I worked 4 "initials," F2TU, OK1CA, G4CCH and ES5PC, all on CW. Who knows what I'll be able to do with the JT modes! Now here's the interesting bit; the system consists of just a 1.4 m solid dish on a modified satellite jack arm polar mount with a Septum feed and "pie dish" choke ring. Real "backyard microwave EME". The project started with the dish, and I decided that it would be the one thing I wouldn't change. I spent a lot of time with a calculator deciding to go for 13 cm, and came to the conclusion that this was the right band for a really small dish, taking in to account the availability of surplus "real" QRO and "real" LNAs at a sensible price. RF hardware is a home-brew transverter. The LO is based on a VE1ALQ/G8ACE reflock, G4DDK 2001 multiplier and my own 2 GHz doubler. I use a PIN switched diode mixer with a G3WDG LNA in front of it, and the whole thing is sequenced by a PIC circuit. The dish uses a G4DDK VLNA2 to give me 5.5 dB of Sun to cold sky noise, and the PA is an ex cellular 300 W SSPA giving 225 W at the feed.

G4RGK: Dave g4rgk@btinternet.com is now set up 13 cm EME, did not make it on for the MW contest -- I managed to find time to finish off the 13 cm equipment with about 30 mins to go before the start of the 13 cm contest, unfortunately the biasing came off one of the palettes unbalancing the combiner and taking out the driver amp. I was unable to get more than 20 W out of the PA; so I didn't work anyone. I did hear around 20 stations. I will be QRV during the next leg of ARRL EME Contest on 23 and 70 cm, but I will not be QRV in the last leg at the end of Oct from home.

I1NDP: Nando nando.pellegrini@tiscali.it reports on his 70 cm activity during the Sept ATP -- I missed the first period because of strong winds. Fortunately WX was much better on Sunday morning, so I could be QRV for the second part. There were very strong echoes for EU to EU signals, bad conditions instead to work NA stations with fixed polarization. I worked on CW (of course) G3LTF, DG1KJG, G4RGK, K2UYH, OZ4MM, K5SO, DJ7GK, W8TXT, DL7APV, IK6EIW, PA3DZL and N4GJV. Outside of the ATP, I QSO'd on JT65B EB3DYS, M0EME, NR5M, PA3DZL, EA7AJ, OK2UZL and SM7GVF.

IK3GHY: Georgio reports on his activity during the MW contest on 13 cm – On Saturday with my QRP station, I heard DL0SHF, HB9Q, OK1CA, SV1BTR, OZ4MM, G3LTF, SP6OPN and OK2?. On Sunday, I worked my first station, OK1CA, and the second, SV1BTR. I heard again OZ4MM and HB 9SV. My 13 cm station is a 2 m dish (f/d 0.5) with a Septum feed, 130 W at the feed and G4DDK LNA.

IK5QLO: Andrea owghil@tin.it reports on his 23 cm activity in Aug -- I found good conditions and fair activity during the Aug AW, and added some initials with my QRP, 2,4 m dish and 150 W station. I worked on 7 Aug on JT65C OK1KIR and GM4PMK for an initial {#} and PI9CAM, and on CW OK1KIR (#), OK2DL (#), SM2CEW (#) and F2TU, and on 8 Aug on JT65C JA6AHB, JA1WQF {#} and OK2DL {#}. Heard on CW were N4PZ, HB9CKL, OZ4MM and SV3AAF.

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp reports on his EME MW Contest activity – I was QRV on 13 cm on Saturday and worked OK1CA (559/559), G3LTF (O/M), F2TU (O/O), ES5PC (O/O) and SV1BTR (O/O). The reports received were lower than usual, but the EU stations were heard (559~569). ES5PC reported my signal was divided into several carriers and each carrier was weaker than usual. He suggested there might have been a problem with my transverter LO. I stopped operation and found the trouble. The reference 10 MHz input terminal was nearly shorted to ground by a solder-whisker, caused by modification two days before the competition. Everything was back normal, and I worked VE6TA (559/559) near midnight. On Sunday, I worked SP6OPN (579/569) for initial #44, OK1DFC (559/559), F2TU (569/569) DUP, OZ4MM (569/559) and PA0BAT (559/559) #45.

JA6CZD: Shichiro's ja6czd@mx35.tiki.ne.jp MW EME contest activity was limited to 6 cm. He QRVed on 6 cm on Sunday and worked OK1KIR (559/559), OH2DG (549/539), ES5PC (559/559) and SV3AAF (549/539). He heard F2TU.

JA8ERE: Mikio sgl01011@nifty.com was active on both 13 and 6 cm in the MW contest. He operated both days and on 13 cm worked OK1CA, G3LTF, ES5PC, SV1BTR, PA0BAT, OZ4MM, F2TU and OK1DFC. He has 4 m dish and 100 W on 13 cm. On 6 cm Mikio worked F2TU and OK1KIR where he runs a 3 m dish and 80 W.

JA8IAD: Michinori ana11142@nifty.com was QRV for the MW contest on Saturday on 13 cm. He worked OK1CA, ES5PC, F2TU, SP6OPN and G3LTF. He has 4 m dish and 150 W on 13 cm.

K1FO: Steve lunarlink@cshore.com is going QRT on EME [Hopefully not permanently] -- After 6,377 QSOs, 631 initials, 50 states and 79 DXCC, K1FO is officially QRT on 432 EME. I haven't been active in a while because my azimuth has been frozen. N8CQ bugged me to get on for the Oct EME contest weekend, so I decided to work on the array and see if I could to fix the azimuth drive. Unfortunately when I went up the tower, I found the aluminum tower backbone of my 24 Yagi array has broken apart from metal fatigue. The array is barely in the air, being held together by just the 2 of the Z braces on the aluminum tower backbone and part of the 3rd tower leg. It was serendipitous that I decided to work on the array today, one more windstorm and the array would have broken apart. 18 years of wind battering took a toll on the array. Given the 70' high forest that I live in and that I'm 18 years older than when I put the array up, I will not put another large EME array up at 95 ft in the air, just too difficult a job to do again at my age. The amount of metal in the air for the 24 Yagis, stacking frame, bracing and polarity mount is mind blowing. If I wind up in a new QTH that is antenna friendly and has a good Moon window from 20' in the air I may return to EME someday, but for now it's sayonara EME.

K1JT: Joe k1jt@arrl.net and the team of K2UYH, K2TXB, AF8Z (Chuck was in the area and able to join us) and K1RS operated the MW EME contest from K2UYH's QTH using the call K1JT. We were a bit disappointed only to be QRV on 2 bands (13 and 9 cm). We planned to also operate on 6 and 3 cm on Sunday. After putting the 3 cm system in place at the feed, we discovered the 3 cm transverter was not working, and spent considerable time trying to get it going before removing it from the dish. We were working on the 6 cm system as the contest was going on, and were only able to get everything ready after the Moon was in the trees on Sunday. We measured 10 dB of Sun noise, but never found our echoes; we had only 10 W. A test with W5LUA also produced nil results at both ends. We started operation on 13 cm and worked on 4 Sept F2TU (549/559), SV1BTR (559/549), OK1DFC (559/559), ES5PC (569/569), HB9Q (56/53) and (5/5) on SSB, SP6OPN (549/559), K5GW (569/579), VE6TA (559/559), DL0SHF (559/559), OK2DL (O/O), F5JWF (0/579), OK1CA (569/569), IW2FZR (569/569), W7JM (569/559), WD5AGO (559/569), G3LTF (569/569) XB, OH2DG (569/569), SV3AAF (569/569), G4CCH (569/569), SM2CEW (559/579) XB, DL1YMK (559/559), OZ4MM (569/579) and WA6PY (569/569). When activity slowed on 13 cm, we switched to 9 cm and worked ES5PC (559/559) and K5GW (569/559), but found very little activity and went back to 13 cm where we added W5LUA (569/569). Our window to JA was very poor – more than 75% of the dish was blocked by trees at the start of the window and virtually 100% when we gave up. We identified and CWNR both JA8ERE and JA8IAD many times. The next day, 5 Sept, we started on 9 cm and worked G3LTF (O/559) and OK1CA (559/559), but again found little activity and switched to 13 cm for RA3AQ (549/O), LZ1DX (559/559), HB9SV (579/589), W9IIX (O/549), PA3DZL (O/O) XB, PA0BAT (559/559) XB and VE4MA (559/569). All QSOs were on CW, but we tried an XB experiment with PA3DZL and were pleased to copy is signals very well. Next month in the 50-1296 part of the EME Contest, we will be active on 144 (from K1JT's QTH) and 432 and 1296 from K2UYH's QTH.

K5QE: Marshall k5qe@sabinenet.com was active on 70 cm EME during the ARRL's Sept VHF contest -- I want to thank everyone who worked me during

the contest. I made a total of 8 432 EME contacts and got 8 unique grids (no surprise there), which is double of last time. QSO'd were I1NDP, K3MF, K5DOG, VK4CDI, K2UYH, K6MYC, W7MEM and KE7NR. I am seeking the counsel of the 432 operators on how to improve my showing. It may be that the 432 world just does not care about VHF contests on 432 - especially USA contests. I think that EME is banned from the EU tropo contests (I cannot imagine why). [It is because they use distance as a multiplier]. What can I do to get more "action" on 432 EME during future contests? I do think that conditions were pretty poor this weekend. They were certainly poor for the tropo stations - actually, conditions were just short of awful. On 2 m EME conditions were pretty good, as I was able to work 50 2 m EME contacts. On 432, I did not find a single station that was really loud. It was straightforward to work the stations that I did work using JT65b, but if I had to work them on CW, I think we would have had a very short list. I am using 16 x 28 el M2 yagis, all Horizontal and 1 kW.

K6LG: CLAIR ccess@sbcglobal.net is QRV on 70 cm EME an interested in skeds for the present of JT as he does not have a very big system -- April 18, I was on hand to observe and hear my first moonbounce signals in the shack of KJ6HZ during Arecibo EME tests. I began immediately to plan to try EME. First, I worked to become proficient in using JT65 on HF). I made quite a few contacts on 20 m JT65 -extremely good practice. With the generous help and advice of several friends, I was able to assemble a QRP EME station for 432. It consists of an M2 9 wl (21'), Tokyo HyPower HL-120U PA providing 70 W on JT, ARR).6 dB NF preamp and FT-847. The yagi is mounted on a G-5400B AZ EL rotator on a 10' pole. The rotator can be controlled from the shack, but the amps are carried by a cart out to the antenna to make as short as possible the connection to the yagi (8'). Polarization adjustment is facilitated by just rotating the boom in its mount. Since most of the "big gun stations" required aiming east to south, I had to do major tree trimming. I saw my first Moon signals on 28 Aug with the Moon hanging low in the southeast. It was DL9APV. I could hardly wait until my automated 1 minute transmission ended, to see if DL7APV had heard me. I was blown away when I saw my call followed by OOO! I want to thank KJ6HZ (my primary mentor), W6SZ, W6DL, WB6OVZ and AF6WC for their assistance. It is my dream came true! I am now interested in skeds and trying to work more stations.

KL7UW: Ed kl7uw@acsalaska.net was active on 432 EME in Aug. He is running a 4.9 m dish, but with only about 40 W at the feed due to > 3 dB of line loss. He can also rotate his feed's polarization and seems to be hearing well. Thus far he has worked DL7APV, I1NDP and K2UYH on JT65B. Ed's real interest is in the higher bands. He is basically QRV on 23 cm now and plans to be operational on 13 and 9 cm in a short time. Look for Ed during the EME contest.

LU6KK: Frederico lu6kk1@gmail.com writes -- I am happy to report that after nearly two years, I finally hearing well on 23 cm EME. After puzzling with my reception problems, I put the pieces together and saw the s-meter of my rig change from S5 to 9 when I pointed my dish at the Sun. G4CCH then sent some CW and I was able to copy his call right away. I also copied signals from DF3RU and OK1KIR. It was great to hear some EME signals again. I still need to work on the relays, improve my tripod and PA. My station is a 3.6 m mesh dish, RA3AQ feed and a G4DDK 0.27 dB NF preamp to a TS2000X. I am looking forward to making some QSOs very soon.
SM7SJR: Bjorn writes: I had a sked with G3LTF on 432 today, we wkd quite easily once I got QRV, I was abt 15 min late for the sked. Sri Peter, tnx for #4 on 70cm for me. KL7HFQ was going to tailend. But farady got me, and since my echoes were not detected at any time I was not sure my aim for the moon was accurate or not. Someone was on QRG, I figured the stn I hrd was not KL7HFQ, and I was right, it was SM2CEW. Sri Peter, I had my hands full and could not detect your sigs, hopefully next time.

N2UO: Marc n2uo@arrl.net sends news about the EME Conference and his recent EME activity - I had a great time at the EME Conference in Dallas. It was a fine event, extremely well organized, and most enjoyable to attend. I look forward to visiting the UK in 2 years for EME 2012 in Cambridge. Back in NC, I was active on 1296 MHz EME on 29 Aug with my homebrew 20' dish and 300 W at the feed, and worked the following stations on CW: NA4N, VE3KRP, N4PZ (also on SSB), S59DCD, UA3PTW, SM2CEW, VE6TA, G4RGK, OZ6OL and G4CCH - all with good signals. On 5 Sept, in spite of the MW contest keeping most people busy, I worked SM4IVE (he is using a copy of my dual-mode feed) for an initial (#), N4PZ, UT2EG (#) and new DXCC, IK3COJ, YO8BCF (#) and new DXCC, HB9IZ (operating HB9MOON), IK2RTI (#), VE3KRP and SM6CSO (#). I retuned my preamp and replaced the feedhorn's receive probe for a receive sensitivity improvement of at least 1 dB. I can now measure 0.4 dB of Moon noise (Moon at 363,000 km) and Sagittarius at 1.5 dB. Sun noise was 18.7 dB on 5 Sept with a flux of 85 from NOAA at 2.8 GHz. All these figures pretty much agree with VK3UM's software predictions. I think that it will be very hard to improve my station's capability from now on, so I will concentrate on adding 432 in the near future. I plan to be active both weekends of Oct for the ARRL 50 MHz and above EME contest. W9EQ will be the usual guest operator.

N4GJV: Ron qstdemb@yahoo.com send a report on his Aug 70 cm CW ATP activity -- I was QRV during both of the Aug activity periods. Conditions seemed to be poor to fair, during both weekends. On 1 Aug I contacted I1NDP, SM2CEW, OZ4MM and W8TXT. Also heard were G3LTF (nearly zero beat with a birdie and thus difficult to copy), SM3AKW, K2UYH, and DL9KR. On 29 Aug I contacted W8TXT, K2UYH, I1NDP, SM2CEW, and G3LTF. Also heard were OZ4MM, K5SO (both called), DJ7GK, DL7APV and PA3DZL. Thanks to all for the EME QSOs!

OH/DK2ZF: Rolf niefind.rolf@t-online.de ran a min-dxpedition in Aug to check out his equipment in preparation for his BIG dxpedition activity in the South Pacific later this year – see his CE dxpedition announcement at the start of this NL. He operated from Aland Island but because of his available dates had a very small window to EU - just from 160 to 190 degs for his minimum EL of 15 degs (lots of trees). He worked on CW DL9KR arm chair copy and OZ4MM good copy but Stig has problems with his 500 W. On JT65B he QSO'd DK3WG, I1NDP, PA3CSG and DL7APV. His window to NA was much better, but no stations were heard. Everything seems to be working perfectly in CW and WSJT and ready to go for Chile.

DK2ZF with array in Aland Is. – 432 yagis are 2 in center

OK1CA: Franta strihavka@upcmail.cz was QRV during the microwave part of the ARRL EME Contest on 2.3 GHz and 3.4 GHz -- My score on 2.3 GHz was 43x27 with initials with 9A5AA, PA3FXB, N8OU, IK3GHY, RA3AQ, G4BAO and IZ2DJP to bring him to #97 on 13 cm. My score on 3.4 GHz was 6x6 with initials to ES5PC #27 and K1JT #28. The condition and weather was very good and I think the Sept schedule is optimum for the microwaves. I plan to be QRV in the first Oct part of ARRL EME Contest on 1296.

OK1KIR: Tonda (OK1DAI) and Vlada (OK1DAK) report a great start to the ARRL EME Contest was had during the MW EME weekend –- The MW EME activity started out extraordinarily well prior to the contest on 9 cm. On 6 Aug we made the first ever 9 cm EME contact with Estonia. We also worked on 9 cm on 5 Aug at 2352 OZ6OL (O/O), and on 6 Aug at 0323 OH2DG (559/569) and finally at 0501 ES5PC (559/569) for initial #33, a new DXCC and KO field. This QSO was followed by a very easy JT4G contact at 0519 with ES5PC (15DB/16DB). For both sides this was the 1st JT QSO on 9 cm. We added on 7 Aug at 1150 W5LUA (569/569), 1157 G3LTF (559/569), 1206 PA0BAT (559/559), 1218 WA6PY (O/O) #34 and DM field, 1339 VE4MA (O/O) and 1446 WW2R (549/559). We heard on 9 cm G4NNS. On 1296 we QSO'd using CW on 7 Aug at 0103 VK3UM (569/569), 0227 HB9HAL (579/579), 0433 JA1WQF (559/569) #300, 0719 OK2DL (569/569) #301, 0808 IK5QLO (O/O) #302, 0905 GM4PMK (O/O) #303 and new DXCC via EME, 0943 F2TU (579/569) and 1008 N4PZ (569/569) #304, and on 8 Aug at 0542 UT5JCW (549/549), 0711 SV3AAF (559/559) and 0746 and HB9CKL (569/589). We heard on CW 4Z5LV, F5KUG, IK3COJ and SM2CEW. With JT65C we worked on 7 Aug at 0358 JA6AHB (7DB/8DB), 0457 4Z5LV (22DB/18DB for digital initial {#64}, 0543 PE1HNG (15DB/14DB), 0707 OK2DL (12DB/12DB {#65}, 0752 IK5QLO (14DB/O), 0855 GM4PMK (13DB/13DB) {#66} and a new DXCC and 1049 PI9CAM (9DB/6DB) {#67}, on 8 Aug at 0543 JA6AHB

(8DB/10DB), 0528 IK5QLO (4DB/24DB), 1143 UN6PD (20/O) {#68}, 1348 ON4BHM (16DB/10DB) {#69} and JT DXCC, 1431 VE7BBG (13DB/O), 1515 S57SU (24DB/O) {#70} and 1602 partial DL6ABC (21DB/?) - lost signal, and on 3 Sept at 2324 ZL1WN (12DB/O) {#71}, RF field and JT ODX 17862 km. In ARRL MW EME Contest 2010 the decision was made to leave multiband and concentrate on 5.7 GHz single band operation. On Saturday 4 Sept we QSO'd on 6 cm at 0447 F2TU (559/569), 0536 SP6GWN (M/O), 0733 SV3AAF (549/559), 0845 SQ6OPG (O/549) #44 and 1216 IK2RTI (559/559), and on Sunday at 5 Sept at 0354 JA6CZD (559/559), 0410 OH2DG (559/569), 0443 JA8ERE (559/559), 0515 ES5PC (549/569) and 0616 G3LTF (549/579). Sun noise was measured at 15 dB (SF77), Moon noise at 1.3 dB and G/CS at 4.4 dB. We were heard IZ2DJP (539) – he is using 3 m dish. On Sunday morning we finally finished the reconstruction of our 3 cm rig. TWTA had burned up last year and was replaced by SSPA. First tests around noon on Sunday brought great delighting echoes (about 15 dB above average on Spectran) and we jumped into the ring. A bit late, quite low activity brought just contacts with at 1022 ON5TA (549/549), 1047 G4NNS (549/559), 1102 SP3DRT (O/O) for initial #43, 1116 F5JWF (549/549), 1220 F2TU (549/559) and at 1230 WA6PY (549/569). Having nobody else but just noisy waterfall, we agreed to run a JT test on 3 cm with G4NNS. Surprisingly we QSO'd quite easy at 1340 - our first ever JT4G 3 cm QSO at (25DB/24DB) regardless of the wide spread at that time (~150 Hz) by "Moonsked" by GM4JJJ. Our TNX to K1JT for really great software. Later on measured Sun noise at 17.8 dB (SF82), Moon noise 2.8 dB and G/CS 5.3 dB. After half a year of QRT, we were quite happy to be back on 3 cm. Unfortunately, we will not be able to participate in the Oct part of the ARRL EME Contest due to its conflict with the IARU UHF/SHF Contest.

OZ4MM: Stig vestergaard@os.dk reports on his 70 cm, 23 cm and 13 cm activity during the ARRL MW EME Contest – I was in and out of the MW contest, as I had other activities that needed my attention during the weekend. On Friday I put up a VLNA2 from G4DDK (exellent job by Sam). This gave a big improvement here. Sunnoise is now around 20 dB and Moon noise is 1.3 dB. But I had problems with RX on 2424. After I removed the top cover of the box, it worked OK. My feedhorn is now a RA3AQ feed, which is mounted few degs offset. My 1296 W2IMU is in center. At 2424 I now have problems with Wifi, but the JA's get through fine anyway. The PA is a SSPA in shack with around 75 W at the feed. I worked 37 stations: JA8ERE, OK2DL, OK1CA, SV3AAF, ES5PC, G4CCH, PA3DZL, DL0SHF, DL1YMK, SV1BTR, LZ1DX, OH2DG, HB9Q, LA8LF, SP6OPN, 9A5AA for initial #102 and DXCC 37, OK1DFC, F2TU, F5JWF, G3LTF, SM2CEW, WA6PY, W9IIX, K1JT, K7XQ, VE6TA, K5GW, N8OU, WD5AGO, IW2FZR, JA4BLC, PA0BAT, RA3AQ, PA3FXB #103, HB9SV, VE4MA and IZ2DJP #104. On 1296, I worked back in June ZS5Y (O/O) and UA3MBJ (O/539), and in Aug 4Z5LV (2.5 m dish with 5 0W) for initial #358, SM2CEW, OK2DL, HB9CKL, G4CCH, OK2DL, SV3AAF, DF3RU and GM4PMK #359. On 432 during the July ATP I worked G4RGK, SM3AKW, VK4EME for initial #331, OK2POI, K2UYH, I1NDP, G3LTF, N4GJV, W8TXT and SM2CEW, few days later G4YTL and EA3XU (2 x 21 el yagis and 800 W for initial #332, and in the Aug ATP K5SO #333, I1NDP, PA3DZL, G4RGK, DL7APV, G3LTF, DJ7GK, OK2POI and DG1KJG. I was only QRV for the second part of the Aug ATP. All my QSOs are on CW.

PA0ZH: Bouke zhtech@zhtech.nl is a new station of 432 EME who has potential for both CW and JT QSOs. He comes to 432 after significant success on 144, where he has reached DXCC 120! On 70 cm Bouke is using 2 x 23 el from Wimo (DK7ZB) yagis a Russian power amp with a GS35b (build by him). He is having a problem with flash over at power more than 700 W. He is now up to DXCC 5 on 432. [I gave him his first NA].

PA0ZH 2 x 23 el Wimo yagi array used on 70 cm EME

PA3DZL: Jac PA3DZL@planet.nl is back on EME in a big way -- It was very nice to work many stations with UFB signals on 13 cm during the ARRL's EME MW Contest . I QSO'd on 13 cm on 4 Sept ES5PC (559/559), SV1BTR (559/469), OK1CA (559/559), HB9Q (539/569), G3LTF (549/549), F2TU (559/559), G4CCH (549/549), OZ4MM (559/549), SP6OPN (559/559), DL1YMK (449/449) for initial #27, OK2DL (O/O) #28, K5GW (559/559) #29, DL0SHF (559/519) #30, PA3FXB (20DB/20DB) on JT65C #31 and WD5AGO (O/O), on 5 Sept LZ1DX (O/O) #32, DXCC 22 and grid 55, SM2CEW (O/O) #33 and grid 56, OK1DFC (O/O), PA0BAT (O/20DB) JT65C, PA3FXB (21DB/21DB) JT65C, OK1DFC (15DB/12DB) JT65C and K1JT (O/O) #34 and grid 57, and on 6 Sept G4DDK (O/O)#35 JT65C. Since 14 August I am also QRV again on 70 cm EME. I put up a new array of 4 x 38 el, 13 wl M2 yagis, GS23b PA and 0.36 dB NF preamp. I can hear my echoes with 100 W output! I am very pleased with the results. QSO'd on 432 thus far are on 14 Aug I1NDP (339/449) and (16DB/13DB) on JT65B, OK2POI (27DB/O) JT65B for initial mixed #137*, EA3XU (O/O) JT65B #138* and DL5FN (20DB/O) JT65B #139*, Best – 20, on 21 Aug I1NDP (15DB/O) JT65B EME, on 28 Aug K7XQ(21DB/17DB) JT65B #140* and grid 261, 29 Aug I1NDP (9DB/O) JT65B, NR5M (16DB/O) JT65B #141*and grid 262, K6JEY (26DB/O) JT65B and grid 263, OZ4MM (559/559), DL7APV (569/559), K5SO (449/449) #143* and grid 264, G4RGK (O/O), SM2CEW (449/449), I1NDP (559/559), SM7GVF (24DB/O) JT65 #144*- my first single yagi QSO, K2UYH (14DB/15DB) JT65C and K7XQ (23DB/O) JT65C, and on 5 Sept I1NDP (9DB/O) JT65C, ZS6WAB (1`3DB/O) JT65 #145*, DL7APV (16DB/13DB) JT65C, K5QE (19DB/O) JT65C #146* and grid 266, NR5M (15DB/16DB) JT65C and F6FHP (28DB/O) JT65C #147*. All the above QSOs were on CW unless noted.

PA3DZL's new array of 4 x 38 el, 13 wl M2 yagis for 432

PY2BS: Bruce bruce@zirok.com is making a big noise on both now on both 23 and 13 cm. He was unable to be QRV on 13 com for the ARRL MW EME Contest, but should be active during the Oct contest weekends on 1296. He is running on 13 cm his 4.6 m dish and 200 W. On 23 cm he is running a kW. Bruce is also occasionally on from his coastal QTH on 70 cm under the call PY1KK, where he has new Rohde & Schwartz kW SSPA and OE5JFL antenna positioner. He does not plan to be on from this location until after the new year.

TI2AED: Armando aebonill@ice.co.cr is QRV on 70 cm with 2 x KLM 44CX circular pol yagis, 100 W SSPA and a ARR preamp. He has only 1.2 m of feedline to keep losses down. He has thus far worked only HB9Q, but is very interested in QSOing additional stations. He has some new M2 yagis on order and plans to increase his power. Armando eventually wants to try 1296 EME.

S57SU: Uros uros.skrjanec@telekom.si is now QRV on 23 cm EME. He is antennas he borrowed from S54AA. On 1296, where he has made several QSOs on JT65C, he is using a 1.2 m dish, 150 W PA and a FHX35 LNA with 0.28 dB NF. He also has 2 x 13 wl DJ9BW yagis for 432, but no PA at the moment, and some gear for 3, 6 and 3 cm, but little power there.

S57SU's 1.2 m dish for 23 cm EME in middle of 2 m EME array

SM7SJR: Bjorn sm7sjr@gmail.com is a new station on 70 cm and writes -- I had a sked on 10 Aug with G3LTF on 432 and we worked quite easily once I got QRV; I was about 15 min late for the sked. Peter was my initial #4 on 70 cm for me. KL7HFQ was going to tailend, but Faraday did not cooperate. Since my echoes were not detected at any time, I was not sure my dish was aimed at the Moon. Someone else was around, but the station I heard was not KL7HFQ. It was SM2CEW, but I did not get a chance to work him. I will be taking my antennas down for the winter, but will return when it gets warm again.

SV1BTR: Jimmy jimmyv@hol.gr send his results for the ARRL MW EME Contest -- After almost 4 months of absence due to constant QRL trips abroad, I managed to be QRV for the microwave weekend of the ARRL EME Contest. Luckily, station, antenna mechanics, etc. were fully cooperative. I had a great time and would like to thank all stations who participated. During the whole of Saturday, I was 1-2 degs off in aiming and as a result echoes and signals were 2 ~ 4 dB down. When I checked Sun noise I was spot on, but when I was following the Moon there was a misalignment. Ears need to be trained for weak signals RX, so the first pass was good training opportunity – hi! On Sunday I said why not so narcissistic, and was aimed right on. Nevertheless, the first 4 hours (CQs blended with coffee) were very lonely. I worked on 13 cm CW random the following 40 stations: on 1st pass - OK1DFC, ES5PC, SP6OPN, OK1CA, LZ1DX, OH2DG, PA3DZL, F2TU, JA8ERE, JA8IAD, JA4BLC, G3LTF, G4CCH, LA8LF, DL0SHF, HB9Q, OK2DL, SV3AAF, DL1YMK, OZ4MM, 9A5AA, PA3FXB, K1JT, K5GW, VE6TA, IW2FZR, W7JM, WD5AGO, N8OU, IK2RTI and W5LUA, and pass - JA8ERE (dup), JA4BLC (dup), PA0BAT, SM2CEW, RA3AQ, IK3GHY, HB9SV, IZ2DJP, W9IIX, VE4MA and SD3F. Using my 16' dish, the smallest station worked was IK3GHY, an excellent operator, who has a 2 m dish and 130 W. PA3DZL with his 2.5 m dish was loud throughout the weekend. I briefly CWNR G4BAO. It was a big surprise when I learned he was using only a 1.4 m dish. RST (589) kings were K5GW and HB9SV, followed by the (579)ers of DL0SHF, SP6OPN, HB9Q, OK1CA, F2TU, OZ4MM, G3LTF, W5LUA, ES5PC and JA4BLC (on Sunday). It was quite a thrill to work SD3F on Sunday so near the end! Glad to hear all the fine JA and VE activity. I missed my friends from CA even though I was actively searching for WA6PY and K7XQ. I had expected higher activity from the US. Since I lowered my tower last summer after a freak accident my moonset starts at 25 degs elevation. I have never been following logger(s). And happily continue to not have, any such active or passive desire, regardless of band. In my view, logger use in a multiband microwave contest should ONLY be acceptable in merely announcing - QRV in X band, as G3LTF stated well.

SV3AAF: Petros sv3aaf@yahoo.com reports *good traffic* during the MW contest weekend but slightly down maybe due to holiday season – Sept was definitely a better choice than Nov when weather can become a major problem many stations using outdoor setups. I operated on 6 and 13 cm, changing bands several times. In the future I plan to adding more bands. I will keep the same configuration for each bands – no feed swaps, just trickier in construction & optimization. I worked on 13 cm OK1CA, HB9Q, DL1YMK, ES5PC, OZ4MM, DL0SHF, SV1BTR, LA8LF, SP6OPN, LZ1DX, OH2DG, OK2DL, G4CCH, F2TU, IW2FZR, G3LTF, OK1DFC, K5GW, K1JT, PA0BAT, SM2CEW, RA3AQ, HB9SV, WD5AGO and WA6PY, and on 6 cm OK1KIR, OH2DG, F2TU, JA6CZD, ES5PC, G3LTF, IK2RTI, K5GW and W5LUA.

W5LUA: Al w5lua@sbcglobal.net reports on his MW contest results -- I was able to activate 4 bands, 2304, 3400, 5760 and 10368 MHz in the ARRL MW EME Contest. I made a total of 31 QSOs. Most of the weekend, however was spent making 78 GHz noise figure measurements and sun noise tests. I have confirmed that my 2.4 m offset fed dish that I use on 24 and 47 GHz does not work very well on 78 GHz. I did however find that an aluminum Winegard 1 m offset fed dish does work rather well on 78 GHz. With about a 4 dB system noise figure, I am able to measure 5.6 dB of sun noise. I am still waiting for the Moon to come back around to the north so that I can measure Moon noise again. I believe that a 1.5 m offset fed dish would be optimum for 78 GHz. As is the 3 dB beamwidth of the 1 m dish is about 0.3 degrees with a gain of greater than 55 dB to be expected. My transverter uses a WR-15 fundamental mode mixer with an OE9PMJ 47 GHz filter retuned to 78 GHz. I also use a small piece of WR-8 which acts as a 59 GHz high pass filter to reduce some of the low frequency gain of the LNA. The LNA is the latest version from WA1MBA and will be discussed at MUD in Cerritos, CA in late Oct. The feed is a W2IMU type feed machined by WA5JAT. As a temporary means of testing the 1 m dish, I mounted it on some 2 by 4 pieces of wood that were strapped to the arm of my 2.4 m offset fed dish. The arm of the dish has my 24,048 MHz transverter and the 100 TWTA for 24 GHz mounted in its permanent location.

W7IUV: Larry larry@w7iuv.com is now QRV on 23 cm with a 7' and OK1DFC septum feed. He has at 40 W at the feed, but is producing a nice signal. His first QSO was with K2UYH on JT65C, but he has made several more since. He should be very workable on CW by the bigger stations.

WA6PY: Paul pchominski@maxlinear.com reports on his Sept microwave activity – In the contest I QSO'd on 10 GHz G4NNS, W5LUA, F2TU, ES5PC, F5JWF and OK1KIR. Heard were DL0SHF and IQ4DF. On 2.3 GHz I QSO'd OZ4MM, IK2RTI, SM2CEW, K1JT, K5GW, SP6OPN, OK2DL, OK1CA, DL1YMK, DL0SHF, VE6TA, OH2DG, HB9Q, W7JM, WD5AGO, HB9SV, SV3AAF, LZ1DX and PA0BAT. It was difficult to control both bands including 2320 MHz during my short window to EU. The next morning, 6 Sept, I QSO'd on 3.4 GHz VE6TA for initial #15. Back on 7/8 Aug I QSO'd on 3.4 GHz OK1KIR, ES5PC, PA0BAT, VE4MA, OH2DG, G3LTF, G4NNS, WW2R, DF9QX, LX1DB and LZ1DX. All setup was on the dish from my last 9cm activity, I did not had a time to work on LNA or frequency drift problems. In the ARRL EME contest I will be on 2.3 and 10 GHz. After the contest, I modified my 3.4 GHz transverter by replacing the LO chain with a PLL using Analog Devices' PLL chip, ADF4106 programmed by a PIC16F684 and driven from 12 MHz Toyocom TCXO, which should keep +/- 1 ppm from -10 to 85 C. This should help my frequency drift problems. I can use my 10 MHz OCXO +/- 0.1 ppm in the shack, but I prefer to use reference oscillator inside the transverter. The close in phase noise is higher than my old xtal multiplier chain, but far-out noise is comparable. Close in phase noise still limits the ultimate SNR to > 45 dB in a SSB bandwidth. The transverter is located on the dish, and I would need additional coax cable with a reference frequency source. Next I will make a similar improvement to my 5.76 GHz transverter and finally my 2.3 and 10 GHz transverters. My old 24 GHz transverter already has a PLL based on a 10 MHz OCXO.

WB7QBS: Barbara gbskinner@hotmail.com was QRV for the 432 Sept CW ATP, but although he heard weak CW signals around 012, 015 and 016, he was unable to copy any intact calls. Barabara plans to be on for the next ATP and should be active in the during the Oct EME contest weekends. He is also very interested in skeds.

WD5AGO: Tommy wd5ago@hotmail.com sends news on his recent 13 cm activity -- We tried to make it on another band during the Sept ARRL EME contest weekend, but other commitments kept us just on 13 cm. We could only be on for a total of 9 hours. I worked 4 Sept OK1DFC, ES5PC, HB9Q, G3LTF XB on our 1st CQ), OK2DL for initial #67, G4CCH XB, K1JT, IW2FZR, DL0SHF, OK1CA, W7JM (CW & SSB), SP6OPN, SV1BTR, LZ1DX, OH2DG, K5GW, VE6TA, OZ4MM, PA3DZL XB, F2TU and CWNR JA8ERE – he was on for half hour in W window, and on 5 Sept RA3AQ, SV3AAF, HB9SV, WA6PY, SM2CEW XB, PA0BAT XB, G4DDK XB #68 and W5LUA for a total 28 QSOs. I also CWNR G4BAO, DL1YMK and another PA? - all crossband. Overall activity was down a bit from last year with many NA stations not heard. Some of the low turnout may have been due to the holiday weekend. I plan to be on 70 cm for the 1st night of the ARRL EME Contest with a little more power than last year. It will be a group effort with students and maybe using another call sign. I enjoyed seeing many in Dallas last month, although it seemed time was short.

W5LUA's 78 GHz 1 m dish mounted in front of his 24 GHz dish

WW2R: Dave eme_ww2r@g4fre.com brings us up to date on his 9 cm activity in Aug. The weekend was at times fun, at times frustrating! At the start of my sked with LZ1DX (who heard me!), I noticed that 3 panels had popped from the dish by the storms the previous evening. So I fixed the panels, but missed my ES5PC and G4NNS skeds. I searched the band for signals for hours but found none. Then suddenly I found OK1KIR calling CQ loud and proceeded to work

them and ES5PC for initial #18 and DXCC 12 - who called me. At the start of my sked with WA6PY, the heat (104 degs F) in my EME shack (a garage) locked up the keypad/VFO of the FT847, so I had to quickly install a K3 as an IF, but Paul hung around and I managed an easy QSO #19 and state 4. Then the band went quiet again. Unable to believe it was conditions, I went looking at Sun noise. All seemed well in that respect with 9.5 dB of Sun noise and the Sun peaked where it should. Sunday at moonrise I listened again but heard nothing. I suspected dish tracking errors. I set the polar mount to the correct declination/elevation and rotated the whole dish slightly to find signals. Rotating the dish 4 mm on its 100 mm dia pole, I found a huge signal from LX1DB. Now I could hear my echoes as well. I then worked LX1DB, G3LTF and DF9QX #20. It looks as though I need to do some work on making my Moon tracking work better under the changing weight distribution of the dish.

ZS6AXT: Ivo ZS6AXT@telkomsa.net is still recovering from his lightning strikes and health problems. As a consequence, he has decided to sell his 5 m dish (it is going to ZS6Y). He plans to concentrate on 3 cm EME with a smaller solid 2.5 m Andrew dish that will be easier for him to maintain. Later he may also try 6 cm. The 3 cm setup is nearly finished. Ivo will first use linear pol, and as soon as he finishes a CP horn, then CP. He have a 22 W PA from DL2AM, DB6NT preamp and SMI WG switch. WG runs are already in place into the shack.

K2UYH: I a.katz@ieee.org had a great time during the MW EME Contest operating under the call K1JT with our EME contest team – see the contest report under K1JT. Under my own call before the contest I worked on 7 Aug on 1296 at 1230 ON4BHM (15DB/9DB) and 1245 EA3XU (27DB/O) both on JT65C, on 8 Aug at 1421 I1NDP (559/559) CW, 1458 PA0ZH (16DB/21DB) JT65B for mixed initial #801*, 1528 DG1KJG (559/559) CW and 1600 partial KL7UW (-/21DB) JT65B - Ed had TX problems, on 8 Aug on 1296 at 1700 G4CCH (55/55) on SSB as EME demo during VK4CDI's visit, on 21 Aug on 1296 at 0202 W7IUV (25DB/23DB) JT65C for mixed initial #376* and Larry's first 23 cm EME QSO, on 28 Aug on 432 at 0700 KL7UW (23DB/17DB) JT65B #802* and 0730 K6JEY (14DB/O) JT65B, and on 29 Aug during the 432 ATP at 0601 I1NDP (559/569), 0609 W8TXT (559/559), 0622 SM2CEW (559/559), 0646 G3LTF (559/559), 0701 K5SO (569/559), 0718 N4GJV (559/559), 0730 G4RGK (559/559), 0747 DG1KJG (559/559) and partial 0754 KL6M (569/-) disappeared all on CW and later at 0845 PA3DZL (15/DB/14DB) on JT65B. After the contest I was active on 12 Sept on 432 during the ARRL's tropo contest and worked at 1904 K5QE (17DB/O) JT65B, and on 1296 at 1948 PY2BS (4DB/6DB) JT65C and 2150 ZL1WN (16DB/O) through near 100% trees blockage!, and on 20 Sept on 432 at 0130 K6LG (27DB/23DB) JT65B #803* and 0206 K7XQ (13DB/15DB) JT65B. I also ran two unsuccessful 70 cm skeds with TI2AEB using JT65B. Armando is working to improve his system and wants to be a regular on 70 cm EME. I thoroughly enjoyed the EME conference in Dallas and have EME-UK on my calendar for 2012. A bonus was a wonderful visit by VK4CDI and his XYL Sandra, who were touring the US on their way to the conference.

NETNEWS BY G4RGK: **PY4AJ** is now QRV on 70 cm EME with two 16 el yagis and 250 W. **G5WQ** is QRV on 23 cm EME with a 2.4 m dish, homebrew ring feed horiz polarized, 130 W at the feed and a 0.8 dB LNA. Ian has worked PY2BS. **KB7F** in Milwaukie, OR is working on his first EME QSO. Gerald has a 100 W on 432 with an M2 432-12EME yagi and plans to add a second soon. His e-mail is geraldjdaily@hotmail.com. **OY3JE** reports that his 1296 EME activity has been delayed due to problems with his new Spid BIG RAS rotor. He has had to ship it to the dealer for repairs. He does now have the PSU for his SSPA. See report in last month's NL. **PA0PLY** is preparing for 3 cm activity with 3 m dish and 18 W. **JA4BLC** planned to be QRV in ARIEME Contest on 1296 and 2424. Yoshiro can QSY between bands in several minutes.

FOR SALE: **K2UYH** is looking for a TWTA or SSPA for 6 cm EME. **N4PZ** has some excellent deals on high power amps for 70 cm using big Russian tubes – contact Steve at n4pz@juno.com.

14TH INTERNATIONAL EME CONFERENCE FINAL REPORT BY W5LUA: We had 82 people pre-registered and 52 walk-ins for a total of 134 people registered for the conference. We had an additional 30 women registered for a grand total of 164. I was very pleased with the attendance numbers. The final count for the Saturday evening banquet was 137. I especially wish to thank our international friends for attending including DL1YMK, XYL Monica, F5JWF, G3LTF, XYL Margaret, G4DDK, G4HUP, HB9BBD, HB9DRI, XYL Helene, HE9JKJ, I0NAA, XYL Marina and daughter, JH1KRC, XYL Sylvie, OK1DFC, XYL Jana and 2 sons, ON7UN, SM5BSZ, SM6CKU, XYL Barbro and VK4CDI, XYL Sandra. Several Canadians attended including VE1KG, XYL Francoise, VA3TO, VE4MA and VE6TA, XYL Karen. Plus several Alaskans were in attendance including KL6M, KL7UW, XYL Janet and KL7HFQ. Once again the Westin hotel provided excellent facilities and was a pleasure to work with. The help I received from my wife Emily and my co-chairmen Barry, VE4MA and Tony, WA8RJF and his XYL Diane made this 2 year project most enjoyable. The support from many members of the North Texas Microwave Society also contributed to the great success of the conference. Included in this list are N5AC, WA5TKU, KM5PO, KA5BOU, N5PYK, WD5AGO, AF8Z, K5MRA, WA5YWC, WA5VJB, WA5JAT and others. I also wish to thank Dale, WA8SRA, Steve, N5AC and Joe, N5PYK for helping with our web site. The noise figure testing organized by WD5AGO, AF8Z, and myself was most helpful and informative. Our conference provided a fine list of speakers with topics for the seasoned as a well as the newcomer to EME. I would like to thank G4HUP, KL7UW, OK1DFC, N4PZ, WA5WCP, WD5AGO, K5SDR, WW2R, K5GW, W5LUA, K1JT, DL1YMK, Michaels's XYL Monica, HB9DRI, N2UO, AD6IW, KL6M, G4DDK, F5JWF, JH1KRC, K2UYH, G3LTF, W1GHZ, K6MYC, and K0YW. Also thanks to the many others who submitted a paper for the proceedings. The proceedings which were published by the ARRL looked fantastic and were full of valuable information. Thanks to Maty, KB1EIB of the league, Barry VE4MA and Wes WA5TKU for putting together a fine proceedings. Paul, WA5WCP provided an excellent demonstration of EME on 1296 with his portable 12' dish out in the hotel parking lot. Several newcomers and old timers alike made numerous contacts via the Moon. I was particularly pleased to see the number of newcomers interested in our fascinating part of the hobby. Thanks also to Jim, WA5JAT for providing Paul with assembly assistance out in the Texas heat. The Saturday evening banquet was highlighted by the presentation of awards to two of our long time EMEers. The first was to Joe Demaso, K1RQG in appreciation of his efforts as NET control of the 432 and Above EME NET for the past 25 years. Joe was unable to make the conference, but we were able to have him on the phone during the presentation. The second award was given to Al, K2UYH in appreciation of his efforts in producing the 432 and Above Newsletter for nearly 40 years and his continuous devotion to EME communications. I am looking forward to seeing everyone in Cambridge in the UK in 2012 as Sam G4DDK and Dave G4HUP organize the next event. The PPT presentations have been uploaded to the EME conference web site and the noise figure results should be up there shortly [and also in this NL].

NOISE FIGURE RESULTS FROM DALLAS EME CONFERENCE BY W5LUA: We had the luxury of 4 NF test sets. The first system was supplied by WD5AGO and consisted of an Eaton 2075 with an HP346 noise source and calibrated 10 dB attenuator to supply a nominal 5 dB ENR. The second system was supplied by W5LUA and consisted of an HP8970B and HP8971C test set. The noise source was an HP346A with a nominal 5 dB ENR. For 24 GHz testing we used an HP346C noise source with an isolator. The third test set was an Agilent 8973A supplied by W5LUA with an N4000A supplied by HB9BBD. The fourth test set was an E4440 spectrum analyzer with the noise figure personality card supplied by Agilent Technologies. Having the various test sets available provided some interesting results. Due to the competitive nature at these events, the decision was made to test three 1296 MHz LNAs, from WD5AGO, G4DDK, and HB9BBD respectively on the Eaton 2075, the 8970B and 8973A and review the data. The results are in the following table.

Test Set	G4DDK	WD5AGO	HB9BBD
Eaton 2075, HP346 + 10 dB pad	0.15 dB	0.16 dB	0.23 dB
8970B + HP346A	0.19 dB	0.22 dB	0.19 dB
8973A + N4000A	0.24 dB	0.25 dB	0.22 dB

It is interesting to note that Sam's LNA measured the lowest NF when measured on the Eaton 2075. Both Sam and Dominique's measured the lowest on the 8970B and Dominique's measured the lowest noise figure on the 8973A. Even though all noise sources have greater than 30 dB return loss. It appears that each LNA may optimize differently when subjected to different noise sources. As a check, I measured the 346A noise source and it has 35.25 dB return loss in the "off" state and 35.41 dB in the "on" state. The difference in the reflection coefficient from the "off" to the "on" state is .003 at 1296 MHz. The Agilent spec is less than .01 for the 346A and the N4000A. It was decided to continue the testing of the 1296 MHz LNAs with the 8973A and N4000A. [Based on taking an average, G4DDK is the winner with .19 dB and WD5AGO and HB9BBD tied for second place with 0.21 dB]. After the conference was over, I decided to run my own tests where I would compare the HP8970, N8973A and the E4440 with the same HP346A noise source. All 3 instruments were corrected for the ambient temperature. The 8970B and the E4440 measured a 1296 LNA to within 0.02 dB of each other on NF where the 8973A measured about 0.08dB higher than the 8970. I have heard differing stories over the years about why the 8973 does appear to measure higher and supposedly more

accurate noise figures than the older 8970, but it was most interesting that the recent E4440 with the NF personality module measured very close to the older 8970 when using the same noise source. [A table of all results is shown at the end of this NL].

FRASER SHEPHERD AWARD: This award is presented annually by the Radio Society of Great Britain (RSGB) to a nominee selected by the UK Microwave Group – the presentation normally takes place at the RSGB's Annual General Meeting in the UK. Exceptionally this year, the recipient was Joe Taylor, K1JT, and the formal presentation took place at the EME Conference in Dallas. Joe is the first non EU to receive this award. The award is for research into microwave communications, and the UK Microwave Group committee was in unanimous agreement that Joe's work on weak signal digital modes is not only an outstanding contribution in its own right, but is also an enabler for many other areas of research into microwave propagation. The presentation of the award to Joe at the EME Conference was also highly appropriate given Fraser's connections with the mode. Fraser Shepherd was a Scottish amateur operator, holding the call GM3EGW, and a member of the Dunfermline Radio Club – he was a first class CW operator, and also technically advanced in his thinking and construction. As such he was a prime mover in the first GM 432 EME activity in 1965. Professionally he was a businessman and hotelier. His sudden death in 1970, at just 45 years old, brought to an untimely end his creativeness, and also precipitated a period of decline in the Dunfermline Radio Club history. [More information on the history of the DRC can be found at: www.kars.org.uk/drc_history_.PDF].

K1JT receiving Fraser Award from G4HUP (R) & G3LTF (L)

FINAL: Also awarded at the Dallas EME Conference were the 2009 and 2010 23 cm EME SSB Contest/Chief Fun Maker Awards. For the first time neither of the award winner were present, OK1CA for 2009 nor SP6JLW for 2010. The awards are being sent to them. Congratulations to Franta and Andy (and Jerzy, SP6OPN).

Besides the International EME Conference in Dallas, Bernd, DL7APV had a small gathering of German VHF/UHF operators, many of whom are on EME at his home – see photo.

German gathering in front of DL7APV's big array: L-R DK3WG, DK5OZ, DL7AKL, DL7ANR, DL7YS, DL7VTX, DL7APV, DL7AIG, DL7HG, DL7UDA

For the EME Contest, it is very helpful to have an updated list of active EME stations. Jan, PA0PLY has recently updated his EME stations database, see http://www.pa0ply.nl/directory.htm. He invites all of you to check it out, particular the not active file, which has been updated as well, and please send any changes/corrections/additions to him pa0ply@pa0ply.nl.

G4GRK has recently updated his CW EME Initials List. It can be found at http://www.zen70432.zen.co.uk/Initials/index.html. Send updates to Dave.

That pretty much covers the news for this month. Please keep the tech info and reports coming, and don't forget for sale items. I will be looking for you during the EME contest (under the call K1JT). 73, Al – K2UYH

DALLAS NOISE FIGURE RESULTS

50 MHz	**(8970)**					
		WA2ODO	WA2ODO	NE334SO1	0.16	22.5
		WA3QPX	WA2ODO		0.28	21.6
		K4SME	DEMI KIT	FDP-750	0.37	18
144 MHz	**(2075)**	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
		WA2ODO	WA2ODO	NE334S01	0.09	26
		WA2ODO	WA2ODO	NE334S01	0.1	24
		WA2ODO	WA2ODO	NE334S01	0.12	20
		K4SME	DEMI KIT	FDP750	0.25	18
		AD6IW	AD6IW	MMIC	0.34	24
		K0YW	HB	MGF1302	0.43	23
		AD6IW	AD6IW	MMIC	1.5	25
		K0YW	HB - WA6LET	U310	2.5	11.7
CONVERTER		KA2UPW	DEMI KIT		8	-7
222 MHz	**(8970)**	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
		WA2ODO	WA2ODO	NE334S01	0.15	21.8
		K4SME	demikit	FDP-750	0.42	17.7
432 MHz	**(2075)**	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
		WD5AGO	HB Cavity (new device)	NE334S01 - GAL74	0.22	41
		WA2ODO	WA2ODO	NE334S01	0.26	21.2

		WA2ODO	WA2ODO	NE334S01	0.29	21
		WD5AGO	AGO CAVITY	ATF35143 - GALA	0.32	38
		OK1DFC	AGO CAVITY	ATF35143 - GALA	0.37	37
		WA2ODO	WA2ODO	NE334S01	0.37	22
		WD5AGO	NRAO "1985"	MGF1412 X 2	0.45	37
		K4SME	DEMI KIT	FDP750	0.51	18
		AD6IW	AD6IW	MMIC	0.54	22
CONVERTER		K4SME	DEMI KIT	FDP750	0.64	19.5
		VE6TA	-	MGF1302	0.7	20
		K0DSP	Pauldon	MG1402	1.73	2
		K3JNZ	KA0Y		2.46	10
CONVERTER		KA2UPW	HAMTRONICS		6.3	15.1
902 MHz	**(8970)**	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
		KL6M	HB	atf 54143	0.45	18.9
		K4SNE	DEMI KIT	FDP-750	0.55	17.7
		WA2ODO	WA2ODO	ATF 334S01	0.75	14.05
1296 MHz	**Eaton 2075**	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
	HP346+10dB pad	G4DDK	G4DDK	MGF4919	0.15	
	WD5AGO System	WD5AGO	WD5AGO	MGF4919-MGA61584	0.16	
		HB9BBD	HB9BBD	NE32484A	0.23	
1296 MHz		HB9BBD	HB9BBD	NE32484A	0.19	
8970B						
	346A	G4DDK	G4DDK	MGF4919	0.19	
	W5LUA System	WD5AGO	WD5AGO	MGF4919-MGA61584	0.22	
1296 MHz		HB9BBD	HB9BBD	NE32484A	0.22	
8973A						
	N4000A	G4DDK	G4DDK	MGF4919	0.24	
		WD5AGO	WD5AGO	MGF4919-MGA61584	0.25	
1296 MHz		HB9BBD	HB9BBD	NE32484A	0.22	39
8973A						
	N4000A	G4DDK	G4DDK	MGF4919	0.24	36
		WD5AGO	WD5AGO	MGF4919-MGA61584	0.25	39
		K6JEY	G4DDK	MGF4919	0.26	39
		WD5AGO	AGO (Old Ref. 0.20 dB)	NE32584 -ATF21184	0.27	36
		K6HLH	G4DDK	MGF4919	0.27	36
		K6JEY	K6JEY	FHX26	0.28	39
		N2UO	HB	MGF4919	0.28	37
		G4DDK	G4DDK	NE325	0.31	38
		WA2ODO	WA2ODO	NE334S01	0.34	10.6
		N8CQ	LUCKY - CNK		0.35	35
		G3LTF	HB	FHX35LG	0.36	38
		WB2BYP	W7CNK	ATF36077	0.42	34
		K0YW	AGO	ATF36077	0.43	30
		N8CQ	CNK		0.45	34
		WA6MGZ	AGO	NE325	0.47	32
		WB2BYP	Demi		0.47	18
		K0YW	AGO	ATF36077	0.48	29
		K0DSP	DEMI KIT	ATF36077	0.53	21
		KL6M	HB CNK	ATF36077/2086	0.56	33
		WA2ODO	WA2ODO	NE334S01	0.57	12
		K0YW	W7JF	ATF10136	0.65	26
		K0YW	AGO (Old w/relay))	ATF36077	0.7	30
		K6HLH	K6HLH	36077	2.8	13
Converter		KA2UPW	DEMI		3.6	21.1
2304 MHz (all rest		**Call**	**Design**	**Device**	**NF dB**	**Gain dB**

HP)

HP8970 and HP8971	G4DDK	G4DDK	MGF4919	0.27	29
HP346A	N0UU	G4DDK	MGF4919	0.3	25.9
	G4DDK	G4DDK	MGF4919	0.31	29.2
	WD5AGO	WD5AGO	MGF4919 - FHC40	0.32	31.9
	WD5AGO	WD5AGO	NE3511 - ATF36163	0.35	32.9
	K0YW	AGO	ATF36077	0.55	30.9
	K0DSP	Demi	ATF36077	0.55	18.2
	KL6M	W6PQL	ATF54143	0.72	14.7
	W7CS	GASFET		1.03	28.2

3400 MHz	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
	G4DDK	G4DDK	MGF4919	0.45	25.9
	WD5AGO	WD5AGO	NE325 - MGA651	0.55	28
	WD5AGO	WD5AGO	MGF4919	0.56	27.5
	KL7UW		ATF36077	0.58	31.5
	G3LTF	W5LUA	ATF36077	0.6	14.7
	WA6PY	lnb WA6PY		0.65	42.9
	KL6M	W6PQL	54143	2.05	12.8
	VE6TA	W6PQL		NG	

5760 MHz	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
	G3LTF	W5LUA	ATF36077	0.6	10.6
	WD5AGO	AGO-LUA	ATF36077 - FHC40	0.73	25.8
	WD5AGO	AGO-LUA	NE32584 - FHC40	0.77	25.5
	WA6PY	WA6PY	ATF36077	1.02	27.9

10368 MHz	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
	AD6IW	AD6IW		1.02	26.7
	K6HLH	DEMI	ATF36077	2	9.56
	W1GHZ	AML AMPLIFIER		4.34	21.1

24 GHZ	**Call**	**Design**	**Device**	**NF dB**	**Gain dB**
HP346C & Isolator	W5LUA	HB		2.25	13.8
	W1GHZ	COMM SOLUTIONS	CS00138-01A	3.42	22.1
	WA6PY	AML		4.35	14
	W1GHZ	AML	0440-120	5.38	12.3
	W1GHZ	AML	0420-117	6.62	15