432 AND ABOVE EME NEWS
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VERY BEST SEASONS GREETINGS FOR A WONDERFUL NEW YEAR FROM ALL ON 70 CM & UP EME TO ALL

CONDITIONS: We have much to be thankful for and celebrate. The reports were filled with messages of greetings and thanks that I have not included, but want to echo here for everyone. The big news this month is the preliminary results from the ARRL EME Contest. For the first time in many years, activity on 432 has turned around. In Nov DL7APV took over the lead with **127x49** (his best ever) from OH2PO, who ended with **116x42.** On 1296 OK2DL is on top and well ahead of the rest with **117x39.** It shall be interested to see if this trend will continue. SM2CEW will set the dates and times for the 2017 432 CW activity time periods (ATPs) – see www.moonbouncers. org. There was much more of note in Dec/Nov. The 24 GHz Activity Weekend (SW) despite problems with finding a good date drew an excellent turnout – see OK1KIR's and other reports. Both E44 dxpeditions were amazing successes providing new DXCCs on 2 m and 70, 23, 13 and 9 cm. 51 initials were made on 1296! See the reports in this newsletter! Two 70 cm WAS's were completed this month by OK1DFC and OK1KIR – congratulations! The rare state of SC is now QRV on both 70 and 23 cm by N4CNN and KH6TY. EA8/G4RGK will be on in Jan – see Dave's report. Also see the TM8DO report. TMX0CNS has completed 70 cm EME QSOs using a 2 el yagi and 60 W – see Tom's report. **Coming up is the EME SSB Funtest on 7/8 Jan.** on 4/5 Feb is the 2 m and 70 cm DUBUS EME CW Contest.

SSB FUNTEST: The1296 SSB Funtest will start at 1200 on 7 Jan and end at 1200 on the 8 Jan. This year there will not be a 432 SSB contest. Instead 13 cm SSB activity is encouraged around the 23 cm contest. If any significant QSO counts are received, they will be recognize with special certificates. These events are intended to be fun. You do not need to transmit on SSB to participate. CW to SSB and vice verse exchanges are encouraged and count for points. (Only one QSO between stations is allowed, i.e., you cannot work a station SSB to SSB and SSB to CW for extra points). Scoring is contact points x number of two letter Grid Sectors (IO, JM, FN, EM ...) worked. SSB to SSB contacts count as 2 points. SSB to CW (or CW to SSB) count as 1 point. The exchange is your Sector (IO, JM, etc.). Only the 2 sector letters need to be sent and copied by EME. The exchange of signal reports and/or 4 character grids is optional and not required. Operation may be by single or multiple operators from one location. No distinction for scoring will be made. Assisted operation is not encouraged. All skeds/operational announcements should be made prior to the start of the contest. Logs should be sent to the 432 and Up EME NL by email to alkatz@tcnj.edu ASAP after the end of the contests. (All logs for contest awards should have been received within the month following the contest). The top scoring station on each band will receive an attractively framed certificate that will be presented at the next International EME Conference (Holland 2018).

BD4SY: Zhu bd4sy@126.com is now QRV on 13 and 9 cm EME -- I have been trying to solve interference problem of 13 cm and now my system working well on 2320. I have worked thus far on 13 cm HB9Q, OK1DFC, OZ4MM and OH3LWP. I have also have made QSOs on 9 cm with HB9Q, K2UYH and W5LUA. [There may be more. Zhu is using the same 3 m dish he uses on 1296 on these bands.]

DJ3JJ: Andreas dj3jj@gmx.net reports on his ARRL EME Contest operation -- I was on 1296 single op CW only. I QSO'd on 19 Nov at 0814 OE5JFL (559/559), 0823 OZ4MM (559/539), 0831 I1NDP (569/559), 0844 W6YX (559/559), 0856 OK1CA (559/559), 0925 OK1DFC (559/559), 2250 G4CCH (549/449), 0043 OK2DL (559/O), 0600 SP6JLW (449/O) and 0905 LZ2US (559/559). In Jan I plan to be QRV for the SSB Funtest.

DL7APV: Bernd dl7apv@gmx.de 70 cm ARRL EME Contest results -- ARRL II is over and I needed a lot of sleep after it. But it was really fun and activity was very good. It seems to have increased (at least on JT). In Oct, I had one more QSO compared to last year. But in the Nov leg, I had 16. **My final score was 127x49, (including 17 on CW). I never had such a high score before**. I will send in the log as check log due to using loggers. I feel it is important to show the activity. Back in Oct, I only made 4 initials (EO25F, DG0KW, JN4JGK and SM7THS). In Nov, I was luckly and added 15 stations. Initials were JH7OPT, JR0HKT (his first EME QSO), UR7DWW, SM6FHZ (from his city QTH), DL6YBF, KA1GT, RV3IG (15 el and 30 W), N0KE, E44CM, JA7YCQ, RK9CXM, UA4AAV, RD3FD, OZ9FW and RO2F. I also had about 15 getaways. They included 2 incomplete QSOs with W9IIX and UN9L. Back in the beginning of Nov after 7 month of testing, I finally worked MX0CNS with his 2 el yagi and 60 W at the feed. The excellent perigee and good condx made it an easy QSO after all the previous tries. We started with a 7 el yagi, reduced it to 4 el, then 3 el and now a QSO with 2 el. Now we are looking for new challenges!

DL7LJ: Per per@per-dudek.de reports on his 3 cm EME Beacon -- The new beacon with the same QRG as in the past (10368.025) is up and running again. It has a new JT65C program. Averaging is possible. The output power is 40 W. The dish is 7.2 m, with the beacon up from moon rise to moon set in JO54. The beacon will be not up when the Moon does not reach 20 degs. Reports are welcome.

E44CM's single 432 27 el yagi use with the Moon

E44CM: Chris (PA2CHR) post@pa2chr.nl has the story and results of his and PA3FYC's dxpedition to Palestine on 70 cm (and 2 m) during the Nov part of the ARRL EME Contest (20 Nov) from Jericho in Palestine (KM71ru) -- Our station was a FT857 transceiver with Italab PA, running about 300 to 350 W at the dipole of a 27 el yagi. I build this new DK7ZB antenna with 17.7 dBd gain especially for this dxpedition; we could turn it by hand for horizontal or vertical polarization. On 432, the following stations were worked on JT65B unless noted: US7GY (26DB), OK1DFC (23DB), DL7APV (17DB), LZ1DX (26DB), OK1KIR (23DB), OH2PO (13DB), ES3RF (26DB), DK4RC (26DB), PA0CSG (25DB), (HB9Q 14DB), UT6UG (28DB), DF3RU (20DB), UA3PTW (24DB), DL9KR CW, DL6SH (17DB), OZ4MM (21DB), JA6AHB (24DB), VK4EME (26DB), UX0FF (28DB), DL8FBD (29DB), G4RGK (28DB), PA2V (26DB), I1NDP (17DB), ON4AOI (27DB), UX5UL (25DB), S51ZO (27DB), ZS6JON

(26DB), UT5DL (28DB), DJ4TC (28DB), YL2GD (27DB), RN6MA (29DB), UR7DWW (26DB), DL1RPL (27DB), DK3WG (25DB), WA4NJP (23DB), NC1I (16DB), PY2BS (23DB), W5LUA (23DB), K2UYH (22DB) and SM4IVE CW. We started with horizontal polarization for TX and RX and this was fine for most of the stations; only a few later in the moonpass where worked on V-pol. I think this relatively constant polarization helped us to work 40 stations in just one moonpass. We are very satisfied with the results. We never worked so many stations during one moonpass before. It was a pity to work only 4 stations from the USA. Our QTH had a free moonrise, with some local QRM but at moonset, we were blocked by mountains at about 13 degs. We already have plans for our next dxpedition; maybe in the same regionà and are thinking of adding a second yagi on 70 cm. 23 cm is also a possibility with a 67 el yagi and about 120 W; the same setup as I used at Z21EME in 2014.

PA2CHR (L) and PA3FYC (R) at E44CM

E44QX & E44HP: Bodo DF8DX df8dx@gmx.de and Hermann (DL2NUD) put Palestine on 23, 13 and 9 cm û We had a very successful DXpedition. All QSOs were on JT65C unless noted. I [Bodo] was the primary operator as E44QX on 23 cm. We were QRV on 1296 on 9 and 10 Dec and made 62 QSOs (53 on JT65 plus 9 on CW) of which 51 were initials. Stations worked were HB9Q, OK1KIR, OK2DL, OK1DFC, JA6AHB, UA3PTW, IK3COJ, ES6RQ, OH2DG, OZ4MM, ZS6JON, PA3FXB, PA3DZL, DK3WG, I1NDP, DJ9YW, YL2GD, PA3CSG, G4CCH, UA9YLU, RA3AUB, OK1IL, PA7JB, PE1CHQ, I5YDI, LZ1DX, DF3RU, DL7YC, DL6SH, PA3CQE, PY2BS, DF2VJ, UA9FEM, YO3DDZ, OE5JFL, I7FNW, W5LUA, K2UYH, G4YTL, NC1I, UA9YLU (dupe), OK1DFC (dupe), OK1DFC (CW), OZ4MM (CW), ES5PC, OK1KIR (CW), DL7YC (CW), HB9Q (CW), G3LTF (CW), I1NDP (CW), PA0BAT, PE1LWT, I5YDI (dupe), YO2BCT, G4CCH (CW), LX1DB (CW), YO2LEL, PI9CM, DF2VJ (dupe), ES6FX, PA2DW and VA6EME. Hermann was the primary operator as E44HP on 13 and 9 cm. We were QRV on 3400 on 11 Dec and logged 16 QSOs (12 on JT65C and 4 on CW) of which 12 were initials. Stations worked were HB9Q, OK1KIR, OK1CA, PA3DZL, HB9Q (CW), PA0BAT, OK1KIR (CW), OK1CA (CW), G3LTF (CW), PY2BS, OH2DG, DF3RU, ES5PC, W5LUA, K2UYH and W5LUA (dupe). I had to leave on Monday, but Hermann continued on; operating on 13 cm on 12 and 13 Dec. Signals on 13 cm were interfered by local WLAN repeaters on the roof of our hotel. Herman operated on both 2320 and 2304 with no crossband needed. On 13 cm, Hermann completed 23 QSOs (22 JT65 and 1 CW), of which 20 were initials. Stations worked were HB9Q, OK1KIR, OH2DG, OZ5G, PA3DZL, PA0BAT, OZ4MM, ZS6EME, ES5PC, IK3COJ, DF3RU, SP3XBO, PA3DZL (dupe), UA3PTW, PA7JB, PY2BS, LZ1DX, LX1DB, DF3RU (dupe), YO2BCT, W5LUA, K2UYH and HB9Q (CW). Overall we made a total of 101 EME QSOs! We used a 1.5 m mesh dish, circular horn feeds and preamps on all 3 bands, with 300 W on 1296, 100 W on 23xx and 100 W on 3400 at feed. QSLs for 23 cm (E44QX) should be sent to DF8DX and for 13 cm and 9 cm (E44HP) to DL2NUD. Please include a SAE and postage. Donations are welcome; we had to travel with 90 kg of luggage.

E44QX/E44HP 1.5 m dish with 23 cm feed

F5SE: Franck kozton@free.fr was not QRV for the ARRL EME Contest as he is still making repairs after a break-in and theft of equipment at his portable shack (F5SE/p) -- I don't expect to be QRV again until the spring. I received a new replacement DB6NT 1 kW SSPA only in late Oct. The SSPA with heatsink and blowers weighs no less than 16 kg (~35 pounds). Its overall size is much bigger than my former 500 W SSPA. This means a complete re-design of the waterproof enclosure used for it at the feed. As of this writing, I just finished the design of the sequencer to be used with the SSPA. Other safety circuits are still on the bench. If you have not heard, I want to call attention to the total Sun eclipse on 21 Aug 2017. It will be visible in all of the USA. The shadow will "touch" the USA in the state of Oregon at 1715 and will "leave" the USA in the state of South Carolina at 1848. It is a replica of the Saros cycle that took place on 11 Aug in 1999 that was total in Reims. If you are interested, you can get much more info regarding the phenomenon at http://xjubier.free.fr/en/site_pages/solar_eclipses/5MCSE/xSE_Five_Millennium_Canon.html. This is a French site, but the above URL directly connects to an English version. In a future message, I will let you know about some planned "radio observation" of the eclipse similar to what I did with I1NDP during the eclipse of 20 March 2015.

F5KUG: Jean-Louis (F6ABX) f6abx@wanadoo.fr chairs the radio club of Colomiers near Toulouse Space. Club members F6ABX and F5BUU, and F2CT guest CW operator were active on 1296 during the final leg of the ARRL EME contest on 19/20 Nov. They used F6ABX's 3.7 m TVRO dish, SSPA with 300 W at feed and G4DDK VLNA. QSO'd were DL3EBJ, OK2DL, G4CCH, OK1CA, DF3RU, SP6JLW, G3LTF, UA4HTS, OZ6OL, RA3EC, SP6ITF, PA3FXB, OK1DFC, F1PYR, SM3AKW, G4RGK, OK1CS, N8CQ, W4OP, OE5JFL, RA3AUB, DK3WG, UA3PTW, IK3COJ, K2UYH, I1NDP, OZ4MM, W6YX, HB9Q, SM4IVE, ES5PC, I5YDI, UA9YLU, LZ2US, RW0LDF, OK2ULQ, S59DCD, YL2GD, N2MO, IZ1BPN, VE4MA, PA2DW, SM2CEW and IW2FZR for a total of 44x24.

3.7 m dish used by F5KUG on 1296 in Nov

G3LTF: Peter's g3ltf@btinternet.com EME report for Nov/Dec follows -- On 19 Nov, I added 16 more to my first pass contest total on 23 cm. All QSOs were on random CW with OK1DFC, IZ1AEM for initial #428, IW2FZR, F5KUG, G4RGK, F1PYR, UA3TCF #429, OE5JFL, W4OP, LA3EQ, OZ4MM, S59DCD, SP2HMR, W4AF, F5HRY, G4YTL and VE4SA. CWNR were JA4LJB and DJ3JJ. Heard in QSO were NA4N, DK3WG, RA3AUB. I never found their CQs. Someone with a call ending in LAT called, but didnÆt try for long enough. When the libration is bad, it often takes 4 or more tries to get it confidently correct. The WX worsened on Saturday evening as forecast, with high winds and heavy rain, and I had just one 432 QSO with OK1DFC (total 24) before I had to stow the dish at 2300. I thought the 432 RX system had failed as signals were very weak and when I switched the preamp to a load the noise went DOWN by 3 dB (normally goes UP by ~5 dB). After stripping it all down the next day, measuring NF and relay loss, and finding no faults, I realized that it must have been rain static! **My final score on 23 cm was 68 x 34** and on **70 cm 24 x 15.** My total CW only, multiband single op score was 1,178,200. I do not intend to enter with the current rules, which permit "side-channel" arranged QSOs. I was especially pleased to work UA3TCF. I found him on the SDR and replied to his CQ. He was using 100 W to a 2.2 m dish. On 26 Nov on 6 cm I worked PY2BS #65 (my 6cm total has jumped as I had left out 3 initials in 2015). On 23 cm on 27 Nov I worked DJ3JJ for #430 and OK1KIR, and on 8 Dec had a little SSB-fest working I5YDI, I1NDP, OK1KIR, IZ5TEP #431 and then on CW ON4AOI #432 (2 yagis and 300 W, easy QSO using his JT CW facility) and N4PZ. The next day, 9 Dec, I worked on CW IK2MMB,

G3LQR (first EME QSO with Simon for some years) and K2UYH. On 10 Dec I was delighted to work Bodo on 23 cm CW at E44QX #433 and DXCC 65. I added on 11 Dec on 9 cm CW, E44HP for initial #57 and DXCC 27. On 12 Dec Hermann was operating E44HP on 13 cm with a good (549) signal but only on JT. In fact, it was the strongest of the three bands. A great dxpedition. I then worked ES5PC on CW and then successively on SSB DF3RU, PY2BS, PA3DZL, LX1DB, HB9Q and ZS6EME. On 15 Dec back on 23 cm CW, I worked LA3EQ, DJ3JJ (improved signal) and SP6ITF. Finally on 16 Dec, (5 am LST) on 6 cm, I worked W5LUA and KL6M #66 and DXCC 31. So I end the year with activity on all my bands, 70 thru 6 cm and send season's greetings to all.

G4RGK: Dave zen70432@zen.co.uk reports on moon operation in Nov and plans for operation from EA8 on 432 -- I was not on for the Oct contest weekend because of a trip to CA, and because of the backlog at work. Consequently I have had very little free time since. However, I did get on for a while in the Nov contest leg. I was only on 23 cm for about 3 hours with the dish during the first pass due to a storm, which blew through on the second pass. Whilst I was on 1296, I worked mainly on CW, my preferred mode. Starting at midnight I QSO'd SP6JLW, OZ6OL,DL3EBJ, DF3RU, OK2DL, SP6IQU, G3LTF, UA4HTS, G4CCH, OK1CA, 9A5AA, RA3EC, OK1DFC, YL2GD, F5KUG, SM3AKW, SP6ITF, SP5GDM, RA3AUB, SQ7D, I1NDP and HB9Q. I then QSY'd to 432 because I can keep the 70 cm array on the Moon during stormy weather. My 432 mount is much more stable than the dish, which tends to blow around on its wheels. On 432, I worked DF3RU, DL7APV, VE4MA, LU8ENU, DF2VJ, K2UYH, DL8DAU, K3MF, E44CM, I2FHW, OH2PO, UA3PTW, SM2CEW, SM4IVE, UT5DL, OK1TEH, SM7THS, YO2LAM, DL8DAU, OK2POI, OK1YK, YL2GD, W4NH, K5DOG, OZ4MM, OK1DFC, W5LUA, PA2V, SP1JNY, I5CTE, OH3LWP, HB9Q and VE6TA - just on my Moon set. For a change everything worked without any glitches, just wish I had more time to spend on the bands. I will be going down to EA8 at the end of Dec, and will try to re-activate 70 cm EME from down there. I can be QRV only for those who want EA8 and grid IL38qb. I will have a single 21 el yagi, 500 W and a MGF1302 preamp. This maybe my last time; it's been four or more years since my last activity from EA8 on 432.

HB9Q: Dan dan@hb9q.ch sends news on his group's results during the Nov leg of the ARRL EME Contest -- We worked **on 70 cm** 24 additional stations, all using JT65B for **a total 89 stations**. New initials were OE3REC, JH7OPT, DL1RPL, JE2UFF and YO4FNG who were all worked before the contest. During the contest KA1GT, N7WN, N0KE, DJ2TX, E44CM for DXCC 158, UA4AAV, RD3FD and F6KBF were added. After the contest N1DH and F8DO were QSO'd for mixed initial #937*. **On 1296**, we worked 31 additional stations, 11 were on CW and 16 on JT65C for **a total of 84 different stations**. New initials were UN7CL on JT during the contest, and after DJ3JJ CW, DL4EA JT, CT7AFN JT and E44QX JT for DXCC 116. We are now up to mixed initial #572*. We also worked E44HP on 2320 using JT65C and on 2304 on CW for DXCC 57 and mixed initial #149. On 3400 we worked E44HP on CW and JT for DXCC 26 and mixed initial #55. On 10368 we have added UT2EM using JT for DXCC 26 and HB9BHU on CW to bring us to mixed initial #81*. As always, if you would like to work us look for us on the HB9Q band loggers or send an e-mail for information. We are very interested in working new initials with QRP stations especially.

I0NAA: Mario mario.natali@gmail.com writes on his 1296 EME -- For the first time in many, many years I participated in the ARI EME contest (in Oct) and at last I can say with GOOD result! Unfortunately I could not make the Nov ARRL EME Contest weekend. We had very bad weather and I could not put the dish in operation. I only made a few contacts during the Oct weekend and was hoping to give out many more contacts. I see that CW is a must if you really want to be in on the full contest action, and am working to improve my CW skills.

I1NDP: Nando nando.pellegrini@tiscali.it reports on his recent EME activity -- Not much news this month except the successful activity from Palestine first with E44CM on 70 cm and then with E44QX on 23 cm. Both had excellent signals. My congratulations to the crews. I could not be active all the time during the ARRL Contest. I was actually on for less than half the time but ended up with **a final score of 84x34 using only CW on 1296.** I found a good amount of signals on the bands but a relatively poor participation from North American stations.

IK3COJ: Aldo's ik3coj@gmail.com EME contest report -- This year I decided to participate in the ARRL EME Contest on **1296 CW only**. In Oct I was only QRV on Saturday morning as the following Sunday I had an Italian microwave meeting. In November I was active for both Moon passes. I worked **a total of 49x27** and added 2 initials with WA2FGK and VE6BGT. I had the feeling that there were fewer stations than usual. I heard but did not QSO PA3FXB, JR4AEP, F1PYR, SM4IVE, VA7MM, N5BF, VE4MA and DK3WG. After the contest I worked the dxpedition in Palestine, E44QX on 23 cm and E44HP on 13 cm. I also QSO'd on 2320 ZS6EME (559/549) on CW.

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp focused on the microwave bands in Nov/Dec – I found that with the new position of 3 m solid dish that I now have a limited moon window to eastern NA. On 24 GHz I worked on 15 Nov W5LUA (O/O) for initial #12. I changed feeds to 5760 and worked on 16 Nov JF3HUC (559/569), on 16 Nov JA6XED (559/559), on 14 Dec partial K2UYH heard (O), on 15 Dec suffered from AZ readout error and could not perform computer tracking but managed to track the Moon manually and worked JA1WQF (559/559), JF3HUC (569/559) and KL6M (559/559) for initial #42, and on 20 Dec JA8IAD (559/559).

JA4BLC's window to eastern NA

K4MSG: Paul Phbjr@aol.com updates us his EME progress -- I'm pleased to report that I successfully completed construction of a 500 W SSPA for 432. I began using it in the Nov ARRL EME Contest. Unfortunately, conditions were mediocre at this location on 19 Nov. I did work a few of the larger stations no problem. In fact, I noticed that in every case, they answered after only one or two calls from me, which is definitely an improvement over my previous experiences. In addition, after a couple of tries that evening, I finally succeeded in completing a QSO with ZS6JON for WAC on 432. John is also the very first 432 station I've ever worked who is running only 4 yagis. His power level is 800 W. All my previous QSOs have been with stations running 8 or more yagis or a dish and upwards of a kW in power. The complete 432 setup at K4MSG is a TS2000X and homebrew 500 W SSPA in the shack, a suitably-switched LNA (0.5 dB NF) at the antenna, and my trusty pair of 18 el LFAs. I'm looking forward to more activity on 432. But I have already begun planning a 1296 EME station and have a few of the components on hand.

KA1GT: Bob ka1gt@hotmail.com was active again during the last weekend of the EME contest on 432 -- Weather was good on 19 Nov and I made 14 contacts with UT5DL, UA3PTW, OH2PO, DL7APV, PA2V, PY2BS, RN6MA, SM7THS, K3MF, NC1L, OK9KIR, HB9Q, WA2FGK and ES5PC. 9 of these contacts were in the first 2 hours of operation. Bad weather on 20 Nov limited operation, but I still made 6 contacts with DK3WG, OK1YK, LU8ENU, OK1DFC, K5QE and DL9SH. My contact with LU8ENU was especially interesting because he is running the same moderate power (500 W) and same relatively small antennas (2 x 28el yagis) as I am. [I believe all QSOs were on JT65B]. My antennas are now down for the winter, so I'll be QRT until March. I am spending the downtime adding motorized control and readouts for AZ, EL and polarization. I am also adding MAP65 to the system.

KL6M: Mike melum@alaska.net writes to the NL – I participated in Oct. and Nov. weekends of the ARRL EME contest. I was unable to participate in the microwave segment due to techical issues. The Oct segment was cut short due to tracking problems. I ended up with **64 QSOs on 23 and 70 cm combined**. My log is available at http://www.kl6m.com/16arrl.pdf, My tracking problem was due to a uA9638 RS422 line driver failure. This was an intermittent issue due to the fact that device is spec'd for minimum temperature of 0 degrees C

and the temperature was -8 or so. I have corrected this problem with a small light bulb heater in the enclosure. My Novsegment was perfect. On 14 Dec I installed the 5760 feed and had 9 great QSOs with the following results: OZ1LPR (559/559) for initial #12, K2UYH (559/559), JA1WQF (559/559) #13, VK3NX (559/559) #14, JF3HUC (559/549) #15, JA4BLC (559/559) #16, G3LTF (559/559) #17 and W5LUA (559/549). Then I put the 23 cm feed in and worked ON4AOI (O/O) on his 4 yagis. I also worked DJ3JJ and OK1IL on sked for new initials. All of the above was on CW of course. FYI I have a system block diagram here at http://kl6m.com/sdr/10-7e.pdf. The red areas are future connections for JT65, etc.

KN0WS: Carl sends his Nov activity report -- The first two weeks of Nov were the warmest I can ever recall. I traded 3 days of work so I could be free to go up Friday to prepare for the final weekend of the ARRL contest. After telling G3LTF that I would try to learn CW for next year, I ended up spending spare time over 3 weeks using a software download from G4FON to learn. I practiced character speed of 15 WPM with word speed of 9 wpm and was doing about 85% by the time this weekend rolled around. As luck would have it, we had our first major winter storm of the season on Friday 18 Oct. Travel was not advised, but since I had the day off, I ventured north to my property in my 4WD pickup truck. There were scattered cars in the ditch, but I made it to within 15 miles of my destination before checking into a hotel. The walls were paper thin, so the noises were steady from various deer hunters and motorists who were stranded there for the night. Wind speeds were up to 45 mph, so there was no way I could have used my dish that night for the contest. The next morning it was 16 degs but we had only 5 inches of snow instead of the feared 10"-12", so I was able to make it down the road and on to my property. The snow and remaining wind meant it took about 5 hours to set up my gear and my camp. I drove 2 foot long stakes into the earth to anchor the tent over my gear. I had to use starting fluid to get the generators operating, and if they were off for 30 minutes I had to start over, so I decided to keep then off until closer to moonrise. I crawled into my tent and napped until evening. When I woke up and went outside in the dark, I saw a meteor through a break in the clouds, then remembered it was the tail end of the Leonid meteor shower, so I lied on my back on the pickup tailgate and watched about 5 meteors over the next 30 minutes before starting the generators. It was a nice reminder that one can enjoy the heavenly bodies without depending upon our technology. During the night I tried my new GPS clock and worked JT, but I asked K2UYH if he might be able to try CW with me later. On JT I completed with PA3FXB (15DB), UA3PTW (7DB), DK0ZAB (19DB), YL2GD (12DB), SP5GDM (15DB), SQ7D (19DB), IZ5TEP (22DB) and G4CCH (13DB). I had initials with UA3TCF (25DB), OK1IL (14DB), VE4MA (21DB) and VK2JDS (17DB). I listened to some CW exchanges and although I could hear "CQ's" at the beginning and "559's" at the end, the in-between seemed very fast to my ears and nowhere as distinct as my practice code! I was fearful to try the CW, but OZ4MM was patient and we were able to complete for my first CW QSO ever. That was followed by a CW exchange with G4CCH and finally N4PZ. I tried with K2UYH and sent my (OOO) but we did not complete this time. I sent (O) signal reports because I have no idea how a (339) or a (559) should sound. I will need LOTS of practice. My final ARRL contest numbers were **16x13 on 70 cm and 40x25 on 23 cm**. I made 7 EME trips to my property this year and spent 3 days on 432 and 6 days on 1296. My 70 cm initials rose from 41 to 50 and my 23 cm initials went up from 34 to 73. Last year I mentioned 7 specific QSOs that I wanted to do this year. I ended up being successful with 5. Thank you all for giving my enjoyment in 2016. I am not sure where to focus for 2017. I have a 13 cm Specttrian amplifier to finish, I have made a 6 cm feed and have electronics for 3 cm and 6 cm and a mesh 8 foot dish kit to use with them. If I only spend 10 days a year on EME, it seems foolish to divide the time between 5 bands… Perhaps I should just practice my CW so I don't lose it all over the winter. I KNOW I have a goal of working G3LTF using CW (and K2UYH)!

MX0CNS: Tom (M0ABA) m0aba1970@gmail.com write on his 432 QRP EME experiences -- Since Jan, I have been testing with small DG7YBN yagis to see how far i could push the limits. I started with a DG7YBN 7 el yagi and made an easy QSO with DL7APV. Since then the 7 el has become the reference antenna to gauge conditions before trying with the smaller antennas. First the 4 el GTV 70-4m and a QSO again with Bernd after two days of trying. Next was the GTV 70-3w, 3 el yagi. It took a month of testing before 3 QSOs were completed with DL7APV, OK1DFC and PI9CAM. Finally GTV 70-2m that has an electrical boom length of just 134 mm and a power at the feed of just 60 W. After 7 months of testing, 2 QSOs were completed. The first with HB9Q (19DB/26DB) and DL7APV (24DB/28DB) at DL7APV. It's amazing what can be achieved with these tiny antennas! So that's the last of the small antenna tests. Now it's time to encourage more amateurs to give it a try. A special thanks to Bernd for the constant testing over 11 months. It has been hard work, but worth the effort, and also thanks to Dan. Last but not least thanks to DG7YBN for the amazing antenna designs and for encouraging me over the last year.

N5BF: Courtney courtney.duncan.n5bf@gmail.com sends his ARRL EME Report -- In the Nov weekend, I worked WA2FKG, DF3RU, SP5GDM, OK1CA, VA7MM, YL2GD, OK1DFC, KL6M, JA6AHB, VK2JDS, OE5JFL, LZ2US, ES5PC, and VE4MA on 1296 for 14 new contacts and 9 new multipliers making a two-weekend **total of 36 QSOs (24 JT65C and 12 CW) with a 26 multiplier for 93,600 points.** In the hour and a half between the opening of the VK / JA window and entry into the western trees Saturday morning, I worked one each: VK2JDS and JA6AHB. Some of the near misses were painful, particularly RW0LDF which I credite to a own sleep-deprived operator error!

NC1I: Frank frank@NC1I.COM sends his Nov EME report -- Oct and Nov were very busy months as we spent a lot of time trying to complete the repairs to the 432 array before we really got into winter weather. Because of this no stations were worked in Oct on either 432 or 1296. After being off of 432 for 11 months, I made my first 432 EME QSO of 2016 on 11 Nov. Between 11 Nov and 15 Nov I made 25 QSOs, but my station was still not 100%. 16 additional QSOs were logged on 19 Nov before completing repairs to the array. During the daytime on the 19th, we finally fixed the polarity rotation system and reinstalled my best cavity preamp. Earlier in the fall, we replaced all of the coaxial phasing lines, cleaned the power dividers (replaced a connector on the 2-way divider), repaired a couple of baluns, adjusted the location of some of the open wire spreaders that had moved over the last 22 years, and rebuilt the preamp box using new relays. SWR is now measuring 1.08/1 when the array is dry and came down to about 1.05/1 during moderate rain. After completing all of the repairs, and with the array back working 100% (I believe), we added 24 QSO's on 20 Nov. Many of the QSO's on the 20th would not have been possible without polarity rotation. Highlights included easily working N1DH (24DB/19DB) who was using a single 17 el yagi and 50 W, and working E44CM (12DB/16DB) for a new country. Chris and Jos had an absolutely amazing signal. I copied them between (12DB and 14DB) horizontal and I called them several times with my TX horizontal with no response. I then turned my array vertical and called and E44CM came right back to me. Chris reported that I was (16DB), which was obviously much stronger than I was horizontal (when he apparently did not see/hear me at all). E44CM's signal stayed between (12DB and 15DB) regardless of my RX polarity. This was a bit unusual as I have found over the years that normally if my RX polarity is "mushy", my TX polarity is typically not critical either. In this case my RX polarity made virtually no difference, but my TX polarity was very critical. Anyhow thanks and congratulations to Chris and Jos on a very successful dxpedition! The only part of my 432 station that is not back to 100% is my power. Due to some arcing in the amp, I was limited to about 650 W at the feed. With my focus on 432 in Nov, only 15 QSO's were made on 1296. Most of the 1296 QSOs were made by guest op K9PW. Pete comes every year to operate my HF station in ARRL Sweepstakes, which coincided with the second weekend of the ARRL EME contest this year. Since the HF contest did not start until Saturday afternoon, Pete had an opportunity to work some 1296 EME on Friday night. I intend on being very active over the weekends of 10/11 and 17/18 Dec. My focus will be on 432; however, if W1QA is able to get over we will be on both bands. Unfortunately I do not expect to have my power issue on 432 resolved by that time. I should also mention that it's very encouraging and exciting to see 432 activity on the rise again. It's such a great EME band! We did not receive any feedback or responses to our thought of either putting Connecticut on 432 or New Hampshire on 1296 in the spring, so we will drop that idea for now and perhaps revisit it sometime in the future.

OH2PO: Jukka (OH6DD) jukka.sirvio@luukku.com sends his groups 432 EME contest results -- Conditions on the final leg were good. Saturday morning was a disappointment though as we worked only 10 new stations. The second night was much better with 26 QSOs and four more in the evening. We **ended with a 116x42 (28 CW and 88 JT)**. We still did not manage to work them all - you never do! Three uncompleted QSOs and a few missed ones. We also had some problems with the elevation system but Matti fixed them.

OK1CA: Franta strihavka@upcmail.cz was QRV during AW on 24 GHz -- The perigee Moon was one of the closest and offered the low

attenuation. I worked in the first path on CW OK1KIR, W5LUA and DL7YC, and on JT4F OK1KIR and JA1WQF. CWNR were JA4BLC and G4NNS. I heard LX1DB, IK2RTI and G3WDG. I was also QRV on Sunday evening and I worked on CW G4NNS for initial #14 and on JT4F PA0BAT. I heard JA4BLC, JA8ERE and G3WDG all on CW; and Charlie also on JT4F. I measured moonnoise at 2.3 dB. I used WSJT-X for JT4F without any problems. I was QRV in ARRL EME Contest on 23 cm only at Saturday 12 Nov and missed the VK stations, but did catch at the start JA8IAD and JA4LJB. I worked overall 23 stations. Initials were IZ1AEM, UA3TCF, LA3EQ, VE6BGT, N5BF and DJ3JJ to bring me to initial #333. I measured sunnoise at 21.4 dB (SFU 78.6) and moonnoise at 1 dB. My total score in ARRL EME Contest **on 23 cm using CW was 78x35**.

OK1DFC: Zdenek ok1dfc@seznam.cz reports that he has received his official 432 WAS Certificate #29! His certificate can be viewed at http://www.ok1dfc.com/eme/432/awards/was-ok1dfc-1500.jpg.

OK1KIR: Vlada and Tonda vlada.masek@volny.cz EME report for Nov/Dec follows – On 432 with JT65B on 11 Nov, we worked at 2148 LU8ENU (19DB/16DB), 2201 DL8DAU (19DB/21DB), 2205 OK2AQ (25DB/18DB), 2227 DL6SH (6DB/7DB), 2311 EB2FJN (19DB/21DB) for digital initial {#184} and 2350 worked KH6TY (25DB/28DB) {#185} from SC as our 50th state to complete WAS on 70 cm - Skip enabled it by adding elevation to his 4 x 15 el yagi array and 500 W. This last QSO was followed on 12 Nov at 0035 N4CNN (22DB/26DB) {#186} – John installed at our request a 70 cm loop feed in his 3 m dish with 250 W. Our sincere thanks to both for their effort, which allowed us to complete WAS after 40 years of EME operation on 70 cm. On 24 GHz we had a successful AW. On 12 Nov, we worked using CW at 1600 JA1WQF (O/O), 1643 JA4BLC (O/O), 1840 OK1CA (O/O), 1921 G4NNS (O/M), 2001 LX1DB (569/559), 2146 PA0BAT (O/O), 2159 DL7YC (O/O) and 2346 W5LUA (569/559), and on 13 Nov at 0136 G3WDG (O/O), 1643 JA8ERE (O/O) for initial #22 and QN field and 1700 JA4BLC (549/559). Heard was IK2RTI (O) making QSOs; we repeatedly CWNR. Using JT4F we worked on 12 Nov at 1606 JA1WQF (14DB/15DB), at1757 EA3HMJ (17DB/20DB) for digital initial {#32} - a 1.8 m offset dish and only 4 W for the first EA-OK QSO on 24 GHz - the spreading was only about 20 Hz and close to minimum,1856 OK1CA (19DB/15DB) and 2025 DL7YC (15DB/12DB) {#33}, and on 13 Nov at 1858 G3WDG (16DB/16DB), and with WSJTX at 1907 EA3HMJ (21DB/18DB) as 2nd QSO and 1943 PA0BAT (18DB/12DB). We were decoded by EB3FRN (17DB) and VE4MA (14DB). We were forced to QRT earlier that our Moonset, so we missed DF1OI. Sunnoise on Saturday in bad WX (humidity over 90%) was 14.4 dB and moonnoise 2.4 dB. On Sunday with frosty/sunny WX, we measured 15 dB of sunnoise. A big thanks goes to all who participated in the 24 GHz AW. After the 24 GHz AW, we changed feeds to 3400 and worked on 15 Nov at 2109 using JT65C BD4SY (18DB/O) for digital initial {#22} and 1st BY-OK 9 cm QSO and PM field. The last weekend of ARRL EME Contest we spent on 432. We worked using CW on 19 Nov at 0554 SM4IVE (589/579), 2246 OK1DFC (589/559), 2257 DL9KR (589/589) and 2304 OZ4MM (569/559), and using JT65B on 18 Nov at 2151 JS3CTQ (18DB/18DB), 2201 I5CTE (21DB/18DB) and 2209 YO6OBK (22DB/O) {#187}, and on 19 Nov at 0002 RN6MA (14DB/O), 0011 DK1KW (28DB/27DB) {#188}, 0418 SM7THS (15DB/15DB) {#189}, 0424 LU8ENU (20DB/O), 0446 YO2LAM (22DB/O) {#190}, 0452 KA1GT (16DB/17DB) {#191}, 0527 K5QE (15DB/O), 0537 K3MF (12DB/12DB), 0615 OK1TEH (17DB/23DB) {#192}, 0630 DL7APV (3DB/5DB), 0702 OH2PO (4DB/O), 2110 E44CM (22DB/23DB) {#193} for new DXCC, 2124 OH3LWP (20DB/15DB) {#194}, 2144 JA7OPT (22DB/24DB) {#195}, 2148 OK2POI (24DB/O), 2230 DJ4TC, 2234 OK2AQ (24DB/O), 2344 US7GY (20DB/O) and 2358 YL2GD (19DB/17DB), and on 20 Nov at 0522 PY2BS (11DB/15DB), 0532 UT5DL (16DB/16DB), 0726 UA4AAV (18DB/O) {#197}, 0741 K5DOG (17DB/O), 0803 K2UYH (6DB/O) and 0813 K3GNC (23DB/O). On 6 cm we worked on 26 Nov using CW at 1000 UA4HTS (569/569), and with JT4F at 1011 UA4HTS (15DB/12DB) for digital initial {#26} and at 1117 PY2BS (12DB/17DB) {#27}. On 23 cm while waiting for E4, we worked on 8 Dec on SSB at 1636 G3LTF (55/55), 1643 I1NDP (57/57), 1647 I5YDI (54/53) and 1722 IZ5TEP (44/55) for initial #407, then using CW at 1838 ON4AOI (O/O) #408 and 1854 IZ1AEM (559/559), and on 9 Dec using JT65C at 1342 E44QX (15DB/12DB) for digital initial {#263} and first E4-OK QSO on 23 cm and our 400th* DXCC (CW+JT) in mixed bands 432 thru 24 GHz and 1442 OK1IL (7DB/6DB) {#264}, and then using CW at 1453 OK1IL (559/559) #409, and using SSB at 1607 ZS6JON (44/54), and on 10 Dec using CW at 1536 E44QX (O/O) #410 as the 300th DXCC 2xCW mixed all bands 432 thru 24 GHz. We worked on 13 cm using JT65C on 10 Dec at 1421 BD4SY (20DB/24DB) for digital initial {#43} and first BY-OK on 13 cm and PM field, and on 12 Dec at 1526 E44HP (24DB/22DB) for first E4-OK on 13 cm and new DXCC. We QSO'd on 9 cm using JT65C on 11 Dec at 1518 E44HP (25DB/21DB) for digital initial {#23} and first E4-OK on 9 cm and new DXCC, and at 1801 E44HP using CW (O/O) for initial #64. We easily added the E4 dxpedition on all three bands as 1st E4-OK QSOs in JT65C and CW with very good signals on 23 and 9 cm. 13 cm was surprisingly quite weak with "only" a JT65C QSO. Many TNX to Bodo and Hermann to make it possible!

OK2DL: Marek ok2dl@seznam.cz sends his activity report for on 23 cm in ARRL EME Contest -- I was QRV for both parts of the contest, but in first part have technical problem with output spliter in my 1 kW PA. During first pass, I repaired PA, but missed some stations from east. I was using my 6 m mesh dish, RA3AQ feed, 1 KW SSPA installed on dish and ATF35143 preamp. **I make a total 117 QSOs and 39 multipliers** – see www.ok2dl.eu.

SM2CEW: Peter sm2cew@telia.com sends his Nov/Dec NL report -- My activity was during the activity weekend on 20 Nov. I started out on 70 cm by working G4RGK, WA4NJP, K2UYH and DL6SH, and then switched to 23 cm to work OE5JFL, IK3COJ, OK1CS, SP6ITF, RA3EC, OK2DL, DL3EBJ, PA3FXB, G4CCH, F5KUG, VE4MA and I1NDP. As usual, it a great pleasure to hear the sweet music created by a large number of CW stations at the bottom end of the band. On 17 Dec, I was again on 23 cm and worked OZ4MM, VE6TA, VE6BGT for an initial (#) and KL6M. A getaway was DJ3JJ. I heard Andreas well while he was working other stations with good signal. Over the holidays I will prepare a list of proposed times for the 2017 70 cm CW EME ATPs. The list will be published on www.moonbouncers.org.

SM3AKW: Carl sm3akw@spray.se was active on **1296, CW** only class during the ARRL EME Contest -- I managed to work **60x25** this year. I called CQ a lot for a change. This worked well. The first weekend on 1296, I made 43 QSOs but the second brought only 17. Worked on 22 Oct were OZ6OL, UA4HTS, RA3EC DL3EBJ, YL2GD, OK2CS, SP6ITF, 9A5AA, DF3RU, G4CCH, I5MPK, I5YDI, S53MM, G3LTF, IK1FJI, F6ETI, PA3FXB, UA3PTW, PA3DZL, SP3XBO, SP6JLW, IZ1BPN, DJ8FR, W6YX, IK3COJ, IW2FZR, PA2DW, OK2DL, KL6M, WA9FWD and OH2DG, on 23 Oct JA4BLC, OH2AXH, OK1CA, OZ4MM, OH1LPY, I1NDP, PI9CAM, OK2ULQ, N8CQ, N4PZ, K2UYH and SV3AAF, on 19 Nov OK2DFC, F5KUG, SP2HMR, G4RGK, OE5JFL, W4OP, S59DCD and WA6PY, and on 20 Nov JA6AHB, RA3AUB, N2MO, ES5PC, IZ1AEM, LZ2US, VE4MA, DK3WG and F1PYR.

SM6FHZ: Ingolf ingolf.fhz@gmail.com was on 70 cm CW from his city QTH (JO67aq) for the Nov contest weekend -- I was using 4 x 9 el yagis in a box configuration and 500 W. Unfortunately the antenna had very high VSWR Sunday morning. I do not know why, but my receive capability was way down and I could not TX due to the reflected power. Consequently, I have worked only 7 stations via the Moon with this antenna so far - the big ones and heard at least 5 more. The rig was built for working tropo and aurora but I could not resist trying it on the Moon.

TM8DO: Marius (F8DO) marius.cousin@libertysurf.fr will be QRV on 70 cm EME as TM8DO to celebrate the first EME QSO from France – I just erected a *small pistol* EME station on 432 with 2x21 el Tonna yagis, FT847 and HL-130U. I made QSOs using JT65B unless noted with UA3PTW (17DB), YL2GD (22DB), DL9KR on CW (529), HB9Q (16DB), DL8FBD (25DB) and UT6UG (22DB). I will be active on in Jan and Feb with TM8DO call for 50th anniversary of first US/FRANCE EME QSO made on 2 m back on 27 Jan 1967 between F8DO and W6DNG. Watch HB9Q logger for operating times.

TM8DO 2x21 el Tonna yagis

UA3TCF: Alex ua3tcf@mail.ru writes about his Nov/Dec EME QSOs -- In Nov I worked on 23 cm using JT65C SP5GDM (O/O) for mixed initial #60*, I5YDI (O/O) #61*, IZ5TEP (O/O) #62*, PE1LWT (O/24DB) #63*, SP3XBO (O/O) #64*, LA3EQ (O/O) #65*, OE5JFL (O/O)*, I5YDI (O/O), DF2VJ (O/O) #66*, ES6FX (O/O) #67*, RA3EC (O/O) #68*, OK1IL (O/O) #69*, G4BAO (O/O) #70* and one on CW RA3EC (O/449). In the ARRL EME Contest I QSO'd **on 6 cm 5x4** and **on 23 cm 30x18**. **My overall score was 35x22** with 9 initials. In Dec I worked on 23 cm using JT65C G4FUF (O/O) - 2 x 49 el yagis #80*, LA4ANA (O/O) #81*, ON4AOI (RO/O) – 2 x 67 el yagis #82*, PE1CHQ (O/O) #83* and SM7SJR (O/O). On 6 cm using JT4F on 17 Dec I worked VK3NX (14DB/15DB) for mixed initial #15*, a new continent, DXCC, and new ODX of 14012 km! My setup is on 23 cm a 2.2 m dish with CP feed and 100 W, and on 6 cm a 3 m dish with only 2 W at CP feed.

VA7MM: Mark (VE7CMK) and Toby (VE7CNF) va7mm@rac.ca report on their EME activity **on 1296 EME** for both legs of EME contest – We operated multi-operator, all mode and **completed 62 QSOs (28 CW and 34 Digital) with 31 multipliers for 192,000 points.** We concluded the contest with **our second highest score in 14 years** of participation in this event. During the two weekends 10 initials were added with DF2VJ, OH1RLY, WA3RGQ, N5BF, UA3PTW, PA2DW, IZ5TEP, SM7SJR, LA3EQ, VE6BGT to bring us mixed initial #204*. We're running an OZ9CR cavity amplifier that produces about 200 W at the feed of our 3 m dish. On receive we have 0.33 dB NF preamp with about 35 dB total gain in three stages. We're planning to operate next in the 1296 SSB Contest in the New Year and are otherwise available for scheduled contacts by email.

VE3KRP: Fast Eddie eddie@tbaytel.net sends his apology for his non-activity -- I thought I would let everyone know that I am still around. But it has been very cold (-39C with the wind chill to 2C) and my elevation actuator is giving me grief. Wet snow, sleet and normal snowfall have impeded any repairs. [We hope to see you in the SSB Contest].

VE4MA: Barry's ve4ma@shaw.ca ARRL Contest Report follows – I decided to get on 432 for the Oct weekend with my 3 m dish and dual polarity dual dipole feed. There were more signals than I expected, but only worked one on CW and only heard a few more. Several were peaking 20 dB over the noise on my Flex display. I did work on JT65B unless noted W5LUA, DL7APV, W7MEM, SM4IVE (569) on CW, HB9Q, OH2P and K2UYH. I had a near miss with PY2BS (21DB). I had a problem with spurious signals the first weekend that I found out later were due to the US Digital encoders on my 2.4 m dish. I had some trouble with no decodes with JT V10. The second night was frustrating. It started with a loss of PTT. I put on another PS. My main breaker did not like the long JT duty cycle. I was running a 115 V PA and running 600 W out key down in Class C. When I turned the power down to 4-500 W all was OK. JT V10 was again giving no decodes regularly when the signals were very strong. I was VERY frustrated! The polarity switching was very important later as the polarity twisted around with sunrise in EU and maybe some AU. EU stations reported that echoes were coming back vertical. I often had to TX V and saw them H. I worked 6 more on JT, and DL9KR (569) on CW. I could have worked PI9CAM on CW but caught him on JT. I switched to JT V9.7 on the second night, and had better luck with decodes. I ended up with 15 stations. In Nov I had built a new PY2BS/W5LUA 432 enhanced patch feed. It has much better illumination, but sun was too low to compare. I worked I2FHW and DL9KR DUP (579/569) on CW and using JT65B UT5DL, UT6UG, UA3PTW, UX5UL, S51ZO, ES3RF, WA2FGK, G4RGK and PA2V for **a total of 25 on 432.** The second night I was **on 1296 and worked 24 stations** with only 4 on JT65C. Initials were SP6ITF, F5KUG, DL3EBJ, VE6BGT, 9A5AA, N5BF, WA3GFZ and KN0WS. I will be going to AZ at the end of Dec with activity probably on 23, 13 and 6 cm.

VE6BGT: Skip macaulay.skip@gmail.com sends his submission for the NL -- We had good weather and low winds for the second part of the ARRL EME Contest. On 23 cm I was able to make **17 contacts** with 6 of them initials. My new dish is working very well and with the output power from my dual cavity amp, I acquired the reputation over the weekend for being an "Alligator". All in good fun of course, but with my poor receiver it's understandable. I have since then modified my old Kenwood TS-711 with a IF output port and by using a Softrock interface board I am able now to try a few different SDR programs to help me with CW filtering and notching plus some noise reduction abilities. I have been testing this setup in the past weeks and it is going to help me a lot. So next time, expect my alligator's teeth to be not as sharp. I have had problems with the isolation relay on the PA's output line; either from the relay being under rated (probably) or due to a SWR problem. I think have it repaired will be testing. So, I am looking forward to the SSB Contest coming in the New Year.

W5LUA: Al's w5lua@sbcglobal.netW5LUA Dec EME report follows -- During the Nov 24 GHz AW, I was able to work OK1KIR, DL7YC, G4NNS, OK1CA, IK2RTI, G3WDG, JA1WQF, JA4BLC and JA8ERE, all on CW. Libration was only 35 Hz making echoes T9, which is very unusual for 24 GHz. During the last half of the ARRL EME contest, I spent the entire time on 432. I worked RN6MA, LU8ENU, SM7THS, K5QE, UT6UG, ES3RF, S51ZO, OK2AQ, UA3PTW, WA2FGK, BH4PVP, E44CM, NC1I, OK1DFC, UA4AAV, SP1JNY, OK2POI, DL8FBD, OK1YK, DL6SH and G4RGK. This makes my total worked on 432 during the contest at 51 stations, which makes me very happy for my 5 m dish.
On 9 Dec, I worked E44QX on 1296 for DXCC #93. I also worked on 1296 ON4AOI, EW1AA, OK1DFC, N5BF, VE6BGT, W4AF, VA6EME and N4PZ. On 11 Dec, I worked E44HP on 3400 along with DL7YC and K2UYH. On 14 Dec, I worked E44HP and EW1AA on 2304. On 16 Dec, I spent some time on 5760 and worked G3LTF and KL6M. I also went on to work BD4SY on 3400.

W9IIX: Doug w9iix@icloud.com had hoped to be QRV on 432 for the EME contest in Nov, but mounted his EL rotor in way that it filled with water. When it froze, he was out of business and had to take everything down to repair. Bad WX has stopped further work. He does not expect to be QRV before New Year.

WA2FGK: Herb wa2fgk@yahoo.com sends his EME final leg report -- I finally had everything working as well as it could. I started on 2 m because it has the best window for rising Moon. When my moon was at 27 degs, which gave me a great shot on 1296, I started calling CQ there. I had a nice run of contacts with LA3EQ, UA3PTW (very strong), I7FNW, PA3FXB, RA3EC, VA6EME, ZS1LS, K2UYH, VE4SA, SP6GDM, VA7MM, DK0ZAB, N5BF, IK3COJ, KL6M and WA3GFZ. Now, you can't operate any sort of contest without having a story to tell. Here's mine… I switched to 432 at 5 am LST. I was watching the HB9Q logger and stations in EU are telling me they are hearing me loud and calling. Without exaggeration, there has to be ten stations hearing and calling me. What did I hear "nothing"! I kept calling CQ hoping that the X pol problem would switch, but it never did. Before we put these 4 x 33 yagis up, we contemplated mounting them vertical, but since we can use this antenna on tropo, we settled on horizontal. I wound up working one station, OH2PO far to the north in Finland. I also had no problem also working KA1GT, W5LUA and VE4MA. At the times I was on 432, the Moon was approaching the SW and 60 degs up.

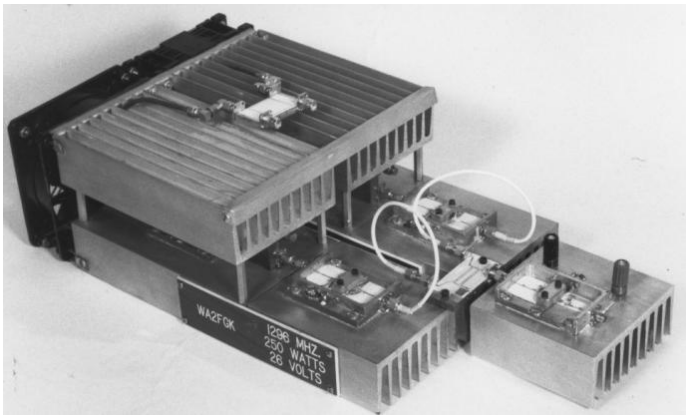
WD5AGO: Tommy wd5ago@hotmail.com was on 1296 for the final contest weekend -- The home QTH EME system has been down for repairs the last several months, but completed the rebuild over Thanksgiving holidays. So I worked with students to get the 4' square x 13' long horn going again. We were hoping to be QRV on both nights but we could only operate the first night due to student availability. We worked on CW OK1CA, I1NDP and a partial with OK2DL. I heard and called several stations and received QRZ's from UA3PTW, G3LTF, N4PZ and K2UYH.

K2UYH: I alkatz@tcnj.edu, NE2U, K2BMI, K2TXB had fun operating the last leg of the ARRL EME Contest and did not have any problems until about an hour before the final moonset the drive chain broke in a wind gust. This caused us to finish our contest operation a little early. I doubt that we could have missed more than one or two QSOs. In general the WX was not bad until the end of the weekend. On 19 Nov we worked starting on 1296 at 0528 PA3FXB (11DB/5DB) JT65C, 0535 UA3TCF (20DB/O) JT65C, 0540 UA3PTW (6DB/O) JT65C, 0547 LA3EQ (20DB/O) JT65C, 0551 SP5GDM (10DB/6DB) JT65C, 0605 ES6RQ (7DB/4DB) JT65C, 0625 F5KUG (559/559) CW, 0632 OZ4MM (589/579) CW, 0637 I1NDP (589/589) CW, 0641 W4OP (559/579) CW, 0645 IK3COJ (559/569) CW, 0652 WA2FGK (559/559) CW, 0715 OK1IL (10DB/9DB) JT65C for mixed initial #540*, 0720 OK0ZAB (9DB/O) JT65C, #541* and 0737 W4AF (559/579) CW, then on 432 at 0754 RN6MA (11DB/O), 0800 DL8DAU (15DB/O) JT65B DUP, 0806 SM7THS (11DB/O) JT65B for mixed initial #925*, 0848 IK2RTI (5559/569) CW, 0857 OE3JPC (559/559) CW for initial #738, 0905 WA6PY (559/559) CW, 0912 F6HLC (559/559) CW, 0921 ES5PC (569/569) CW, 0943 F6APE (17DB/O) JT65B DUP, 1000 K5DOG (16DB/13DB) JT65B, 1040 G4RGK (16DB/13DB), 1311 JS3CQT (13DB/18DB) JT65B, 1329 VK4EME (15DB/13DB) DUP and 1409 BH4PVP (21DB/16DB) JT65B #927* and DXCC 128, back to 1296 at 1437 JA6AHB (7DB/5DB) JT65C,

1446 VK2JDS (14DB/5DB) JT65C, 1520 KL6M (579/579) CW, 1537 VK5MC (569/569) CW DUP and 1542 JA4AEP (559/559) CW, on 20 Nov starting on 432 at 0615 E44CM (19DB/O) JT65B #928* and DXCC 129, 0652 US7GY (17DB/O) JT65B #929*, 0707 SM2CEW (569/569) CW, 0737 OK1DFC (7DB/9DB) JT65B, 0744 NC1I (5DB/O) JT65B, 0750 PY2BS (13DB/12DB), 0805 OK1KIR (8DB/O) CW, 0828 OK1YK (11DB/O), 0834 DL6SH (7DB/15DB) JT65B, 0845 PE1RDP (16DB/O) JT65B, 0909 SM2A (15DB/O) JT65B, then on 1296 at 0920 IZ1BPN (579/579) CW, 0937 OE5JFL (579/579) CW, 1003 PA2DW (14DB/O) JT65C, 1038 ES5PC (569-569) JT65C, 1045 VE4MA (559/569) CW, 1102 WA9FWD (569/579) CW DUP, and finally on 432 at 1144 VE6TA (579/579) CW, 1400 JA7OPT (22DB/20DB) JT65B #930* and 1458 JA6AHB (11DB/11DB) JT65B. We then lost the dish drive and had to stop with the Moon at about 8 deg. We ended with a **total on 432 of 65x33 and on 1296 of 81x38.** After the contest I worked on 9 Dec E44QX on 23 cm, on 11 Dec E44HP on 9 cm, and on 13 Dec E44HP on 13 cm (2304) for new DXCCs on all 3 bands. On 13 Dec I also worked EW1AA on 2304 for another DXCC. On 14 Dec I switched feeds again to 6 cm in hopes of working JA4BLC during his very limited eastern window, but we only achieved a partial. I did QSO JA1WQF and JF3HUC and later during my EU window KL6M. I was on 6 cm the next day (15 Dec) to try again with JA4BLC, but Yoshiro had problems. I did make an initial with JA6XED. On 16 Dec, I switched to 9 cm to work BD4SY for another initial and DXCC.

NET/REFLECTOR NEWS: **N4PZ** reports bad WX severely limited his 1296 operation during the Nov contest weekend. **ON7UN** reports that ON0EME Beacon was able to remain QRV and dish maintain tracking during big wind storm on 20 Nov. **VE4SA** was QRV in the contest on 23 cm with 400 W and 3.7 m dish on CW and JT during the contest. **VE4MO** was QRV during the Nov contest weekend on 23 cm with 100 W and 4 x 45 el loop yagis on JT only.

EME 35 & 25 YEARS AGO BY PETER, G3LTF: 35 years ago in Oct 1981 the first 23 cm solid state EME QSO was made when WA2FGK heard G3LTF calling CQ and replied with his 160 W of solid state power in K2UYH's shack feeding Al's 28' dish. I replied and we exchanged (O/O) reports. The devices were MSC bipolars, long pulse types for radar applications, but specially bonded and with Andy's call branded on them! (It was a real pleasure to work Andy in the contest, 35 years and 5 days after that initial QSO). ZE5JJ made the first 23 cm QSO from Zimbabwe by working G3WDG using 75 W to his 32' dish. ZS6NG was getting South Africa going on 432 with only 150 W into 16 quagis. G3LTF described adding a choke to a circular "coffee can" feed to reduce back radiation and improve the pattern. There were over 30 reports in the NL with most activity on 432, including rare states such as Utah, Tenn, Alabama and Nevada. 25 years ago in Oct 1991, the NL was 6.5 close typed pages and indicates the approach of "Peak EME" (at least for 432) with several new stations appearing on both there and 1296. IK3COJ made his first 1296 QSO with 60 W and a 3.2 m dish – all was on CW. Herve, F5HRY reported on the second GJ dxpedition working 69 stations, and Alex UB4LL on UC2/UB4LL, which made 20 QSOs before their HV transformer failed. A 10 GHz CP feed with a dielectric polarizer was described by SM6CKU and SM4DHN. The editor announced that due to the coincidence of the ARRL contest with the next sked weekend, there would be no sked list as "with all the contest activity, skeds should not be needed". Contests without skeds then lasted for 23 years. [The months have become a little out of synchronization, but will return to normal next month].



WA2FGK 60 W SSPA used for 1st Solid-state EME QSO

FOR SALE: **AA2AC** has 10' dish available in Clarence, NY (outside Buffalo) for the taking. Contact Vern at aa2ac@srscales.com if interested. **KL6M** has 23 cm septum feed horns for sale. See details at http://ptt-ak.com/SeptumFeed/septum.html. **G4HUP** http://hupRF.com has hardware available to interface an SDR directly with a TS2000. See http://huprf.com/huprf/pat-board/ and scroll down to the second table on the page to find the link to Dave's info. **K6FG** has for sale a rotator built to elevate his 6M9KHW 6m antenna for EME, but he has decided to not use it. A heavy-duty actuator comes with it. The complete unit weighs around 80 pounds. If interested contact Mark at k6fg@arrl.net.

FINAL: This month was another very busy one and thus this NL is later than I had planned. I have more material, but it will have to wait until next time.

► I have included DL7APV's 2017 MOON Calendar with the DUBUS, ARRL and ARI EME Contest weekends, as well as F5SE's very helpful 2017 Moon Charts.

►It is with great sadness that I announce the loss of another long time EMEer, K3CB.

Owen may be better known as K6LEW. For a time K6LEW provided SC to 432 EME operators for WAS. More recently he was a key member the K8GP Grid Pirates Contest Group that frequently showed up in ARRL tropo contests on 432 EME. Owen will be sorely missed – R.I.P.

► I note that there still seems to be some confusion on the ARRL multipliers. DXCC entities count as multipliers expect for the US and Canada. There the State or Province (1, 2, 3.. etc.) count as the multiplier.

►G4RGK has updated his CW Initials Lists with all the changes received since the contest. Dave reports there are quite a few changes in the top sections of each band.

► Take a look at the MX0CNS report. It is truly amazing what can be down with small antenna and low power with a big antenna on the other. It also indicates that there are *EME Conditions* and that if you don't succeed at first it is worthwhile to try and try again!

►If you think you have problems with your QTH, see KN0WS' report!

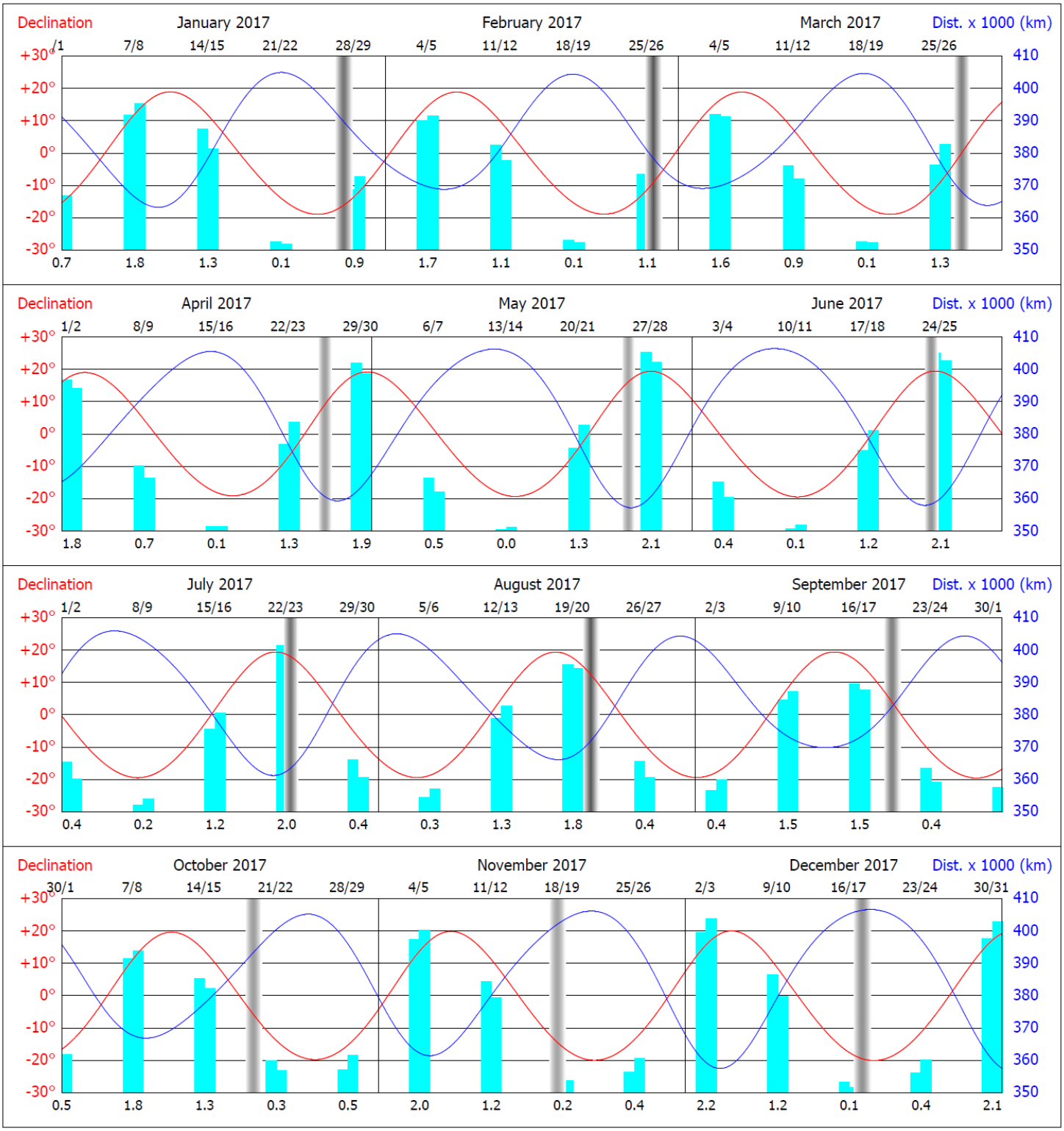
►The deadline has passed for ARRL EME contest logs, but you can still send check logs, picture and comments to K1DS k1ds@hotmail.com.

►It is now 45 years of NLs! I am always looking for suggestions on how the NL can be improved, and for volunteers to help with the editing/material. OK1TEH will be joining the NL staff and helping in the future. TNX to W2WD and W6SZ for their terrific help; it is gratefully acknowledged! From all who have contributed to this NL: Our wishes for the very best health, happiness, prosperity and lots of fun in 2017 – and off the Moon! 73, Al – K2UYH (& Sal)

PS: I will be looking for your voice echoes in the SSB Funtest.

Hermann (DL2NUD) - L and Bodo (DF8DX) - R at E44QX & E44HP

Moon Ephemeris Overview for the Year 2017, by Franck F5SE



- Vertical blue bars show the overall "quality" of each week-end for EME. The higher the bar, the "better" the week-end.
- Figures below bars show expected signal improvement, in dB, referred to apogee path loss, for Sundays at 00:00 UTC.
- Full scale span: 2.4 dB. Scale step: 0.4 dB per division. 0 dB level = Band path loss figure at apogee, as quoted below:
- 144 MHz: 252.8 dB, 432 MHz: 262.3 dB, 1296 MHz: 271.8 dB, 2.3 GHz: 276.9 dB, 3.5 GHz: 280.4 dB, 5.7 GHz: 284.8 d
- 10.4 GHz: 289.9 dB, 24 GHz: 297.2 dB, 47 GHz: 303.0 dB. Data computed for an apogee around 406500 km.
- To get the week-end path loss on a given band, subtract to band apogee figure the value printed under the week-end bar.
- The shading pattern below shows how close the Sun is to the Moon, at any time - the darker, the closer.
- Shading is only visible around New Moon date, appearing as a vertical gray bar.

Lunar Weekend Calendar 2017 by DL7APV

2400_Sat/ 0000 Sun	Decl/deg	Loss (dB)	Sun offset/°	Temp 432	libration	contest dates & meetings	Comments	Moon at my qth (UT)
Jan 00/01	-15,9	-1,82	-33	30	+		Moon in south	10-18
Jan 07/08	+11,3	-0,37	-118	35	-	ssb Fun contest 23cm	Day AM	14-03
Jan 14/15	+11,1	-0,82	145	20	+		Night	20-08
Jan 21/22	-14,6	-2,28	68	40	-		Day PM	03-11
Jan 28/29	-14,0	-1,59	-15	30	++		Moon in south	08-17
Feb 04/05	+13,7	-0,57	-101	30	-		Day AM	11-00
Feb 11/12	+9,0	-0,96	165	20	+	Dubus 144&432 CW	Night	19-07
Feb 18/19	-16,2	-2,21	88	40	-		Moon in south	01-10
Feb 25/26	-11,9	-1,34	4	25	++		Sun noise	07-16
Mar 04/05	+15,7	-0,62	-84	35	-	Eu VHF/UHF Tropo	Day AM	10-01
Mar 11/12	+6,5	-1,2	-176	20	++	Dubus 2,3GHz CW	Night	18-05
Mar 18/19	-17,6	-2,17	107	50	-		Moon in south	00-07
Mar 25/26	-9,7	-1,15	24	25	+	Summertime starts in eu		05-15
Apr 01/02	+17,2	-0,54	-68	40	-	DUBUS 23cm CW	Day AM	09-00
Apr 08/09	+3,6	-1,47	-157	20	+/-		Night	17-03
Apr 15/16	-18,9	-2,17	126	80	-		Night	23-07
Apr 22/23	-7,5	-1,06	44	25	+		Day PM	04-14
Apr 29/30	+18,1	-0,40	-51	40	-	DUBUS 9cm CW	Day AM	08-22
May 06/07	+0,6	-1,69	-139	30	+/-	Eu VHF/UHF Tropo	Night	16-02
May 13/14	-19,8	-2,16	145	180	-		Night	23-05
May 20/21	-5,1	-1,04	63	25	+	Dayton & SM Conf	Day PM	02-12
May 27/28	+18,4	-0,28	-33	40	-	DUBUS 6cm CW & ARI	Day AM	06-21
June 03/04	-2,3	-1,82	-120	30	+/-	EU 23&up Tropo	Day AM	15-00
June 10/11	-20,3	-2,12	163	180	-	ARRL VHF Tropo	Night	21-04
June 17/18	-2,3	-1,03	82	25	+		Day PM	00-11
June 24/25	+18,3	-0,27	-14	35	-	DUBUS 10G & up CW	Sun close	05-20
July 01/02	-5,1	-1,89	-101	25	-	Eu VHF/UHF Tropo	Day AM	13-23
July 08/09	-20,2	-2,04	-179	80	-		Night	20-03
July 15/16	+0,9	-0,98	100	30	+	Ham Radio (DL) CQ WW VHF	Day PM	23-11
July 22/23	+17,7	-0,38	5	25	-		Sun noise	04-18
July 29/30	-7,6	-1,94	-82	30	-		Day AM	12-22
Aug 05/06	-19,5	-1,93	-160	45	-	ARRL UHF Tropo ES-Tropo	Night	19-01
Aug 12/13	+4,3	-0,84	118	30	+		Day PM	22-09
Aug 19/20	+16,6	-0,58	23	20	-	LY-Tropo	Day PM	03-17
Aug 26/27	-10,0	-2,00	-62	35	-		Day AM	11-20
Sept 02/03	-18,6	-1,85	-141	30	-	Eu VHF Tropo	Night	17-00
Sept 09/10	+7,6	-0,61	135	30	-	ARRL VHF Tropo Weinh **ARRL 2.3GHz and up**	Night	21-08
Sept 16/17	+15,0	-0,82	41	15	-	ARI Autumn section	Lowest Noise	02-16
Sept 23/24	-12,3	-2,10	-42	35	-		Day AM	10-19
Oct 00/01	-17,4	-1,82	-122	30	-		Night	05-00
Oct 07/08	+10,7	-0,31	153	35	-	**ARRL I 50-1296 MHz ** & Tro**	Night	19-08
Oct 14/15	+12,9	-1,00	58	20	-		Day PM	01-14
Oct 21/22	-14,4	-2,22	-22	40	-		Day AM	09-17
Oct 28/29	-15,9	-1,87	-103	30	-	Summertime ends in eu		14-00
Nov 04/05	+13,2	-0,03	172	30	-	**ARRL I 50-1296 MHz ** & EU**	Night	17-07
Nov 11/12	+10,4	-1,07	75	20	+		Day PM	00-13
Nov 18/19	-16,4	-2,34	-3	40	-		Sun noise	08-17
Nov 25/26	-14,2	-1,97	-83	30	-		Moon in south	13-22
Dec 02/03	+15,1	-0,10	-169	35	-		Night	16-05
Dec 09/10	+7,7	-1,01	93	20	+/-		Day PM	23-11
Dec 16/17	-18,1	-2,42	15	50	-		Worst apogee !!!	07-14
Dec 23/24	-12,0	-2,02	-64	25	-		Moon in south	11-21
Dec 30/31	+16,6	-0,03	-149	35	-		Night	15-04

ARI EME Trophy 1.1. - 31.12. ** Very bad choise of ARRL to fix the contest dates parallel to the Major EU tropo contest, QRM is for sure !!!