

432 AND ABOVE EME NEWS NOVEMBER 2007 VOL 35 #16

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CONDITIONS: The Microwave (MW) part of the ARRL EME Contest produced good conditions and some of the highest 13 cm activity ever recorded. G3LTF reports a QSO rate of 5/hour and a final score is 30x23. Turnout on 3 cm was also good. RW1AW reports 19 QSOs on 3 cm and a 3 band total of 54 QSOs. Despite the MW focus, 23 cm was quite active both on MW contest weekend and the following weekend (6/7 Oct) for the ARI EME Contest, which we missed announcing in the last newsletter (NL). On 27/28 Oct attention will be on 70 and 23 cm with the second leg of the ARRL EME contest limited to bands 50 to 1296 MHz.

EA3DXU IS A SILENT KEY: I have very sad news to report. Josep, EA3DXU has died after a long battle with cancer. Josep ran only two yagis but always had an exceptional signal. Possibly it was his enthusiasm that made his signal seem a little louder. I can remember QSOing him in the last ARRL contest. 70 cm EME just will not be the same without him. The 2008 DUBUS/REF EUR EME contest will be held in memory of EA3DXU.

DX NEWS: I do not have much DX news for the Oct Contest weekend. On 23 cm K0ALL will be on 1296 again from ND. For the Nov contest it now appears very likely that Aruba, P43, will be on 23 cm EME with a respectable signal (and possibly 70 cm) – see my report. There is also news that DL3OCH will put Peru on 1296 in 2008.



G4RGK's relocated 3.5 m stress dish with 432 array to side

DJ3JJ: Andreas dj3jj@gmx.net is working on improving his 70 cm system in preparation for the ARRL EME Contest -- I will change my yagi vertical stacking distance from 1.2 m to 1.43 m which should give optimum GT and 0.5 dB more gain. I will also reduce the RX cable loss after my LNA and want to build up a second stage for my LNA giving another 18 dB of gain to offset the 5 dB NF of my TS2000 on 70 cm. I have heard/worked the following stations: VK3UM 28' dish, SM3BYA 8 x 21 el yagi, UT5JCW 4 x 28 el yagi, G4RGK 8 x 26 el yagi, JA6AHB 28' dish, IZ5MAO 4 x 25 el yagis, I1NDP 16 x 26 el yagis and DK3SE 4 x 21 el yagis. I now have 750 W at my 4 small 3 m boom DK7ZB yagis.

DL1YMK: Michael DL1YMK@aol.com is working on a new 13 cm dish has a round Septum feed and 300 W PA as well as a 500 W amp. He will be active on this band in the spring. Michael also has acquired a 7.5 m dish. He confirms there will be a new dxpedition in May, but he cannot confirm date or location as yet. It will most likely be during the 1296 part of the DUBUS contest. Michael reports he has made reservations for Florence.

ES5PC: Viljo vallik@telia.com writes on his MW EME contest activity -- Here is my final list of stations worked: on 13 cm HB9SV, SM4DHN, OK1KIR,

IK2RTI, G3LTF, F2TU, DF3RU, SM3AKW, RW1AW, F5JWF, K1JT, OK1CA, CH2DG, VE6TA, WD5AGO, WA6PY, NA4N, DL4MEA, KL6M, VK3NX, JA4BLC, HB9Q, IW2FZR, G3LQR, OE9ERC and JA8IAD, on 6 cm F2TU, RW1AW, OK1KIR, VK3NX and OK1CA. I worked OK1KIR easily on Sunday evening and after had successful skeds with VK3NX and OK1CA. I also heard JA6CZD on 6 cm. Otherwise it was really good activity and strong signals on 6 cm on Sunday evening. I can also confirm significant improvement with the septum feed compared to the circular patch feed I used before. My echoes were audible 100% of the time. Also I find the SDR-IQ receiver very helpful for monitoring the activity on the bands during the contest. 1 Oct I worked VK7MO on 2301 in all three JT65 modes (C, B and A). We saw no difficulties with decoding, even in JT65A. The signal strength was reaching -16dB (speaker copy). VK7MO has GPS locked frequency. At my station, I have a 10 MHz high precision OXO for phase locking the LO. Later I also worked OE9ERC on 2320 on JT65C.

G3LOR: Simon G3LOR@aol.com reports on his 13 cm activity during the Microwave (MW) EME Contest – I have not been as active as I would have liked over summer as other responsibilities took over my time. I was on 13 cm for the ARRL test during 2nd pass, but missed most people as they had already worked each other on the first night. With the times difficult and my limited window, I only managed 9 QSOs with F2TU, G3LTF, RW1AW, OK1CA, SM3AKW, OK1KIR, F5JWF, OE9ERC and ES5PC. Heard were HB9Q, IK2RTI and HB9SV. Signals were very good and all stations were worked with my tower and buildings in front of my dish. I could even hear echoes into the JA window, so I hope to work into the east sometime. I am unable to stay on late at night these days, so missed most of the NA window. I did not try 9 cm as it takes too long time to change feeds. I am still unable to get power from my YD1336 on 23 cm and will go back to work on my GS15 PA construction project. In Oct I will be on 23 cm with the usual 200 W.

G3LTF: Peter pkb100@btinternet.com reports on his Sept – Oct moon activity - - After missing out on all the fun in Aug, I was delighted with my results in Sept and early Oct, especially on 13 cm. On 1296 on 27 Sept, in mid week, I worked SM3LBN, SM5LE, SP7DCS for initial #258, G4CCH, OK1DFC and AL7RT the next morning. In the MW leg of the ARRL contest there was record activity on 13 cm. On the 29th I worked almost 5 stations per hour for the first 3 hours, which is a high rate for 13 cm and mostly on 2320 MHz. (Crossband QSOs are denoted by *). I QSO'd DF3RU for initial #47, F2TU, RW1AW, OH2DG, OK1KIR, ES5PC, IK2RTI #48, SM3AKW, OE9ERC, HB9SV*, F5JWF #49, SP6GWN #50, K1JT*, DL4MEA and PA0BAT. At moonrise, at 2040 I worked VK3NX* #51 on CW and SSB to establish a new distance record on 13 cm 16,973 km. My RX was low on sensitivity down at 2301.950, but it still worked OK. I then worked JA4BLC*, JA8IAD*, IW2FZR, OK1CA and G3LQR, and on 30 Sept DL4MEA on SSB, VE6TA, W5LUA*, WD5AGO*, OZ4MM, WA6PY*, DL0SHF and HB9Q* #52. In the final session after moonrise I worked KL6M, LX1DB on SSB and JA4BLC*. CWNR were JA8ERE, who I heard (559) in both JA windows, NA4N and K7XQ. Final score is 30x23, way up on previous years and reflecting the increasing level of interest in 13 cm especially in Europe. I just don't understand why the US activity is so low. On the 1 Oct I worked on 13 cm K7XQ* for #53. On the 30th, during the contest at 3 AM local, I changed the feed and the transmitter and PSU (all located at the base of the dish) to 3.4 GHz and after tracking down a miss placed wire, I got it working, found the moon with the help of moon noise and worked W5LUA. But by the time I'd had sorted out the problem, OK1CA had gone to 6 cm. This was my first 9 cm contest QSO. On 6 Oct I was on 1296 and worked K2DH #259, SP6JLW, LA9NEA, SV1OE, GW3XYW, DK3SE #260, VE3KRP #261 and K1RQG on SSB. CWNR was DL6YDH. It was a very productive session. Finally on 7 Oct, still on 1296, I worked G4RGK. I have a few things to fix before the next leg of the contest and am looking forward to it as usual. I have quite a few new stations that I'm looking for, RD3DA and N2UO being two. My usual plea is for the smaller stations to find a clear spot away from 1296.010 and call CQ. We midi stations will find you, but we can't tailend when you just work

the big boys. In the clear I can easily work stations with a 3 m dish and +100 W. I am building a system for 6 cm, but it will be a few months yet.

GW4DGU: Chris chris@chris-bartram.co.uk operated for a few hours on 10 GHz in the MW EME contest -- Conditions were good with low levels of libration fading, which meant that signals were less spread than usual, and as the moon is/was quite close, path loss was relatively small. I've spent some time putting a new reflecting surface on my (fibreglass) dish. The original reflecting surface, which appears to be a sprayed metallic layer just below the gel coat, seems to have been breaking down for some time, and in retrospect, it may be why the dish was 'retired' in the first place! The new 30 micron aluminum dish surface (200 mm wide self adhesive al tape!) has improved the G/T a lot, although I've not yet characterized it as I didn't finish fitting it until 1800 on Friday of the contest. The new surface should now be good enough for operation at higher frequencies. I guess that activity was diluted by people trying to run multiple bands. Several people who I'd expected to be QRV on 3 cm were clearly playing elsewhere or were only around for a short while. I was running ~ 40 W at the Skobelev dual-mode feed, and a 2.4 m 0.935 f/d offset dish. The preamp, like most of the kit, is homebrew with about ~ 0.7 dB NF. This NF is consistent with both instrumental measurements (HP346B) and cold-sky to ground estimations with the preamp mounted on the feed alone. I still have 0.3 - 0.4 dB loss in the coax antenna switch. (I'm working on a new preamp where the input match is performed entirely in waveguide, and I now have a WG17/WR75 waveguide switch). I worked RW1AW (559/559), F2TU (O/O), IQ4DF (549/519), F5JTA (O/O) for an initial (#), IK2RTI (519/O) (#), OK1KIR (O/O) (#), OK1CA (559/559), WA7CJO (569/559) and G4NNS (O/O) (#). Stations I heard and called and received either QRZs or lost in QRM, or had no reply include HB9SV, DL0SHF, F5JWF, WA6PY and I4BER.

HB9Q: Michel (HB9JAW) hb9jaw@bluewin.ch reports on 13 cm activity during ARRL contest from HB9Q -- Some time ago I asked Danny, HB9CRQ, if he wanted to try 13 cm with his large dish. He told me that the dish may not be accurate enough for 13 cm, but a try seemed worthwhile. I told him that the ARRL MW Contest would offer a good chance for lots of QSOs. Danny told me that he could not be there, but that I could try myself. After some instructions on how the station worked and the installation of some additional cables to the feed, I was about ready. A week before the contest I installed my 13 cm setup with the help of Bodo, DL3OCH. Testing on the sun showed lots off sun noise and all seemed to be functioning ok. A Initial test with HB9SV a few days later failed as Enrico had high wind and rain, but Bodo was able to hear echoes very well. In the contest, Bodo started at 2100 on Saturday and worked the following stations on 2304: at 2123 ES5PC (539/579), 2131 HB9SV (559/569), 2137 IW2FZR (539/579), 2141 F2TU (559/589), 2146 OK1CA (539/579), 2216 OK1KIR (529/579) and 2256 SM3AKW (429/579). At 2300 I showed up at HB9Q. Bodo tried some Echoes. They were there, but weak and not really comforting. Never the less we started calling, but heard nil. Sudden F5JWF was copied on 2320.098, but he did not reply to our calls on 2304.098. Then nothing for hours until we worked at 0049 IK2RTI (429/579). This QSO is surprising as we must have worked him with a broken preamp, as we later discovered checking sun noise -- none was heard. I exchanged the preamp for an old homebrew one, put the antenna on the sun again, and the sun noise was back! (Later back home I discovered that the first stage of my DB6NT preamp was also smoked. Don't know why). We then worked at 0721 K1JT (559/579), 0727 VE6TA (559/579), 0733 OE9ERC (579/579), 0736 RW1AW (559/589), 0741 W5LUA (579/579), 0747 WD5AGO (539/559), 0753 G3LTF (559/589) - RX 2320, 0759 DL4MEA (559/579) -- RX 2320, 0812 NA4N (539/559), 0816 WA6PY (559/579), 0849 DL0SHF (579/579) and 0857 KL6M (539/559). Sunday night we added OZ4MM. PA0BAT was not heard. Overall we ended up with 21 QSO and initials. The station used was HB9Q's 15 m dish, 250 W at feed, 2 stage DB6NT preamp replaced with DJ9BV preamp, and DB6NT transverter. For 2320 I used a FT9600 receiver as a 160 MHz IF.

I1NDP: Nando nando.pellegrini@tiscali.it (JN45al) sends the story of his past 432 EME activity and current plans -- I was active on 70 cm EME for a few years and lost my antennas (8 x 39 el yagis) during a snow storm. Then I changed QTHs and was forced to QRT. I now have a new array composed of 16 x 26 el DJ9BV yagis at a new QTH, but am not quite QRV. The array is feed with open lines, but the LNA is far away from the feed point and I have used old coax (very lossy). I am also having problems with balancing the feed point. I am seeing 12 dB of sun noise with 0.4 dB LNA, which is much lower than my expectation. For TX I have a GS35 1 kW PA.

I4BER: Goliardo tomasset@ira.inaf.it writes about 10 GHz from Italy -- I am a retired scientist from the Medicina (Italy) Very Long Baseline Interferometer (VLBI) radio telescope station. I started 10 GHz EME in Europe in the late '80 using the plant 32 m dish. I could hear my own echoes running at 100 mW with a home built solid state amplifier! Tests that followed, organized with colleagues in US and EU were unsuccessful, even when attempting with the Green Bank 45

m dish. Errors on both sides and lack of experience played a fundamental negative role back then. Today I run a TWTA with 35W output into a 3 m dish. My latest 3 cm EME QSO was with WA6PY in San Diego, CA. I am always interested in testing with new stations and can be reached by e-mail.



I4BER, Goliardo with his 3 m dish on 3 cm EME

K0ALL: Ron roche@ideaone.com reports that he and Barry (VE4MA) will be QRV during the Oct contest weekend from ND again -- We should have a little more power and the antenna tweaked up a bit.

K1JT: Joe k1jt@arrl.net operated the MW EME contest with me (K2UYH) from my QTH. We had planned to operate both 13 and 3 cm, but unexpected problems with the 13 cm equipment limited our activity to just 13 cm. Tree blockage seemed much worse on 13 than on 23 cm and prevent any copy JA stations despite our attempts. We also had some TX problems that cost us valuable moon time on the 30th. Stations QSO'd were on 29 Sept at 0240 F2TU (559/569), 0243 RW1AW (559/569), 0259 OK1KIR (339/559), 0312 G3LTF ((569/559) RX 2320, 0312 SM3AKW (549/559), 0318 HB9SV (589/579), 0327 ES5PC (549/559), 0335 OK1CA (559/559), 0351 IW2FZR (569/559), 0425 W5LUA (449/549), 0440 VE6TA (549/559), 0535 NA4N (549/559) and 0540 WD5AGO (549/559), and on 30 Sept at 0530 DL4MEA (549/559), 0559 WA6PY (559/559), 0630 OZ4MM (559/559), 0656 DL0SHF (569/559) and 0722 HB9Q (579/579) for a total of 18 QSOs in 15 multipliers. We will be active again under K1JT's call on 432 and 1296 (as well as 144) in Oct and Nov.

K1ROG: Joe K1rqg@aol.com is back on 1296 EME in a big way and writes -- I am gearing up for 70 cm EME as well as 13 cm EME. 70 cm will come first, as I have all the stuff ready. I am using a GR-1236 for noise measurement and typically hear 0.8 dB of moon noise. I have measured close to 1 dB at times. I use moon noise to track, or should I say verify tracking the moon. I just switched tracking systems from the VE1ALQ/FIEHN [the old style] to the W2DRZ controller and my own interface with incremental encoders and "Z" pulse [index pulse] calibration. I am still running the FIEHN software with this. First indications are very positive. I tracked the sun for several hours and it only varied about 1.5 dB from peak. I cut down a number of trees to give me at least ten more degrees of moon window to the west, and worked on 23 cm JA6AHB (579) and W7BBM on SSB (57). On 29/30 Sept I heard RD3DA on .060 with an (S7) JT signal, but he did not acknowledge my CW call on his freq. This is too bad because he had a great signal. Thanks to N2UO for standing by while I worked SM5LE for a new one.

K2DH: Dave k2dh@frontiernet.net now has his W2DRZ controller running well and is testing W9ZIH's 8 tube PA. During the IARC EME Contest in Oct, he worked on 1296 LA9NEA, G3LTF, SM3LBN and SP6JLW, and heard VE3KRP and ES5PC. Dave tried to break in on LX1DB, G3LTF and K1RQG on SSB.

K4EME: Cowles candrus@rica.net writes -- I have not been very active on EME lately, but my station is operational. My Mother just went through Lung Cancer surgery and has needed my help, so my hobbies have suffered a little. I am planning to make some station improvements in preparation for the EME contest in Oct. It's seems that noise causing technologies keep creeping into my area here in the National Quiet Zone making each year a little harder to do EME on 432. I am looking for suggestions on a good 432 LNA. I have a small collection of both home brew and commercial LNAs. The preamp that appears

to work the best here is a Cavity type followed by a Stripline design. I also own a SSB Electronics Helical type, the SP-7000 and ARR P432VDG preamp. I can hear my echo well with all these preamps, however I think the Cavity preamp seems to have a slight edge over the rest. I heard about a company building a cavity preamp named LNA Technology LLC. Have you heard anything about this company or their preamps? I think they build, or use to build a 432 version cavity LNA model number CAV432-NB. Do you know where I might find one of these CAV432-NB preamps? [Contact WD5AGO – I have verified Tommy's NFs and they are excellent].

K5SO: Joe k5so@valornet.com reports on his YO2IS sked -- Unfortunately, I was not able to complete with YO2IS and was not able to detect him at all. I heard K5JL apparently working YO2IS on sked. I had only partial moon at this time at 6 degrees of moon elevation. Jay was about 3 KHz low (below Doppler shifted sked frequency) and only S7 with my moon obstructions. A little later, at my sked time, K5JL was his usual S9 strength. I listened carefully above and below the sked freq for YO2IS and called on the sked freq. On a couple of TX sequences I tried to turn the freq over to K0YW, since I was hearing nil from YO2IS, but I never heard Bruce either. After the sked I moved down to near 1296.010 and worked 15MPK (559/579) for initial #103 and SP6JLW (569/579). The next day stations I QSO'd seven stations: K5JL, SM5LE, K1RQG, N0OY, VE3KRP, W2DRZ and SV1OE. I am still working to improve my pulsar detection and the radio astronomy aspects of my system. I am also trying to improve the performance of my TH-347 cavity PA, which is supplying 1 kW to my feed.

K7XQ: Jeff k7xq@secure.elite.net seems to have his 13 cm EME system working well -- After replacing a blown regulator in my preamp and re-optimizing the feed position for maximum sun noise (the feed was over illuminated), signals came way up. In the MW EME contest I completed with OK1CA for my initial #1 and KL6M #2. I then added during skeds OE9ERC #3 - very loud, partial W5LUA - easy copy but AI never found me, G3LTF #4 - very loud and F2TU #5 - very loud. Nil was copied from WD5AGO. I am running a Spectrian PA with 120 - 140 W of output. I am afraid to run it above 150 W for fear of burning out the output isolator as many have reported. (I may remove the isolator and add 50 ohm trace in its place). I found a Lambda LZS-1500-3 power supply on E-bay that runs 28 VDC at 75 A.

KL6M: Mike melum@alaska.net was active on 13 cm during the ARRL MW Contest -- I had problems with tree blockage that limited my moon times. The first night by the time the moon finally cleared the trees most had gone to sleep. I did QSO ES5PC, F2TU, WD5AGO, K7XQ for initial #23 and heard K1JT. I had power supply problems the second night, but was able to find work a rounds and QSO'd F2TU (559/549), ES5PC (559/559), WD5AGO (549/559), K7XQ (O/O) again, RW1AW (569/569), OK1CA (559/579), OZ4MM (559/549), SM3AKW (559/559), DL4MEA (549/549) #24, HB9Q (559/539) #25, G3LTF (559/559) and LX1DB (569/579) #26. I heard many others, but had lots of trouble staying on the moon. I really need to get my new position system in place. A new 120 A power supply is coming in the mail, so my power problems should be fixed in the future. I plan to work 432 pretty much exclusively during the Oct part of the ARRL contest and 1296 in the Nov part.

KL7HFQ: Roger rkh@alaska.net was not QRV at the end of Sept -- I was planning to be on 432 on 30 Sept, but instead was in the hospital to have my gall bladder removed. I am now back home and still in a little pain. I should be back to normal soon and hope to be QRV on 432 for the Oct contest weekend.

LA9NEA: Viggo la9nea@online.no 1296 activity report -- On 7 Oct I worked SM3LBN (569/569), SV1OE (549/539), F2TU (579/569), G4CCH (569/579), ON7UN (579/579), G4RGK (O/O), DL6YDH (559/559) and SP7DCS (O/O). Initials were SV1OE and DL6YDH. At about 0850 I received a "PA3" or "RA3", but never identified.

LZ2US: Marco lz2us@orbinet.bg is coming on 1296 EME. He has built up a couple 2 kW 23 cm PAs. One he will put in service – not sure when. The other is going to SV1BTR. Jimmy plans to be QRV on 23 cm in Dec. [Info provided by K5JL - TNX].

N0OY: Pete petesias@yahoo.com reports on his 28' dish -- I have the dish operational again after replacing the encoders due to lightning damage. Wind caused vibration is blamed for breaking the scalar ring mounts, so I operated this month with no scalar ring on my VE4MA feed. During the AW on 29 Sept signals were very loud on 1296. I worked K1RQG, K5JL and K5SO - all with (599) signals. I also heard SM5LE and N2UO, but had to QRT due to high winds that continued all weekend. I plan to be more active now that things are working again and fall is here with fewer outside activities. I am open for skeds at anytime, and will be QRV during the contest.

N9JIM: Jim n9jim-6@pacbell.net sends news of the ARRL EME Contest plans for the Jamesburg dish – The callsign to be used will be N9JIM during the contest period. Other calls may be active on "Thursday" evening PST. We will be operating 1296 with the 97' dish and a new improved feed system. We hope to get an additional 5-6dB gain with the improved feed horn. Unfortunately, our 300 W amp is not available this weekend, and we will use our 120 W backup PA. If anyone can help us out for the weekend with a "big amp", please contact me or Kevin. Preamp remains < 0.7dB NF. Great success was had on 1296 earlier in the year with the lower gain feed. We worked a few small dish systems that were running < 200 W. In addition, we will be operating 144. If 144 creates too much interference to 1296, 1296 will have the priority. These improvements are assuming good weather at the site on Thursday and Friday before the contest, as we must climb the giant dish and make the changes. We will have some internet access during the contest via email, but we are using a Blackberry.

NC1I: Frank frankp@gcq.net is another who has recently experienced bad luck with lightning -- Back on 8 Sept I experienced substantial damage to my station from an electrical storm. We were not home at the time and the storm had not been predicted. Unfortunately I had just reconnected everything just days before after a busy summer with no ham radio activities. Everything had been working perfectly before the lightning strike. All antennas were disconnected at the time, and all of the VHF/UHF equipment including the 432 EME station was disconnected from the main line power. But most control wires (for rotors, preamps, relays, antenna positioning, etc.) remained connected, since I had never really set up a quick disconnect system. All of the electronics on the tower including the t/r relay, preamp, positioning pots, etc. were damaged. This includes components for 50, 144, 222, the 432 EME system and 1296. Most of the VHF/UHF radios in the shack have checked out OK. My HF station suffered more significant damage. Only the antennas had been disconnected. Three of my four rotor systems have failed. Fortunately my IC-781 was out of line at the time. I suspect it will take many months to get stuff back in full working order. At this point it is highly unlikely that I make it on for either weekend of the ARRL EME contest.

OK1CA: Franta's ok1ca@ges.cz MW EME Contest report -- I was QRV on 13, 9, 6 and 3 cm during the contest. I worked 27 QSOs on 13 cm and made initials with K1JT, PA0BAT, DF3RU, SP6GWN, K7XQ, VK3NX and HB9Q #53. I lost 3 hours on Saturday due to trouble with a directional coupler in my SSPA. The activity on 13 cm was very good. I think 35 stations were QRV. I made only one QSO on 9 cm with W5LUA. I was active on 6 cm with my 4.2 m dish for the first time. The feed was a horn with septum polarizer. I had only 12 W at the feed. I worked F2TU, RW1AW, IK2RTI, W5LUA, OK1KIR and ES5PC – all initials to bring me #6. I heard VK3NX and CWRN JA6CZD. I made 14 QSOs on 3 cm with initials from W6YFK, IK2RTI, K6RE and DL0SHF to bring me #31. I had the bad weather at Saturday with heavy rain and strong wind. The Sunday was a clear day and very good for the microwaves. Thanks to all for the nice contacts.



OK1CA's MW multi-band feed

OK1DFC: Zdenek ok1dfc@seznam.cz writes -- Weather did not permit me to work outside and prepare for 13 cm operation in the MW contest. The strong wind calmed on Saturday and I was able to put my station into operation for a couple of hours on 23 cm. I QSO'd 27 Sept G3LTF (569/579), SP7DCS (539/559) for initial #172, SM5LE (539/549) and GM3SBC (O/O) #173, and on 29 Sept SP6JLW (559/559), VK4AFL (559/579), SM3LBN (559/559), VK3UM (579/569), G4CCH (55/55) on SSB, SM5LE (539/559), G4CCH (O/O) on JT65, 15MPK (559/579), K5JL (599/599), VE3KRP (519/549) #174 and AL7RT (559/559) #175.

OK1KIR: Jan (OK1VAO) ok1vao@o2active.cz reports for the OK1KIR team – On 2300, we worked on 29 Sept at 0003 RW1AW (579/579), 0017 HB9SV (579/579), 0022 OH2DG (569/569), 0031 ES5PC (559/559), 0046 G3LTF (569/569), 0055 F2TU (579/569), 0101 DF3RU (O/O) for initial #68, 0119 OE9ERC (579/559), 0118 SM3AKW (559/559), 0130 IK2RTI (559/569), 0237 F5JWF (559/579) #69, 0258 K1JT (549/339), 0523 IW2FZR (549/559), 0528 VE6TA (559/559), 0537 OK1CA (579/569), 0618 DL4MEA (559/569), 0638 NA4N (549/-), 0658 WD5AGO (O/O), 0740 WA6PY (549/559), 1903 VK3NX (539/539) #70 and QF field, 2217 HB9Q (579/529) #71 and 2257 G3LQR (549/559). We heard W5LUA, KL6M and JA8IAD in local WiFi QRM on 2424 MHz. On 5760, we worked on 30 Sept at 1840 ES5PC (549/559), 1848 OK1CA (539/569) for initial #28 and the 1st OK-OK 6 cm EME QSO, 1956 RW1AW (569/579), 2011 JA6CZD (549/559) and 2030 F2TU (569/579). VK3NX was only heard. On 10368, we worked on 30 Sept at 0018 GW4DGU (O/O) for initial #35 and GW (17th DXCC), 0024 IK2RTI (459/549), 0031 HB9SV (549/569), 0128 RW1AW (569/579), 0557 IQ4DF (559/539), 0607 OK1CA (559/579), 0610 F5JTA (549/579), 0619 K6RE (549/559) #36, 0623 WA6PY (559/579), 0628 G4NNS (549/579), 0710 I4BER (559/559) #37, 0725 WA7CJO (589/579), 0750 F2TU (559/559), 0800 DL0SHF (559/539) and 0808 F5VKQ (549/O) #38. We also started QSO with SP7JSG (549) but lost Czeslaw's signal. OK1KIR is up to on 70 cm #361 and DXCC 64, on 23 cm #243 and DXCC 47, on 13 cm #71 and DXCC 26, on 9 cm #7 and DXCC 5, on 6 cm #28 and DXCC 17 and 3 cm #38 and DXCC 17.

RW1AW: Alex rw1aw@appello.de reports on his MW contest activity – On 3 cm I made 19 QSOs with 2 initials. Contacted were G4NNS, F2TU, SP7JSG, F5JTA, F5JWF, IK2RTI, GW4DGU, K6RE (#), WA7CJO, WA6PY, DK7LJ, IQ4DF, F5VKQ, DL0SHF, OK1KIR, HB9SV, W6YFK (#), OK1CA and I4BER. 10 GHz activity was poorer this weekend than in ARI contest 3 weeks before when W5LUA, VE4MA, WC8VOA, LX1DB, DF9QX, HB9BHU, F6KSX, F3VS and DL2LAC were also worked. On 6 cm I made 6 QSOs with F2TU, OK1CA, ES5PC, JA6CZD, OK1KIR and VK3NX. On 13 cm 29 QSO were made with 5 initials. Worked were OK1KIR, DF3RU (#), G3LTF, F2TU, OH2DG, IK2RTI, HB9SV, F5JWF (#), NA4N, W5LUA, ES5PC, K1JT, WA6PY, OK1CA, DL4MEA, SM3AKW, DK7LJ, IW2FZR, VE6TA, WD5AGO, PA0BAT, VK3NX (#), KL6M, DL0SHF, G3LQR, OZ4MM, HB9Q (#), OE9ERC and SP6GWN (#). Strong WiFi QRM completely blocked any opportunity to work the Japanese on 2424. I ended with a total of 54 QSOs on 3 bands. In Dec I shall finish work on a 9 cm station which will use my 6 m dish with a CP feed and ~ 150 W SSPA).

SM5LE: Sven sm5le@telia.com reports that despite the station drain of the MW contest that he still did well on 23 cm – I added 4 initials on the weekend on the contest weekend. I worked on CW on 27 Oct G4CCH, G3LTF and OK1DFC, on 28 Oct G4CCH and SP6JLW for initial (#), on 29 Oct K5SO, K1RQG (#) on random, G4CCH, VK3UM and OK1DFC, on 30 Oct heard and called VK4AFL - nice sigs, G4CCH (44/559) SSB to CW and SP7DCS (#) on sked. I also QSO'd N2UO for another initial. I received a nice "heard you" report from N00Y. On JT65c I QSO'd on 26 Oct ES5PC, on 27 Oct RD3DA and 29 Oct JA6AHB. My initial total is now to #79* (both CW and JT together). The changes in moon degradation are significant for small dish people. For the first time I was able to really hear (by ear) my own echo's, but less than 50% of time. Spectran helps a lot especially when I am "echo-tuning in" on a CQ. My sun noise is now 7 dB at flux 67, very near theoretic.



SP6GWN's 2.7 m dish used on 13 cm

SP6GWN: Henryk sp6gwn@wp.pl is the first 13 cm EME station from SP. He had a lot of technical problems in ARRL MW contest, but managed to work 3

stations. His equipment is a 2.7 m dish and 100 W SSPA. He worked on 24 Sept on sked F2TU for his #1 QSO and in the contest on random the first day F2TU, G3LTF and OK1CA – all firsts with SP. Henryk discovered some technical problems during the contest which he wants to correct before he takes more skeds. [TNX SP7DCS for relaying this report].

SP7DCS: Chris sp7dcs@o2.pl has his stations working well on 23 cm -- After my first try on 1296 EME in ARI contest, I managed to add a preamp to my system (0.45 dB NF LNA) and of course stations are now louder. In spite of my QRP, I worked (all CW) on 27 Sept G4CCH, OZ6OL for an initial #7, G3LTF #8 and OK1DFC #9, on 28 Sept K2UYH #10 and SP6JLW #11 on sked for first SP-SP on 23 cm EME, and 30 Sept LA9NEA #12, DJ9YW (#), SM5LE #13 – all on sked. I was extremely pleased to work Sven as both of us are small stations! It will be very difficult to work a smaller station. I added on 6 Oct ES5PC #14 on sked, OE5JFL #15 and on 7 Oct LA9NEA (with 1/3 of dish behind a building). My equipment is 3 m solid dish, RA3AQ feed, 150 W at feed and TRV/LNA with 0.45 dB NF by SP9WY. I plan to be active in the ARRL Contest.

VE1ALO: Darrell ve1alq@nbnet.nb.ca is not doing too well, although he has his 3.7 m dish up and is seeing about 13 dB of sun noise. He broke his left wrist and thumb, right hand thumb knuckle, and tore his right hand wrist ligament while installing the dish. If this is not bad enough, he has a problem with his EL drive actuator. He set the travel range wrong and the stop point is over shooting – but now seems to have solved this problem by shorting the DC Motor. Darrell should be QRV at least as an SWL on 27/28 Oct as he does not expect to get his PA finished in time.

VE3KRP: Eddie eddie@tbaytel.net is adding initials on 1296 -- During the 29/30 Oct AW I worked DJ9YW for initial #13, W2DRZ #14, K1RQG, K5SO and OK1DFC #15 - a tough go as Zdenek couldn't get my call at first. I also heard K5JL, RD3DA on JT and others. All had nice signals. And in Oct I worked G3LTF #16 and LA9NEA #17. I'm gathering parts for a GS-15B PA winter construction project.

VE6TA: Grant ve6ta@clearwave.ca reports on his MW contest efforts -- It was an interesting weekend for me with severe weather and equipment breakdowns playing their big part. On 13 cm the following stations were worked, most with great signals due to perigee conditions: OK1CA, WD5AGO, K1JT, HB9SV, SM3AKW, DL4MEA, OK1KIR, ES5PC, IW2FZR, RW1AW, F2TU, WA6PY, F5JWF for an initial (#), G3LTF, W5LUA, OZ4MM, DL0SHF, OE9ERC, NA4N and HB9Q (#) for a total of 20. At the end of my first Eur window my 24 Vdc supply decided to retire again. Thus I missed the Asia/VK window. At first glance those Spectrian amps are a real deal, but one needs to work in the cost of a beefy 24 Vdc supply. My plan was to install the 10 GHz gear on the dish with an W2IMU feed and waveguide relay. Unfortunately the dish surface accuracy is not sufficient and I could only get a maximum of 5 dB of sun noise. I guess 10 GHz EME will have to be a future project for now. Plan B was to get back on 13 cm for the second pass and borrow the boat battery for a power supply. Seemed to work okay but man those batteries are heavy! I will probably remain on 13 cm for the first pass next weekend and then switch everything over to 432 in preparation for the second ARRL EME effort.

VK3NX: Charlie ibnkarim@bigpond.net.au QRV on two band in the MW EME Contest – This was my first time on 13 cm. It took a lot of effort listening on 2 bands. I also had some random contacts on my own frequency band. I didn't realize that some countries have 2300-2304 as an allocation. I am very sorry that I missed some stations on 2320. I did QSY for Rx on that band as I said I would. The WX was very bad here. Wind gusts were 60 km/h and created a lot of QSB. Nonetheless I was amazed at how loud the signals were. I think my feed efficiency is very good as I am receiving at least 0.3 dB of moon noise. As a result of the wind accurate pointing was difficult. I was also amazed to hear my own echoes through the ground noise and some big signals. Here is my list of QSOs, almost all were skeds, but were completed on random before the sked time: W5LUA (579/559), RW1AW (559/559), OK1CA (579/579), OK1KIR (539/539), ES5PC (519/559), F2TU (569/559) and (45/44) on SSB, SM4DHN (519/549), IW2FZR (529/549), G3LTF (579/569) (52/42) on SSB to bring me to initial #9. This all made getting up at 3 am local time worthwhile! I will be happy to be on 13 cm again for the next AW for those I missed out on. Here is the list of worked stations. On 13 cm F2TU, RW1AW, G3LTF, OK1KIR, OE9ERC, ES5PC, G3LQR, DL4MEA, IW2FZR, SM3AKW, VE6TA, DL0SHF, and on 3 cm F2TU, RW1AW, IQ4DF, F5JTA. Good conditions for my first contest on 13 cm. The 13 cm station was just finished Thursday before the contest. Sorry for US stations, but I am still not equipped with cross band RX. My station is a 3.7 m solid dish with 40 W in the feed on 3 cm and 170 W in the feed on 13 cm TRVT 2320.1 TX RX (no cross band).

VK3UM: Doug tikaluna@bigpond.com was sick during the weekend of 29/30 Sept and was not very active -- I did get on briefly for Eur on 29 Oct and worked on 23 cm G4CCH, SP6JLW, SM5LE, VK4AFL and OK1DFC. On 70 cm I QSO'd I5YDI for an initial, G4RKG, SP6JLW and I1NDP - the last 3 when my moon was at 2 degs or less. I also heard DJ3JJ calling me when the moon went out and did not complete. It would be nice to work some of the Eur stations without ground noise! They had >25 el at the time! My 70 cm blower stopped with a thermal protection cut out during TX. Fortunately I was there to kill all instantly. It would have been a real expensive mess (even in the filament/EHT on standby condition), if it had happened when I was not in the shack as I often do during 'warm up'. Yes, total interlock protection is in the pipeline, but a fail safe indicator has been temporarily installed (a piece of paper over the air outlet that can be heard with the cans on). [See Doug's news on his latest software near the end of this NL].

W5LUA: Al w5lua@sbcglobal.net after completing 1296 WAS last month continues to make firsts -- ES5PC and I worked on 5760 on both CW and JT65c. I have some screen captures, but no wav files. Maybe Viljo does. Next time, I will record it. Mutual Doppler was varying about 1 cps so it helped to keep one hand on the mouse wheel of the SDR-1000. I need to computer control it. I was running a 5 m dish and 70 W at the feed and Viljo was running a 4.5 m dish and 15 W at the feed. With CP on 5760 the signals sound a lot cleaner. Signals were T9. Will CP be better on the higher bands as well, up to 47 GHz? During the MW contest on 3400 I worked G3LTF and OK1CA, then back on 13 cm I added HB9Q, F2TU and OK1CA, and on 5760 VK3NX and OK1CA for initial #27 on 5760. On 13 cm the next day I worked VK7MO and VK3NX on 2301.195. I worked a total of 10 on 13 cm.

W8TXT: Mike [no e-mail] now has his new 8 FO-24 yagi (6.9 wl) array in operation on 70 cm EME (with 600 W at feed point with RIW PA and 17 dB of sun noise with MGF4919G LNA). He ran into K4EME on 432.021 and called Cowles many times, but only received QRZ in return. On 29 Sept he worked JA6AHB (579/539). Mike will be active in the ARRL EME contest and looking especially for K4EME.



W8TXT new 8 FO-24 yagi array for 70 cm

WA6PY: Paul pchominski@maxlinear.com was QRV in MW ARRL EME Contest -- I QSO'd on 10 GHz F5JTA, IQ4DF, F2TU, RW1AW, W6YFK, WA7CJO, G4NNS and OK1KIR. I heard GW4DGU, I4BER -- very good signals and shortly SP7JSG. On 13 cm I QSO'd IW2FZR, W5LUA, RW1AW, F2TU, ES5PC, VE6TA, OK1KIR, WD5AGO, NA4N, SM3AKW, K1JT, G3LTF, OZ4MM, DL4MEA, DL0SHF, OE9ERC and HB9Q. Heard were HB9SV and OK1CA. On Saturday 29 Sept from about 0645 till 0710 suddenly my Moon noise starts to increase up to 15 dB. I did not try to find maximum of the signal with the antenna. At the same time the noise floor on the band increased also. On 13 cm I am tracking antenna on Moon noise and for this period of time I lost tracking possibilities. I was trying to aim for maximum echoes, but echoes became also quite weak due to the high noise floor. Someone called me, but unfortunately gave up. This looks like a problems we had with satellites in the late 1980s. I could not find the carrier frequency, but my noise power meter has a 4 MHz BW and my RX does not cover that wide band. I was unable to receive VK3NX because my TS2000 covers only down to 142 MHz. I was missing by just about 60 kHz. On 2424 I have this year even a higher level of interference. I have to build a noise blanker in wide band 144 MHz chain with a switch isolation of at least 120 dB. Thanks to the very sharp filters and

relatively high IP3 LNA chain, I do not have any trace of interference in the 2320 or 2304 MHz bands.

WA7CJO: Jim wa7cjo@futureone.com was on 10 GHz for the MW contest. The first night he had LO problems and only made a few contacts. Things were better on the second night and he worked 9 for a total of 12. Jim QSO'd I4BER for initial #71 and IQ4DF on both CW and SSB. Signals were good on X band during the contest and there was even some QRM at times. Regarding circular pol, in tests done a few a few years ago, Jim found that CP actually was a bit worse than linear on 10 GHz. The theory is that the differential Doppler from moon reflections [Doppler spread] due to the rotation of the moon in relation to the rotation of earth degrades the signal.

WA8RJE: Tony temanuele@kentdisplays.com will be QRV on 23 cm EME during the ARRL EME Contest in Oct with his new dish. He is hearing well and has now run 1 5/8 hardline to the dish for TX. During the MW contest he was in SWL mode on 13 cm, but was not happy with his results. He only heard 4 stations.

WB2BYP John wb2byp@ieec.org is working on assembling his new 28' dish. But he is still active with his old dish and worked during the Italian contest on 7 Oct G4CCH and heard LA9NEA and others. John tried his dish on 10 GHz during the MW contest and was able to detect 10 dB of sun noise. He had a heck of a time keeping up with the Moon, but did detect some signals.

WD5AGO: Tommy wd5ago@hotmail.com reports 20 QSOs on 13 cm in the MW contest -- Conditions were normal on 13 cm in Sept except for a two hour spot on the first night, 29 Sept. The bird (satellite) flying over which we have received before took out any chance of hearing on 2320 MHz. Signals were also down on 2304 but not bad enough to stop QSOs. The second night things were back to normal with no problems on all four RX frequencies 2301, 2304, 2320, and 2424. We worked OK1CA, VE6TA, IW2FZR for an initial (#), HB9SV, K1JT, SM3AKW, ES5PC, F2TU, RW1AW, OK1KIR, WA6PY and KL6M. On the 2nd night QSOs were made with NA4M (#), DL4MEA (#), G3LTF, OZ4MM, OE9ERC, HB9Q (#), DL0SHF (#) and JA4BLC. I CWNR W5LUA, F5JWF, VK3NX, JA8IAD, JA8ERE and JA6CZD. Although NA activity could be higher an excellent time was had on 13 cm overall even with the small station. Activity was low until the last hour or two of the EU window. Later on in the week when our western window was better, we work VK3NX (O/O) for #34. Our window closes at about 30 degs to the west, which is better than before but only 15 min with VK at high dec. I am not sure what we will do for the next few months, maybe hang out on 13 cm and switch over to 5760 during the Christmas break.

WW2R: Dave ww2r_eme@g4fre.com now has 4 x 25 FO yagis up for 432 and seeing 9.8 dB of sun noise. He will be on the Oct weekend of ARRL contest on 70 cm - no microwave operation, but possibly 1296. He also reports that after 16 years that he has finally got his VK3UM moon tracker board working!

K2UYH: I a.katz@ieec.org have the opportunity to put Aruba, P43, on 23 cm EME (and possibly 70 cm) for the Nov ARRL Contest weekend. I have found an Aruba station (P43L) who is interested in VHF/UHF and EME, and that has 10' TVRO dish for use on 1296. I should be able to put out quite a respectable signal as I have a 200 W SSPA available. I expect to be QRV on the 23rd, 24th and 25th and possibly part of 26th of Nov. In Sept I joined forces with K1JT as a multi-operator effort. We will use Joe's station on 144 and mine for the higher bands. We operated only on 13 cm during the MW EME contest -- see K1JT's report earlier in this NL for the list of stations worked. I did operate once under my call to pick up an initial with DL4MEA. I also on 28 Sept on 432 at 0230 partial DJ3JJ (M/O?) and QSO'd on 1296 on at 0320 SP7DCS (559/579) for initial #306* and {#272} on CW, and on 1 Oct on 1296 at 0400 YO2IS (O/O) 0505 #307* {#273} on CW and DXCC 59, and on 7 Oct on 432 at 1130 partial I5IDY (-/O) on CW.

NETNEWS BY G4RKG: **SM4IVE** reports that the local farmer needs the field where Lars was going to assemble his big dish. He now has to find another place to put the dish. He should be QRV for the contest on 70 cm with his yagis. **W4TJ** has his feed working well, but still has not repaired the damaged ribs on dish. **N8CO** is working on a trailer mounted 70 cm array for portable operation. **DL9KR** is now feeling well after his operation. He will be on 70 cm in the contest. **UT5JCW** will be active on 70 cm in the contest. **W2UHI** is still working on repairing damage by his last lightning strike. **K9SLQ** now has a repaired (TNX K5JL) DEMI transverter and back on 23 cm EME. Wayne did compare with the TS-2000X DEMI and decided DEMI the winner. **K7XC** will be on the horizon on 70 cm EME for moonrise and moonset during the EME contest weekends with a single yagi and 300 W. **MOEME** is QRV with 100 W on 70 cm. Sun noise is 7 dB. **G4RKG** worked 4 stations (F2TU, LA9NEA, G4CHH and G3LTF) during the Italian contest on 23 cm. **N2UO** is expecting a

