

432 AND ABOVE EME NEWS NOVEMBER 2014 VOL 42 #10

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CONDITIONS: Reports this month are dominated by the ARRL's Microwave (MW) EME Contest weekend. Conditions were mixed with some complaints of difficult copy from librations – particularly on 13 cm. It was also generally agreed that the turnout was way down – again particularly on 13 cm. If anything activity was up on 3 cm. The top reported score on 13 cm was only 23x20 by OK1CA, (G3LTF also made 23 QSOs but had fewer multipliers), while OK1KIR made more QSOs on 3 cm and ended with a total of 27x13. On 6 cm DL7YC reports the best total with 18x13. OK1CA has the top score on 9 cm with 10x10 and also the overall best total microwave tally with 57x50. SP6JLW also did well with an overall total of 49x40. **The fun continues on 8/9 Nov with the second leg of the ARRL EME Contest for the 6 m through 23 cm bands.**

There are also a great many dxpeditions coming up! First is H80/ on 432 the weekend of 31 Oct to 2 Nov, and Z21EME on 23 cm 1/2 Nov and on 70 cm 3/4 Nov – see reports on both these dxpeditions in this newsletter (NL). On 15/18 Nov LX is being put on 432 JT by DH7FB and DF2ZC with 2 x 17 el DK7ZB yagis and 100 W. Then on 26 Nov to 8 Dec, the DL2NUD and DL4WO team will put Surinam on EME on 70, 23, 13 and 9 cm (also 2 m) using the callsigns PZ5UD and PZ5JW from locator GJ25. On 432 they will have a 38 el yagi, preamp and 350 W. On the higher bands they will use a 1.5 m dish with circular pol. The power on 1296 is 200 W, on 2320 is 350 W (RX on 2304.120 MHz on request) and on 3400 is 60 W... And there is more to come in 2015 including a Bodo dxpedition to JW in Feb!

2015 CONTEST DATES: The DUBUS/REF (EWW) EME CW Contest dates have set for 31 Jan/1 Feb for 70 cm (the 2 m contest will run the same weekend), 28 Feb/1 March for 13 cm, 28/29 March for 9 cm, 25/26 April for 23 cm, 16/17 for 3 cm and up, and 13/14 June for 6 cm. The 70 cm EME SSB Funtest will on the Sunday of the EWW CW EME Contest, 1 Feb. SSB contacts can be applied to both contests. [This was G3LTF's suggestion. Peter deserves all our thanks for his efforts in finalizing the EWW dates.] The 23 cm EME SSB Funtest will be on Sunday 22 Feb. I will be suggesting we make Saturday 21 Feb an experimental 13 cm EME Funtest.

DF3FI: Hubert hdj3fi@t-online.de is **QRV on 13 cm** and reports on his **ARRL's MW EME Contest** weekend – I was QRV from Sunday at 0400 to 0930 on 2320. Most of the time was spent testing my station, which has some improvements but also still has some problems. **I worked OK1KKD, OK1CA, G3LTF, DF3RU, HB9Q and PA3DZL for a score of 4x6.** I only QSO'd Europeans because in the direction of JA/VK my neighbors have high trees, and for the US frequency my PLL's oscillator did not work properly. I hope to have this problem solved soon. My antenna is a 2.8 m dish. The RF power is made by 2 Siemens SSPAs in parallel giving 420 W out. The feederline is about 10 m of 7/8" cellflex. I think there is about 320 W at feedhorn (on RA3AQ design). My preamp is from DB6NT. With this equipment, I received good reports and heard my echoes every time. What I have most to improve is my *EME ears* – so sorry to miss S53MM and some others.

DL0SHF - 3 CM EME BEACON: Per (DK7LJ) <per@per-dudek.de> reports that the beacon has been in operation continuously (on 10368.025) for more than 2 month, since it had a TWTA problem. He replaced the TWTA and the power is now 38 W at the feed. He reports that the beacon only runs high power when someone requests a special test. When high power is on, it will be announced on the Moon reflector. Per appreciates hearing from OMs that have first experienced 10 GHz EME by copying his beacon.

DL7YC: Manfred dl7yc@snaflu.de was active in the **MW EME Contest** -- The first part of the annual "big microwave battle" is gone and in reality it

wasn't a big thing. **Activity on 6 cm and 3 cm** was much lower than last year and the number of QSOs even was less than expected. Nevertheless I did manage **18 QSOs on 5760 and 12 QSOs on 10368** (both the contest days and a day before). Among these contacts were 10 EME initials on the bands and 9 new MW EME stations, 5 new DXCC and 3 first QSOs with DL! **On 6 cm I worked SM6CKU, PA7JB, OH0/DL1YMK for initial #56, DL-OH0 first and a new DXCC, G3LTF, SM6FHZ, JA1WQF, F2CT #57, SM6FHZ, OK1CA, TM8PB, WA6PY, JA4BLC, JA1WQF, JA6CZD, ES5PC, G3LTF, UA3PTW #58 and new DXCC, and ES5PC. On 3 cm, I QSO'd OH0/DL1YMK initial #40, first DL-OH0 QSO and new DXCC, YO2BCT #41, first DL-YO QSO, new DXCC, SM6CKU #42, SP6JLW, WA6PY, K1JT #43, YO3DDZ #44, OK1CA, OK1KIR, UA4HTS #45 and new DXCC, DL0EF and W6YX #46.** On 10 GHz I was heard by SM2CEW and probably from some others - sorry for all my QRZs! I heard SM2CEW marginally, but could not complete a QSO. This is something to improve for the next time. Thanks for all the interesting QSOs.

E3AXU: Benjamin bpaloma@telefonica.net reminds us that he remains active with a modest system on the MW EME bands -- I am QRV 10 GHz in JT4F mode with a 150 cm offset dish, 17 W TX and a kuhne WR-90 LNA. I presently have no window to west, but after the leaves drop from the trees, QSOs may again be possible in this direction. On 3 cm, I have logged OK1KIR, LX1DB, G3WDG, W5LUA, JA1WQF, UA4HTS and OZ1LPR.



DF3FI 2.8 m dish with 13 cm feed

G3LTF: Peter's g3lft@btinternet.com report for Oct -- I fired up the 6 cm system and worked on 9 Oct PA7JB, OH/DL1YMK for initial #52 and DXCC 25 and DL7YC. In the **ARRL MW contest, on 11 Oct, I stayed on 13 cm through the first night (with cat naps) and worked ON5RR, OK1KKD, UA3PTW, DF3RU, S53MM for initial #120, ES5PC, SV3AAF, SM3BYA, SM3BYA, WD5AGO XB (crossband), ON5TA, OH1LRY, SP6OPN, OZ4MM, PA3DZL and VE6TA.** During the following night I was back on 13 cm and worked PA3CQE, SP7DCS, K1JT XB, DJ3FI #121, IK6EIW, VE4MA, PI9CM and OK1CA. **I ended with 23x16 on 13 cm.** This is a long way down from previous years. I don't know where everyone was. Lots of usual calls were missing. I heard HB9Q on 2304 but never heard him on 2320 and he didn't respond to XB calls. The other CWNR

was K5GW. I changed to 6 cm at about 0700 on the first day and worked SM6FHZ, OK1CA, TM8PB, SP6GWN, K1JT, ES5PC, DL7YC, JA1WQF, SM6CKU, SM4DHN and SQ6OPG. CWRN was JA6CZD. I ended with 11x8. I went on 9 cm on Sunday morning at about 0700 and worked OH1LRY, HB9Q, SP6OPN, VE6TA, K1JT, OK1CA, S53MM for initial #53, PA0BAT and KL6M for a score of 9x9. I had a few "Murphy" visits and was lucky to spot a carbonized LDF5-50 connector before I connected the 2320 PA to it, but the worst was having the keyer stop sending dashes. I got out the old hand key, but then the knob fell off that onto the floor in the middle of a contact! Since the contest, I have been on 1296. On 18 Oct I worked OZ6OL, SP3XBO for initial #390, SM7FWZ, and SP4MPB #391 all on CW of course. Finally on 19 Oct I had a nice chat to I1NDP and I could copy K2BLA's JT signal at S4.

HB0 DXPEDITION: Carsten (DM1CG) and Frank (DL8YHR) will be putting Lichtenstein (JN47SD) back on 70 cm EME. It has been a long time since it was on 432. (They will also be on 6 and possibly 2 m, but no 23 cm). They will be QRV from 31 Oct through 2 Nov (first weekend in Nov). On 432, they will have 2 x 12 el XP DF7KF yagis and full legal power - TX CIR and RX both POL. [I guess, look for them on the HB9Q reflector.]

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp sends news on his recent activity -- I made a new 6 cm SSPA with 48 W out. I tested it off the Moon on 17 Sept with JA6CZD. Signals were (559/559) - better than my previous 25 W SSPA. I worked on 6 Oct OH0/DL1YMK (O/O) for #22 on 3 cm - TNX M&M for listening on 10450. I QSO'd on 5760 on 8 Oct UA3PTW (569/559) for initial #28 and ES5PC (569/569), and on 9 Oct JA1WQF (559/559), JA6CZD (569/559), OH0/DL1YMK (O/O) #29, SM6CKU (569/559) #30. In the ARRL MW Contest, I worked on 13 cm, on 11 Oct KL6M (569/559) and on 5760 SM6FHZ (569/559), SQ6OPG (549/559), JA1WQF (559/559), DL7YC (579/539), ES5PC (559/559), JA6CZD (559/559) and TM8PB 589/559, on 12 Oct on 13 cm K1JT (559/559), and on 3 cm OK1KIR (559/559) and OK1CA (559/569) XB. Heard on 10368 were SP6JLW, SP7JSG, PA0BAT, UA4HTS and OZ1LPR. A typhoon prevented my operation the last two hours on Sunday and I went QRT at 2200. During the contest I found my 3 m dish has a window to east at high Elevation, AZ 105-117 degs and EL > 50 degs; I could copy my echoes at normal strength on 5760. A W6 station should have a window for about 40 minutes.

JH1KRC: Mike jh1krc@syd.odn.ne.jp tried to be on 6 cm for the MW EME Contest -- As I had little time, I just reconnected my old 6 cm system for the contest. I was on the Moon on 11 Oct at about 2200 for about an hour near 5760.115; but heard no echoes, nor any other signals. Did anyone receive me? I used my 4.4 m dish with waveguide to the feedhorn. My TX has 200+ W output. As I have not operated on 6 cm for sometime perhaps some water had accumulated in the waveguide. Another possible problem may have been my pointing. It was very cloudy, so I could not visually check the Moon. We have had 3 typhoons this year, and antenna tracking calibration may have been changed. Unfortunately another typhoon is on its way! Wish me luck.

K1JT: Joe k1jt@arrl.net reports the first EME contest weekend -- All went reasonably. Operation was at K2UYH's QTH with me, K2UYH, K2BML and NE2U operating. K2TXB was also part of the team, but was not feeling well and left before we had moon. Our total of 30x29 was far from our best. The trees to the east of Al's house continue to grow, so the EU window continues to shrink, and our impression is that activity was less than in recent years, especially on 13 cm. Or maybe we made some wrong choices about when to switch bands. Anyway, as always, it was good fun. QSO'd were on 11 Oct, on 3 cm at 0459 SP6JLW (559/569), 0533 WA6PY (569/559), 0544 DL7YC (539/559), 0615 PA0BAT (559/559) and 0636 OK1KIR (559/569) for a score of 5x5, and on 6 cm at 0728 OK1CA (559/559), 0740 TM8PB (559/569), 0750 G3LTF (559/559) and 1242 JA1WQF (O/O) for a total of 4x4, and on 12 Oct, on 13 cm at 0425 OK1CA (579/579), 0442 VE4MA (559/559), 0448 G3LTF (579/570) XB, 0506 PI9CM (559/559) XB, 0509 S53MM (569/559), 0517 WD5AGO (569/569), 0533 OK1KDD (569/569), 0550 HB9Q (559/569), 0556 SM3BYA (569/559), 0600 ON5TA (559/559), 0620 PA3DZL (559/569) XB and 1333 JA4BLC (559/559) XB for a total of 12x11, and on 9 cm at 0718 SP6OPN (559/569), 0721 HB9Q (559/579), 0724 OK1CA (569/569), 0730 G3LTF (569/569), 0734 PA0BAT (559/559), 0750 S53MM (549/559), 0758 VE6TA (569/559), 0032 OH1LRY (559/559) and 0912 KL6M (O/O) for a score of 9x9. Next month we will be back again on 2 m, 70 and 23 cm with some operation on 70 cm for the first time from the W2PU station to allow operation at rising moon.

K6PF: Bob k6pf@sbcglobal.net acquired a 5 m solid dish and mount -- I have completed move of my new dish to my new QTH in AZ. This was a big job! I still have lots of work to do before putting it up, but I hope to be QRV on 23 cm EME later next year. I'll have a water cooled GS-15B PA in shack that should put out ~350 W. In the future plans also call for 10 GHz EME.



K6PF's new 5 m dish to be used on 23 cm from AZ

N6OVP: David n6ovp@pacbell.net is QRV on 23 cm but continues to struggle with his very limited window to EU -- I made another 2 contacts this past month. One was to VK3UM (559/559). The other was with KL6M (559/559), who is back on 1296. I am very interested in skeds with stations in NA, SA, VK and JA where I have a good window.

N8DJB: Craig craig@rotor-doc.com was listening on 13 cm during the MW contest and found the libration made copy a problem -- I was on Sunday morning RX only for a couple hours and heard numerous signals clustered from 2304.100 to 2304.110. I couldn't locate ANY signals on 2320.1 at that time; just lots of birdies. The 2304 signals were darn near impossible to copy. I kept getting just pieces of calls and many single letters and numbers. Normally, on an activity weekend, these stations would be on the loggers, which would helped me to identify them. [The ARRL MW Contest rules allow stations to identify the bands they are operating to help coordinate switching bands.] But of course with the contest rules actually being followed quite well; I got no help from there at all. I finally identified SV3AAF, who no one else seems to have mentioned in their reports yet. After awhile, HB9Q posted his calling freq on 2320.104 and he was so strong that I copied him immediately. Strong enough that even SSB would have been possible. I was using a linear feed, VE4MA style that I built in the 90's. I still cannot get my septum feed to work right. I will be soon QRV on TX too.

OH/DL1YMK: M&M (Michael and Monika) dl1ymk@aol.com report on their MW EME expedition to the Aland Isles from 4 to 11 Oct -- This was our second dxpedition to Aland. Our first was in 2009 on 70, 23, 13 and 9 cm. We only took the small 1.8 m dish with us, which was used previously to activate 10 GHz on Corsica in 2012 and 2013 on Jersey. According to our calculations, it should have been also possible to use it on 6 cm -- but we had never before tested it on 6 cm. So all was prepared theoretically to fit together -- a feed support for the old 6 cm feed (a round septum with 3-ring Chaperral from WD5AGO), 1 m run of 1/2" cellflex cable to the PA and a PE fridge box with venting holes (and it was a hell lot of work to drill these holes) to protect the SSPA against the rain, but also enabled an air inlet to cool the PA. The QTH was far from ideal. It was situated in a pine forest (but with fantastic views over the archipelago). It was hard to find any flat, levelled ground with a sufficient Moon window. So we had to make compromises, which limited our window to NA. As scheduled, we started up with 3 cm, but we were minutes too late to calibrate the dish position with Sun noise. So in the beginning, we didn't hear any signal at all. Only the strong signal from LX1DB enabled us finally to find the 1.1 deg beamwidth, which means that we are spot on the Moon (thank so much to Willii!) and then we were finally able to fine-calibrate the system with Moon noise. The peak reading was 0.95 dB noise on the SDR-IQ and Spectravue. For the first time we had a fully automatic OE5JFL tracking system, which was a combination of a MEMS inclinometer for elevation read-out and the MAB25 for azimuth, incorporated as before in a modified SPID-RAS. This combo was run with a special firmware for the controller, which Hannes had programmed last spring as a special favor for us (thank you

Hannes!). After Willi, we worked OK1KIR, PA7JB, PA0BAT, OZ1LPR and G3WDG. The next 2 days we stayed on 3 cm and worked JA4BLC, OK1CA, F1PYR, JA1WQF and JA6CZD. The fact, that we were able to receive our Japanese friends on 10450 MHz was only due to JA4BLC, who supplied us with his 10450/10368 converter, which was published in DUBUS earlier this year. The converter was easily hooked up between the first WG LNA at the feed and the 10368 input of the piggy-back mounted transverter box behind the dish. On 8 Oct, we changed as planned to 6 cm, which was kind of exciting for us as we could have failed easily without having performed any tests of the system before hand – but we didn't fail. Contrary to all expectations, it was relatively easy to hear/see our first Moon signal, once our window opened. It was OK1KIR, who made again another country first QSO! In the next gap between 2 pine trees, we worked OK1CA, G3WDG, PA0BAT, SM6CKU, ES5PC, UA3PTW and just before the Moon vanished in the trees, also W5LUA, who had only 6 deg EL at his side. On the 2nd day on 6 cm, we again were successful with JA. We worked JA6CZD and JA4BLC, then SM6CKU for a dupe, DL7YC, G3LTF, PA7JB, LX1DB and finally on our last CQ, OH2DG. Although not predicted by any calculations, we were consistently able to hear our own echoes. The peak reading of Moon noise on 6 cm was 0.4 dB. Apparently, the small dish worked unexpectedly much better than the under-illuminated stressed dish, used for TK and MJ. For the first MW contest night, we decided to give stations a chance on both bands who had not been able to work us during the week. So during the first hour of our Moon window in the contest, we worked SM6FHZ on 6 cm and finally JA1WQF on his CQ, before we changed the system in complete darkness (in the light of torches, balancing on a garden chair) for a last call on 3 cm. We managed to work DL7YC, SM6CKU, OK1KIR, SP6JLW and OK1CA. We tried to give also US stations 3 cm from Aland, but failed in that, because our moon dipped into the trees some minutes before the US stations had enough moon sight, very sorry! Saturday morning after only 3 hours of sleep, we knocked the dish down and stuffed everything in Monika's car again. By taking the ferry to Kapellskär, we headed back to Sweden, where we had a short stopover in JO78, before we reached Germany on Monday evening after a 1200 km drive. So in total, we again made quite a lot of country firsts from the Aland Isles, from 70, 23, 13 and 9 cm in 2009 up to 6 and 3 cm this year. It was really fun, because the small dish was easily set up and the moon tracking was just perfect this time. Thanks a lot to all stations, who had interest in our short MW dxpedition and contributed to make it again a success!! Perhaps, we might do it again from ?????? – it all depends.



OH0/DLYMK 1.8 m dish looking toward west

OK1CA: Franta strijavka@upcmil.cz reports on his recent operation -- I worked on 19 Sept on 3 cm OK2AQ (15DB/15DB) using JT4 - this my first digital QSO on 10 GHz. I continued on 10 GHz on Saturday and I worked UA4HTS, SM6CKU for initial #63, OH2DG and SM4DHN #64. Ben was worked with circular polarization with a good signal. I was QRV on 24 GHz from 4 to 7 Oct. A sked with VK3NX was not successful on the 4th as Charlie had strong winds. We did work on the 5th, VK3NX (O/O) for initial #3 and DF1OI (O/M) #4. The QSO with DF1OI was realized with a 210 Hz spread. On both days the humidity was at 80% at my QTH. I worked on 6 Oct PA0BAT (M/O) #5 and on 7 Oct early morning an easy QSO with W5LUA (O/O) #6. Both these QSOs were during lower spread of only 95 Hz, but the humidity was at 80/90%. I worked on 6 Oct, on 10 GHz OH0/DL1YMK (O/O), and on 7 Oct, on 5.7 GHz

UA3PTW (569/569) for initial #55 and OH0/DL1YMK (O/O) #56. I was QRV in the ARRL MW EME Contest on four bands. I worked on 13 cm 23x20. This was the least activity in years. There were no QSO from VK and JA, and only 5 QSOs from NA. My score on 9 cm was 10x10. New stations from me were S53MM, OH1LRY and KL6M to bring me to initial #51 - TNX Mike. My antenna was only at 6 degs during my QSO with Mike. I worked on 6 cm only for 2 hours on Saturday morning and thus missed several stations; my score is 7x7. The good activity was all on 3 cm. I worked 17x13. Initials were YO2BCT and YO3DDZ to bring me to initial #67. Overall I made in the contest 57x50. It was a very pleasant EME weekend with good weather and without technical problems.

OK1DFC: Zdenek ok1dfc@seznam.cz found that Mr. Murphy never sleeps in the MW EME Contest – For the whole of the contest, I was working with my 3 cm portable setup. The first night, I had problem with tracking and lost the Moon. Due to heavy clouds, I was not able get back on the Moon. During next period, tracking was OK, and I had full SDR screen of 3 cm band signals. Heard were OK1KIR (559) and JT (12DB), OK1CA (549/559), DF0EF JT (12DB) and many others. The problem was with my TX. After the pass, I found a bad multiplier in transverter, which is located in a PVC box at the focus of the dish. I measured 0.8 dB of Moon noise, 4.6 dB GN/CS and 9.8 dB of Sun noise and am looking forward to QSOs before the contest ends. [Zdenek made at least one QSO at the end of the contest.]

OK1KIR: Vlada and Tonda vladimir.masek@volny.cz report on their club's Sep/Oct EME activity – On 70 cm were worked on 26 Sept at 1044 IS/DJ4TC dxpedition (21DB/21DB) JT65B for digital initial {#115}. On 23 cm we QSO'd on 27 Sept at 1100 IS/DL2NUD (24DB/27DB) JT65C for digital initial {#188}, 1225 TM1GM (579/579) [same as F5SE], 1239 LU8ENU (14DB/16DB) JT65C, 1301 EA3HMJ (24DB/27DB) JT65C {#189} and 1309 F6APE (21DB/O) JT65C {#190}. On 13 cm we contacted on 28 Sept at 1142 IS/DJ4TC (22DB/24DB) JT65C for digital initial {#21}. On 6 cm we worked on 8 Oct at 1839 UA3PTW (559/569) for initial #78 and 1854 OH0/DL1YMK (O/O) #79 and 1st OH0-OK 6 cm QSO. On 3 cm we QSO'd on 5 Oct at 1628 UA4HTS (549/569), 1722 SM6CKU (549/559) for initial #87, 1833 LX1DB (589/579), 1942 OH0/DL1YMK (549/549) #88 and 1st OH0-OK 3 cm QSO and 2108 YO2BCT (559/559) #89 and new DXCC, and on 10 Oct at 2210 SM6CKU (559/559), 2318 YO3DDZ (549/559) #90 - mistakenly with hor pol. In the ARRL MW EME Contest we were only on 3 cm and worked on 11 Oct at 0004 OH0/DL1YMK (O/O), 0012 SM6CKU (549/559), 0023 SP6JLW (579/569), 0031 UA4HTS (549/569), 0038 OK1CA (569/579), 0100 YO2BCT (579/559), 0236 UA4HTS (14DB/14DB) JT4F DUP, 0306 W5LUA (559/559), 0636 K1JT (559/569), 0642 PA0BAT (569/569), 0653 W6PY (559/569), 0703 W6YX (579/559), 0806 W6YX (16DB/16DB) JT4F DUP and digital initial {#55}, 2002 VK7MO (13DB/13DB) JT4F with hor pol (spatial offset -7 degs), 2107 HB9BHU (559/559), 2113 IW2FZR (O/O), 2206 EA3XU (18DB/13DB) JT4F, 2220 EA3MHJ (18DB/15DB) JT4F {#56}, 2304 YO3DDZ (559/579), 2310 DL0EF (569/559) and 2350 DL0EF (15DB/14DB) JT4F {#57} DUP, and on 12 Oct at 0019 YO3DDZ (16DB/15DB) JT4F {#58} DUP, 0048 F5IGK (559/529), 0344 DL7YC (569/559), 0454 SM2CEW (M/O) initial #91, 0542 PA7JB (569/569), 0633 OZ1LPR (O/O), 1943 ES5PC (559/569), 2122 OK1DFC (15DB/14DB) JT4F {#59}, 2134 JA4BLC (559/559) on 10450/10450, 2250 IZ2DJP (549/559) and 2327 OK1DFC (M/O) #92 DUP - very weak (up/down) signal allowed just marginal CW QSO, but the JT4F QSO was easy. Tests with Zdenek verified that when CW becomes lost in noise and spreading, JT4 still easy continues. Our total on 3 cm was 27x19.

OK2AQ: Mirek mirek@kasals.com was QRV on 3 cm in the middle of Sept and the beginning of Oct – I worked using JT4F on 18 Sept UA4HTS (15DB/15DB) for digital initial {#5} and on 19 Sept G3WDG (12DB/16DB) {#6} and OK1CA {15DB/15DB} {#7}, on 3 Oct VK7MO (19DB/20DB) {#8} and G3WDG (12DB/13DB), and on 4 Oct UA4HTS (14DB/12DB). The QSO VK7MO is particularly noteworthy. I was the smallest station Rex has worked to date. He was operating portable from Mt Wellington in Tasmania, QE37oc, and was using his portable equipment consisting of a 77 cm dish and 50 W. I was using a 180 cm dish and 20 W. Rex automatically compensated Doppler shift for both sides using the VK1XX program. We both used horizontal polarization with spatial offset of about 17 deg that was compensated by me. Averaging was required at the VK7MO end due to my lower TX power. The timing of the sked was chosen for extremely good conditions. The spreading was 15 Hz and degradation 0.5 dB. More details you can see at <http://www.urel.feec.vutbr.cz/esl/files/EME/EME.htm>.

ON5TA: Eric eric.vanoffelen@skynet.be writes that he participated in the **EME MW Contest on the 13 cm** and enjoyed it very much, but that Murphy was not far -- My TX output power was very unstable and went down to less than 100 W after TXing on a few sequences. I lost quite a lot of time investigating and have not found the fault yet. But, even at such low power, echoes were always well audible as the conditions seemed quite good. I made **17 random CW QSOs and 1 on sked with KL6M**. Many TNX to Mike for the initial and first ON-KL on 13 cm. The activity was down from last year, which I believe is related to the license problems and uncertainties in various countries. It is a pity because the 13 cm is a really nice band for EME! I was running my 3.6 m mesh dish with 140 W at feed (when the power was up).

ON5RR: Marc moonbouncer@skynet.be was **active on 13 cm before and after MW contest -- We worked 8 stations and had 4 initials**. Our 13 cm system seems to be working very well, but our window to the east is limited. We were not QRV until after 1130 and even then still had some tree blockage. We were listening on both 2304 and 2320, but it is hard to get attention XB. In Nov, we will be 23 cm, but plan to be 13 cm skeds the evening before the contest.

OZ1LPR: Peter PH@Focon.dk is very active on 3 cm EME and **reports on the MW contest** -- The Moon offered super conditions. I had 1.1 dB moonnoise on my little 1.8 m offset dish. I made 2 OZ first QSOs on 3 cm. I worked the M&M team on their trip to Aland Island on CW EME. At times the signal was 10 dB over noise. The second QSO was the first ever with YO on 3 cm from OZ. I worked YO2BCT (529) and very good signals at times. **In the contest I worked OK1CA, OK1KIR, UA4HTS, DL0EF and SP6JLW**. I heard HB9BHU, W6YX, K1JT, DL7YC, PA0BAT and PA7JB and some that I could not get a call correct. I am daily QRV on 3 cm EME, whenever the Moon is over 20 degs for skeds both on CW and JT. I have 42 W at the feed.

PA3DZL: Jac pa3dzl@ziggo.nl reports his **13 cm ARRL MW Contest results** -- After my last QSO off the Moon made on the 7 April, I am QRV again with my new 3.7 m solid f/d 0.34 Andrew dish. After I took down my 3.7 m mesh dish, I have been working on my new dish. It was a lot of work, but it paid off very well. Due to too much QRL I did not make it on for M & M dpxpedition -- such a pity. I was QRV on 13 cm for the contest and pleased to work **13 QSOs** and 2 initials. Although I did not have enough time to optimize my system, signals and my echoes were very good. I worked G3LTF (579/579), DF3RU (559/559), OK1CA (579/579), HB9Q (569/579), SP7DCS (569/559), UA3PTW (579/569), PA3CQE (559/559), K1JT (569/559), S53MM (549/559) for an initial (#), ON5TA (559/559), OK1KKD (569/569), WD5AGO (559/559) and DJ3FI (549/559) (#). Heard were OZ4MM, SP6OPN and VE6TA. The strongest stations were HB9Q and SP6OPN - moving my S-meter up to S6-7.



PA3DZL's new solid 3.7 m dish (f/d 0.34)

PA7JB: John pa7jb@ziggo.nl had problems **on 3 cm** during the **MW contest** weekend -- It was not a good day for me. I have a 2.4 m offset dish and 50 W on 3 cm, and normally see about 1.5 dB of moonnoise. **I did not work any stations** on 10 GHz in the contest. I was only QRV on Saturday and did call W6YX many times, but no QSO.

PI9CM: Jurgen (PE1LWT) pe1lwt@me.com had his first activity in the **ARRL MW EME Contest** with his club's call PI9CM. They were **only active on 13 cm and put 10 stations in the log** - no Murphy around this round. They used a 3 m dish with a 180 W at their RA3AQ feed and a 1 dB NF LNA. [PI9CM is not an initial if you already worked PE1LWT.]

S53MM: Matija matija@hamradio.si (JN76gd) was **on 13 and 9 cm EME** for the first time during this years MW contest -- On 13 cm, I worked UA3PTW, G3LTF, OK1KKD, DF3RU, ON5RR, SP7DCS, OK1CA, SV3AAF, PA3CQE, WD5AGO, K1JT, VE4MA, SM3BYA, HB9Q, PA3DZL, WA6PY and ON5TA using our 3.6 m dish and 150 W at the feed for a total of 17x15. On 9 cm, I worked OK1CA, HB9Q, SP6OPN, SM4DHN, OH1LRY, G3LTF, PA0BAT and K1JT using our 3.6 m dish and 50 W at the feed for a **total of 8x8**.

SM3BYA: Gudmund SM3BYA@wannberg.net writes on his **13 cm activity in ARRL MW Contest** -- My building project (demolishing the old farmhouse and constructing a new home on the same spot) is now well under way, and I am spending nearly all of my time on it. But since my 2.3 GHz high power permit was extended until 31 Dec, contrary to earlier expectations, I felt obliged to take some time off from the construction work and put in a few hours on the band. I was QRV on both Saturday and Sunday. Although not a serious effort, it paid off with **10 QSOs** and 3 initials. I worked on 2320 ES5PC, G3LTF, UA3PTW for an initial (#) and OK1CA, and on 2304 K5GW, OK1KKD (#), WD5AGO, S53MM (#), K1JT and HB9Q, bringing me to initial #55 on the band. I am still interested in skeds before the end of the year to add a few more - KL6M would be a nice addition! Please note that my SM2BYA@telia.com email address will be deactivated in about a month's time; from 1 Dec on please use only SM3BYA@wannberg.net.

SM6CKU: Ben ben@sm6cku.se made his **3 cm EME debut** on 9 Sept -- I worked SM4DHN, who has been on the band since 1990 for my first QSO. We were both circular. The day after I worked OK1CA, OH2DG, SM4DHN and DL0SHF. On 5 Oct I added OK1KIR on random and again just before the start of the MW contest. Then I managed to get OH0/DL1YMK - TNXnks M&M. **In the MW contest I worked OK1KIR, DL7YC and SP6JLW**. I should have stayed on 3 cm on Sunday morning for several other stations, but I switched to **6 cm**. On that band I worked UA3PTW, ES5PC, G3WDG, PA0BAT, OH0/DL1YMK, JA6CZD, JA4BLC, DL7YC, SM6FHZ, G3LTF, SM4DHN, TM8PB, SP6GWN and SV3AAF. I am using my 4 m dish on both bands with 48 W on 6 cm and 18 W on 3 cm. I don't like the concept of this contest, so I did not participate. Changing band is far too difficult and sometimes dangerous in darkness. I also recently got my old, and repaired, 8 m dish up in the air, but lots of work remain before it is operational -- see <http://youtu.be/ZI7LJv-mk10>. I plan for a comeback on 23 cm, where I worked my last QSO in 2007.



SM6CKU's new 4 m dish for MW EME with his old 8 m dish in the background

SM6FHZ: Ingolf ingolf.fhz@gmail.com sends the following info on his MW contest effort -- I worked **only 6 cm in the ARRL MW contest**. Friday night, before the contest, when setting up the rig, I worked OH0/DL1YMK for an initial (#), new DXCC and new square. Many TNX to M&M for another great dpxpedition! I also worked DL7YC, JA1WQF and F2CT with

nice signals. Saturday morning in the contest, I worked **DL7YC**, **SV3AAF**, **WA6PY (#)** and new field, **SP6GWN**, **OK1CA**, **TM8PB** and with the Moon in the pine trees **G3LTF**. Saturday evening I added **SQ6OPG**, **JA1WQF**, **JA4BLC**, **JA6CZD**, **ES5PC** and **SM6CKU**, and on Sunday morning **UA3PTW (#)** and after some struggle **VE4MA**. It all adds up to 15x11. I worked all stations that I heard on the band. If anyone heard me and called with no response, I would like to hear about it. Looking at the HB9Q logger, 10 GHz seems to be the band to be on in the contest. I plan to be on 23 cm for the Nov leg of the ARRL EME Contest if the renovation of my rig is successful and ready in time. For the moment I am busy improving my 6 cm RX capability by adding a new LNA (SM6PGP design) with lower NF and higher gain and decreasing the loss in front of my LNA. I'll have more on the results later.

SP6JLW: Andy (SP6JLW), Jacek (SP6OPN) and Paul (SQ6OPG) sp6jlw@wp.pl write – We operated the **MW EME Contest on 4 bands**, multi op and using only CW. We used the call SP6OPN and our 6.5 m dish on 13 and 9 cm, the call SQ6OPG with a smaller dish on 6 cm and SP6JLW with the same small dish on 3 cm. The dark, night time hours were a problem when switching feeds; perhaps this is the reason for the lower turnout than in the previous year. We are in need of more experience, when we must change equipment on antennas in the dark. Fortunately, the weather was good and the equipment worked without failure. **QSOed on 13 cm (SP6OPN) were OK1KKD, UA3PTW, ON5RR, DF3RU, ES5PC, WD5AGO, G3LTF, HB9Q, OH1LRY, SV3AAF, KL6M, VE6TA, OK1CA, ON5TA for a total of 14x12, on 9 cm (SP6OPN) were OK1CA, HB9Q, S53MM for an initial (#), OZ6QL, OH1LRY (#), K1JT and G3LTF for a total of 7x7, on 6 cm (SQ6OPG) were SM6FHZ, JA4BLC, ES5PC, DL7YC, G3LTF, TM8PB and UA3PTW (#) and DXCC for a total of 7x7, and on 3 cm (SP6JLW) were OH0/DL1YMK for an initial (#) and DXCC, OK1KIR, DL7YC, YO2BCT (#) and DXCC, SM6CKU (#) and DXCC, UA3HTS (#), OK1CA, K5GW (#), W5LUA, HB9BHU, K1JT, WA6PY, PA0BAT, W6YX, DL0EF, PA7JB, F5IGK, OZ1LPR, ES5PC, SP7JSG (#) and DXCC and IZ2DJP for a total of 21x16. Our overall score was 49x40. We will be back for the next rounds of the contest.**

SV3AAF: Petros sv3aaf@yahoo.com was QRV in **MW EME Contest** for a few hours during his western window -- I found stable condx in line with the expected path loss and smear; however traffic seemed to be lower than usual for the period I was on. I worked on 13 cm **G3LTF, DF3RU, OK1KKD, WD5AGO, HB9Q, SP6OPN, OK1CA, S53MM, PI9CM and K5GW, and on 6 cm SM6FHZ, ES5PC, UA3PTW and SM6CKU**. I did not switch on 3 cm. When more stations upgrade to circular pol, I will put the gear back on the dish again.

TM8PB: Guy (F2CT) F2CT@wanadoo.fr reports on his groups operation during the **MW contest on 6 cm** -- It was a nice EME activity weekend even if the participation level was low. I think that a better way is have separate bands on more than one weekend as during the DUBUS contest. Feed changing depend of weather conditions and in Brittany, we must take into account heavy rain and high winds! Sorry, but it was impossible for us to move to 10 GHz; we need more accuracy buy the tracking system because our aperture angle is less than 0.1 degs! On 6 cm we worked on Saturday **OK1CA, DL7YC, SM6FHZ, WA6PY, SP6OPN, G3LTF and K1JT**, and on Saturday evening/Sunday **JA4BLC, JA1WQF, JA6CZD, SM6CKU, SM4DHN and SQ6OPG** for a total of 13x12. Heard were OH0/DL1YMK, ES5PC and UA3PTW. Unfortunately we had to QRT early on Sunday morning due to bad weather and a failure of the tracking system. We missed too many stations from EU and NA! It's a real pity. The loudest signal was DL7YC. Our moonnoise was at 4.2 dB.

VE4MA: Barry ve4ma@shaw.ca sends his **results for the MW contest weekend** -- Mr. Murphy also visited this QTH; he had a busy weekend! On the first night, I had high RX signal loss coming from the 6 cm dish and a bad relay control cable going to the 13 cm dish (so no TX), but I did hear WD5AGO and SP6OPN very FB. On the second night after fully checking out the systems, I had better luck. **On 13 cm I QSO'd OK1CA, K5GW, K1JT, WD5AGO, OZ4MM, G3LTF, DF3RU, HB9Q and WA6PY**. I heard SM3BYA and OK1KKD. I was **on 6 cm** briefly and **worked SM6FHZ**, but did not complete with DL7YC. I am being heard much better than I am hearing. This is a problem I had when portable in AZ earlier this year. I am using the same feed/preamps and relays but different rigs in the station. My sun noise is only 11.5 dB on 6 cm and I see no moonnoise. I use the same 2.4 m offset dish on 3 cm where I see 16 dB of sunnoise. I suspect the septum polarizer feed and will check with a linear feed this week. In the past I had noticed considerable WiFi QRM in VE4 and at AZ, but can't say that it was obvious this weekend.

On 13 cm, I seemed to have a difficult time with libration. Signals were strong but copy was difficult. Sorry to those who got "many" QRZs from me! I was operating on 2320, but had the satellite QRM that Grant VE6TA mentioned, and my received echoes were 3-6 dB below what I was seeing on 2304. I saw many signals on 2320, but had trouble identifying them.

VE6TA: Grant ve6ta@xplornet.com briefs us on his **ARRL MW weekend results** -- This year there seemed to be much lower activity than in previous years; it seemed very low from NA as has been usual. On 13 cm, the Sirius satellites continue to present problems hearing stations on 2320 when my moon azimuth gets to be greater than 90 degs, and I start pointing over the US. I did manage to work a couple of new stations and fought windy conditions on the second my moon pass. I guess I should have gotten on the high bands the first night. Stations worked were on 13 cm **OK1KKD (559/559) for initial #82, WD5AGO (559/559), HB9Q (599/579), UA3PTW (569/569), G3LTF (579/569), DF3RU (559/539), OH1LRY (559/559) #83, ES5PC (569/569), OK1CA (579/579), SP6OPN (589/569), ON5TA (549/559) and KL6M (559/559) for a score of 12x11, and on 9 cm PA0BAT (559/539), OK1CA (579/559), HB9Q (589/549), G3LTF (569/549) and K1JT (569/559) for a score of 5x5. Heard and called were OH1LRY, DF3RU. I'll be back again in Nov on the lower bands.**

VK4CDI: Phil vk4cdi@gmail.com was QRV on 9 cm for the ARRL MW contest but had some problems – Every time I powered up my xverter (all mounted at the feed) everything was dead. Finally found that the local crows were trying to rip the black plastic waterproofing around the feed, and once they succeeded, some nice bright red wires were next - the 12 V to LNA and xverter. I guess they were collecting nesting material. I **only worked HB9Q and OK1CA** on CW. I now have a new 5 m dish mounted and hope to have it ready for 23 cm in Nov.

W2LPL: Les llistwa@gmail.com in NJ is now QRV on 1296 and says his station was 2 years in the making -- I finally made it on 1296 EME with a 2.3 m dish and 150 W at the septum feed. I have contacts so far on JT65C with G4CCH, SM7FWZ, NC1L, of course PI9CAM, who was (10DB), PA3FXB (23DB), UA3PTW, DL6SH and OK1YK. You may ask what took me so long. I was for the last year or so focused on remoting my SSPA at the base of the dish, which was 100 feet from my shack in the basement. My "aha" moment came when my wife told me she didn't like looking at the dish in our backyard. I moved it to the side of the house by our Sun room. This greatly simplified things. I just moved my 1296 shack and into the Sun room. The feedline is now about 20', and I am QRV. My sky window is pretty limited with lots of trees and houses. I need a minimum elevation of 35 degs and an AZ of between 120 and 175 to be clear of the trees and houses. I plan to be QRV regularly and am looking for skeds.

WA6PY: Paul's pchomins@san.rr.com **MW contest report** follows – I was active during the EME contest on 13, 9, 6 and 3 cm. On the first day, I QSO'd on 3 cm **DL0EF, DL7YC, HB9BHU, IK2RTI, K1JT, OK1CA, OK1KIR, PA0BAT, SP6JLW, UA4HTS and W6YX** for a score of 11x10, and on 6 cm **DL7YC, OK1CA, SM6FHZ and TM8PB** for a total of 4x4. The next day on 9 cm I heard only PA0BAT after calling CQ for 45 minutes, and then switched to 13 cm and QSO'd **HB9Q, OK1CA, ON5TA, S53MM, VE4MA and WD5AGO** for a score of 5x5. My window to EU was short and late, and probably most of the stations went QRT by the time I had the Moon. Switching feeds between bands also took about 1 hour of my window.

WD5AGO: Tommy wd5ago@hotmail.com writes on the **MW contest weekend** -- Our group worked **17 on 13 cm**. New ones were ON5RR for initial #87, OK1KKD #88 and S53MM #89. The 13 cm activity was way down from the past 7 years. Conditions were normal, so it was not that, or my system. I had good echoes with my 3.4 m 0.34 f/D dish at 275 W. I measured 15.1 dB of sunnoise at an SFU of 126, and 0.36 dB of moonnoise. Operation hours were a bit different, but the 1st hour or two was great for NA, not to late in the evening, well before midnight, so I blame it on just lack of firing things up. Nothing heard on VK and JA window on the first pass. The 2424 QRM was louder than it use to be. I slept through my 2nd western pass. For Nov. we will be running things a bit different. We will just be on 1296 using our group's new 16' long horn and 250 W. Look for our CQs on CW. In Dec we would like to re-mount the 432 array and that means the 23 cm horn would need to come down.

YO2BCT: Liviu yo2bct@yahoo.com is now operational on 3 cm EME – I made my first QSO on 4 Oct with G3WDG, and added on 5 Oct OK1KIR,

PA0BAT and OZ1LPR, and on 10 Oct DL7YC. In the ARRL EME MW Contest I was on 3 cm and worked on 11 Oct SP6JLW, UA4HTS, OK1KIR, OK1CA and OH2DG, and on 12 Oct YO3DDZ, DL0EF and IK2RTI. All QSOs was on CW. I used my 3 m, 0.325 f/D dish (the same as on 23 and 13 cm), DB6NT G3 transverter + OCXO, LNA from a modified LNC for satellite TV, tuned on 10.4 GHz. My T/R switch is a WG (WR75) relay. For TX I have a TWTA (TNX DK7LJ!) with 300 W out, but I have 4 dB of cable loss, so my power at the feed is about 110 W. I get good reports and can hear my echoes FB, even in SSB! I still have work to do for remote control. Now I must run out every minute to adjust the antenna by hand on maximum Moon noise. I am looking for skeds for new initials and DXCC on 3 cm.

Z21EME: Chris (PA2CHR) post@pa2chr.nl sends news that big EME expedition to Zimbabwe (KG58gh) is on track and only days away. 23 cm operation will be on Saturday 1 Nov and Sunday 2 Nov with a single 67 el yagi, 150 W and DDK LNA. 70 cm will be on Monday 3 Nov and Tuesday 4 Nov with a single 38 el M2 yagi and 400W. They plan to be on the HB9Q reflector, but if you want to request a sked in advance email Chris. QSL can be direct or via buro. For direct send an SAE and €2 or \$2 to L Berben, Simonshoek 2, 5768 CS Meijel, Netherlands. If there is not enough postage, the QSL will be send back via buro. All sponsors will automatically receive QSLs direct. Any donations are welcome, send to Paypal info@pa3cmc.nl, Bank IBAN NL58INGB000677093, BIC INGBNL2A. The team is Lins, PA3CMC/Z21CMC; John, ZS6JON/Z21EME; Chris, PA2CHR/Z21CHR; and Paul, ZS6NK/Z21NK. Their Website is <http://www.pa3cmc.nl/#category7>.

K2UYH: I a.katz@ieee.org operated the MW contest under the call K1JT. See Joe's report earlier in this NL for the full details. We had rain all of the first moonpass, which complicated switching feeds. I still have work to do on my 3 cm system. Initially, I did not have the feed position set correctly, but even after optimizing the feed we only worked 5. (After the contest, I tried with OZ1LPR, but could not copy Peter's CW signal well enough to complete a QSO). We only worked 4 on 6 cm. This poor showing was because we switched bands too late. We were hearing W6XY very well on 3 cm and kept calling them, but they did not reply. We finally decided that we could not delay further and finally switched to 6 cm. By then it seemed everyone was QRT. The next day, we were only on 13 cm and then 9 cm. There did not seem to be time for more. I was on for the 9 cm ATP on 21 Sept and QSO'd at 1246 DL1YMK (569/559), 1255 PY2BS (559/559), 1308 G3LTF (559/569), 1316 PA0BAT (559/559) and 1320 partial OH2DG - sent QRZ but disappeared. I was then away traveling for business. When I returned, I tried to work OH0/DL1YMK, but it was not possible because of their poor window to the west.

NETNEWS: JA6CZD and JA1WQF worked OH0/DL1YMK on both 6 and 3 cm. KD3UY is working on 1296 EME and hopes to be QRV soon with a 6' dish. XE1XA is set up for 432 EME again, but is having major problems with noise/interference. If you have any idea contact Max at general.manager@corix.us.

FOR SALE: WD5AGO has for sale a 23 cm Septum feed, two 9 cm round Septum feeds, a 6 cm round Septum, and two 3 cm Septum feeds with SMA connectors. LNAs for 2 m through 6 cm in machined aluminum housings (no solder together boxes) are also available. Contact Tommy at wd5ago@hotmail.com. HB9HAL has a 400 W 23 cm SSPA available for sale. If interested contact Chris at christoph.joos@bluewin.ch. LZ1DX is looking for 2 PTF14150 1E transistors. If you can help contact Ned at Lz1dx@lz1dx.org. VE1KG is looking for a small prime focus dish of size from ¾ to 1 m for use for 10 GHz EME. If you have something contact Serge at ve1kg@eastlink.ca. WA2FGK is selling a complete 1296 system consisting of a pair of combined DEM amps which runs 250 W on CW or SSB, a DEM transverter that requires 100 mw of 144 MHz drive and is 10 MHz sync locked, all power supplies, plus sequencer. This will be a pick-up only as it is hard to package. If interested contact Herb, K2LNS at wa2fgk@yahoo.com or call 570 829-2695.

EME PLANNER UPDATE V1.92: Doug (VK3UM) announces that his latest additions and improvements have been applied to the Sky Noise Map where the source data has been updated from the latest information detailed in Franck's (F5SE) 2014 French EME 2014 Convention paper. In addition the Park position has been refined to provide for precise positioning. Moon temperature, commensurate with the phase angle at 2.77 cm, has been added from the Monstein paper along with other Moon data. I am now using topocentric instead of geocentric calculations

and have gained 0.1 dB near zenith, (but lose it at rise and set), so you can now turn off DS! Check out the Doppler, loss and distance calculations around Moon rise and set and you will most likely see some 'interesting effects' now related to your actual location and not that at the centre of the Earth! You will also be able to determine the current, future (or past) background sky temperature, cold sky and noise source locations and their temperature at your chosen frequency, Sun and Moon relative positions, perigee and apogee times and to simply find the best time to operate. You may also wish to do a time drift of the Sky and plot your received noise against the Sky map using SpectraVue. It will provide, for new (and a refresher for old hands), an insight into the relationship of the Moon, Sun and Stellar background noise, your enemy, which can severely impact upon weak signal communications. The conclusion that will become clearly evident is, that by choosing the highest Declination for major operating weekends, as is the current practice, is wrong! Perigee now corresponds to the quietest part of the sky and is of a southern declination. (Approximately -4.7 DEC with the next perigee on 6 Oct). Sure, for those living in the Northern Hemisphere it will be lower in the sky (for some even below the horizon) and you may need to reconsider where you site your antennae if at all practical. It will be this way for several years to come! In due time I will be releasing an update of EMECalc, which includes all the above with additional refinements of moonnoise temperature calculations as a result of current and ongoing measurements. My sincere thanks to G3LTF, VK5DJ and SM6FHZ for their help and suggestions in this latest version. The Help file has been updated to reflect the recent changes to assist in its use.

FINAL: There were a number of request to expand the ARRL's MW EME Contest to multiple weekends such as the DUBUS Contest. In theory this would be wonderful, but where would we fit 3 more EME contest weekends? I firmly believe that one of the reasons that contest activity was down is the plethora of competing events. When there is a contest every weekend, it is hard to get excited every weekend!

I am sad to report that TI2AEB was in the hospital at the end of Sept. Armando is recovering but will be QRT for a month or two.

The M4 Lunar Orbiter discussed last month is now on its way to the Moon and can be copied on JT on 2 m.

I am looking forward to the second leg of the ARRL EME Contest on 8/9 Nov and will be looking for you all on 70 and 23 cm under the call K1JT. Best of luck in the contest. 73, AI – K2UYH



Some of WD5AGO's feeds that are for sale

