432 AND ABOVE EME NEWS
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CONDITIONS: Most of the reports this month are on the ARRL contest, but there is also very disturbing news -- F2TU was very seriously injured when he fell while changing feeds on his dish. Philippe broke 6 ribs and one arm. He was in a coma, but is now speaking with difficulty. This news explains the absence of Philippe's signal during the contest. [Our prayers for Philippe's full recover – I'll keep you informed.] Conditions during the contest were not great, but there was a good turnout especially on 1296. Many stations reported problems with libration fading making copy difficult. Faraday was often not cooperative and produced weak or nil signals for stations with fixed polarization. Despite the conditions, there were big QSO counts. OK1DFC appears to lead the pack on 23 cm with 90 QSOs! DL7APV reports 47 QSO with a less than full time effort. Don't miss the final ARRL EME Contest weekend on 1/2 Dec! There is little dxpedition news this month. E51APA was reported to be QRV from Cook Island on 432 between 25 Nov and 4 Dec, but the latest information is that they will only be QRV on 144 [TNX MMMonVHF].

OK1DFC leads with 90 QSOs on 1296 at end of the Nov leg

EME BANDS UNDER ATTACK: We recently learned that the SM stations are losing 13 cm operation. Now it appears that 1296 privileges could be lost in JA. JH1KRC reports that in April, a committee of the Japanese telecomm has decided on new frequency allocation of 1.2 GHz band. A new system for high quality traffic broadcasts has been assigned 1.2 GHz for their primary frequency allocation. This decision was made without amateur input. This committee will meet on 12 Dec to discuss the technical issues. Mike is hoping to say something from amateurs' side. Another primary frequency allocation has already been made for Japanese GPS satellite MICHIBIKI on 1.2 GHz band. This satellite was launched by JAXA. There is already a problem with interference to reception of the experimental system caused by a local amateur repeater system. The JARL has been requested to submit the technical report on this matter. Space communications and aviation radar systems of Japanese self-defence air force have been allocated 1.2 GHz for their primary use for many years. This is the reason why JA amateurs are limited up to only 1 W output for their mobile/out-door operation, and usual amateur fixed station is limited up to 10 W. A special license is required for high power EME station, max. 500 W. Now the JA 23 cm band is threatened again. [If you have experience with similar matters in your country, please contact Mike, jh1krc@syd.odn.ne.jp.]

DJ3JJ: Andreas dj3jj@gmx.net was QRV on 70 cm 3/4 Nov -- In the 1st part of the ARRL contest conditions were very difficult with strong and fast QSB. The weather was about 6°C-10°C and wet on both days. An oscillating LNA caused problems in the beginning of the contest, but was fixed by lunch on Saturday. Stations worked were SM4IVE (559/539), OH2PO (O/O), SV1BTR (549/529), UA3PTW (O/O) and K5GW (559/559). CWNR were DF3RU and VK3UM, and a QRZ from SM2CEW - had reduced my TX power due to technical issue.

DL7APV: Bernd dl7apv@gmx.de had problems during Nov on 432 -- Just before the start of the ARRL contest, after a QSO with CU3EQ, the tube in my PA gave out. After replacing it with a new one and repairing the G2 line, I still was having troubles with the PA burning up the G2 supply wire. So I had to run the ARRL contest with my backup SSPA with about 3 dB less power than normal. Most of my QSOs were on JT, while looking at a waterfall display from a 2nd receiver for signals in the CW band. I worked 43 on 432. I was not on all the time and got enough sleep. I hope to have the tube PA back in operation in Dec. New stations were I2FHW with big signal and G4CBW (1 Yagi and 150 W) for his first EME QSO – both were on JT.

G3LTF: Peter's g3ltf@btinternet.com Nov EME report -- On 23 cm I worked on 28 Oct OK1CS and ZS5Y, on 29 Oct OK1CS again and 30 Nov HB9BCD. On 1 Nov, I was on 13 cm to work SM6CKU for initial #110. I was just delighted to be Ben's first 13 cm QSO. I was not able to be on for the first Moon pass in the contest, but on 3 Nov I worked on 23 cm VK3UM, OH2DG, OE5JFL, UA3PTW, OK1DFC, OK1CS, OK1CA, JA8ERE, SP6JLW, UA5Y, IK3COJ, JA4LJB, JA1WQF, YO2BCT, SM7FWZ, JA6AHB, LX1DB, VK5MC, F5KUG, JA4BLC, LZ2US, IK6EIW, DL3EBJ, F5SE/P, IK1MTZ, S59DCD, SD3F, G4CCH, SP7DCS, RK4CR for initial #363, I1NDP, ON5TA, SV1BTR, DF3RU, HB9Q, and on 4 Nov I2MBC #364, LZ1DX, OK1KIR, K1JT, LA9NEA, N2UO, WA8RJF, CT1DMK, SM2CEW, WD5AGO, NA4N, W6YX, UA4AAV, HB9BCD, VE6TA, SV3AAF, IK5QLO, HB9BBD, VA7MM, RD3BA, WA6PY, ON7UN, SM6FHZ, PA3DZL, PA3FXB, DJ3FI, G4RGK, IK2MMB, AL7RT, SM4IVE and KL6M. My total on 1296 was 65. Heard working others were SP3XBO, K5GW, W1AIM, 9A5AA, LU1C, ON5RR and OK2DL. For the end of the second pass, I changed to 70 cm and worked K1JT and I stayed on 70 cm for the last pass (2130-2400) and worked SM4IVE, OH2DG, VK3UM, JA9BOH, OZ6OL, SV1BTR, SM3JQU, JA6AHB, OH2PO and DF3RU. CWNR was LZ1DX. My Total on 432 was 11. On 9 Nov, I was back working random CW on 23 cm and worked I5MPK and F1PYR. On 11 Nov, I was on 6 cm. The WX was very calm, so the dish stayed on the Moon and I worked OK1KIR, SG6W for initial #38 and CT1DMK. Heard were SV3AAF and PA0BAT. Finally the same day on 23 cm I worked TI2AEB for #365 and DXCC 59 (all CW). I hope to be QRV for the last leg of the contest, and plan to spend more time on 432. In preparation for the next leg of the ARRL contest, I got around to replacing a bad tube in the 23 cm 6 tube PA (it was in its socket, but with no heater supply). This put the power in the shack up to 900 W, which gives me 400 W at the feed.

G3WDG/G4KGC: Charlie and Petra charlie@sucklingfamily.free-online.co.uk sends news on their 5760 efforts – We want to let everyone know that we are now QRV on 6 cm with our 3 m dish. A few weekends ago we received our first echoes quite easily. We were using 40 W output from a GaN PA mounted at the feed and a new (own) design of preamp using MGF4919. We have 3 of these in series, giving a system noise figure of about 0.6 dB. Sun and Moon noise are consistent with this noise figure within experimental error. We also have a balanced PA working using 2 x 40 W GaN stages, which gives about 70 W output. We have not tried this on the dish yet. We are open for skeds for anyone interested.

G4DDK: Sam jewell@btinternet.com sends an update -- It was good to see everyone at Cambridge in Aug. Not much to report except that I have taken delivery of a PE1RKI 23 cm 250-300 W SSPA that I will install in an old Storno TX combiner housing at the rear of my dish. This should give me a 3 dB transmit improvement over the existing arrangement where the DB6NT 200 W SSPA is in the shack. A similar housing will interchangeably accommodate my 13 cm SSPA for a similar or better transmit improvement.
The weight of the Storno housing is such that it will usefully replace the existing dish counterweights.

G4RGK: Dave zen70432@zen.co.uk was QRV on both 70 and 23 during the Nov contest weekend – I found 432 condx during the ARRL contest were difficult with very poor pol alignment that made CW QSOs had to come by. On

70 cm, I worked on 3 Nov SM4IVE (559/559), SV1BTR (549/549), OZ6OL(O/O), OH2PO (559/569), SP7DCS (559/559), I2FHW (559/559), DL7APV (10DB/O) on JT, 0350 OH2PO (O/O) on JT, DL8GP (20DB/O) JT, OH2PO (O/O) JT, K3MF (15DB/O) JT, DL8DAU (21DB/28DB) JT, LZ1DX (O/O) JT, EA5CJ (O/O) JT, UA3PTW (O/O) JT, YO2LAM (22DB/23DB) JT, OK2POI (27DB/O) JT and PE1RDP (27DB/O) JT, and on 4 Nov K5GW (559/559), K7XQ (22DB/24DB) JT, K4EME (17DB/O), PY2BS (24DEB/26DB) JT, K1JT (10DB/9DB) JT, Conditions were better on 1296 where I worked on 3 Nov SP6JLW (559/559), I1NDP (569/579), HB9BBD (579/589), SD3F (549/559), OK1CA (559/569), OK1CS (O/O), G4CCH (569/559) and IK1MTZ (569/559), and on 4 Nov UA5Y (559/559), DL3EBJ (559/559), OK1DFC (569/559), F5SE/P (559/559), SP7DCS (549/559), OK1KIR (559/549), SV1BTR (579/559), LZ1DX (559/559), G3LTF (569/559), N2UO (559/559), PA3DZL (O/O), VE6TA (559/559), CT1DMK (559/559), WA6PY (559/549) and SM7FWZ (559/549). Before the contest, I QSO'd on 23 cm on 29 Sept at 2012 I1NDP (579/559), 2015 LZ2US (559/559), 2029 ES5PC (549/549), 2040 G3LTF (569/559), 2044 F2TU (559/559), 2147 SM7FWZ (559/539), 2158 IZ1BPN (549/539), 2210 SD3F (449/559), 2220 OK1KIR (559/559) and 2227 IW2FZR (O/O), and on 30 Sept at 2027 OZ6OL (549/549), 2032 IK1MTZ (559/549) and 2044 OK1CS (549/549). After the contest, I worked on 70 cm, on 10 Nov at 0954 IZ2DJP (23DB/24DB) JT, 1022 PA0PLY (14DB/21DB) JT and 1035 ES3RF (19DB/18DB) JT, and on 11 Nov at 0852 SM2CEW (549/559), 0945 OH4LA (19DB/18DB) JT and 0955 SM5DIC (13DB/22DB) JT. All QSOs were on CW unless noted as JT.

HB9BBD: Dominique dfaessler@bluewin.ch is now QRV on 23 cm (CW) from his new location with a BIG signal and writes -- The first contest weekend with the new station brought an interesting finding. My window to west was improved from 40 degs elevation down to 6.5 degs. This enhances my working time by more than 3 hours. I worked 75 stations, including 15 initials. I will probably not send in my log, but very much enjoyed the QSOs. The second weekend is still unclear due to other commitments, but I will try to make it.

I1NDP: Nando i1ndp.nando@gmail.com sends his 23 cm first leg result -- From my side not much to report except my participation in the ARRL (leg 1) on 23 cm, and a very gratifying total of 79 QSOs. I did not count the multipliers yet, but I do not expect a great result because I was not on for my window with JA & VK. There was good activity, but with a very deep level of libration making it difficult to copy weak signals (lost some). I tried also 70 cm, but all I could copy was SM4IVE's signal in a mess of birdies and noise, so I gave up.

JA4BLC: Yoshiro's ja4blc@web-sanin.co.jp Nov EME report follows -- I enjoyed the Nov ARRL EME Contest weekend and worked 32 stations including 2 initials. On Saturday, I missed the NA window due to coming home late from a visit to JA6CZD. During the EU window I QSOed G4CCH, OK1DFC, G3LTF, HB9Q, DF3RU, OK1CA, OK1CS, HB9BCD for an initial (#), UA5Y (#), IK1MTZ, SM7FWZ, I1NDP, OK1KIR and SD3F, and on Sunday WD5AGO, VE6TA, VK3UM, VK3NX, K1JT, K5GW, VA7MM, HB9BBD, SV1BTR, IK3COJ, JA1WQF, KL6M, SP7DCS, ON7UN, UA3PTW, ON5TA, OE5JFL and S59DCD. I was surprised to hear KL6M calling me during the EU window. His signal was weaker (449) than usual. I suppose that Mike had some ground blockage. Back on 20 and 21 Oct, I worked JA1WQF on 10450, and on 24 Oct heard JA6CZD (O) on 24048 as my first ever received 24 GHz EME signal. My rig is a 3 m Cassegrain dish, W2IMU long horn and Kuhne WG preamp. I am receiving 11.8 dB of Sun noise, 1.45 dB of Moon noise and 2.3 dB dummy vs. CS. On 26 Oct I worked on 2424.050 (both of us) LZ1DX (339/449) for initial #57.

JA6CZD: Shichirou ja6czd@mx35.tiki.ne.jp continues his success on 24 GHz and reports that he worked on 24048, on 30 Oct DF1OI for the 1st ever DL-JA 1.25 cm QSO. He was using a 2.4 m offset dish and 30 W SSPA for this QSO. His Sun noise is 14.5 dB, Moon noise 2 dB and CS/G noise 3 dB. Shichirou is planning to remove his 5 m mesh dish (presently used on 5760 and 10 GHz EME) in mid Nov, but will continue operation with his 2.5 m dish. [TNX to JA4BLC for forwarding this report.]

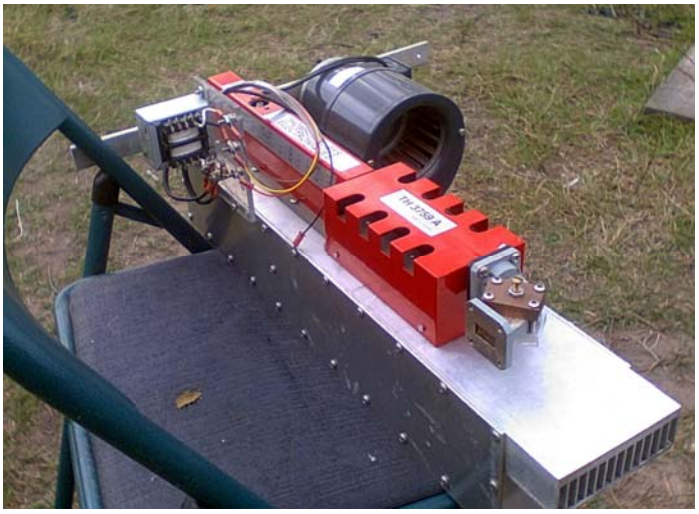
JH1KRC: Mike jh1krc@syd.odn.ne.jp reports that a new pedestal mounted 3.5 m dish has been completed for EME on the microwave bands. His old 4.4 m dish is still also mounted, but needs to have the feedhorn to be installed. Mike hopes to be active for the second leg of the EME contest on 23 cm.

K1JT: Russ (K2TXB), George (NE2U) and I (K2UYH) a.katz@ieee.org operated on 70 and 23 cm during the Nov contest weekend – There was a huge amount of activity on 1296 and because of near constant activity during the EU window, we ended up putting more time on this band then we intended. We only were on 432 for a total of 5 hours and most of this time was not during prime time - our EU window. As result, we plan to put more time on 70 cm in Dec, particularly during the first Moon pass. Noise was also a major problem on 432. We were seeing a difference of about 3 dB when we rotated pol 90 degs. I still have not figured out the cause. We also experienced noise problems on 1296. Up until recently, 1296 has been free of noise problems. The 1296 noise was primarily wideband and prevented us from making accurate Moon noise measurements, but I do not think it was degrading our narrow band RX. We focused on CW QSOs, but kept a receiver on the JT portion of the band we were on, and tried to add QSOs there when we saw new stations. On 23 cm, we QSO'd on 3 Nov I1NDP (579/579), 0325 SV1BTR (579/569), OK1DFC (579/579) , OK1CS (559/569), UA5Y (559/559), HB9BBD ((589/589), OK1CA (579/579), DF3RU (559/559), CT1DMK (559/559), S59DCD (559/579), IK1MTZ (559/579), IK3COJ (559/559), DL3EBJ (559/579), SP6JLW (579/579), N2UO (569/579), 0516 SD3F (569/569), VA7MM (559/559), NA4N (559/589), W6YX (579/579), WA6PY (569/569), I2MBC (13DB/17DB) JT, LZ1US (579/579), W5LUA (10DB/9DB) JT, UA3ITW (11DB/6DB) JT, UA4HTS (O/O) JT, PA3FXB (13DB/13DB) JT, HB9Q (8DB/8DB) JT, PA3DZL (559/559), K7XQ (O/O) JT, IW2FZR (559/559), EA1J (O/O) JT, OK1KIR (O/O) JT, IK5VLS (O/O) JT, OZ4MM (589/589), KL6M (559/569), F5SE/p (579/579), SM4IVE (599/589), K5GW (589/579), G4CCH (589/589), SM7FWZ (569/579), WB2BYP (539/559), LU1C (O/O) JT, 1217 JA8ERE (559/569), 1221 JA8IAD (559/559), 1247 JA6AHB (579/579), JA1WQF (569/579), VK3UM (579/569) and VK4CDI (15DB/8DB) JT, and on 4 Nov PI4Z (O/O) JT, ZS5Y (O/O) JT, LZ1DX (559/569), G3LTF (569/579), UA4AAV (569/569), SM6FZH (559/569), HB9BCB (569/579), ON5TA (559/559), WA8RJF (559/549), VE3KRP (559/569), WD5AGO (559/559), OH2DG (569/569), SP7DCS (569/579), RD3DA (449/559), SQ7DQX (O/O) JT, IK2QLO (O/O) JT, ON7UN (589/579), SV3AAF (579/O), VE6TA (569/579), JA4BLC (579/579), and VK3NX (559/599). On 70 cm, we QSO'd on 3 Nov K4EME (O/O) JT, WA0ARM (23DB/21DB) JT, VE6TA (559/559) and JA9BOH (O/O), and on 4 Nov DL8GP (O/O) JT, OH2PO (5DB/8DB) JT, LZ1DX (O/O) JT, OK2POI (O/O) JT, UA3PTW (O/O) JT, K7XQ (O/O) JT, K5GW (O/O) JT, LU1C (O/O) JT, EB5EEO (O/O) JT, K3MF (O/O) JT, DL7APV (O/O) JT, PY2BS (O/O) JT, DK3WG (O/O) JT, EA5CJ (O/O) JT, G3LTF (569/569), G4RGK (9DB/10DB) JT, K0RZ (559/559), VK3UM (559/559), VK4CDI (O/O) JT, JE1TNL (O/O) JT, JA6AHB (10DB/11DB) JT, and N4GJV (559/559). All QSOs were on CW unless indicated as JT. We ended with a score on 70 cm of 26x18 and on 23 cm of 68x33.

K4EME: Cowles candrus@mgwnet.com (FM20ky – VA) writes on his Nov contest activity -- I made it on 70 cm for the first leg of the ARRL EME contest this year. I am also planning to be on for the second leg in Dec. The overall number of stations I heard this year seemed down from last year, especially on the CW mode. Possibly the count was down a little due to Sandy on the East Coast and another contest going on in EU. SM4IVE had a great CW signal and was an easy station to work. I was able to work 26 stations and added a few new initials! On the first moon rise, I worked OH2PO, LZ1DX, K5QE, DL7APV, W7MEM, SM4IVE, DF3RU, OK2POI, K7XQ, LU1C, K3MF, ES3RF, DL5FN, K1JT, and W7AMI, and on the second G4EZP, WA0ARM, W5GW, UA3PTW, EB5EEO, PY2BS, G4RGK, DL8DAU, DF2VJ, JA6AHB, and JE1TNL. I already received and sent QSL's to K5QE, and will soon be sending a QSL to JE1TNL, which I just received his QSL yesterday. I did not hear or decode any VK or KL stations; I hope they are out in number for the second leg. I also received a very nice letter from a KN0WS, who copied my signals on JT. [See his report later in this newsletter (NL).] I am planning to be on for the second leg of the ARRL EME contest on 432. I will be on both CW and JT65B. I hope some of the smaller 70 cm stations come out and tries to work me on JT. On JT, I usually am on .060 to .070. I am running 8 x horz pol FO33 yagis and up to 1 kW on transmit. I also have 4 x vert pol FO22 yagis for receive only.

K4EME's 8 x FO33 yagis on 70 cm

K5GW: Gerald TexasRF@aol.com was active during the Nov contest weekend, but sends news on his post contest efforts -- The only activity to report since the contest weekend is working on 11 Nov VK3NX on 3 cm. Charlie had a great signal and we swapped (569/579) reports. The low libration spreading, as predicted, resulted in near T9 signals. A lot of time was spent this month testing 70 cm overload caused by TV transmitters located south of Dallas, about 75 miles from the EME QTH. When the dish is pointed in that direction, the total broadband power at the output of the preamp is +6 dBm! There are about 90 HDTV channels in use above 470 MHz or so.



K5GW's 300 W 10 GHz Thomson TH3759A and HB Screw Tuner – see Gerald's report in the Oct NL for more details.

KN0WS: Carl (Minn) is working to become QRV on 432 EME. He set up 4 home brew FO25 yagis and a 185 W TE Systems SSPA at a portable location (his summer home) for the first leg of the contest, but the mount was damaged, and he was only able to get 2 of his four yagis in operation. He copied on JT65B OH2PO (26DB), K0EME (28DB) and also LZ1DX. Carl does not expect to be able to try in Dec because of WX considerations – it gets very cold in the winter at this QTH. He is interested in trying again and hearing from others interested in 432 EME.

K6CLS: Cliff cls@employees.org sends word as to why you have not heard his signal off the Moon on 70 cm lately. His life has changed drastically causing him to change QTHs. He has temporarily moved to a location with no room for his EME setup, and way too many trees. He very much misses EME, and plans in a few months to have a new place with good southern exposure. He also sends his regrets for missing the EME Conference in Cambridge.

KL6M: Mike melum@alaska.net sends his input for the NL -- I was active in the first leg of the ARRL EME contest. I started out on 70 cm and worked only one station, OZ6OL before my GS35B amplifier quit (after 10 years of solid service at 1500 W). SO I switched feeds to 23 cm. I was plagued by tree blockage as usual, but managed to work 29 with 5 initials. I was running only a pair of W6PQL SSPAs for about 300 W in the shack and 150 W at the feed. I plan to build another set possibly by the next leg of the contest. I am also working on a 3400 transverter, which is about 95% finished. I also have 902 about 90% finished, and have a start on a 5760 transverter. I am currently QRV on 222, 1296, and 2304 (which has a problem that I have not yet identified).

KL7UW: Ed kl7uw@csalaska.net is working on getting his 4.9 m dish back in operation – I am frustrated by a lack of 12 V control voltage to the rotator relay control box. It defies ohms law, so it must be Murphy's law! I guess that I will just rewire the dish. Winter is here with about 3-inches of snow and it was down to low 20's, but I am attempting to be QRV on 1296 for the second contest weekend with 60 W at the feed. [TNX to WB2BYP for relaying this report.]

LU1C: "Adrian adrian.sinclair@multiradio.com.ar was QRV on 200, 70 and 23 cm during the Nov EME ARRL Contest weekend -- During the contest we had good weather and smooth operation. There was almost no trouble except for the VHF antenna rotor (2 m), which had a mechanical issue that we fixed on the second midnight. We operated on the 3 bands. Conditions on 23 cm were tough, and in some moments we only could hear a couple stations and found it very difficult to get answers. Most interesting was 432 where we made our first CW QSO and several on digital. We now have the new version of MAP65 working and are pleased with its FB performance. We will be on for the second part and we hope to have better condx and many more contacts.

N1AXB: Larry lgpignolet@aol.com RI) has procured a rare model 962 12 petal DS Kennedy dish. This model is the transportable tropo version, similar to VK3UM's. He is planning a mount similar to others, and looking for the best ideas incorporated and would like to hear from you. \ He has a former crane azimuth bearing, 12" prop-pitch motor and experience with hydraulics. [TNX to WB2BYP for relaying this report.]

N4GJV: Ron qstdemb@yahoo.com was active on 70 cm from NC in Nov, but was having a noise problem -- I was QRV during several scattered periods of time, during the Nov portion of the ARRL EME contest. My activity has been very scant, during recent months, and I was unpleasantly surprised by the sudden appearance of a serious QRM problem. The presence of hash/noise led me to find an FSK digital signal, on approximately 431.998 that is apparently the source of this noise. The noise sidebands from this signal extend up to at least 432.060, and seriously impact my ability to copy EME signals, especially during the first hour of my Moon window. I made an inquiry on the Moon-Net reflector regarding this problem, and received several helpful hints regarding possible sources. Conditions often seemed to be quite poor during the weekend, and the QSB was often severe. However, I occasionally heard some very good signals, which caused me to suspect that sharply defined signal polarization may have been the reason for my perception that conditions were poor. Many TNX to SM4IVE, SV1BTR, K5GW, SP7DCS, VE6TA, OH2PO, K0RZ, W8TXT (especially to Mike for his patience as the noise was quite severe during our QSO), OZ4MM, VK3UM, and K1JT for the FB CW contest QSOs. Got-a-ways include LZ1DX and N8CQ. I plan to be QRV for at least a few hours during the Dec part of the contest.

NA4N: Greg na4n@comcast.net (VA) sends his Oct and Nov EME contest results – I worked on 2304 on 6 Oct K5GW, SV1BTR, G3LTF (XB), OH2DG, ES5PC, HB9Q, WA6PY, OZ4MM, OK1CA, WD5AGO and K1JT, and on 7 Oct HB9Q (XB), IW2FZR, SP6OPN and VE6TA. During the next contest weekend, I was on 1296 and worked 29 stations. I QSO'd on 3 Nov HB9BBD, I1NDP, G4CCH, OK1CA, SV1BTR, K5GW, SP6JLW, UA3PTW, CT1DMK, K1JT, LZ2US, UA4AAV, OZ4MM, SD3F, HB9Q, F5SE/P, SM4IVE, KL6M, N2UO and VK3UM, and on 4 Nov SP7DCS, IK1MTZ, G3LTF, OK1DFC, ON7UN, WA6PY, VE6TA, SM7FWZ and SM2CEW. I found conditions pretty good on 2304, but some Moon libration on 1296 making copy at times difficult - chopping the CW up. I am looking forward to the Dec leg of the contest.

OK1CA: Franta's strihavka@upcmail.cz report for the Nov part of ARRL EME Contest follows -- I was QRV on 23 cm and finished with a score of 68x33. I added initials with OK1CS, UA5Y, UA4AAV, W6YX, ON5TA, RK4CR, IK6EIW, SP3XBO, IK5VLS and W3HMS to bring me to initial #283. There was great activity from all regions during the contest. However, I found that conditions were not optimum for EME, and that for short periods the signals from some stations were very weak. The presence here of bad weather with rain did not help copy.

OK1DFC: Zdenek ok1dfc@seznam.cz is nearing DXCC on 432 –- I am now at DXCC 92. My last one was EI9E during last weekend of Sept. I have not been able reach XE2AT. He does not seem to get my emails. I am now looking for the last 8 DXCC, so hope to finish also my DXCC soon. Also WAS is close and I want to finish this nice award too. I was QRV for my whole Moon window of Nov leg of ARRL contest. WX was not good here, but the wind was moderate and I was able to run my antenna full time this weekend. I ended with 90x40. Heard but did not work were ES5PC, SM6FHZ, TI2AEB and DJ9WY. I know that VK3NX was QRV, but did not find him. I plan to be QRV again for the next leg if WX permits. Due to librations, I had problems with two week stations. I do not know who was calling me. I wish they had repeated their calls in the format of "OOOOO KKKKK 11111 DDDDD FFFFF CCCCC". So PLEASE, if I send "YYY", use this format, which helps me to read your call. Some weaker stations were terribly affected by the librations, but I think it would not have been so big a problem if they had replied with the "YYY" format. Stations worked were I1NDP, SP6JLW, HB9BBD, JA4LJB, DL3EBJ, PA3FXB, YO2BCT, SD3F, HB9BCD, F5KUG, DF3RU, IK1MTZ, OK1CA, OZ4MM, SV1BTR, CT1DMK, ZS5Y JT, ZS5Y for CW initial #336, IK5VLS JT, EA1RJ JT, W3HMS JT, K1JT, OH2DG, UA3PTW, N2UO, W6YX, UA4AAV, DJ3FI, UA5Y #337, LZ2US, ON5TA, G4CCH, LA9NEA, UA4HTS JT for digital initial {#162}, I2MBC JT {#163}, HB9Q JT, W5LUA JT, UA5Y JT {#164}, K7XQ JT, WA6PY, WB2BYP, OK2ULQ, VA7MM, WD5AGO, OE5JFL, OK1CS, OK1KIR JT, F5SE/P, K5GW, KL6M, PA3DZL, SM4IVE, JA6AHB JT, VK4CDI JT, VK2DVZ JT, IK3COJ JT, VK2AMS JT, VK3UM, G3LTF, IK6EIW, SP7DCS, LX1DB, SM7FWZ, JA4BLC, JA1WQF, ON7UN, JA8IAD, RK4CR #338, S59DCD, PI4Z JT {#165}, I2MBC #339, LZ1DX, G4RGK, IK2MMB, SQ7DQX JT {#166}, SM2CEW, HB9BCD, IK5QLO,

SP3XBO, OK2DL, NA4N, VE6TA, LU1C, SV3AAF, RW3PX, AL7RT, WA8RJF, VK3AXH JT, 9A5AA, W5LUA and W1AIM #340. All QSO were on CW unless indicated as JT. I am looking forward to the next leg on 1296 and 432.

OK1TEH: Matej ok1teh@seznam.cz has added another DXCC on 70 cm with his single yagi station -- On 16 Oct I worked on 70 cm CT1HZE (26DB/29DB) for a new DXCC. Joe used his old 4x23 el yagi and 1 kW. He is now working on a new antenna with 4 x LFA yagis. ES3RF also heard me on 70 cm, and I heard SM5DIC, however no QSO yet. I was also QRV 23 cm and tried W6YX on on JT65 from Stanford University. The QSO wasn't completed due to my bad RX. They copied me (25DB). During the winter I will prepare a new LNA box, and plan to be more active on 23 cm with my tiny 1 m dish. I expect to be able to make JT65 contacts with 3 m dish and 500 W stations, and bigger stations on CW too. I'm especially looking to run with somebody with QROO [BIG station] from VK.

OK1TEH's EME antennas

PA2V: Peter peter@pa2v.com is now QRV on 432 with 800 W into a single 24 el LFA yagi, and less than 1 dB feedline loss between the yagi and his shack. He only has the ability to elevate his yagi enough to get over the ground noise, and is thus limited to near horizon operation. Nevertheless, Peter's station is operating excellently. He easily worked me [K2UYH] on both JT65B and CW on 9 Nov. He may have worked some others by now. Peter is interested in skeds and will likely be active during the Dec contest weekend.

SG6W: Ingolf (SM6FHZ) ingolf.fhz@gmail.com is now QRV on 6 cm EME and reports on [what I believe was] his first operation on 6 cm -- I had a good time on 6 cm EME on 11 Nov. I was using my vanity call sign SG6W. There was low libration spread and path loss predicted together. I measured about 0.8 dB of Moon noise. This is less than expected, so I have some work to do. The Moon noise reading was taken at an elevation of 21 deg and the "cold sky reference" was taken at about the same elevation, and thus I still had some noise from ground and trees. I did not have the time to do a serious measurement due to my short Moon window. I am using a SoftRock SDR and SpectraVue in Continium mode to measure Moon, Sun and ground noise. My own echoes were at best moving my S-meter well in a 300 Hz BW. Signal quality was very clean over all today, thanks to the minimal Libration. Between 0940 and 1100, I worked OK1KIR, G3LTF, PA0BAT, SV3AAF and CT1DMK. All stations had very nice signals and were very easy to QSO, but PA0BAT had the best signal. I did have some problems tracking the Moon due to the gusty wind (10 to 12 m/s). I did not hear anyone else on the band. I got a report from F2CT that he heard me. If anyone else copied me, please let me know. I had my SoftRock/Rocky SDR panoramic receiver running all the time watching 5760.075 to 5760.115 and checked all stations I saw. I had to park the dish at 1115 due to the strong wind, and got wet when I took down the feed due to rain and wind. TNX to all for the nice QSOs.

SM2CEW: Peter sm2cew@telia.com sends his Nov contest report -- I was planning to operate on 432 during the 2nd day of the contest after spending the first pass on 144. Unfortunately I discovered a problem with my preamp, so instead of operating on 432 I went to 1296 where signals were really good. I worked the following stations: N2UO, I1NDP, G3LTF, LZ1DX, SV1BTR, IK1MTZ for an initial (#), LA9NEA, OK1DFC, VE6TA, OK1CA, OK1KIR, SP6JLW, OK1CS (#), SD3F, K5GW, SP7DCS, G4CCH, F5SE/P, SM7FWZ, ON5TA, DL3EBJ (#), LZ2US, WA6PY, OE5JFL, PA3DZL, CT1DMK, WD5AGO, S59DCD, IK3COJ, AL7RT, IK2MMB, LX1DB, VA7MM, KL6M, HB9BBD, NA4N, SM4IVE all on CW of course. The following weekend, 10/11 Nov, I fixed the 432 preamp problem (loose SMA connector) and was active on 432 for a few hours. The following stations were worked on CW: OZ6OL, SM4IVE, G4RGK, IZ2DJP for an initial (#), DL7APV, UA3PTW, DF3RU and SM5DIC (#). DJ3JJ was also heard with a good signal on Saturday. Since changing over to US Digital Absolute Encoders, I find that my tracking has improved tremendously and I now have more consistent echoes on all bands. Now I also notice a bit of play in my azimuth chain drive that I need to take care of. My 13 cm high power permit runs out by the end of Dec, so if anyone is looking for me for a sked, I am also interested. I do need to change the feed to install the 13 cm stuff, so a QSY from 432/1296 is always dependent on the weather. If we don't get a special permit in 2013 for 2300 MHz, I will have to get rid of my DB6NT 13 cm transverter/preamp, Ericsson SSPA and Septum feed. Instead of 13 cm, I will then focus on becoming QRV on 3.4, 5.7 and/or 10 GHz.

SP7DCS: Chris sp7dcs@wp.pl reports on their Nov contest activity -- With my son, SP7MC, we were QRV as SP7DCS on 3 band CW EME during the first weekend of ARRL Contest. We were on 70 cm during first pass and made 13 QSOs. Signals were a bit down due to path degradation, but Faraday was cooperative. Unfortunately, as others mentioned, activity level was poor. The second and third Moon passes were dedicated to 23 cm. Huge signals, big activity and great fun were found - no need to say more! We ended with with 53 QSOs. We spent only a little time on 2 m due to noise problem and the Marconi tropo contest in Europe. Our total score was 77 QSOs, all on random unassisted CW on 3 bands. Our equipment on 70 cm was a 6 m dish (fully rotatable dual dipole feed) and SSPA, and on 23 cm a 6 m dish (dual mode horn RA3AQ feed) and SSPA. We plan to be on during Dec weekend. I hope to make more QSOs on all bands. I hope for better activity on 70 cm - this band really deserves it. We will see how bad our noise problem on 2 m will be. We also hope to catch the got-a-ways on 23 cm.

TI2AEB: Armando ti2aeb@gmail.com is now QRV on 1296 – After fighting with various problems, including instability of his transverter that he solved with a 10 MHz standard, he now has his station working well. His first QSO was with OK1DFC on CW. Armando was amazed when Zdenek asked him to try CW. He next worked HB9Q (569) on CW on random on and later on JT65C. He has now worked several stations on 1296 including K2UYH. I expect Armando to be QRV on 23 cm during the Dec contest weekend.

VE3KRP: Eddie eddie@tbaytel.net is recovering from some hand surgery, but has managed to remain QRV on 1296. He worked I1NDP and G4CCH on random CW before the Nov contest weekend and 9 stations during the weekend of the contest. Look for Eddie in Dec.

VE5KKZ: Kees kaperk@sasktel.net has been listening on 1296 for more than a year -- I am rebuilding my station. I started with the coffee can feedhorn (Tim Hortons is the best). I now have a circular pol diplexer and VE4MA ring and am measuring 13 dB of Sun noise with my 10' dish. I have also bought from PE1RKI a 150 W SSPA – TNX for the advice of many active EMEers. I hope soon to be working you all off the Moon.

VE6TA: Grant ve6ta@clearwave.ca sends his Nov EME contest results – I worked the first pass on 432 and the second on 1296. Unfortunately I found poor activity on 432 again this year. I worked on 432 SM4IVE, SV1BTR, LZ1DX, SP7DCS, K0RZ, K5GW, DF3RU, N4GJV, OH2PO, K1JT, W8TXT, VK3UM and JA9BOH. On 1296 I QSO'd SV1BTR, IK1MTZ, I1NDP, OK1CA, N2UO, SD3F, LZ1DX, OH2DG, SM2CEW, W6YX, G3LTF, SP6JLW, WA6PY, LZ2US, K5GW, S59DCD, OK1DFC, SV3AAF, HB9BBD, SM7FWZ, G4CCH, SP7DCS, CT1DMK, WD5AGO, OK1CS, IK2MMB, ON5TA#, NA4N, KL6M, G4RGK, AL7RT, DL3EBJ, PA3FXB, PA3DZL, VA7MM, SM4IVE, JA1WQF, JA4BLC, VK3UM, VK4CDI, K1JT and VK3NX. After the contest I worked W1AIM with a nice signal on 1296. I will be on for only the first pass, probably on 1296, in Dec due to a business trip.

W3HMS: John W3HMS@aol.com was QRV on 1296 using both JT and CW during the Nov contest weekend – The middle of the night hours of the contest did not work well for me. I find that I need my beauty sleep. During the time I was QRV, I worked OK1DFC (11DB/10DB) on JT65C, PA3FXB (22DB/20DB), HB9Q (10DB/O) JT65C, I1NDP (579/579) and OK1CA (559/559). I was glad to discover that I could call CW stations on their freq and they would reply - a really big help! I also QSO'd on 16 Nov using JT I1NDP (8DB) - what a signal from Nando!

W5LUA: Al w5lua@sbcglobal.net was on 1296 during the Nov contest weekend – I made 20 QSOs on 23 cm in the contest and plan to be active again in Dec. During the following week, I worked on 23 cm W1AIM and WA8RJF. I also worked JA1WQF crossband on 10368/10450 and IK2RTI on 24 GHz. Then the next week, I was on 1296 again and added VK2JDS, VK2DVZ and TI2AEB for a new DXCC. I also worked on 13 cm SM6CKU.

W6YX: John (K2YY) johnhill5000@gmail.com sends news from the W6YX EME team – We had a very productive Nov leg of the ARRL EME Contest! We operated on 2 m and 23 cm. On 1296 with our 6 m dish and 500 W PA, we

made 45 contacts, 30 on CW and 15 on JT65C. We do not go to sleep when EU stations leaves the Moon's footprint! However, we do tend to work much more JT65 after the EU window ends. In Dec, we will be QRV on 3 bands, 144/432/1296. We will use software defined radios and MAP65 on all 3 bands, so the best way to work us is to call CQ and call it often so we can find you.

W6YX's 6 m dish used on 23 cm in the contest

W7UPF: Don donsay2@cox.net (DM42mf AZ) hopes to be QRV on 23 cm in Dec and writes -- After many-many months of being off the Moon, I learned there was a ON0EME beacon on 1296. When I checked the signal, it was received here at a quite steady S1+ with little fading into my 10' dish. I had long waited to hear/see a beacon on 1296. It is a great help for someone just starting EME or for me in re-establishing my 1296 EME setup. I monitored the signal and watched as the path changed and the beacon signal was lost. The beacon's group's efforts are very much appreciated and I hope they will continue.

WA0ARM: Bill Bill.Glynn@westarenergy.com was active on 70 cm during the contest in Nov -- Over the summer, I upgraded the system with a new counterweighted array frame allowing a full 90 degs of elevation and scalability to 16 antennas. A hard wired cameras were added too. With only 160-180 W of power and a WA2ODO LNA, I can hear better than I can transmit. I made 5 QSOs including 2 initials in the first segment of the ARRL contest, but decoded several more. All my QSOs were made on JT65B and were OH2PO (24DB), DL7APV (17DB), K1JT (21DB), K4EME (25DB) and UA3PTW (20DB). Decodes on Saturday were K4EME, LZ1DX, LU1C, OH2PO, ES3RF, OK2POI, W7AMI, DF3RU, K5GW, DL7APV and K1JT, and on Sunday K4EME, K5GW, W7AMI, K3MF, YO2LAM, UA3PTW and LZ1DX. My TX feedline is presently 7/8" hardline. Before the next weekend, I will try to upgrade to 1 5/8" hardline to get a few more watts to the array.

WA0ARM's upgraded 8 yagi array

WA8RJF: Tony TEmanuele@kentdisplays.com report on his Dec contest operation on 23 cm -- I worked 10 stations on 23 cm during the first weekend of the ARRL EME Contest. The WX was nice the week after the contest and so I left the feed in place at the dish and later worked W5LUA, I1NDP and OK1KIR. I was surprised to discover that I had not worked OK1KIR previously and so Tonda is a new one. I also heard W1AIM, but not enough for a QSO and could see traces of TI2AEB on the panadapter. WX permitting, I will be QRV again in Dec.

WB2BYP: John storyavenue@hotmail.com (NY) was QRV in the contest in Nov on 1296 and worked I1NDP, HB9BBD, OK1CA, IK1MTZ, SV1BTR, SP6JLW, G4CCH, OZ4MM, N2UO, OK1DFC, PA3DZL, DL3EBJ, F5SE/P, K5GW, KL6M and K1JT. Heard were WA6PY, HB9Q, OK1CS and UA3PTW. Unfortunately John will be away on business during the Dec contest weekend and does not expect to be home in time to get on. The weekend after the contest he QSO'd I1NDP and W1AIM. Both were worked with his dish pointed through trees. John also heard HB9Q in QSO with TI2AEB.

WB7QBS: Glenn glennwb7qbs@hotmail.com (WA) was looking for contacts on 432 during the Nov contest weekend. He heard SM4IVE (559) on 3 and 4 Nov and OZ4MM on 4 Nov. He working on doubling his power by combining 2 brick, but is still a ways away. Look for Glenn in Dec.

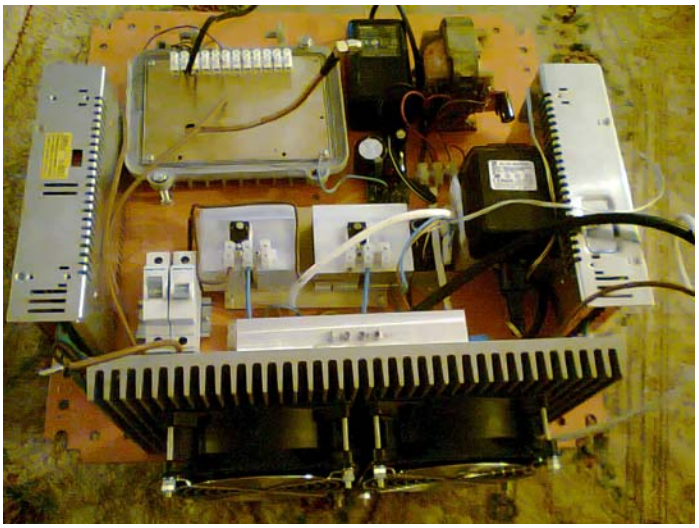
WD5AGO: Tommy wd5ago@hotmail.com reports on both the MW EME contest in Oct and his 23 cm activity in Nov -- Our final report for the ARRL MW EME weekend has mixed activity results. There was a good amount of EU activity, but with some stations fixed on 2320 and not apparently listening on 2304. There was limited NA activity mostly due to middle of night Moon pass, but there was plenty of Moon time left in the day light mornings for most NA stations. We were hoping for some S. Africa activity on 13 cm, which never materialized. All in all, as compared with other station logs not bad, but 10 QSOs below the max of a couple of years ago. Our group worked on 13 cm OH2DG, LZ1DX, ON5TA, R3YA, SV3AAF, K5GW, VE6TA, G3LTF (XB), SD3F, K1JT, ES5PC, OZ4MM, HB9Q, PA3DZL (XB), SV1BTR, WA6PY, SP6OPN, OK1CA, NA4N, JA4BLC (XB), F5JWF, IW2FZR, CT1DMK, PA7JB, WB5AFY for initial #81 and SM4IVE for a total of 26x22. CWNR were DL1YMK (XB), DF3RU (XB), JA8ERE (XB), PA0BAT (XB), SM2CEW (XB), SM3BYA and WA8RJF. Our equipment was a 3.1 m dish with HB scalar feed, HB 0.35 NF LNA and 300 W PA. A SFU that day 110 gave 14.4 dB Sun noise. The Moon noise was 0.35 dB. In Nov, we switched to 23 cm with a new system and our 1st real activity in +10 years. We used the same dish as on 13 cm and also had a 300 W PA. The LNA NF was a little lower at 0.2 dB and we had a 3 ring HB scalar, but using a quad hybrid for CP. We measured 14 dB of Sun noise with an SFU of 103 and a whopping 0.13 dB of Moon noise! Conditions were not that good, but many signals were still 579-599. Our own echoes were well above the noise all weekend. We worked 28x20. CWNR or QRZs were DL1YMK, ON7UN, HB9Q, HB9BCD, F5ES/P, LX1DB, VK3NX, JA8ERE and NA4N. Many others were heard on CW. We will try calling CQ in Dec weekend. We are updating our QSL card info and should be sending some out shortly.

ZL4PLM: Simon gm4plm@hotmail.com writes that he is near ready for EME operation on 432. He had some problems with RFI from his the PA controller, but now expects to be QRV early in 2013 with 8 X 19 yagis and 1 kW. He is also working to be QRV on 1296 early in 2013. There he will have 3.7 m dish with OK1DFC feed, 1 kW PA and G4DDK preamp. A 7 m dish is to come later next year. He is also working on 3400 with 140 W to the same 3.7 m dish with WD5AGO feed and a G4DDK preamp, 5760 with 100 W to same dish with WD5AGO feed and a Kuhne preamp, and 10,368 is also planned with 50 W to same dish with a Kuhne preamp.

K2UYH: I a.katz@ieee.org put my main operating effort into the ARRL EME contest as part of the K1JT team, but did make some gratifying QSOs. I worked on 1296, on 8 Oct at 1050 MU/DL4NUD (23DB/25DB) on JT65C for mixed initial #424* and DXCC 84*, on 9 Nov at 1205 TI2AEB (13DB/11DB) JT65C #425* and DXCC 85* and 1245 TI2EAB (559/559) for CW initial #339. I also worked on 9 Nov on 432 at 1132 SM5DIC (14DB/20DB) JT65B for mixed initial #842*, 1212 K5DOG (13DB/21DB) JT65B, 1218 G4CBW (22DB/17DB) JT65B #843, 1232 IZ2DJP (14DB/O) JT65B #844*, 1245 IZ2DJP (559/559) for CW initial #727, 1303 PA2V (14DB/O) JT65C #845* - Peter's 1st EME QSO, 1325 PA2V (559/O) #728 and 1344 DL8DAU (19DB/30DB) JT65B.

NETNEWS: **YO8RHI** is working to finish a new higher power 1296 SSPA in time for the Dec contest weekend. **KL7UW** is still making repairs and not QRV on 1296. He has a 4.9 m dish, G4DDK LNA and 60 W with 300 W under construction. **W1AIM** (FN34 Vermont) was on 1296 EME during Nov contest weekend with a 16' dish and ~60 W on CW only. I1NDP among possibly others were QSO'd. W1GHZ assisted with the azimuth tracking. They are expected to

be on again in Dec. **N4PZ** has been traveling in SA and thus was not active during Nov, and is not reported to be back for the Dec contest weekend. **N8CQ** (NC) was active on 70 cm during the Nov contest weekend and is expect to be on more with his new 30'dish in Dec. **N4ZQ** is setting up for 70 cm EME and will be listening soon. **W9IIX's** dish is down and will not be QRV this year during the contest. **VE4MA/W7** is now in AZ. **NE8I** is working on his 14' dish and amp for 23 cm.



YO2RHI's new SSPA for 23 cm

FOR SALE: **W4SM** is in the process of downsizing his ham equipment in anticipation of a move. Stacey has for sale a 4.5 m dish and K2AH 1.2 kW 1296 PA. The PA breaks down fairly easily into pieces that one person can carry and it would fit easily into a station wagon or mini-van. The 4.5 m dish needs to be taken down, which would take a few hours. It includes septum feeds for 1.2 and 2.4 GHz, pre-amps, coax switches, as well as a substantial amount or 7/8" Andrew hardline and other coax. Also included is the computerized drive system and spare azimuth drive motor. Basically, this is a "turn key" setup. I also have other equipment for sale including LunarLink 1 KW PA for 144 and 432 and smaller 75-200 W PAs for 1296 including a pair of combined Kuhne MKU 3200 PAs giving 500 W out with 28 VDC switching power supplies, Icom 970A transceiver with 1.2 GHz and 2.4 GHz modules and lots of ancillary stuff, Bird wattmeters, etc. More details can be seen at http://www. keplerian.com/dish/4.5m_dish.html. Contact Stacey at w4sm@keplerian.com. **WD5AGO** will be making a couple extra CP feeds for 9 and 6 cm in the next month. If interested please contact Tommy at wd5ago@hotmail.com before the end of Nov. He also has one 13 cm CP feed remaining and commercial made LNAs for 23 cm through 6 cm.

SPECIAL EDITORIAL BY G3LTF ON PATH LOSS OF ACTIVITY TIMES: As we start to think about contest and activity weekends, I want to make a few points about the variation in Earth-Moon-Earth path loss. As far as I can see everyone displays the variation in this figure referenced to the closest EVER that the moon comes to the earth. Although each year there is always one month with a closest perigee (see http://www.fourmilab.ch/earthview/pacalc.html for a list) the "closest EVER" only occur quite rarely. If you search for "Super-Moons" you will find there was one in March 2011, but the previous one was Nov 1992... easy to miss them! The result of this thinking is these "scary" 2 dB excess loss figures. I suspect some people look at them and conclude that it is not worth switching the rig on. So why do we take closest EVER as the reference zero? Every month the Moon goes through its AVERAGE distance, 382,500 km; surely that should be the zero reference. The highest monthly variation is then +/- 1 dB and in fact most months the loss variation is less than that, for example Aug this year, it was only +/-0.6 dB and frequently is +/-0.8 dB. Note +/-1 dB is the difference between having a 10' dish and a 12'dish - worth having, but not a killer difference. VK3UM, points out that we are going through a period, which will last for several years, where perigee and high Northern declination are completely out of phase, and as 99% of the Activity is in the N Hemisphere (I am talking about 432 and above) we should just stop worrying for now about the lower part of the loss variation, its only accessible to a few Northern hemisphere folks with wide open horizons and the window is short. For example here at 51 deg N, for the closest approach this year (5/6 May), if you are clear at 5 degs elevation, you have a 7.5 hour total window with just a 1 hour window into W6. By contrast, the next weekend, which is at apogee, there is a 14.5 hour window above 5 degs and a 6 hour window to W6. For me it is a no-brainer, go for the maximum Moon coverage of the areas where there is activity and swallow the 0.6 to 1 dB. Finally, for 23 to 3 cm, the only "degradation" is the path loss variation covered above, and the inevitable noise from the Moon itself (which will dominate in bigger dishes), otherwise the sky is quiet (6-10 deg K). At 70 cm there is more variation in noise background, but the only time when it is significantly high is for about 4 days around the lowest Southerly declination. This can easily be seen from the VK3UM planner, using it will make clear that for a lot of the time when the Moon is above 0 degs declination, the sky background temperature is low - see http://www.vk3um.com/eme%20planner.html and go to sky noise display, select the Moon option, and click through day by day. As W1GHZ said recently... **If you have an antenna that can see the Moon, get on and use it.**

TECHNICAL: WATER COOLING GS35b BY N4PZ: I have produced a 1/2 wave H_2O jacket for my 432 GS35b amplifier, which completely eliminates even the slightest tendency for thermal drift – see pictures. The jacket itself is made from the original core of the cooler. Clearly it's not long enough to resonate so I extended it with a ½" piece of the 3" diameter tubing and wrapped the jacket and the ½" wide ring with brass shim stock to make it about 4 ¼" long. It is enclosed in an 8" x 8" x 9" box. The tuning disc and output probe are at the hot end of the assembly with the RF choke and B plus bypass at the very bottom of the assembly along with the input and output for water as well. Inside the jacket I directed the water upward on the input and at an angle to get it swirling around the core. The tough part of the job is stripping the original anode down to the basic core. I did one myself by hand and it took 6 hours. The second one was cut off by a commercial machine shop. I used some tubing that I got from a friend to get the water inside the cavity. It isn't Teflon, but seems to tolerate the high RF field without melting.

N4PZ's GS35b water cooling jacket.

FINAL: I am holding the results on of a survey on States Needed by W1QA until next month – Bob has some surprising conclusions.

G4RGK's has just updated his 70 cm Up CW Initials Lists, which can be seen at http://www.zen70432.zen.co.uk/Initials/index.html. The top 10 on each band were listed in the Aug NL.

DL7APV is preparing the 2013 Moon Calendar. It is not yet finalized, but a preliminary version can be found at http://www.mydarc.de/dl7apv/moon2010/moon2010.htm. I plan include the latest version in the next NL.

For those of you interested in your pitch discrimination (important for CW copy) see <http://musicianbrain.com/pitchtest>.

I have added info on the ON0EME EME beacon to the NL's masthead. TNX for a great job to ON4BCB and ON7UN!

Besides sending wishes for the very best of luck during the Dec EME Contest weekend, I also want wish all of you a wonderful Christmas/holidays (whatever you celebrate) and 73, Al – K2UYH