432 AND ABOVE EME NEWS
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CONDITIONS: This month's newsletter (NL) is filled reports on microwave (MW) EME activity as you would expect after the ARRL's MW EME Contest weekend. 13 cm has certainly come of age with activity approaching that of 23 cm a few years ago. Many QSO counts were above 40 this year. There was also increased activity on 9 and 6 cm, but it does not seem that 10 GHz saw any increase and there were no reports of 24 GHz QSOs. Good conditions I'm sure helped contest activity levels, but very poor weather (WX) in many parts of Europe (EU) was a big negative and may explain what happened on 3 cm and above. 5/6 Dec is the final leg of the ARRL EME contest with expected high activity on 70 and 23 cm. The Dec activity weekend (AW) also as you would expect corresponds to the Dec EME contest weekend. There is a 70 cm CW activity time period (ATP) in Dec, but it is scheduled for 27 Dec from 1200 to 1400 and 2100 to 2300. Reports about a dxpedition to C9 have disappeared and there is no news about any other up coming dxpeditions.

PI9CAM feed box with 3, 6 and 13 cm feeds in place with PA3CEG adjusting the 13 cm feed – see report later in NL.

CT1DMK: Luis cupido@mail.ua.pt was QRV on only 6 cm during the Nov contest weekend –- I was active during both passes around moonrise and moonset. I was on more than 12 hours in total. On the first pass there no activity as expected. On second pass I made just one QSO with ES5PC at 1011. These were my worst results in 13 years of microwave EME and I am puzzled. I observed from reflector reports that most activity was at EU moonrise, from 2000 to 2200. While I only got on at 2309, could by that time the 6 cm band already be empty (all stations switched off to 3 and/or 13cm)? There was another short smaller peak of activity around 0600 to 0700, which I missed since I started on my west window operation at about 0830. It is amazing that the band was empty all the other times that these were exactly the times I was QRV! My hardware was so good this time that Murphy could not attack it, so Murphy got creative and made a "sneaky" move instead – hi, hi. After this experience, I think the DUBUS contest band plan/weekend scheme works much better for me. Between my frustrating endless CQs, I had time to experiment and could get audible CW echoes with as low as 1 W for most of the time, and always readable SSB echoes with 30/35 W.

DL0SHF: Christoph, DF9CY, mail01@df9cy.de operation during the microwave contest on 3 cm -- I went to DK7LJ/DL0SHF on Saturday, 7 Nov to try some 10 GHz moonbounce. 13 cm was not possible because of a TX problem, although a lot of stations could be heard. While Per tried to find the fault with the 13 cm rig, I activated the 10 GHz equipment. When I first heard the echoes I thought, aha not bad, but not that strong. After adding the QRO amp giving about +11 dB, echoes were more than fine! I found IQ4DF and worked him immediately. Things were complicated (for me) as the keyer was not working and I had to use the CW Type software. A little later WA7CJO came back with a big signal on a CQ. Then I heard someone calling, but could not figure out the callsign. Until then we had been RXing and TXing horizontal. When we switched to vertical receiving things was much better. Suddenly IQ4DF was a big signal and I worked W5LUA, F2TU, WA6PY, ON5TA and ES5PC in a row. Signals became weaker as the moon dropped below 20 degrees of elevation and I stopped with the moon at about 15 degs. I am sorry that I could not return on Sunday, but I had to look after the kiddies here. The 10 GHz dish is not working correctly, we estimate a performance similar to a 2 or 2.5 m dish. Nevertheless, I was pleased to work so many old friends in so short a time. Weak signals, especially weak EME signal still have a great fascination for me.

DL1YMK: Michael DL1YMK@aol.com is now QRV on 13 cm from JO33rp -- I made my first QSO from my alternative QTH on the North Sea coast. The QSO was with SV1BTR – TNX very much Jimmy! A contact with ES5PC followed shortly afterwards. I am using an old 3.65 m dish that I refurbished during the last 2 years, when Monika and myself were occasionally at our holiday home. The PA is built in a 19" waterproof rack underneath the dish, which is 60 m away from the house, so the loss would otherwise be too big. 20 W in the shack are fed into a 60 m run of 1/2" cellflex coax. This power is attenuated down to 2.5 mW, and drives an Ericsson module giving 280 W. The LNA is a G4DDK that is followed by an additional MGA 86576 to give 52 dB of gain, which is needed for the long run back to the house. The feed is a round septum Super VE4MA style. Nothing was optimized so far. The feed was just thrown in where the focus is believed to be. We will do a lot of optimization during our next visit to the alternative QTH.

DL4MEA: Guenter guenter.koellner@mixed-mode.de was active during the Nov microwave weekend -- I had limited time because with the my little son. I worked PI9CAM, OK1KIR, G3LTF, OK1CA, K5GW, W5LUA, OH2DG, VE6TA, PA0BAT, OZ6OL and K1JT. For me it was quite nice. I now need get my TH347 back to real power on 23 cm, otherwise I soon will have less power on 23 cm than on 13 cm. Look for me on 23 cm in Dec.

DL7APV: Bernd dl7apv@gmx.de added a number of initials on 70 cm during Nov most were by the JT mode. QSOs included CX5IC with a single 22 el yagi and 160 W, RX9CHW with 2 x 23 el yagis and 75 W, YL3HA with 4 x 19 el yagis and 50 W, and OE3FVU with 4 x 17 el yagis and 35 W. Bernd is still having problems with his new PA.

EA3XU: Benjamin bpaloma@telefonica.net sends a short report on his EME contest activity back in Oct. He was only QRV on Saturday as his computer went KAPUT on Sunday and QSO'd on 432 using JT65b HB9Q, K2UYH (not contest QSO), K1JT, OK1KIR, DL7APV and DL5FN.

F2TU: Philippe f2tu.philippe@orange.fr send new about his Nov contest activity -- Conditions were very good and the activity also good. I operated on 3 bands and changed feeds 12 times with each change taking 10 to 15 min. I worked on 13 cm 43 calls and 10 initials SD3F, RK3WWF, SV3AAF, SV1BTR, SP6PON, W7JM, K8EB, PI9CAM, VK2JDS and PA3DZL for #101. On 6 cm I had 11 calls and PI9CAM and SV3AAF were initials to bring me to #33. On 3 cm I made 13 QSOs but no initials so my count there says at #52. I will be QRV for the last part on 23 cm and perhaps on 70 cm.

G3LTF: Peter g3ltf@btinternet.com writes -- The ARRL Microwave contest attracted a lot of interest, the only problem was how to cover all the bands now that there is significant activity above 13 cm. Personally, I prefer the way the DUBUS contest allocates the bands. I divided my time between 13 and 9 cm, changing the feed sytems over and had little sleep. Activity was higher than last year, especially on 9 cm and happily, at least in the Southern UK, the WX was kind with no wind. On 13 cm I worked 37 stations: LZ1DX, OK1CA, SV1BTR, HB9Q, OH2DG, SP6OPN, ES5PC, PA0BAT, SP6GWN, SV3AAF, OK1KIR, F5KUG #79, PI9CAM #80, K1JT, W5LUA, DL4MEA, F2TU, G3LQR, PY2BS,

K8EB #81, WA6PY, WA8RJF, NA4N, WD5AGO, LA9NEA, DL3EBJ, VE6TA, K5GW, IK2RTI, SD3F, G4CCH, RK3WWF, OZ4MM, IW2FZR, DF3RU, SM2CEW and W9IIX. CWNR were OE9ERC and PA3DZL. All NA stations except VE6TA were crossband. I looked for the JAs but didn't find any. There were at least 3 more stations that I would have worked if we were able to use 2304. The PI9CAM signal was probably the loudest I have heard on 13cm and we did have a short chat on SSB as well as CW. The CAM gang are doing a really great job with that big dish. My system on 13 cm is a 6 m dish with 250 W at the feed, which is a standard VE4MA with a screw type polarizer and the preamp is a G4DDK type, which seems slightly better than my old W5LUA one. Both use ATF36077. On 3.4 GHz, I worked 12 stations: OZ6OL, PA0BAT, PI9CAM for initial #26, DL4MEA, OK1KIR, OK1CA, W5LUA, K5GW, OH2DG, G3LQR, VE6TA and K1JT #27. CWNR were DF9QX. The 9 cm system is a 6 m dish with "Super" VE4MA feed and a septum polarizer with 25 W at the feed and a W5LUA design preamp with ATF36077. I am probably slightly over illuminating the dish, but as I can hear better than I am heard. I will leave the feed alone for now. My final scores for this leg were 37x26 for 13cm and 12x9 for 9cm.

G4RGK: Dave zen70432@zen.co.uk plans to be QRV in the Dec part of the ARRL EME Contest -- We have been taking a real beating from the weather lately. We had 12" of rain in one 24 hour period last week and very high winds, but everything seems to be surviving here so far. I plan to be on 70 and 23 in the next leg of the contest - WX permitting. This will be the first chance I've had to get on in the contest, so I'm hoping the WX will be calm.

JA4BLC: Yosiro ja4blc@web-sanin.co.jp reports on his Nov EME results -- I received permission to transmit 25 W on 3cm after the final inspection by the radio authority on 4 Nov. I succeeded in QSOing OK1KIR (O/O) on 6 Nov for my first ever on 3 cm contact. On the Nov contest weekend, I worked on 3 cm OK1KIR (549/539) again and heard WA6PY (T) and W5LUA (M-O) for 20 minutes. I worked on Sunday on 6 cm OK1KIR, JA6CZD, F2TU and heard JA8ERE. Sorry for my no show on 13 cm this time because of my on 6/3 cm activity.

JA4BLC's 9 cm feed

JA6CZD: Shichiro ja6czd@mx35.tiki.ne.jp worked on 3 cm OK1KIR and F2TU. On 6 cm he worked F2TU,
WD5AGO, OK1KIR and JA4BLC. His TX freq is 10,450 and RX at 10,368 and/or 10,450. [TNX JA4BLC for forwarding this report].

K1JT: Joe k1jt@arrl.net reports on the microwave leg of the ARRL EME Contest – The Nov team consisted of K1JT, K2TXB, K2BMI and K2UYH operating using K2UYH's 28' dish. We had a good time on 13 cm the first night and were on 13 cm for the entire Moon pass. We made 29 QSOs with SV1BTR (O/559), SP6OPN (549/559), ES5PC (569/569), OK1IR (559/559), SV3AAF (549/559), OK1CA (569/569), F2TU (569/569), W5LUA (559/569), DL4MEA (569/569) XB, G3LTF (569/579) XB, PA0BAT (549/559) XB, SD3F (559/559), WD5AGO (549/339), VE6TA (549/569), NA4N (549/559), K5GW (549/559), W7JM (579/559) WA6PY (559/569), K8EB (549/559), PY2BS (549/559), OH2DG (549/559), HB9Q (589/569), SP6GWM (559/559), W9IIX (5349/559), OE9ERC (559/559), IK2RTI (559/579), WA8RJF (549/559), LA9NEA (569/569) and G4CCH (569/569). Our only disappointment was no JAs. We called for several hours before giving up with the dish well into the trees (at ~ 30 degs el). We were still hearing our echoes on 2304 while listen on the JA band when we gave up. Before going to sleep, we switched feeds to 3 cm and checked Sun noise. It was about 12.5 dB, which is not bad for an old 28' dish at best rated for C-band. The next day unfortunately was not as good as the first. We started on 10 GHz and Murphy struck. Our preamp blew on the first echo test. We tried running with the transverter barefoot, but only received weak echoes and did not hear anyone else. I suspect we were too hasty, but we decided to switch to 9 cm. This was the first time we ever tried the 9 cm equipment. We could not see any ground to cold sky noise. Something was wrong with our preamp even though it appeared to be working (produced lots of noise). We again ran with the transverter barefoot, but now found reasonable echoes and quickly made 7 QSOs with G3LTF (559/569), OZ6OL (449/559), DL4MEA (O/559), W5LUA (O/O), OH2DG (O/O), PA0BAT (O/O) and VE6TA (O/O). We continued calling CQ for a couple of hours, but appeared to have worked out the band. We decided to try 3 cm again. After making the feed/system switch, we found that we could now not see ground noise on 10 GHz. I am not sure what went wrong - it may have been simply a mistake with our noise measurement software setting (SDR-IQ) – it was the middle of the night, hi. We decided to try 13 cm again, by then it was very near the end of the EU window, but were unable to find any new stations. We heard VE4MA, but not get his attention. We finally switched back to 9 cm for a prearranged sked with VK3NX. The Moon was heavily blocked by trees at the sked time and nil was heard either way. In Dec we will be back on the lower bands.

K1RQG: Joe k1rqg@aol.com reports on his recent EME operation -- I was on 23 cm on 31 Oct/1 Nov and worked a new one from Sweden, SM6CSO. I also worked LA9NEA and heard N4PZ, W4OP, K5JL, N0OY, VE3KRP and more. On 7 Nov also on 23 cm I added N0OY, JR4AEP, K5AZU and JA6XED (who is now using 8 m dish and 500 W).

K7XQ: Jeff k7xq@secure.elite.net was only QRV during the microwave contest on 8 Nov for about three hours – I worked on 13 cm 7 stations: SV1BTR for an initial (#), ES5PC, OZ4MM, PI9CAM (#) crossband, OK1CA, WA6PY (#) and F2TU. CWNR were WD5AGO, SP6OPN, PY2BS and W7JM. It was nice to work a few new stations. I will leave the 13 cm feed in my dish in case anyone wants to try in the following weeks. The 2304 EME station here is a 3 m dish and 180 W.

K8EB: Erv mrdxcc@sbcglobal.net (EN73cb) was on 13 cm in Nov – In the MW contest I worked the following: SV1BTR, F2TU, W5LUA, OK1CA, G3LTF, K1JT, VE6TA, OH2DG, SP6OPN, NA4N, WD5AGO, K5GW, SD3F, ES5PC, PY5BS, PI9CAM, LZ1DX, G4CCH, WA8RJF and OK1KIR. 2300 is new for me. The system still needs lots of work and I have lots to learn. I am also working on getting on 9 cm.

KL6M: Mike melum@alaska.net is sorry he missed the fun in Nov -- I am presently not QRV on 13 cm (and up). I bit off too big a chunk with my consulting business. It is keeping me way too busy. I was hoping to be QRV 23 cm in Dec, but my wife is dragging me off to Fiji for three weeks this month. I probably won't have time to get ready. If not I will be back on 70 cm. In the first leg, I worked 33 even though during the first pass I had to shut down because of high winds. I added 3 new ones: ES5PC (549/559), F6HLC (O/O) and W0DRL (O/O) to bring me to #204. W0DRL was on sked not in the contest. Al was great copy (539). I'm going to try hard to be ready for 13 cm and 23 cm for the DUBUS contests.

LA9NEA: Viggo la9nea@online.no was QRV on both 23 and 13 cm in Nov. He was on 23 cm during the pre-contest weekend and QSO'd IW2FZR (559/559), YO8BCF (17DB) on JT65c, PE1HNG (20DB) on JT65c, SM6CSO (549/439), K1RQG (569/589) and N4PZ (559/439). He was on 13 cm for the contest and QSO'd OK1CA (579/579), SV1BTR (559/549), SP6OPN (559/339), LZ1DX (549/559), DL4MEA (559/569), G3LTF (569/559), PI9CAM (579/559), HB9Q (579/559), F6KUG (549/539), OK1KIR (O/O), WD5AGO (549/339), K5GW (569/559), K1JT (569/569), PI9CAM (55/52) on SSB, OZ4MM (559/559), DL3EBJ (449/559), PY2BS (549/549), ES5PC (569/559), SM2CEW (569/569), RK3WWF (549/549), DF3RU (559/539), WA6PY (559/559), G4CCH (559/559) and F2TU (569/559). Being able to now listen on the USA band was a great help. Viggo says condx seems up and down, maybe due to the bad WX in LA. He had lots of fun during his first 13 cm ARRL contest and found plenty of activity. In the future he will add an RX converter for the JA segment and use his IC 7000 for the VK band.

N4PZ: Steve w9oji@yahoo.com has a new e-mail address – please note. He is now QRV on 1296 using a 10' dish and 1500 W, and plans to be on with a 16' dish soon. Steve is seeing 10-11 dB of sun noise. He QSO'd on 1296 during the pre-contest weekend LA9NEA, N0OY, K5JL, K5SO (589), G4CCH (579), W4OP (569) – twice during weekend, K2UYH (569) and LZ1DX (439) and heard a DJ9?. The next weekend he added DJ9YW. Steve is now at initial #23.

NC1I: Frank eme@nc1i.com after no activity from March until Oct is QRV on 70 cm again – I hooked everything back up again just before the first weekend of the ARRL EME Contest. Everything seems to be working fine, however last weekend I decided to do some maintenance. The preamp box had not been off the tower in 16 years so I pulled it down and have replaced all the connectors, adapters and jumpers. I also checked the contacts on the HF400 relay. The relay still looked like brand new so that was fine. The preamp was replaced in 2003 but I will check that on the NF meter, and if all is OK the box will go back up before the next AW. I am also going to remove the three power dividers and clean them out. I'm not sure if any of this will make a difference but after so many years it probably makes sense to do. The first weekend of the contest I worked DL7APV, UA6LGH and DF3RU just after my moon rise. I was not feeling well so after 30 minutes of activity I shut everything off. On 8 Nov I added UA3PTW, W8TXT, SM6FHZ, I1NDP and DK3WG all with very good signals. I will try and spend some time on during the final leg; however, we will also be participating in the ARRL 160 contest the same weekend.

OH2DG: Eino eino.metsamaki@sulo.fi reports on his Nov MW activity -- The MW contest this year was full of surprises. The positive thing was that the wind conditions were good, the antenna stayed aligned, and microwave feed changes could be completed without special clothing. The other positive thing was that I made my first contest QSOs on the 9 cm band. I have some problems and had to repair a coaxial cable short circuit in the middle of night - lost about two hours, and also my tracking program gave me some headaches. My main FT736R also had PLL problems. It will not hold frequency in cold condition. It steps up and down a few kHz. Does anyone know a solution to this problem? On 9 cm I have a RA3AQ feed and 4 Ionica amplifiers in parallel to give an output of about 40 W and a DB6NT transverter. During the first night I was on 13 cm and scored 26x21. Activity was good and I added 9 new stations: SV1BTR, SP6OPN, LZ1DX, PY2BS, K1JT [same K2UYH], K8EB, F5KUG, PI9CAM and RK3WWF to bring me to initial #57. Before the contest I worked my first QSOs on 9 cm on 31 Oct with LX1DB (569/569) #1 on sked, followed by OZ6OL (549/549) #2 on random and G3LTF (569/569) #3 on sked, and on 4 Nov OK1KIR (559/559) #4 on sked and DL4MEA (549/549) on random. During the contest second night, I worked on 3400 9x8 QSOs. Initials were OK1CA, W5LUA, K5GW, PA0BAT, K1JT and VK3NX to bring me to #11. There was one station I hear could not indentify. I am ready 9 cm skeds at any the time.

OK1CA: Franta strihavka@upcmail.cz was QRV in ARRL EME Contest MW part on four bands -- I was not able to be QRV for all the contest time. I had a conflict with my work. My score on 13 cm is 43x31. Initials were SV1BTR, SP6OPN, F5KUG, PI9CAM, W7JM, DL3EBJ, PA3DZL, VK2JDS and VK2DAG to bring me to #85. I worked on 9 cm 7 QSOs including an initial with OH2DG #23 and on 6 cm only 3 QSOs but two initials with OE9ERC and PA0EHG to bring me to #15. I worked on 3 cm 4 QSOs including an initial with ON5TA #36 and I heard JA6CZD on 10450 (559) but repeatedly CWNR. The weather was good, but I think the date of the microwave part ARRL EME Contest is better for EU stations in Sept.

OK1KIR: Vladimir vladimir.masek@volny.cz sends the Nov ARRL EME Contest report for his team consisting of OK1DAI, OK1DAK and OK1VAO –- On 2300 before the contest start on 6 Nov we QSO'd at 2346 PI9CAM (559/539) for initial #89 and during the contest on 7 Nov at 0001 HB9Q (579/579), then time break repairing azimuth steering, 0109 SV1BTR (559/559) #90, 0125 PI9CAM (57/56) on SSB, 0139 ES5PC (569/569), 0136 OK1CA (579/579), 0141 G3LTF (569/579), 0146 LZ1DX (O/559), 0155 OH2DG (559/569), 0202 SP6OPN (569/569) #91, 0210 SV3AAF (549/559), 0216 SP6GWN (549/559), 0224 F5KUG (549/O) #92, 0310 F2TU (579/579), 0335 IK2RTI (559/569), 0351 K1JT (559/559), 0402 DL4MEA (569/569), 0417 OE9ERC (579/579), 0427 PY2BS (549/559), 0508 NA4N (549/559), 0518 W7JM [W7BBM] (559/559), 0532 VE6TA (559/559), 0542 SD3F (559/559), 0559 W5LUA (569/569), 0646 PA0BAT (559/559), 0705 WD5AGO (559/559), 0716 WA6PY (559/569), 0755 HB9Q (579/559), 0853 LA9NEA (O/O) #93, 0906 DL3EBJ (O/559) #94 and 0922 K5GW (569/569), and on 8 Nov at 0229 RK3WWF (549/559) #95 and 2345 VK2JDS (M/O) #96. On 3400 we worked on Wednesday 4 Nov at 1853 DL4MEA (549/549), 1903 OH2DG (559/559) for initial #26 and first OH–OK QSO on 9 cm, and during contest on 8 Nov at 0359 DL4MEA (549/549), 0407 PI9CAM (579/559) #27, 0413 G3LTF (559/559), 0513 OK1CA (559/579), 0527 K5GW (579/559) and 0539 W5LUA (579/579). On 5760 we contacted in the contest on 7 Nov at 2018 VK3NX (O/539), 2036 ES5PC (O/O), 2048 F2TU (549/559), 2146 PI9CAM (569/539) for initial #35, on 8 Nov at 0631 OE9ERC (579/559), 0725 PI9CAM (579/559) dup, 0737 W5LUA (569/569), 0809 PA0EHG (O/O), 2138 JA4BLC (549/549), 2150 JA6CZD (O/549) and 2203 JA8ERE (O/O) #36 and QN field, and after the contest in sked on 10 Nov at 0852 SV3AAF (549/549) #37, KM field and the 1st SV – OK on 6 cm QSO. On 10 GHz we worked before the contest on 6 Nov on 10,450 (RX/TX) at 2034 JA4BLC (O/549) for initial #49, during contest on 7 Nov at 2249 HB9BHU (559/559), 2304 JA4BLC (O/O), 2334 JA6CZD (539/549) both RX/TX on 10,450, 2350 ON5TA (549/559) and 2358 OK1CA (549/579), on 8 Nov at 0013 RK3WWF (539/539), 0902 F2TU (559/559), 0910 W5LUA (569/569), 0914 WA7CJO (579/579) and 0918 WA6PY (559/569), and after the contest on 10 Nov at 0703 SP7JSG (O/539) on random and in sked at 0808 OZ1FF (M/O) for initial #50 and DXCC 21. During ARRL MW Contest we tried to make QSOs as much as possible on each MW band regardless of the overall contest result. That resulted in many changeovers of the complete equipment in the dish focus and on the table in our small shelter – see www.ok1kir.cz for more details). Just on Sunday we completed the change 7 times with each consuming at least ½ hour of hard physical work, hi.

ON5TA: Eric fb812248@skynet.be was active on 10 GHz during the ARRL EME MW Contest but had problems -- Bad weather made keeping the dish to the Moon sometimes very difficult if not impossible for hours during the contest. Despite this problem, I worked the following stations in random: F5JWF, W5LUA, HB9BHU for an initial (#), IQ4DF, WA7CJO, WA6PY, DL0SHF (#), F2TU, ES5PC, OK1CA (#), OK1KIR and RK3WWF (#) and a new DXCC. RK3WWF was good copy here with his 2 m dish and is the smallest station I have worked so far. Also on 5 Nov I was very pleased to contact VK3NX on 3 cm for another initial and new DXCC. My station is 2.3 m offset dish with about 35 W at the feed.

OZ1FF: Kjeld oz1ff@mail.dk is a new station (JO45bo) on 3 cm EME -- After collecting parts for some years for a 10 GHz EME setup, on 3 Nov I copied my own echoes for the first time. I could not be QRV during the contest weekend on 7/8 Nov but was QRV on 10 Nov. I succeeded in making my first two QSOs via the Moon with OK1KIR (M/O) and W5LUA (O/O). My equipment is 1.8 m Prodelin offset dish with a modified Ku band feed, 0.8 dB NF LNA direct at feed, 17 W SSPA delivering about 15 W at feed, DB6NT MKU10G3 transverter locked to a 10 MHz GPS-disciplined OCXO. Tracking of the moon is manual by monitoring moon noise 0.8 – 1.3 dB. I'm looking forward for many new contacts in the future.

OZ1FF's 1.8 m dish used successfully on 10 GHz

PA3DZL: Jan pa3dzl@planet.nl was surprised by what you can do on 13 cm EME with a small station -- After not having much luck on 13 cm in the past, I worked on my system before the contest. I retuned my VE4MA feed, the polarizer was not working well and put the feed in a better focus position. I replaced my old preamp with a new G4DDK 0.4 dB and 26 dB gain LNA and upgraded my TX power with a 250 W SSPA in the shack (~ 175 W at the feed). My dish is 2.5 m with a 0.38 f/d. I worked on 13 cm: HB9Q, F2TU, G4CCH, PI9CAM on CW and SSB, SV1BTR, SP6OPN, OZ4MM, ES5PC, PY2BS, OK1CA and WD5AGO for my first USA QSO (crossband 2320/2304). Heard were DF3RU, OE9ERC, DL4MEA and WA6PY. Unfortunately I could not be QRV all the time (only 7 hours) but I was very excited to hear so many signals and also so many strong signals!

PI9CAM: Jan, PA3FXB jvmmap@bart.nl tells the story of the Dwingeloo dish's first microwave EME weekend -- Wow, what a weekend! It was a lot of work to get the dish on 13, 9 and 6 cm. Feedhorns for 13, 9 and 6 cm and a SSPA for 6 cm were kindly made available to us by ON7UN and ON4BCB. The rest of the equipment originated from a lot of different sources - TNX! PA3CEG constructed one working station from all the different components and with PA0PLY installed everything in the focus box on Friday. They completed just before the contest start at midnight. We were rewarded with very strong echoes on 13 cm. On 9 and 6 cm we found not so strong echoes. Also moon tracking on these bands is much more complicated. Our theoretical beamwidths are on 13 cm 0.36 degs, on 9 cm 0.24 degs and on 6 cm 0.15 degs. All are smaller than the

Moon itself. We learned that it is pretty difficult to find the spot with the best echoes. Our focus box now carries 6 antenna systems: 2 m, 70 cm, 23 cm, 13 cm, 9 cm and 6 cm. As you can imagine, not all antennas can be on the same place. So for 13, 9 and 6 cm, we had to offset point the dish a little bit. We had hoped to find the best offset point for every frequency and simply tell the software to adjust. But we soon learned these offsets were not constant. Especially on 6 cm, where we often completely lost our echoes and only after some trial and error "shooting" were able to find our echoes again. Sometimes the difference was more than 0.5 degrees away from the last offset position. This cannot be right, so we need to review our tracking system in the future. We did manage after every band change to find our echoes again. It sometimes took a long period of echo testing, but it all worked! We had hoped to be able to listen on all four worldwide 13 cm band segments, but the receiver we had to do the job did not work properly. Fortunately after some clever thinking by PE1NUT, we were able using an extra TS2000 to convert the 2304 to 21.4 MHz. This solution could have been used for the JA band also, but we discovered it to late. It was very useful on the USA window! Our result was 43 QSOs on 13 cm (including some dups). Many of those QSOs were on SSB, which was fun! On 9 cm we had 8 QSOs and on 6 cm 6 QSOs. We were pleased to make the first SV-PA QSO on 6 cm with SV3AAF! PI9CAM now holds 6 firsts. After moonset on Sunday, PA3CEG and PA3FXB immediately dismantled the focus box. Only the feedhorns and RX on 6 cm were left in. These will be used for some radio astronomy measurements. We do not know when we will be back on 13, 9 and 6, but this sure was a great way to get our feet wet on those bands! More information and audio files are available at www.camras.nl. Our team consisted of ON7UN, ON4BCB, PA3CEG, PA0PLY, PE1NUT, PA3HHE, PC4M, PA2V and PA3FXB. Thanks everyone for the nice QSOs! We had a great time!

ON7UN and ON4BCB at PI9CAM during the MW weekend

PY2BS: Bruce bruce@zirok.net writes on his Nov activity -- I worked 29 stations on 13 cm during the ARRL EME contest. All were on CW except where noted: SV1BTR, OK1CA, SP6OPN, HB9Q, OH2DG, DL4MEA, ES5PC, F2TU, OK1KIR, LZ1DX, PI9CAM on CW and SSB, W5LUA, G3LTF, K1JT, PA0BAT, WA6PY, VE6TA, OE9ERC, SD3F, DF3RU, K8EB, W7JM, OZ4MM, IW2FZR and LA9NEA.

SM2CEW: Peter sm2cew@telia.com reports a great EME weekend during the ARRL MW EME Contest in Nov despite very uncooperative weather with heavy snowfall all weekend -- I Was listening on Saturday evening when the moon was still in the trees and heard a lot of stations. As the WX was so poor I decided to go QRT and get up early Sunday morning instead. After calibrating my dish position I had fair echoes and worked the following stations: OZ4MM, LZ1DX, SV1BTR, RK3WWF for an initial (#), LA9NEA (#), PY2BS (#) DXCC and new continent, F2TU, ES5PC, DL3EBJ (#), PI9CAM (#), DF3RU, WD5AGO, WA6PY, OK1CA, G3LTF and W5LUA. I had no equipment trouble this time despite having all the gear out in the winter weather. I have the equipment very well protected in the dish feed now. I have received a W6PQL 23 cm MOSFET amp. It is a very nice kit that I will assemble and put to work as a driver for my YL1050 PA ASAP.

SV1BTR: Jimmy's jimmyv@hol.gr microwave contest weekend report -- I had a most enjoyable and challenging time operating on 13 cm for 1st time ever during the microwave moonbounce ARRL contest leg. Unfortunately in SV, we do not yet have the 9 cm allocation and if we get it, I certainly will be QRV when/if this day comes. I was QRV for 11 hours less (Moon clearance and sleep). I am glad to outscore by far in each leg my personal highest total ever and for this I am indebted to all friends. On 13 cm I worked 43 fine stations, all on CW random. They were OK1CA, SP6OPN, SV3AAF, DF9QX, OH2DG, G3LTF, LZ1DX, PA0BAT, ES5PC, IK2RTI, OK1KIR, SD3F, SP6GWN, F5KUG, PY2BS, HB9Q, OE9ERC, DL4MEA, K1JT, F2TU, K8EB, W5LUA, PI9CAM, NA4N, VE6TA, WD5AGO, W9IIX, K5GW, DL3EBJ, LA9NEA, G4CCH, OZ4MM, DF3RU, RK3WWF, IW2FZR, JA8IAD, JA8ERE, PA3DZL, SM2CEW, W7JM, WA6PY, VE4MA and K7XQ. CWNR and chased for hours was WA8RJF. I will decide on adding 6 cm and 3 cm (for the latter I already have a 45 W PA) in the future for use with my existing 4.9 m dish. QRL abroad permitting, next summer I plan to put up 2 bigger dishes – work is already in progress.

SV3AAF: Petros sv3aaf@yahoo.com was active during the microwave section of ARRL EME Contest on 13 and 6 cm -- This was the first time I operated on 6 and rushed to have the system operational in time for the contest. WX conditions were bad during the second day and I only got the chance to operate on 6 cm for 1.5 hours. Stations worked on 13 cm were SV1BTR (559/539), OK1CA (569/559), ES5PC (569/559), LZ1DX (549/559), OH2DG (549/559), SP6OPN (569/559), PA0BAT (449/559), G3LTF (579/569), OK1KIR (559/549), SD3F (559/559), DL4MEA (559/559), F2TU (579/569), K1JT (559/549), W5LUA (569/569), PI9CAM (589/579) and (56/52) on SSB, VE6TA (559/549), HB9Q (569/559), K5GW (549/559), DF3RU (559/549), OZ4MM (559/559), F5KUG (549/539), G4CCH (559/569) and RK3WWF(549/539). Stations worked on 6 cm were F2TU (549/549), PI9CAM (559/559), W5LUA (569/559) and OE9ERC (569/559). Outside of the contest I worked OK1KIR (549/549). Of course all these QSOs were firsts on 6 cm between SV and the corresponding countries. I plan to be active again in Dec.

UA3PTW: Dmitrij ua3ptw@inbox.ru reports recent 70 cm QSOs on CW with OH0/DL1YMK and on JT65b with ZS5Y, G6HKS, GM6VXB and F6FHP. On 1296 he worked on CW LA9NEA, JA6AHB, SP6JLW, G3LTF, OH0/DL1YKM, SV1BTR, K5JL, DL0SHF, RA3AQ, HB9BBD, IK2MMB, SD3F, VK3UM, OH2DG, IZ1BPN, HB9MOON, HB9Q, SV3AAF, RD3YA, K2DH, N0OY, SM6FHZ, VE6TA, W6YX and PI9CAM, and on JT65c W3HMS, PA0BAT, YO8BCF and K1JT.

VE3KRP: Eddie eddie@tbaytel.net was QRV on 23 cm on 31 Oct and heard a few, but no QSOs, and on 1 Nov worked K5GW and chased LZ1DX with no luck. He also heard K2UYH and N4PZ. He will be looking more QSOs in Dec during the contest.

VE4MA: Barry ve4ma@shaw.ca writes that he had good intentions to get on 4 or 5 bands for the microwave contest -- Unfortunately it did not work out the way and I had planned. I had to settle for just 13 cm on the second night. Signals were weak but my echoes were decent. After getting weak signal reports, I realized that I had my polarization wrong! On Sunday daytime local, I changed the polarity and ran a sked with PY2BS on Monday at 1200 with 549 signals each way. I was still able to work HB9Q for an initial (#), SV1BTR (#), F2TU, G4CCH (#), PI9CAM, OE9ERC and OK1CA during the contest. I am set up to transmit on 2320 but cannot operate split band (yet). I am presently running elliptical waveguide for 6 and 3 cm to my 2.4 m offset dish and hope to have multiband feed assemblies for fast band switchover. We are getting to the time of year for some 24 GHz activity. I am not sure if it will be in Dec or Jan. I will be on 23 cm in Dec for the contest.

New 4.6 m at PY2BS's QTH

VE6TA: Grant ve6ta@clearwave.ca was active during the Nov microwave weekend -- I found conditions good with a fair amount of activity on 13 cm and reasonable activity on 9 cm. I worked the following stations on 13 cm: F2TU, OK1CA, SP6OPN, PA0BAT, PI9CAM on SSB and CW, W5LUA, SD3F, OK1KIR, K1JT, SV1BTR, SV3AAF, DL4MEA, G3LQR, NA4N, K8EB, WA6PY, WD5AGO, HB9Q, OH2DG, PY2BS, K5GW, G3LTF and G4CCH. I then switched feeds to 9 cm for the second pass and worked K5GW, G3LTF, DL4MEA, K1JT, OH2DG, PI9CAM and VK3NX.

W3HMS: John W3HMS@aol.com is now using a new Super VE4MA Scalar Ring feed on his 3 m 0.36 f/d dish – With the new horn I saw about 0.6 dB sun noise improvement with no adjustments. Optimization may need to wait until spring. During the Nov pre-contest weekend I was delighted to work K2UYH on CW and VK2JDS, G4CBW, PA3FXB, LZ1DX, and YO8BCF on JT65C.

W8TXT: Mike <no e-mail> was on 70 cm EME during the Nov AW and worked NC1I and UA3PTW. He also heard and CWNR I1NDP. Mike plans to be QRV for the Dec weekend weather permitting.

W8WA: Lee w8wa@torchlake.com is coming back on 70 cm EME -- After getting 28' dish mounting plans blocked by the local town board, I subsequently sold the dish and had the wind got kicked out of my sails for 432 EME. But after moving the old framework I had for my 16 yagi array, a flame is starting to rekindle. I still have my old amp, driver, and transverter, etc., which I am sure are pretty much all out of date, but still usable. I also have about 5 pre-amps that I competed with at the Dayton noise figure contests years ago. All did quite well with NFs below 0.5 dB. I am thinking of starting with 4 x M2 432-9WL yagis, unless anyone has suggestions for something better. [Longer is better]!

WA6PY: Paul pchominski@maxlinear.com reports on his Nov contest operation --Prior to the contest weekend, I did not hear JA6CZD and JA4BLC on 3 cm. I double checked the performance of my RX system at 10.45 GHz to assure it was OK. During the contest I was active on 13 and 3 cm, but only during my eastern window. On 13 cm I QSO'd DL4MEA, ES5PC, F2TU, G3LTF, G4CCH, HB9Q, K1JT, K5GW, K7XQ, LA9NEA, NA4N, OH2DG, OK1CA, OK1KIR, OZ4MM, PI9CAM, PY2BS, SD3F, SM2CEW, SP6OPN, SV1BTR, VE6TA, W5LUA, W9IIX, WA8RJF and WD5AGO. Conditions were very good and signals strong with low libration. On 3 cm I QSO'd DL0SHF, ES5PC, F2TU, F5JWF, HB9BHU, IQ4DF, OK1KIR, ON5TA, RK3WWF and WA7CJO.

WA8RJF: Tony's TEmanuele@kentdisplays.com Nov contest report -- My disappointing results during first weekend of the EME Contest on 23 cm, only four QSOs with one initial, were offset by my results on 13 cm during the Microwave weekend. Stations worked were W5LUA, F2TU, G3LTF, DL4MEA for an initial (#), K1JT, WA6PY (#), PI9CAM (#), W7JM (#), WD5AGO, OZ4MM, OK1CA and K5GW (#). CWNR were SV1VTR, HB9Q, ES5PC and a few others. On Monday after the contest I worked K8EB (#), G4CCH (#) and PY2BS (#) for a total of 15 QSOs and 8 initials. I now have worked more DXCC entities on 13 cm than 23 cm - who would have thought. Hope to make an improvement or two on 23 cm before the Dec weekend.

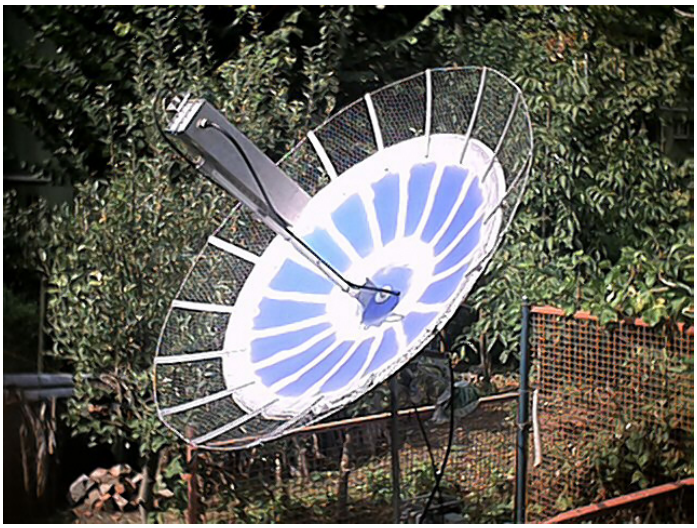
WD5AGO: Tommy wd5ago@hotmail.com writes that 13 cm in Nov was reminded him of 23 cm EME in the 90s – 13 cm proved to be busy as during the contest -- Forget about finding a few stragglers on Sunday, it was almost as busy as on Saturday! I made over 30 QSOs and heard 41 stations. And this with 4 hours spent helping out those on 6 cm. I worked 5 and heard another 5 on 6 cm. The station on 13 cm is 3.1 m dish with 0.3 NF LNA and a 225 W SSPA just for this time – normally I run 180 W. On 6 cm I had a 0.7 NF LNA and a 40 W SSPA. We will keep the 6 cm system in for Dec to work those we may have missed. We will be available for EU on the 2nd, 3rd and 4th. On the 5th we will be operating remote on 70 cm in contest (1st pass only) then back home on the 6th. We are thus open for 6 cm skeds on the 6th. We have JA skeds on 6 cm during those dates. On 6 cm we have 35 W at the feed (up 2 dB), 0.7 dB NF LNA (0.3 dB better) and are getting 11.2 dB of Sun and 0.5 dB of Moon noise with our 3.1 m dish. After 6 cm we will take down the system for the winter and go back to either 13 or 9 cm.

YO2IS: Szigy szigy@upcmail.ro has refurbished his 1296 dish -- I painted it with some anticorrosive Al-Zn spray and covered it with auto-adhesive Aluminum foil. I also have a new 'one piece' 23 cm feedhorn. I had bad luck in the first leg of the ARRL EME contest. I was distracted by DL0SHF's strong signal and over-drove my elevation system breaking the gear shaft... and all was over! I also heard strong signals from HB, F2TU, etc. before the disaster. I have repaired the rotator, and built a more safe (manual command) drive unit. Right now the WX is wet and rainy. I will try to be on for the second leg on 70 cm and stay indoors. Let's hope Murphy will not strike again. It will be my 20th ARRL EME Contest in row.

K2UYH: I a.katz@ieee.org have very little to report beyond my MW contest activity with K1JT reported earlier in this NL. I was QRV during pre-contest weekend on 1296 and QSO'd on 2 Nov at 0108 N4PZ (569/439) for CW initial #302 and mixed initial #362*, 0142 LZ1DX (569/579) and 0225 W3HMS (O/O), but later for unknown causes I could not decode his JT65c signal even though he was quite strong. I will be operating on 70 and 23 cm using the K1JT call during the Dec AW.

NETNEWS BY G4RGK: **W5LUA** worked during the Nov microwave contest weekend on 13 cm 29, on 3400 7, on 5760 8 and on 10 GHz 6. None on 24 GHz but Al was QRV. **SM4IVE** has his big dish up – see pictures at end of NL! Lars still has some mechanical work to do and is not sure he can make it on for the Dec weekend. **JA8ERE** was active in Nov on 6 cm and worked W5LUA, WD5AGO and OK1KIR and heard JA6CZD, JA4BLC and F2TU. He was also QRV on 13 cm and worked WD5AGO, SV1BTR, OK1CA and F2TU. **JA8IAD** QSO'd in Nov on 13 cm WD5AGO, SP6OPN, ES5PC, OE9ERC and SV1BTR. **WA5WCP** tried to get on 23 cm during the contest but amplifier problems. Hopefully he will make it Dec. **WB7QBS** is looking for 432 skeds. **VE4SA** will be active in Dec for the contest on 23 cm. **WW2R** worked for K8EB on 23 cm for initial #100. He was not active during the Nov contest as he was in UK for the Microwave Roundtable. **RW3WR** worked on 432 HB9Q, K2UYH, K1JT and PI9CAM using JT65b in Oct. **UA3MBJ** added on 1296 PI9CAM on JT65c. **UA4AQL** worked in Oct on 432 using JT65B initials with K3MF and K1JT. **RW6AG** recently QSO'd on 1296 CW SV1BTR, HB0MOON, HB9BBD, HB9Q, UT5JCW, RA3AQ, SP6LJW, DL0SHF, G3LTF, K5JL, LZ1DX, PI9CAM, DF3RU and OZ4MM. **UA9UHN** worked on 23 cm using JT65c VK2JDS, G3RGK, OK1DFC, HB9HAL, UA3PTW, VK2JNA/p, DF3RU and ES5PC. **DK3WG** added on 432 using JT65b initials with W7MEM and YL2OK to bring him to mixed #482*. **LX1DB** before the microwave contest worked on 9 cm OH2DG (569) and OZ6OL (559), but missed SV3AAF on 6 cm. Bad WX forced Willie off the air during the contest. **N0OY** during Nov on 1296 worked K1RQG and K5AZU. Pete is now running a 500 W SSPA and is very happy. **K0YW** is back on the Moon on 23 cm EME and worked K1RQG (CW and SSB), N4PZ and W7JM on SSB in Nov. Bruce's system is working FB now with 400 W out. **W7MEM** worked UT6UG ON 70 cm JT in Nov. **K0RZ** plans to be on the Moon on 432 EME for Dec weekend. **WA7CJO** was on 3 cm for the microwave contest and worked 8 stations. **W9IIX** was on 13 cm for the microwave contest and worked 14 stations but missed five or six. He will be on 23 cm in Dec. His SDR-IQ is working well. **WA9FWD** was on 3400 on Saturday 7 Nov and CWNR OK1KIR and OH2DG. John also heard K5GW and W5LUA. He now have 4 x 150 W W6PQL PA boards for combining, but is not sure if he can have them together for 23 cm EME during the Dec weekend. **WA3QPX** is getting on 70 cm EME with M2 9wl yagis. **SM7WSJ** is working to get QRV back on EME 23 cm in spring. **K2DH** will be on 23 cm in Dec and will try 13 cm after the contest. **8J1AXA** expects to be QRV on 23 and 6 cm in a few months.

FOR SALE: **WD5AGO** is building up about 4 extra CP feeds for the 13, 9 and 6 cm bands. Scalar rings are not planed to be on them, but he can build them at an extra cost. Tommy will also have available in Jan, a 2 stage 6 cm LNA (0.7 to 0.8 NF with 24 dB gain) along with the 23, 13, and 9 cm LNAs that he currently have available. **W7MEM** is still looking for a 23 cm feed. **K7XQ** is looking for a 16' or 18' dish. **SM4IVE** is looking for an HF-400 relay with N connectors.



YO2IS's refurbished 23 cm dish

TECHNICAL BY K2UYH: I have to say something about using the SDR-IQ for measuring noise. I am extremely pleased with its performance. I have been using my SDR-IQ for more than a year to monitor for signals over a 100 kHz span, but until recently I did not appreciate how useful it can be for making noise measurements. I have had a problem getting accurate Sun noise measurements, mainly because of compression in my RX system. (Yes, by using an adjustable attenuator after my preamps I can get a reasonably accurate measurement. But using an attenuator is not always that convenient). Seeing Moon noise seemed impossible with my VU meter. There was just too much variation. The secret to precise noise measurement is bandwidth (BW). (BW is why many stations use the old 28 MHz GR IF units for noise measurements). The SDR-IQ can also give you wide BW. This BW is not scan range, but RF (filter) BW. To get the widest BW, you need to put the SDR-IQ in the DSB demodulation mode. In DSB, the filter BW can be set up to 24 kHz. You want to make the BW as wide as possible, as the noise will average more quickly. (The situation can be compared to tossing one coin or 100 coins to determine the average between heads and tails). Next you want to use the "continuum" display rather than the "combo" display that most use to display the spectrum. The "continuum" display produces a line indicating the noise level that moves across the screen from right to left over time. The rate of motion can be partially controlled by changing the "skip N up-dates" under the general setup. The display speed is pretty good for seeing noise change without making any change. To see Sun noise, set the dB scale to 1 or 2 dB/division depending on your antenna's gain (5 for big guns), and then slowly move your antenna across the Sun. The pattern of your antenna will be clearly shown by the horizontal trace produced by the SDR-IQ. (After you make a scale change use the "auto level" button to find your trace). For small noise changes, you want to increase the FFT averaging. The higher the value, the slower will be the response to a change. A value of 20 seems to work well to see 0.1 dB changes. (Smoothing does not seem to have any effect). Set the scale to 0.2 dB/division or there abouts. Using the SDR-IQ in this way, you can immediately tell if your receiver performance has changed by the way the noise level changes as you move your antenna. On 1296, I see a little over 0.4 dB of Moon noise. You can look at the Milkyway – big change in nose or the radio astronomy sources as Cassiopeia, about 0.35 dB at my QTH. You also get a feel for how deadly objects are to reception. A single tree with no leaves still increases my noise floor by more than 3 dB! Once you start using the SDR-IQ for noise measurements, you will wonder how you did without it.

FINAL: Don't forget to make plans to be in Texas for the 14th EME Conference, EME2010 in Aug. W5LUA writes that he should have the conference Web page up very soon.

I had hoped to have the 2010 EME calendar from DL7APV in time for this issue of the NL. Hopefully I will have it for the Jan issue. There will probably be two AWs in Jan, one on the 2/3 and another 30/31 Jan weekends. There will be no EME contests (I know of) until the end of Feb (23 cm EME SSB Contest).

The ARI has announced the dates of their 2010 EME Contests. The "New Modes" (digital) EME Contest will be the weekend 22/23 May. The CW/SSB EME contest will be on 25/26 Sept.

W3HMS sends a correction to his article on AZ readout using a compass rose in the last NL. 24" is the maximum diameter rose available. The rose he is using is 8" dia.

RA3AQ has put descriptions/design details for dual mode horns with round waveguide septum at http://www.vhfdx.ru/faylyi/view-details/shemyi-i-opisaniya/ra3aq-round-septum-with-dual-mode-flare-horn-pdf. The feeds are designed for use with TVRO offset dishes on 23 to 3 cm. The output section design is bases on Skobelev's geometry, but is fully re-optimized as the original Skobelev paper covered aperture diameters from 2 WL and up.

HB9BBD recommends that those using the W6PQL 23 cm SSPA kit throw away the input trimmer and replace it by a good Murata 5 pf trimmer. Dominique has more suggestions on his web page.

The 32 m dish used by 8N1EME has been modified to be a microwave radio telescope by Ibaraki University. The site recently received an IEEE Milestone Award. JH1KRC, JM1GS, JH0TOG attended the ceremony and are seeking use of the dish for microwave EME in the future.

Please keep the activity and technical reports coming. I will be looking for all of you on 432 and 1296 during the Dec contest weekend. Happy Thanksgiving to those in the USA. 73 and GL in the contest to all, Al – K2UYH

SM4IVE's new 13 m dish going into place

Dish with feed pole and mounts in place

Lars putting the surface on the dish