432 AND ABOVE EME NEWS
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CONDITIONS: It is harder today to put together the EME Newsletter (NL) because the much greater variety of activities and information available then in the past. This month the big even is the Oct ARRL Contest weekend (WE), which had generally great conditions and activity. During the first WE on 432 DL7APV made 100 QSOs (90 on JT and 10 on CW) for the top reported mixed mode score. DL7APV and SP6JLW are tied for the top 432 CW report with 10x10. On 1296 the top mixed score is from OK1DL with 96x49 reported QSOs. On CW SM4IVE and SM6CKU are tied for top with 67x30. The 70 and 23 cm combined band multimode score is from NC1I with 136x66. **ZL/VK7MO and G3WDG setting a new 10 GHz World distance record in Oct – see Rex's report. Rex was also providing a 3 cm mini grid dxpedition in ZL.** K6GM was QRV from NV on 1296 during the Oct contest WE and will be on from OR during the Nov WE – see report in this NL. TR8CA is still supposed to be QRV on 432 from Gabon. Coming up right after the contest (27 Nov to 2 Dec) is the HB0/HB9DBM dxpedition on 23 cm thru 3 cm - see the details later in this NL. There is not much dxpedition wise until January when T46MB is to be active from Cuba. In Dec the 432 EME CW activity time period (ATP) will return on 23 Dec from 0130-0330 and 1730-1930, and in 19/20 Jan the SSB EME Funtest will return on 23 and 13 cm.

G3WDG end of new 3 cm World Distance Record with ZL/VK7MO

BD4SY: Zhu bd4sy@126.com participated in the ARRL EME Contest in Oct on 1296 -- I plan to be on 1296 again in Nov. I am also QRV on 13, 9, 6 and 3 cm. Because of the local QRM, 13 cm is hardly usable. On 3 cm, I have less than 10 W output power and only a circular pol feed. I thus can only QSO the bigger stations. On 9 and 6 cm, I am in a better position to make QSOs.

BV3CE: Tom tom33638998@yahoo.com.tw is now QRV on 1296 EME but is limited to only a western window and has not been able to be very active. He hopes to move his antenna to the roof next year for a much better Moon window.

DL0EF: Gerd (DJ5BV) gerd@dj5bv.de reports on his operation of the 25 m Astropeiller dish on 1296 (SWL) during the Oct ARRL EME Contest WE – It was an extraordinary experience! The Astropeiler dish is an old timer among radio telescopes (built in 1956). It was operated by Bonn University until 1995. Scrapping the dish was prevented by a group hams, hobby radio astronomers and scientists. They arranged for it, a 10 m and 3 m dish to be designated a historic landmark. The antennas and electronic labs are all now maintained and operated under the responsibility of the Astropeiler e.V, club. During the contest, I was given a one-time chance of using the dish for 12 hour period – RX only-. It took me some days to prepare the equipment for what turned out a flawless operation. I was assisted by DK8UE, who kept the dish pointed to the Moon. On Saturday evening, the rig (2 receivers, SDRuno and 3 laptops) was set up on a spare table in the control room. While waiting for the Moon, we checked a couple of local beacons (the 25 m dish is AZ/EL). Some of the beacons (< 50 km away) almost overloaded the receivers. The first moon signal heard was DF3RU (589). Walter (DK8UE) thought it must be a direct terrestrial signal – "EME impossible", but changed his mind when SP3ITF answered (579). The strength and quality of signals also surprised other visiting hams. The spectrum display looked like 80 m! At times there were up to 50 stations simultaneously on the screen. I had planned to look for weak signals and let them know they were heard. There were NO weak stations. I logged 91 different calls from all continents plus another 11 stations on 70 cm using a temporary feed placed in the dish. Due to its construction, there is no chance to use it on TX/RX. It was a different world compared to my first EME experience 40 years ago when I used 16 x loop-yagis on 23 cm, and there were ONLY weak signals! This beautiful ancient instrument is still going strong with its precisely controlled mass of more than 90 tons. It is now used for education; a lot of visiting

schools, for university grade seminars and is open to the public (guided tours) during the summer months. It is also used for some scientific work. Technically speaking the Astropeiler did not age at all. In some ways (antenna control, pre-amplifiers, signal processors and computers) it is now more modern and capable than in the days when it was put in operation. I wish and hope this telescope will survive to serve generations to come. [Gerd hope to be QRV with their 10 m dish next year on 3 cm].

25 m dish @ ASTROPEILER / DL0EF

DL3EBJ: Chris d3ebj@t-online.de is QRV on 1296 EME with a 4.8 m dish -- I was QRV in the Oct ARRL EME Contest WE on 23 cm - I worked 74x35, 44 using CW and 30 with JT65C: QSO'd on 27/28 Oct were OK2DL, 9A5AA, EA8DBM, RA3EME, UA4AAV, IK1FJI, RA3AUB, RA3EC, LZ2US, SP6JLW, F5KUG, WA3RGQ, G4FQI, PA3FXB, AA4MD, DL7UDA, G4EZP, W3HMS, KA1GT, SM4IVE, G4CCH, DK3WG, SP6ITF, WA6PY, VE3KRP, WA9FWD, IK5VLS, VE6TA, PA2DW, KL6M, OE5JFL, NC1I, VA7MM, G3LTF, SM6CKU, OK1CA, OK1DFC, UA3PTW, ON4AOI, OK2ULQ, HB9Q, VK4CDI, OH2DG, JH1KRC, SP3XBO, DF3RU, PE1LWT, JA6AHB, PA0PLY, OZ9KY, UA1CCU, ON5GS, IK3COJ, UA9FA, LZ1DX, DK0ZAB, RC4I, OZ4MM, K2UYH, F1RJ, SM4GGC, IW2FZR, W6YX, VE6BGT, OH1LRY, LU1CGB, OZ6OL, ES5PC, VK5MC, DL7YC, JA6AHB DUP, IK2MMB, DL1SUZ and F5FEN. I will be QRV again in Nov.

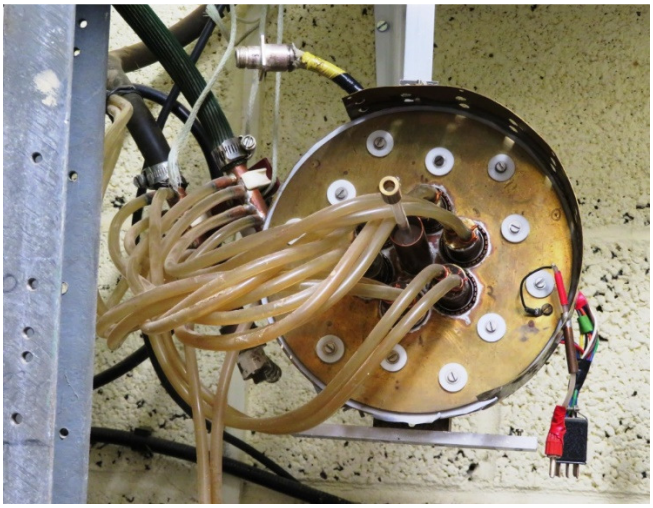
DL7APV: Bernd dl7apv@gmx.de used his new supper array for the first time in ARRL contest on 432 -- It was much fun! I worked 100 in first leg. 90 were using JT65B and 10 on CW - WOW, my best ever results! There were 15 *getaways* that I hope to catch next time. Initials (#) included: OH2BYJ in KP10 with a 23 el yagi and 3 W, UA3MBJ in KO94 with 20 el yagi and 9 W, UA4UK in LO14, RC4I in LO43, RZ3GO in KO92, VK4MIL in QG62, YO5TP in KN16 with a 9 m yagi and 50 W and SM7EOI. JT kept me busy most of the time, but I always tried to watch the CW area. QSO'd on CW were DL9KR, G0JLO, LX1DB, SM2CEW, WA6PY with 1 yagi, JA0TJU, SP7DCS, SP6JLW, I2FHW and OZ6OL. Condx on Saturday were excellent, but not so good on Sunday. I hope to make more CW contacts during the next leg.

DL7YC: Manfred ploetz@snafu.de operated the ARRL EME Contest on 1296 – My results were impressive despite very limited time. I worked mixed JT65C and CW. CW was necessary because it is hard to achieve a high QSO rate with JT. One has to decode the traces from the SDR, but only ONE is possible at a time. It also takes time to find a "NEW" station using JT even in a contest. Nevertheless, I was able to log 51x29. Before the contest, I started testing using JT65C on Friday evening and caught VK2JDS new mixed initial (#*), a new country and WAC on 1296! This QSO was a very good start, and followed by DL6SH (both before and later in the contest time). In the contest I worked KA1GT, PA3FXB, RA3EME (#*), W3HMS (#*), UA4AAV (#*), IK5VLS, NC1I, RA3AUB, G4FQI, K5DN (#*), OK2DL, VE3KRP and AA4MD (#*); then switched to CW for OK2ULQ, OE5JFL, SP6ITF, IK3COJ (#), OK1CA, OK1DFC and SM4IVE; back to JT65C PA0PLY, UA3PTW, RA3EME, HB9Q, EA8DBM, DK3WG and JA6AHB; back on CW SM6CKU, RA3EC, K2UYH, LZ2US, OH2DG and SP3XBO; on JT65C again W6YX (#*), VA7MM (#*), ON4AOI (#*), IK5VLS DUP, SM4GGC (#*), G4FQI DUP, SP5GDM (#*), PA3FXB DUP, DF3RU, DL3EBJ and ON5GS (#*), on CW again G3LTF, OZ6OL, ES5PC, F5FEN (#), IK2MMB (#), JH1KRC (#) and IK1FJI; and finally using JT65C UA9FA. Heard where VE3NXK (FN05), RN6MA (LN06), K4EME (FM08) and I7FNW (JN81), and some old friends such as G4CCH, OH1LRY, VE4MA and DK5YA. Over all, it was a very successful weekend with a lot of fun. I learned new thinks an kept the brain working, and very much appreciate all the QSOs! The weather was so so, but limited rain in Berlin and not much winds. The station worked fine with no failure except WSJT-X. From time to time the program switched by itself from JT65C to an unknown mode with very narrow spacing. The only way to "repair" this was another mode change by hand back to get to JT65C again with a loss of QRG and JT65 mode.

G0JLO: Keith keith@analog.co.uk reports on his Oct/Nov activity -- Despite limited time, the Oct contest brought the best CW activity I have heard to date. All contacts were random CW or SSB. On Friday evening, I had a nice contact with LX1DB (549/459). Wily called on SSB contact some 15 min later for a (31/43) QSO. In the contest proper I worked SM2CEW (569/569), I2FHW (559/559) for initial #18, K2UYH (559/559), SP7DCS (559/559) #19, and on Sunday WA6PY (439/O) #20 and DL7APV (599/579) for a total of 6x6. There were some incredibly strong signals from EU early on Sunday morning. Following the EME contest, my attention turned to Pulsar hunting and with the kind help of OE5JFL and I0NAA, I have managed to pull in 3 pulsars so far...more to come in the next days I think) B0329+54, the strongest candidate in the northern hemisphere at S/N >24. This was closely followed by B1642-03 at S/N=9.5 and

then B1749-28 at S/N=7.4, which was briefly skimming just above the south-west horizon at 10 degrees elevation here in the UK. I fear that the "pulsar bug" has bitten now. I hope to be active during Saturday 27 Nov for the ARRL last part and will especially be looking for Asia, Australia, Africa and SA to complete a WAC.

G3LTF: Peter's g3ltf@btinternet.com Nov EME report -- Due to bad weather, other engagements and a shoulder muscle problem, I was not able to be QRV in the ARRL Contest as much as previous years, and feed changing was not possible. I stayed on 23 cm and worked 46x25; all on CW, of course. I QSO'd on 27 Oct SM6CKU, DL3EBJ, LZ2US, SM4GGC, F5KUG, EA8DBM, SM6PGP, PA3FXB, SM4IVE, KL6M, OK2DL, LU1GCB, VE6TA, VE6BGT, K6MG for initial #461 in NV, VA7MM, G4CCH and N5BF, and on 28 Oct OE5JFL, RA3EC, OH2DG, OK1DFC, LZ1DX, 9A5AA, WA6PY, SP6ITF, SP3XBO, OH1LRY, IK3COJ, IK5VLS, PA2DW, NC1I, K2UYH, IK2MMB, VE4MA, DF3RU, RA3EME, UA4AAV, ES5PC, F5FEN, IK1FJI, JH1KRC, DK5YA #462, JA6AHB, DL7YC and RA3AUB. I lost LA3EQ (his LNA blew) and heard DF2VJ and had 2 nice SSB QSOs with VE6BGT and KL6M. I was working 14 in an hour in the busy times. A tip for newcomers to CW on EME: learn how to use split frequency (or whatever it's called on modern transverters) and put your echo, not spot on my signal, but up or down a bit, we all use SDRs, we will see you and then you are not drowned by the big signals. Thanks to all for some nice operating. I worked on 1 Nov UA1CCU #463, IK3COJ and LA3EQ and on 2 Nov W2HRO SSB/CW. I hope to be QRV on 70 cm for at least the first pass next weekend; CW on around 020-040 and then probably 23 cm CW/SSB. I had a diode go open circuit in the bias circuit for one of the 3CX100A5s in my 6-tube ring PA. The chassis was too heavy (now) for me to lift out with the PA on it. So, I suspended it with its water-cooling lines, [see picture], and then lowered the chassis and replaced the diode! It may have been like that for a while, the output power went up to 850 W, and the SSB echoes were terrific!



G3LTF's 6-tube ring PA suspended by cooling lines

HB0/HB9DBM: Dan (HB9CRQ) dan@hb9q.ch sends the latest info on the Q-team's microwave (MW) EME dxpedition to HB0, Liechtenstein (JN47sf); there are not many changes from the announcement in the last NL -- We will be QRV from 27 Nov until 2 Dec, and have a special license to operate on both 2320 and 2304 and on 3400. So, we will be QRV from 23 to 3 cm. To my knowledge this will be the first EME activity on 3 cm. We have found a QTH that will allow us to work VK (very short window and JA on moonrise and the US west coast on moonset. We plan to be QRV for 1 full moon pass per band. We will have Internet access. During activity we'll be on the HB9Q logger. You may email us about skeds. Our equipment will be a 1.5 m HB dish on all bands. TX power will be on 23 cm 100 W, on 13 cm 90 W, on 9 and 6 cm 80 W and on 3 cm 50 W. On 27 Nov we will arrive, set up the station, and start operation (HB always TX first) at about 2300 (MR) on 13 cm using JT65C. We will start on 2301.990 looking for VK XB and later on 2400.090 for JA (XB, 2320 on request), later on 2320.090 and finally on 2304.090. We will end on 28 Nov around 1000. We will start again on 28 Nov at around 2330 on 9 cm, 3400.090 using JT65C (3398.090 on request only for VK); and end on 29 Nov at about 1030. The next day, 30 Nov, we will be QRV on 6 cm, 5760.090 using QRA64D from about 0045 until 1115. On 1 Dec we will be on 3 cm from 0200 until 1145 using QRA64D. We will start on 10450.090 looking for JAs but can QSY to 10368 for VKs and others. (JA and VKs please ask for skeds in advance). Finally, on 2 Dec we will be on 23 cm, 1296.090 from about 0315 until 1200 using JT65C. Now that WSJT-X 1.9.1 is available, we will use it on 23, 13 and 9 cm for JT65C with Doppler Control ("Own Echo", in other words we listen on our own echo). On 6 and 3 cm we will use QRA64D (if necessary JT4F) including Doppler Control ("Constant Frequency On Moon", CFOM, and if necessary "Full Doppler to DX Grid"). Hopefully more people take advantage of the automated Doppler control. Especially on 6 and 3 cm it is a MUST for successful QRP operations. Although it is on the limit, we will work CW on all bands. However only with big-guns and after the pile-ups on JT/QRA are worked. How big a station is needed to work us? During our last 3 activities the smallest stations worked had the following equipment: On 23 cm 2.35 m dish and 150 W at the feed; on 13 cm 2.4 m dish and 150 W at feed, with excellent signals both sides; on 9 cm 2.4 m solid offset dish and 50 W at feed, with excellent signals on both sides; on 6 cm 2.4 m dish and 30 W at the feed with excellent signals both sides - that's less ERP than we have; on 3 cm 1.2 m solid dish with 40 W at the feed with excellent signals both sides – again less ERP than we have! **QSLs** are only by direct to: HB9Q, P.O.Box 133, CH-5737 Menziken **and must include SAE**. If you wish to sponsor our activity, you are welcome to do so by using PayPal dan@hb9q.ch (please mention your call).

IK1FJI: Valter valter_dls@yahoo.it reports on the Oct leg of ARRL EME Contest on 1296 -- The weather was bad with strong wind and heavy rain. I could be QRV when the wind died down a little. I only operated as usual using CW; and with my 3.2 m dish and septum feed had 29 QSOs, including some initials. I totally lost my window with North America due the wind. I also lost some time on Sunday evening when my computer was confused by the local time change causing my tracking to be way off. Other activity

was on 9 Sept OE5JFL (589/579), 26 Sept ON5GS (559/559) and PY2BS (569/559) for initial #109, 29 Sept ON5GS (54/55) on SSB, 30 Sept DL6SH (55/56) SSB, 21 Oct I5YDI (O/O), 25 Oct IK3COJ (559/559), 18 Nov SM6CKU (579/569) and G4CCH (579/559) and 19 Nov K7CA (O/O) #110 - worked Al the first time 35 years ago on 2 m EME (CW)! I also worked some stations using JT65C. I am really hoping for good WX in the Nov contest leg and to do better!

K1DS: Rick rick1ds@hotmail.com was active during the Oct contest WE on 432 – I managed to get my portable EME setup on the air for the Oct WE from my portable QTH in FL. I used JT65B, a single 5 WL yagi and 150 W. Palm trees blocked my moonrise until 25 degs and from 180 degs to moonset. Despite my minimal system, I QSO'd DL7APV (12DB), HB9Q (13DB), NC1I (16DB), K2UYH (19DB), DK3WG (22DB) and UA3PTW (19DB), and added initials (#*) with SM7THS (23DB), UT5DL (24DB) and PA2V (21DB/28DB) for a total of 9x9. I'll try for a better position in the final WE, when I will be on 1296 with a pair of long loop yagis and 250 W. Thanks for the fun with my little station.

K4QF: Ben LoWeb@esp-inc.net in AL was listening on 23 cm EME during the contest – Due to the rain on Friday, I couldn't complete my dish setup for 1296 EME reception until the weather cleared on Saturday. I then managed to piece things together for my first EME reception effort since 1977 when I was on 432 – a truly long LDE! I'm using the same stressed ribs as then. I had expanded the dish back then to 16', but now it's only 3.5 m (11.5'). This was my first attempt at EME reception on 1296, and I had difficulty with the libration on the CW copy. I think I was hearing OZ4MM. My next task will be to build the timing circuit to drive the dish rotor so I don't have to manually rotate the polar mast to track the Moon. Since the Sun is at a southern dec, I can't use it for testing with my polar mount. [I suggest you use the ON0EME beacon].

K6GM: Gary ad6fp@lbachs.com was QRV on 1296 from NV during the Oct Contest WE using [we believe] a 4.5 m stress dish – see picture near the end of this NL. They had some problems and were only QRV for the first moonpass and worked about 6 stations. Gary reports that they have solved their problems and will be on the whole time for the Nov contest WE.

KA1GT: Bob ka1gt@hotmail.com ARRL Contest for 23 cm follows – I worked around 55 stations on 1296 EME using JT65C during the first WE of the contest, including WAC. Since then I've added a new sequencer and the ability to operate random CW. I'll be active for the last WE of the contest on 1296, and available for both digital and CW contacts (Note that my CW speed is ~13 wpm, so QRS please!)

KN0WS: Carl carlhasbargen@q.com reports on his woes during the Oct contest WE – The WX was wet or raining with never a break in the clouds to see the Moon. My plan was to op 70 cm the first pass, then take the mesh off my 6 m dish for the winter, and op 23 cm the second pass. On 70 cm I was using my new W6PQL SSBA. It draws more current and taxes by generator more than my old BEKO. During one of those times when the TS-2000 was automatically sending out my CW call sign, the generator was groaning and coughing through the dits and dahs, and suddenly my RX noise was much lower. I likely lost a preamp from the on and off switching. I must have had the mast-mounted preamp at the base of my tower still running, but my hearing was not the same for the rest of the night. Also, from that point on I had a change in my PA. Instead of driving it with 16 W to get 600 W out, I had to drive it with 22 W to get 400 W out. I thus finished with both degraded RX and TX. I worked using JT65B DL7APV (14DB), NC1I (5DB), K2UYH (7DB), UT5DL (26DB), PA2V (22DB), UA3PTW (16DB), HB9Q (4DB), G4RGK (18DB), LU8ENU (21DB), VK4EME (22DB), VK4CDI (25DB) and K4EME (24DB); and initials {#} with W1PV (16DB), OH2DG (11DB), W4ZST (19DB) and EM5EME (21DB) - learned they were the same as UT6UG - for total on 70 cm of 16x13. I took the mesh off my 6 m dish and tore down my gear, moving it 100' to my 16' dish and set up for 23 cm. Unfortunately, when I did my testing, I could not get any power out of my linear PA. A coaxial relay that had been inside my tent for 70 cm ended up having water running OUT of it when I went through my trouble shooting. I suspect a coaxial cable was touching my tent and water from the rain outside must have flown through the fabric and ended up running down the cable into my relay. After replacing the relay, the Beko HLV-350 still had not output power and was QRT on 1296! I took everything down and headed home. Since then my Beko has worked just fine in my garage. I don't know if it has dried out or what? I do not expect to have any back-up 23 cm amplifier put together before the final contest WE, so hopefully the weather is dry and this one behaves. Last year a snow storm cut my final weekend down to 5 hours and this year the contest is several weeks later, so we shall see. I have been advised to get a more powerful generator for my EME, but this one is as heavy as I can lift in and out of my truck. [Carl will be setting up for 3 cm EME with a small system from his home over the winter].

KL6M: Mike melum@alaska.net writes on 23 cm during the contest -- My experience during the Oct ARRL contest segment was an exciting couple days. I had intermittent problems with my new 23 cm SSPA. I had an Azimuth encoder failure. My PC that runs my tracking software (F1EHN) died due to mother board failure. I dug through my stuff and finally found a workable relic of a PC and got it fired up after much effort; only to have it fail too. I dug around and finally found another one that I could keep working. The hard part (for both PCs) was getting a USB to RS232 adapter driver to work. I ended up operating with only elevation readout, and scanning for best signals with the azimuth motor, NO AZ READOUT. This worked OK for the first pass and I worked a bunch of stations. I missed my NA/SA/VK/JA window and also my moonset window to EU while trying to fix the azimuth readout. But finally, I replaced the encoder (different PPR, so I had to reprogram my NVRAM in the tracker). Whew! I was able to operate a bit more than 6 hours and made 61 QSO's, 53 multipliers on CW, and added 14 initials. My log is viewable at http://kl6m.com/23cm12-18.txt. Aside from the technical

issues, EME from Alaska with its narrow windows of opportunity is definitely challenging; I have to work fast!

LZ2US: Marko lz2us@abv.bg writes about some very surprising discoveries in his 1296 antenna – During EU/DUBUS 23 cm EME Contest in April, I noticed something was not quite right with my RX. I looked into my septum feed and found a bird's nest. Most amazing, there were live baby birds in the nest on both the RX and RX sides of the feed, despite my QRO operating! Additional inspection revealed some bent dish ribs! In 2012 the dish was in park position at 85 degs of elevation. After a heavy snow, I found the dish was at -4 degs of elevation. It moved because of the extra weight and possibly high winds. I did not notice any damage to the ribs until now. I now have the ribs almost fully restored. I have also installed a new lower NF preamp from G4DDK. On 14 Oct, I check my feed again. Guess what. There was a bird's nest again; this time only on the RX side. After clearing it, I put (at last) a plastic lid on the feed. It is now closed at least to birds. Sun noise was 16 dB and CS/G noise was 8.2 dB. However, another problem has appeared - very strong QRM and wide band noise on the whole 23 cm band caused by security cameras at one of my neighbors. Has anyone had experience with a similar problem. I would be very thankful for any suggestions. I plan to be QRV in ARRL EME contest. My goal will be to try to copy small stations on CW. I suggest small stations called me using very low speed CW. I can then use a very narrow filtering with better success. If anyone wants a sked, please email me. I do not presently have Internet access at my radio QTH.

Nest in LZ2US's 23 cm septum feed

N5BF: Courtney courtney.duncan.n5bf@gmail.com updates us on his recent operation -- New initials since my last report are RA3EME for mixed initial #138*, I7FNW #139*, UA4AAV #140* and VK2FLR #141*. These were all worked during the Oct ARRL EME Contest on 23 cm in which I scored 41x31. I operated both CW and JT with most of my QSOs made on JT65C. During the contest I had a little trouble with my rotator controller, and low output power on CW; both are now repaired. During Sun noise measurements and station maintenance on 9 Nov, my LNA protection relay control circuit was damaged and blew up both of my spare LNAs before the root cause was discovered. I will be QRT for the Nov contest WE unless a new LNA arrives in time.

NC1I: Frank frank@NC1I.COM did extremely well during the ARRL Contest in Oct --
I was joined by W9JJ. Bart handled all of the 1296 operation and did a great job, especially considering his limited EME experience. We found activity very good overall. I thought conditions were "OK" on 432 the first night and "good" (but not great) the second night. We had very heavy rain the first night. I picked up three new countries on 432 and was shocked to add 22 initials on that band. On the down side I only worked 8 NA stations (no VE's) on 432. That represents less than 10% of my QSO's. In comparison, I worked 6 VK's. Last year, I worked 22 NA stations on 432. Hopefully the second weekend produces better NA activity. Our total count for the first weekend on 432 was 81x35 - all on JT65B except for 3 on CW. It would seem that 100 QSO's on 432 should be reachable over the two weekends. That would be the first time since the mid 90's that I had over 100 QSOs on 432 in the contest. On 1296, we had a total of 53x31 - 36 were on JT65C and 17 on CW, and 5 initials. I believe the total score for 432 and 1296 totals 884,400 (134x66); however, our total contest score will also include N1DPM's 2 m effort (Rule 6.1). We worked on 432 using JT65B unless noted on 27 Oct G6HKS, LZ1DX, UA3PTW, DK1KW, UB4UAA, OK1TEH, DL1KDA, 4Z5CP, EM5EME, N9HF for an initial (#*), N4QWZ, W4JST, W1PV, KN0WS, K4EME, DL2HWA, SM7EOI (#*), ZS4TX (#*), OH2DG, LU8ENU, K1DS, PA2V, UT5DL, SM7THS, G3LGR, HG1W (same as HA1YA?), OK2VSO (#*), ON4CGX, OK2D (#*?), OH3LWP, DL7APV, DL6YBF, SM2CEW (CW), OH2BYJ (#*), K2UYH, G4RGK, GM4FVM (#*), VK4EME, VK2MAX (#*), VK2CMP (#*), VK4CDI, JE2UFF, VK4MIL (#*), and VK3NX, and on 28 Oct DF7KB (#*), LZ1OA, I2FHW (CW), RX9AT (#*), DL9LBH, DK3WG, F6HLC, XE2AT, YU7C (#*), TA1IFV (#*), HB9Q, SM5EPO, YO5TP (#*), YO5LD (same as YO5TP?), MX0CNS, UA4UK (#*), RC4I (#*), OK6TW, G4RGK (DUP, RD3FD (#*), OM0AB (#*), DG0KW, OH3AWW (#*), DK5SO, G4BRK, YL2AO (#*), DF2VJ, G4ALH, EI8JK, GM4FVM DUP, GI6ATZ, JH7OPT, JS3CTQ, KF8MY, JH7PAV, JH7BAY, JG7PEF (#*) and JE1TNL, and on 1296 using JT65C unless noted on 27 Oct DL7UDA, RA3AUB, DL7YC, G4FQI, PA3FXB, PE1LWT, UA9FA, WA3RGQ, LU1CGB, K4EME, W2HRO, KA1GT, RA3EME (#*), DK5YA (#*), OK2DL, OH1LRY, VE4MA, VE3KRP, N5BF, DL3EBJ, F1RJ, HB9Q, PA2DW, ON5GS, EA8DBM, and W6YX, and on 28 October DL7UDA, SP6JLW (CW), OK1CA (CW), W4OP (CW), F5KUG (CW), LZ1DX (CW), UA3PTW, UA6AJS (#), K5DN, VA7MM, OZ9KY, W6YX DUP, OE5JFL (CW), SM6CKU (CW), RA3EC (CW), SM4IVE (CW), OH2DG (CW), K2UYH (CW), KL6M (CW), G4CCH (CW), LZ2US (CW), VE6TA (CW), G3LTF (CW), KD3UY, VK4CDI, JA6AHB, VK2FLR (#*), and VA6EME. We expect to put a major effort in again for the final WE. I plan on spending significant time on 432 CW if the activity is there. I expect W9JJ will be back and hope that W1QA can also make it. I have seen many comments about the rules. Personally, I don't care if the rules stay the same or change. Either way I will make every effort to get on and contribute to the activity. I may stay on all weekend or may get on for

just a few hours. I may focus on JT or I may focus on CW. I may or may not turn a score in. It's just nice to see a spike in activity levels.

OE5JFL: Hannes oe5jfl@aon.at brings us up to date on the ARRL Contest and pulsars -- During the Oct part of the ARRL Contest I was QRV for about 10 hours and worked 63 stations on 23 cm; all using CW. It was fun to work old and new friends. The signal strength of many stations was truly impressive. The smallest station worked was DL1SUZ with 2 m dish and 200 W. After my presentation of pulsar reception together with I0NAA and I1NDP at the EME2018 conference there was not enough time for discussion and questions, unfortunately I had to leave rather quickly. I think there are more EMEers interested in trying pulsar reception, therefore I wrote some pages on how to do it (in my opinion) the easiest way. To find out download the PDF at https://qsl.net/oe5jfl/pulsar/detecting_pulsars.pdf.

OK1CA: Franta strihavka@upcmail.cz sends his Oct report -- I was QRV on Wednesday 24 Oct on 10 GHz for ZL/VK7MO, but Rex has heavy rain and he was not QRV. The weather at Thursday 25 Oct was better and I work ZL/VK7MO (15DB/17DB) from RE46OG using QRA64D. This QSO is my personal distance record ODX 17965 km on 10 GHz. I heard Rex and G3WDG during their worldwide record breaking QSO. Rex maintained a very good signal until the Moon was at zero elevation. The best was (13DB). I was QRV in Oct for ARRL EME Contest on 23 cm. I tested my new W6PQL SSPA, and now have 500 W at the feed of my 10 m dish. I was QRV only 9 hours on the Saturday/Sunday night, and I made 57 CW QSOs. Initials were RA3EME, DK5YA, SM4GGS, OK1IL, K5DN, SM6PGP and OZ9KY to bring me up to #350. The new SSPA worked perfectly.

OK1DFC: Zdenek ok1dfc@seznam.cz was QRV on 1296 during the ARRL EME Contest in Oct -- I was QRV for the full moonpass from Saturday to Sunday, and on Sunday from moonrise to 0000. Activity was good on both CW and JT. I have worked 90 QSOs on combining QSOs from both modes. My activity brought my CW initials to #434 and on digital to {#334}. In mixed mode on 1296, I am now at #579*. Conditions were very good. The high point was extending my longest distance QSO on 23 cm to ODX of 18204 km by contacting ZL2MQ. I was only missing Africa to have WAC in one leg of contest; all the other continents were worked. If the WX permit, I will be QRV also in Nov leg of the contest. I do not expect to work many more stations on 23 cm, but may change feeds to also work some stations on 432.

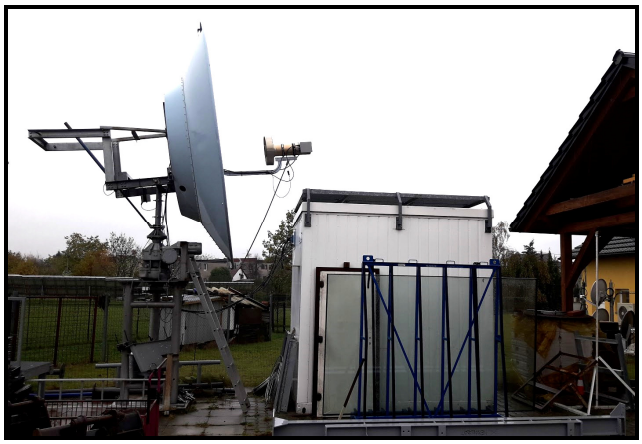
OK1KIR: Vlada's and Tonna's vlada.masek@volny.cz club's Oct report follows – We were mainly active on 3 cm, and worked on 22 Oct using QRA64D at 1622 ZL/VK7MO (16DB/14DB) for digital initial {#179) in RE57 for the 1st ZL-OK 3 cm QSO and a new OK distance record ODX of 18057 km. Late after moonset in ZL, we worked at 1713 OK1DFC (13DB/11DB) {#180) in JO60 and at 1727 G3WDG (10DB/12DB) {#181) in IO80. We QSO'd on 23 Oct at 1656 ZL/VK7MO in RE46 (20DB/19DB) {#182), on 24 Oct (no ZL available due to bad WX) at 1851 VK7ZBX (20DB/16DB) {#183) and 1913 OZ7Z (16DB/15DB), and on 25 Oct Rex did not move and repeated operation from RE46. Therefore we only observed the operation of ZL/VK7MO until Rex's signal disappeared (at slightly negative elevation on his side). We want to express our hearty appreciation of Rex's managing the ZL/VK7MO operation and also to his supporters (ZL3RC and ZL3FJ) for activation of ZL on 3 cm EME after more than 20 years, see - https://www.nzart.org.nz/assets/pdf/2008/the-year-is-1997-eme.pdf. Furthermore, our sincere congrats on a new world distance record QSO with (also portable) G3WDG. Remarkable as it seems almost 3-times bigger dishes, similar power and LNAs were used in 1997 to achieve CW contacts in contrast to nowadays when only about 1 m dishes were used with WSJTX (QRA64D).

OK1TEH: Matej ok1teh@seznam.cz was QRV during the Oct part of the EME Contest – I operated on 70 cm using my single 23 el DK7ZB 5.7 m long yagi, masthead mounted ATF54143 LNA with 0.4 dB NF and 800 W OK1VPZ SSPA (JT65 power output = +/-1 horse power). I QSO'd using JT65B on 27 Oct DL7APV, NC1I, LZ1DX, DF3RU, HB9Q, UT5DL, ZS4TX for mixed initial #126* (in KG30 using 8x15 el yagis and 600 W), K2UYH, PA2V, UA3PTW, DK3WG, EM5EME (same UT6UG), G4RGK, UB4UAA #127*, SM7THS, HG1W #128* and DL5FN, and on 28 Oct DL2HWA #129*, PA2CHR and ON4AOI for a total 20x14 and 4 initials. I was pretty much active for the whole weekend and I tried to call CQ as much as it was possible. I saw K4EME, OH2DG and CWNR many times. I was reported to be heard by KN0WS, VK3NX, VK4EME, W4ZST and I didn't finish QSOs with OH3LWP and SP1JNY. In the CW segment I copied weakly I2FHW and SM2CEW, but never heard DL9KR. During the Nov WE I'll try to be QRV as much as possible. I'll be on HB9Q and N0UK chat, and watching https://www.livecq.eu/432/.

OK2DL: Marek <ok2dl@seznam.cz> wrote about the his operating in the ARRL Contest on 1296 --
On Friday, I untied my 6 m dish and set my alarm clock to 0155… The band was full of stations. I started with on CW because it is faster than digital to make QSOs. I had decided to enter the mixed mode class. This mode I felt would give me access to more stations and thus make such a long contest more interesting. In the chat, KB8JNE wrote that he was hearing me with 45 el loop yagi and that I was the first station he decoded. On Sunday night I was so tired and sleepy that I turned off the radio and went to sleep early (2200 local time). I logged 96x49 contacts: DL3EBJ, RA3EC, SP6JLW, EA8DBM, 9A5AA, LZ2US, RA3EME, UA4AAV, IK1FJI, IK5VLS, KA1GT, PA3FXB, VE3NXK, RN6M, WA3RGQ, G4FQI, AA4MD, SM4GGC, VE4MA, DL7DA, DL7YC, NC1I, PE1LWT, UA9FA, RA3AUB, DK5YA, N5BF, ON4AOI, F1RJ, VA7MM, K4EME, SM6CKU, WA6PY, SM6PG, OK1CA, OK1DFC, IW8RRF, JA8SZW, LA3EQ, DL8FBD, UA3PTW, VK4CDI, DK3WG, PA0PLY, DK0ZAB, I7FNW, UA1CCU, OZ9KY, VK2JDS, F6KRK, IK3COJ, OE5JFL, UA9YLU, DF3RU, JH1KRC, OH2DG, F5JWF, JA6AHB, DL1SUZ, RW0LDF, RC4I, BD4SY, OZ4MM, K2UYH, K5DN, WA9FWD, LZ1DX, SP3XBO, PA2DW, IW2FZR, G4EZP, OK2ULQ, SP5GDM, DF2VJ, ES5PC, IK2MMB, VK2FLR, R6CS, OZ6OL and

VK5MC. [TNX to OK1TEH for translating from blog http://www.ok2dl.eu].

OK2ULQ: Peter ok2ulq@seznam.cz wrote on his participation in the Oct EME Contest WE on 23 cm -- I was QRV on Saturday night thru Sunday morning. The WX was bad with rain, but the conditions on the band were excellent. I combined CW and WSJT. The result was 32 contacts, which included 2 initials on JT65C with DK0ZAB and IK5VLS. I wasn't happy with the dramatic increase in interference I experience when the Moon was at high elevation. I do not know the source of this interference. I worked with SP6JLW, OK1CA, RA3EC, SM4IVE, SP6ITF, SM6CKU, DL7YC, DL3EBJ, OK1DFC, LZ2US, G4CCH, OH2DG, IK3COJ, JH1KRC, EA8DBM, OE5JFL, PA3FBX, IK5VLS, DK3WG, EA3AUB, JA6AHB, UA3PTW, DK0ZAB, RA3EME, UA9FA, OZ4MM, K2UYH, IW2FZR, OK2DL, KL6M, WA6PY and HB9Q. [TNX to OK1TEH for translating from blog http://ok2ulq.blogspot.com].



OK2ULQ's dish during QSO with HB9Q at moonset

OZ4MM: Stig gsvestergaard@gmail.com report on his Oct contest activity -- I was pleased to be able to operate on 23 cm CW – I was QRV on Sunday morning for few hours. This operation was not the plan because of a conflict with family activities. But time schedules do change; and I was able to squeeze in 3 hours of operation in the early morning. The conditions were great with extremely good signals on 1296. I was kept quite busy due the pileup at my CQ frequency. Sorry to whom I may have missed, but often several was calling on exact same frequency. I worked 45 stations, all on CW. I hope to be able to be on for a few hours in the final leg of the contest, but am not sure. It would be great to also work some on 432 then.

PA2DW: Dick qtc@kpnmail.nl sends news of his ARRL Oct Contest 23 cm operation – It was a really nice EME WE! Conditions were excellent, and so was the activity. My own echoes were heard from the loudspeaker as never before. I operated mainly CW and QSO'd 20x16, a new record for me. QSO'd were DL3EBJ, SM6CKU, LZ2US, KL6M, SM4IVE, VE6TA, OZ4MM, OK1DFC, K2UYH, OE5JFL, SP6ITF, RA3EC, RA3EME for initial (#), OK2DL, G4CCH, DL7UDA, IK3COJ, RA3AUB, ON5GS and G3LTF. I added another 4x4 on JT65C with NC1I, KA1GT, PA3FXB and VA7MM for a mixed mode total of 24x20. The CW activity was not bad, but there were many stations that could have been added to my log that seemed to be only doing JT. I hope next time to make more CW contacts. I will be only partially QRV from home in Nov as I will also be operating PI9CAM on CW.

PA2V: Peter peter@pa2v.com writes on the Oct ARRL EME Contest -- I wasn't able to use my full Moon passes because of family matters. But, the 7 hours I could operate were very enjoyable and quite successful. In total I QSO'd 30x19 using mixed modes with 8 initials. As far as I know 3 of the stations QSO'd used only one yagi and a few were low power stations. Logged using JT65C unless noted were on Saturday 27 Oct LU8ENU, K2UYH, DL1KDA for a mixed initial (#*), KN0WS, OK1TEH (1 yagi), HB9Q, 4Z5CP, NC1I, LZ1DX, W4ZST (#*), EM5EME (#*), DF3RU, DL7APV, UB4UAA, UT5DL, SM7THS, G3LGR (#*) (1 yagi) and K4EME, and on Sunday 28 Oct DK3WG, SM7EOI (#*), F6HLC (#*), DF7KB, K1DS (#*) (1 yagi), I2FHW (CW), SM2CEW (CW), G4RGK, LX1DB (CW), VK3NX (#*), VK4EME and UA3PTW. On CW, I lost I lost OH2DG. On JT65C, I missed HG1W, UA3PTW, some US stations and XE2AT (who I did decode). As far as I can remember I have never seen before so many stations on the band during an EME contest. Conditions on Saturday were perfect. Sunday morning wasn't that good with NA and SA not that loud. It does seem my new antenna has much better performance than my old one!

SM2GGC: Stig stig.ake.larsson@gmail.com was activity in the Oct leg of ARRL EME Contest on 1296. This was my first attempt to operate in ARRL Contest on 23 cm. It was definitely a good experience. Conditions also seemed good. I worked CW only on Saturday morning from 0311 until I lost the Moon in ground noise at about 0705. I had Moon again on Saturday evening and started at 1845 but went QRT for sleep at 2205; still only on CW. On Sunday morning I operated CW from 0406 to 0535, but then switched to JT65C until the end of my pass at 0842. For my last moonpass on Sunday from 2004 to 2252, I jumped between CW and JT. I spent about 10 hours at CW and 5 hours on JT65C and ended with 22x20 on CW and 30x22 JT QSOs with a mixed mode score of 52x34. I worked using CW SP6JLW, SM4IVE, G4CCH, OK2DL, RA3EC, WA6PY, SM6CKU, KL6M, LZ2US, G3LTF, OK1DFC, OK1CA, OE5JFL, DF3RU, IK3COJ, EA8DBM, OH2DG, OZ4MM, K2UYH, RA3EME, VK5MC and ES5PC, and using JT65C RA3AUB, G4FQI, I7FNW, PA3FXB, UA9FA, DL3EBJ, KA1GT, WA3RGQ, OH1LRY, DF2VJ, UA3PTW, VA7MM, DL7UDA, VE3KRP, VE4MA, PA0PLY, LU1CGB, DL7YC, LA3EQ, W6YX, HB9Q, IK5VLS, ON5GS, N5BF, K4EME, KD3UY, VK4CDI, UA4AAV, SP5GDM and G4EZP. My Rig was a 3 m dish with septum feed, 250 W (JT) and 300 W CW SSPA and G4DDK LNA.

SM4IVE: Lars sm4ive@telia.com writes -- I have not been on EME since Oct 2017 due to low interest. It did not look promising that any more EME would have taken place here for a long time. We had a massive lightning strike that killed all my radios, SSPAs, SDR IQ, etc. Everything that was connected to my computer including my routers, F1EHN tracking system, US digital encoders, LNAs, even the sequencers were all smoked! This did not improve my

interest. But I had to start somewhere repairing. Everything except the 432 LNA are fixed. It died 2 days before contest for no reason. Regarding the contest: I said to myself, I have lost interest in the contest but it might be nice to see if any initials will show up. I did win the ARRL Contest in 2010 with 117 QSOs on 23 cm. I believe that record still stands. I was only on for picking the raisins! I started quite late in the morning on Saturday, 0300 and probably missed some JAs and VKs. I was QRV to 0809, then back on from 1830 to 2100. On Sunday I started at 0542 and was on until moonset. I was also QRV for last moonpass from 1926 to 2330. There was not many on for this pass. My total moontime was nowhere near that of earlier years, when I was younger (and crazier). It's frustrating to see so many with moderate setups doing only JT. I estimate by looking at the HB9Q logger that 97% of the users are only doing JT. How can we change the low activity on CW, at least in the contest? I suggest we do one contest for digital only, and one for analog only. It would be possible to place the digital when the pathloss is higher. In any case, I worked K5DN for an initial (#), SP3XBO, F5KUG, WA9FWD, SM4GGC, RA3EME (#), RA3EC, IK5VLS ,UA4AAV, OK2DL, EA8DBM, K5DOG, PA3FXB, LU1CGB, 9A5AA, DL3EBJ, SP6ITF, ON5GS, VA7MM, VE4MA, WA6PY, SM6PGP, OH1LRY, VE6TA, DL7UDA, LZ2US, SP6JLW, K6MG (#), RA3AUB, OE5JFL, PA2DW, G3LTF ,F5FEN (#), KL6M, VE6BGT, N5BF, OK1CA, OK1DFC, DK5YA (#), IK3COJ, LA3EQ, UA3PTW, DF3RU, OK2ULQ, OH2DG, SM3JQU, JH1KRC, DL7YC, LZ1DX, K2UYH, OZ4MM, G4CCH, NC1I, OZ9KY (#), F5JWF, ON7FLY (#), IK2MMB, ES5C, OZ6OL, VK4CDI, VK2FLR (#), VK5MC, JA6AHB, SM6CKU, IK1FJI, DL1SUZ (#) and VK4AFL for a total of 67x30 on 1296 in the contest. I heard some more, but I was not able to get their attention. I added 26 initials. Before the contest I added SM4GGC (#) and VK4AFL (#). My initials are now at #303 on 23 cm, and #660 on 70 cm. No QSOs made in 1 year. I am not sure if I can be on in Nov. I am scheduled to go with our son on a whiskey and beer tasting.

SM6CKU: Ben ben@sm6cku.se writes on his recent 23 cm EME -- It has been many, many years since I took part in the ARRL EME Contest. I was thus looking forward to working as many as possible on CW (only). I now have an 8 m dish and 400 W at the feed on 1296 from JO67CK. Pre-contest I worked I5YDI, SM4IVE, IK3COJ, DL6SH and VK4AFL, but forgot to work some of them again in the contest. I missed the first few hours on Saturday morning and got started at 0538 with SM6PGP (5 km apart, S9 on terrestrial and a good (559) via the Moon), then OK2DL, LZ2US, 9A5AA, RA3EC, F5KUG, DL7UDA, OH1LRY, SM4GGC, VE4MA, PA2DW, IK5VLS, K6MG, G4CCH, KL6M, G3LTF, DK5YA, DL3EBJ, EA8DBM, PA3FXB, LA3EQ and VE6TA. I added on Saturday evening OE5JFL, OK2ULQ, SP6ITF, SP6JLW, UA9YLU, VK2JDS, IK3COJ, JH1KRC, DF3RU, VK4AFL, RA3EME, UA3PTW, OK1DFC, IK1FJI, OH2DG, F6KRK, F5FEN and OK1CA, on Sunday morning SP3XBO, LZ1DX, WA9FWD, RA3AUB, UA4AAV, VA7MM, K2UYH, DK3WG, F5JWF, IW2FZR, DL7YC, NC1I, VE6BGT, WA6PY, OZ9KY, ON5GS, SM3JQU and OZ4MM, and finally on Sunday evening VK5MC, VK2FLR, JA6AHB, VK4CDI, IK2MMB, SM4IVE, OZ6OL, DF2VJ and ES5PC. All together I ended with a total 67x30 and some 25 initials. Looking at the digi-band, there were plenty of stations that would have been easy to work on CW. Some agreed to go down the band for a CW QSO, thank you! Some referred to bad CW, but I tell you, I am pretty good at reading any keying and I can go low speed myself. My wish would be separate classes, analog vs digital. [There are already separate classes for all CW and mixed mode]. I would then post my log. Let me be clear, I have nothing against digital modes (except deep search) and one day I might be there too...

SP6JLW: Andy (SP6JLW) sp6jlw@wp.pl, SP6OPN and SQ6OPG had a great time operating the ARRL EME Contest in Oct – We QSO'd using only CW on Saturday morning on 70 cm I2FHW, SP7DCS, DL7APV, OH2DG, LZ1DX, DF3RU, K2UYH and SM2CEW; on 23 cm EA8DBM, OK2DL, 9A5AA, RA3EC, LZ2US, IK1FJI, W4OP, F5KUG, DL3EBJ, WA9FWD, N0OY, SM4GGC, SP3XBO, K5DN, IK5VLS, DL8FBD, SP6ITF, G4CCH, PA3FXB, ON5GS, VE4MA, K5DOG, LU1CGB, WA6PY, RA3EME, OH1LRY, VE6BGT,SM6PGP, SM4IVE, DL7UDA, OE5JFL, LA3EQ; on Saturday evening/Sunday morning on 70 cm OZ6OL and WA6PY, and on 23 cm OK1DFC, RA3AUB, DK5YA, OK2ULQ, IK3COJ, UA3PTW, OK1CA, SM6CKU, SM3JQU, DF3RU, JH1KRC, OH2DG, F5JWF, F5FEN, DK3WG, NC1I, F6KRK, UA4AAV, OZ4MM, K2UYH, LZ1DX, KL6M, VE6TA. We were not QRV on Sunday evening. We ended for both bands with a total of 65x41, on 432 10x10 and 1296 55x31.

VA7MM: Mark (VE7CMK) and Toby (VE7CNF) va7mm@rac.ca were active on 1296 in the Oct leg of the ARRL EME Contest, multi-operator and all mode -- We completed 54 QSOs of which 18 were on CW and 36 were with digital. The weekend's operation added 12 initial contacts to our log with DL8FDB, G4FUF, G4FQI, DL7UDA, K4EME, K5DN, BD4SY, RA3EME, SM4GGC, ON4AOI and DL7YC. We're running an OZ9CR cavity amplifier that produces about 200 W of RF power at the feed of our 3 m dish. On RX we have 0.33 dB NF preamp with about 35 dB gain in three stages. We're planning to operate the Nov leg of the contest. We are interested and available for sked. Please contact us by email.

VE3KRP: Fast Eddie's eddie@tbaytel.net Oct report -- Winter is here but not as bad as it is to the east of here. On 27 Oct during the ARRL EME Contest on 23 cm using JT65C unless noted I worked DL7UDA, PA3FXB, PE1LWT, RA3EME for a mixed initial (#*), IK5VLS, OK2DL, KA1GT, RA3AUB, UA9FA, G4FQI, K5DN, OH1LRY, VE3NXK, DL7YC, DL3EBJ, VA7MM, EA8DBM, I7FNW, NC1I, OZ9KY (#*), W6YX, ON5GS, WA3RGQ and HB9Q, and on 28 Oct RA3EME (DUP), UA3PTW, LZ1DX, AA4MD (#*), F1RJ, DF3RU, SM4GGC (#*), ON4AOI, PA0PLY, K2UYH, VE4MA, DF3VJ, N5BF, JA6AHB, VA6EME, VK4CDI, VK4FLR (#*) and KL6M on CW for a total of 41x30. I hope to pick up more QSOs this upcoming contest WE.

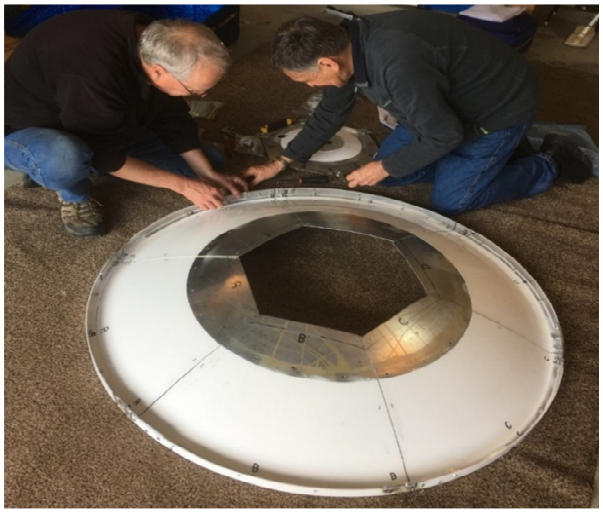
VK2CDI: Phil vk4cdi@gmail.com was QRV in the ARRL Contest in Oct – I had a good weekend and found pretty good condx, and had no visit from Mr. Murphy. On 70 cm I made 8 QSOs and on 23 cm 34, mostly using JT65. I was

too busy working digital to send a lot of time look for CW at the bottom end of the bands. I will be QRV again in Nov on 432 and 1296, and maybe 144 if time permits.

W2HRO: Paul w2hro.fn20@gmail.com is seeing excellent RX results with the extended 4 m dish on both 70 and 23 cm – I have now logged 21 initials on 70 cm and 113 initials on 23 cm. I'm hoping to complete 70 cm WAC with JA and VK skeds during the Nov contest WE. I'm looking to purchase a 500 W SSPA for 70 cm and 300 w amp for 23 cm. I am also planning the installation of a 2.4 m solid fiberglass dish for 10 GHz.

WA6PY: Paul's pchominski@maxlinear.com report for Sept and Oct parts of the ARRL EME Contest -- In the Sept MW Contest I worked using CW on 2304 G3LTF (XB), K2UYH, KL6M, OH1LRY, OH2DG, OK1KIR, RA3EME, VE6BGT and VE6TA for a score of 9x8, on 3400 G3LTF, HB9Q and K2UYH for a score of 3x3, on 5760 DL7YC, G3LTF, HB9Q and SM6CKU for a score of 4x4, and on 10368 DF1SR, DL0EF, F5JWF, G4NNS, HB9BHU, IW2FZR, OZ1LPR and VE4MA for a score of (8x7); and an overall total of 24x22. Switching from 6 to 9 cm took me about 45 minutes. During Oct part, I QSO'd all using CW on 432 with a single yagi DL7APV, G0JLO, I2FHW, SM2CEW and SP6JLW; on 1296 9A5AA, DL3EBJ, DL7UDA, EA8DBM, F5KUG, G3LTF, G4CCH, IK5VLS, JH1KRC, K2UYH, K5DN, K5DOG, KL6M, LZ2US, OE5JFL, OH1LRY, OH2DG, OK1CA, OK1DFC, OK2DL, OK2ULQ, OZ4MM, RA3EC, SM4GGC, SM4IVE, SM6CKU, SP6ITF, SP6JLW, VE6BGT, VE6TA, VK5MC and WA9FWD for a score on 432 of 5x5, on 1296 of 32x23 and a total of 37x28. After the contest I had a nice 3400 QSO with SM3BYA. I plan to be QRV in the Nov part of the contest.

ZL/VK7MO: Rex rmoncur@bigpond.net.au reports on his 3 cm ZL grid dxpedition and World Record QSO with G3WDG -- On 25 Oct, operating portable in New Zealand worked G3WDG portable to extend the existing 3 cm EME World Record between WA3LBI and VK7MO by some 156 km to around 19107 km (exact distance still to be confirmed). The key issues are absorption and absorption noise combined with ground noise, which can increase losses significantly at 10 GHz at the low elevations that are necessary to achieve such long distances. To gain an adequate window both stations operated portable with take-offs over the sea. In our case, it was necessary to fly to NZ and develop a flyable dish to fit in the standard luggage dimensions for airline travel. In NZ operations were supported by ZL3RC and ZL3FJ. In the UK, it was a combined operation between G3WDG and his XYL G4KGC – see picture near end of this NL. Spreading was 19 Hz and lunar degradation 1.1 dB. ZL/VK7MO from RE46og ran 60 W to a 1.13 m cut up flyable dish. G3WDG from IO80ef ran 65 W to a 1.22 m dish. In addition to the World Record, grid locators were activated at RE66, RE57 and RE46, and the following stations completed contacts at one or more grid locators: W5LUA, UR5LX, OK1KIR, HB9Q, VK3NX, EA3HMJ, UN6PD and OK1CA. A number of these QSOs resulted in new National Records. A 10 GHz EME demonstration was held in Christchurch NZ with W5LUA, who completed QSOs with ZL3RC, ZL3OY, ZL3NW, ZL3TCM, ZL3MH, ZL3OF and ZL2IC.



Roger ZL3RC (left) and Rex VK7MO (right) assembling the 1.13 m flyable dish. This was cut-up from a sold aluminum dish with a jigsaw - [See also Oct NL page 7].

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1805 -22  2.9 1015 :* ZL/VK7MO G3WDG          0
1807 -21  2.9 1014 :* VK7MO G3WDG R-24        0
1809 -21  2.9 1014 :* VK7MO G3WDG -23         0
1811 -23  2.9 1013 :* VK7MO G3WDG 73          0
1813 -27  2.9 1012 :
1815 -23  2.8 1015 :* TNX SO HAPPY            0
1817 -20  2.9 1013 :* TNX SO HAPPY            0
1819 -20  2.9 1015 :* TT FB 19105             0
1821 -20  2.9 1015 :* TNX WR 73               0
1823 -25  2.9 1013 :*
1825 -22  2.9 1013 :* VK7MO G3WDG -20         0
1827 -22  2.9 1015 :* VK7MO G3WDG -21         0
1829 -23  2.9 1014 :* VK7MO G3WDG IO80        0
1831 -21  2.9 1012 :* VK7MO G3WDG RRR         0
1833 -23  2.9 1014 :* VK7MO G3WDG 73          6
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Decodes RX'd at ZL/VK7MO during World Record QSO

ZS1LS: Allan allan@rfdesign.co.za writes about his Sept remote EME and new 3 cm system -- It was known that I would be away on a family vacation during the 4U1ITU dxpedition. Thus, I made some plans to activate my 1296 station remotely. On 26 Oct, when 4U1ITU was to start activity on 23 cm I set my alarm for 1 am local time, when the Moon was mutually high between two of us. It was just a matter of logging into my home PC and using Teamview. I had set everything up before going to sleep. I received 4U1ITU (11DB); and after just 1 call was their first African QSO! I have finally finished my 3 cm feed project. I have bench tested everything end-to-end with good results. My output power is 15 W at the feed. My next step is to remove my 1296 feed, install the 10368 system and test with the dish.

K2UYH: Al alkatz@tcnj.edu writes -- Most of my Oct EME operation was during the ARRL Contest. I did QSO on 7 Oct on 1296 while testing at 1447 LU1CGB (559/O) on CW. Murphy showed up for the contest. Although everything worked fine when I checked out my station before the

contest, I found that I had a very high VSWR when I tried to TX at the start. I thus lost several hours of valuable operating time. It turned out the relays I use to switch the TX line to the dish between 70 and 23 cm were not working. I ended up removing the relays from the line. This meant that I had to move the dish to its rest position and climb to the feed to switch bands. I decided to operate only 432 the first day and 1296 the second. It also turned out that my team had conflicts and could not operate. I was basically on my own, which is not a problem but I do find it more fun to have company to keep me awake when activity slows down. NE2U did show up for a few hours near moonset on Saturday morning. I QSO'd on 27 Oct on 70 cm using JT65B at 0300 OH2DG (6DB/2DB), 0308 KN0WS (13DB/7DB), 038 DL7APV (1DB/6DB), 0342 LZ1DX (O/O), 0348 KF8MY (10DB/12DB) for mixed initial #967*, 0354 PA2V (14DB/O), 0402 W4ZST (21DB/O), 0406 DK1KW (19DB/O), 0412 OK1TEH (28DB/O), 0420 UB4UAA (13DB/O) #968*, 0438 UT5DL (14DB/O), 0446 EM5EME (13DB/O), 0450 K1DS (19DB/O) FL, 0454 LU8ENU (12DB/O) and 0502 UA3PTW (5DB/O), 0510 DL1KDA (19DB/O), using CW at 0546 SM2CEW (559/579), 0602 DF3RU (559/579), 0608 I2FHW (559/559), 0614 SP6DCS (559/559), 0633 SP6JLW (569/559) and 0628 G0JLO (559/559), using JT65B at 0652 OH3LWP (8DB/O), 0700 DL9LBH (15DB/O), 0726 SM7THS (13DB/16DB), 0736 PD7RKZ (18DB/O), 0743 DL5FN (4DB/O), 0748 K4EME (12DB/O), 0756 OK2D (9DB/O) #969*, 0802 OK2VSO (14DB/O) #970*, 0826 G4RGK (6DB/O), 0840 NC1I (1DB/13DB), 1054 JE2UFF (23DB/20DB) #971*, 1137 VK4EME (10DB/O), 1159 VK4CDI (19DB/O), 1215 VK2CMP (14DB/O) #972*, 1223 VK2MAX (11DB/27DB) #973*, 1232 W1VP (16DB/O) #974*, 1248 JH7BAY (26DB/O) #975* and 1321 VK3NX (15DB/O) #976*, and on 28 Oct on 23 cm using CW at 0330 OZ4MM (589/569), 0335 UA3PTW (579/579), 0340 IK5VLS (559/559), 0346 RA3EME (579/579) for #402, 0350 PA3FXB (559/559), 0357 WA9FWD (559/579), 0403 OK2DL (589/589), 0415 F6KSX (559/559) #403, 0426 SM4GGC (559/559) #404, 0404 F5KUC (559/569) #405, 0430 DF3RU (569/569), 0439 SP6ITF (559/579), 0444 SP3XBO 559/589), 0450 OK1CA (579/579), 0452 9A5AA (559/579), 0457 SP6JLW (589/579), 0501 DL3EBJ (569/579), 0510 OH1LRY (559/559), 0513 OE5JFL (579/579), 0525 PA2DW (559/559), 0531 SM6CKU (569/579), 0538 RA3EC (559/599), 0546 EA6DBM (559/559), 0550 VA7MM (559/559), 0554 OK1DFC (559/589), 0559 DL7UDA (559/559), 0605 RA3AUB (559/579), 0610 SM4IVE 9569/599), 0612 LZ1DX (559/579), 0622 DL7YC (569/559), 0628 VE6TA (569/579), 0632 DF3RU (569/579) DUP, 0638 OK2ULQ (559/569), 0642 WA6PY (569/569), 0648 NC1I (569/579), 0653 IK3COJ (559/569) and 0700 G4CCH (569/579), using JT65C at 0716 KA1GT (3DB/1DB), 0722 N5BF (9DB/O), 0728 G4FQI (1DB/14DB) for mixed initial #595*, 0732 W6XY (4DB/O), 0735 VE3KRP (15DB/9DB), 0744 DL1SUZ (15/DB/9DB) #596*, 0747 DL7UDA (3DB/6DB) DUP, 0751 PE1CHQ (3DB/6DB) #597*, 0759 LU1CGB (11DB/O) and 0807 VE4MA (5DB/14DB), using CW at 0835 KL6M (579/579) and 0835 G3LTF (579/569), using JT65C at 0849 WA3RQG (8DB/11DB), 0907 KD3UY (8DB/O), 1226 JA6AHB (4DB/8DB), 1255 BD4SY (14DB/10DB) and 1316 VK2FLR (19DB/O) #598*, and on CW at 1339 K5DN (559/559). On 432 we end in mixed mode with a total of 40x22, on 1296 50x30 and on both with 90x52. I added 10 initials on 432 and 8 on 1296. After the contest I had a very nice 9 cm QSO with SM3BYA for initial #49. We will be QRV again for the final contest WE.

NET/REFLECTOR NEWS: **YL100V** is a special events station celebrating Latvia's 100th birthday that was active on 70 and 23 cm EME on 18 Nov. Contact YL2GD for more info. Unfortunately, the announcement did not arrive in time for this NL. **KC4SW** is QRV (or near) on 1296 EME with a small dish using JT65C from NV. Steve's can be reached by email at s.hanselman@datagatesystems.com. **N4PZ** missed the ARRL EME Contest due to faulty isolation relay that smoked two 23 cm preamps. He has replaced the relay and should be on 1296 in Nov. **OK2D** is the contest call of OK2KJT. OK2VSO is the 70 cm operator. [It is possible that OK2D and OK2VSO are the same initial]. **HG1W** (club call) and HA1YA are the same initial.

FOR SALE: **EA1DDO** is look for a dish to use on EME between 1.5 m and 2.4 m. It can be off-set or central feed, aluminium, fibre, etc. Contact Maximo at ea1ddo@hotmail.com. He is currently located in the UK. **OK1ZAX** has for sale a 3 m solid dish (f/d 0.35). OK1UWA used same type of dish for a 24 GHz EME QSO. He is asking EU85. Contacts to ok1zax@seznam.cz if interested. **SM6CKU** has for sale a Vertex 2.4 m offset dish complete with reflector, subreflector, 10-14 GHz feedhorn and fixed mount with column ground post. It should be useful on 24 GHz. It is available by pick up only. If interested contact ben@sm6cku.se. **W8BYA** has FS 1-5/8" hardline & assorted N connectors for sale. See http://w8bya.com.

ASTRONOMICAL CORNER: Hannes OE5JFL has released a new outstanding presentation about pulsars – see his report in this NL. He writes that after my presentation on pulsar reception (with I0NAA and I1NDP) at EME2018 there was not enough time for discussion and the answer of questions. Unfortunately I had to leave rather quickly. I think there are many more EMEers interested in trying pulsar reception. Therefore, I have written a few pages on how to do it in what I believe is the easiest way. You can download the PDF from my webpage: https://qsl.net/oe5jfl/pulsar/detecting_pulsars.pdf.

Other interesting web astronomy links:
https://www.dragonsdawn.org/nrao/Alma/index.html
https://www.dragonsdawn.org/nrao/GB/index.html
https://www.dragonsdawn.org/nrao/VLA/index.html

HARDWARE CORNER: led by OK1TEH: At the Moon-list you can read a discussion about the optimal stacking distance for yagis. I'd recommend to read an old but still relevant article by K1FO https://www.qsl.net/tri-atv/HR_05_1985.pdf and check out VE7BQH's improved list at DG7YBN's web that includes stacking distances for the 432 band http://dg7ybn.de/GT_Tables/432_MHz_GT.htm.

If you would like to set your stacking distance for a specific antenna that you know the measured antenna's main (3 dB)

lobe in degs, you can use DL6WU formula. For an example for a 16 el I0JXX yagi with 3.1 m boom, it can be calculated as follows:

$$d = \frac{L}{2 * \sin(\Phi / 2)}$$

Plane E = 20.0° $= \frac{693.96}{2 * \sin(20.2 / 2)} = \frac{693.96}{0.3473} \cong$ **2.00 m** (with VE7BQH from **1.9 m** to **1.8 m**)

Plane H = 20.4° $= \frac{693.96}{2 * \sin(20.4 / 2)} = \frac{693.96}{0.3542} \cong$ **1.96 m** (with VE7BQH from **1.86 m** to **1.76 m**)

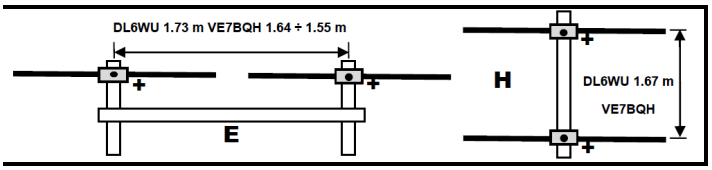


Diagram and stacking formula from the I0JXX (web https://www.i0jxx.com)

FINAL: This has turned out another busy month. We had good intensions to have it out earlier. We hope you receive this NL before the start of the contest.

► OK1TEH has prepared a list of stations QRV for ARRL EME contest at http://www.darkside.cz/eme.php.

► You can see DL7APV's 2019 EME Calendar of events at http://dl7apv.darc.de/moon2010/moon2010.htm. We hope to have a copy in the next NL. We do have at the end of this NL F5CE's 2019 Moon Tables as prepared by F1EHN. [TNX JJ. Also TNX to F5CE's son who also prepared tables].

► Reminder: The dates for 2019 EU-DUBUS/REF EME Contest WEs are for 2 m/70 cm 16/17 Feb, 13 cm 16/17 March, 23 cm 13/14 April, 3 cm and up 11/12 May, 6 cm 8/9 June, and 9 cm 29/30 June. The SSB Funtest for 23 cm is 18 Jan 2000 to 2000 19 Jan, and for 13 cm is 19 Jan 2100 to 2100 20 Jan. (The full rules will be in the next NL).

► The Results of 2018 ARI EME Spring, Autumn and Trophy EME Contests can be found at http://www.eme2008.org/ari-eme/contest.html. The 2019 Contests are on 11/12 May and 28/29 Sept. TNX I5WBE for this info.

► The *real* results for the DUBUS/REF 2018 EME Contest are available as a pdf on the EME page of the English language DUBUS website: http://www.dubus.org/eme.htm.

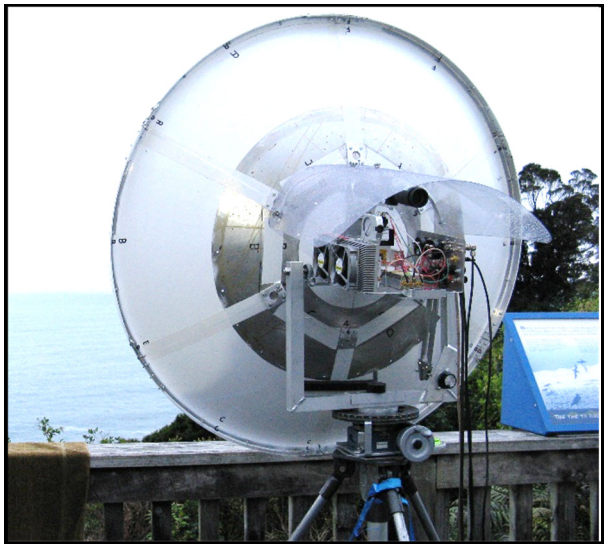
► The new HB9Q Logger has been working great; however, it was down on 28 Oct. Dan explains – The N0UK logger was down on 27 Oct. So many users moved to the HB9Q 144 logger. This generated a much higher load (the highest we ever had). All worked well until about early morning of 28 Oct. At that time the server went down and came up again an hour later. Later that day the server had again a problem and the logger went down again, but was up again a couple hours later. We have investigated the reason for the shutdowns. Within the 24 hour period there were 2.1 million accesses. This caused used memory to grow until it hit the memory maximum, which caused the shutdown. We are now working on some software adjustments, and if needed we will use a dedicated server for the logger. In future we should definitely not hit any computing or memory limits. During next contest there should be no problems. [Our TNX to Dan for the wonderful logger service]!

► The 28th EME and MW meeting in Czech republic will be held on 5-7 April. Info can be found at http://www.vhf.cz/seminar-2018/.

► MX0CNS notes as the Apollo 8 Anniversary (first people around the Moon) is on 21-27 Dec that it would be nice if the EME community celebrated the first of our species to leave mother earth and travel to another celestial body by getting on air. Possibly someone could operate with special calls. It would be great to see some activities celebrating this great achievement. 22/23 Dec are the EME AW and ATP with the best Moon conditions.

► The terrific videos of EME 2018 are now available for download from the CAMRAS website, See https://www.camras.nl/en/blog/2018/eme-2018-conference-report/.

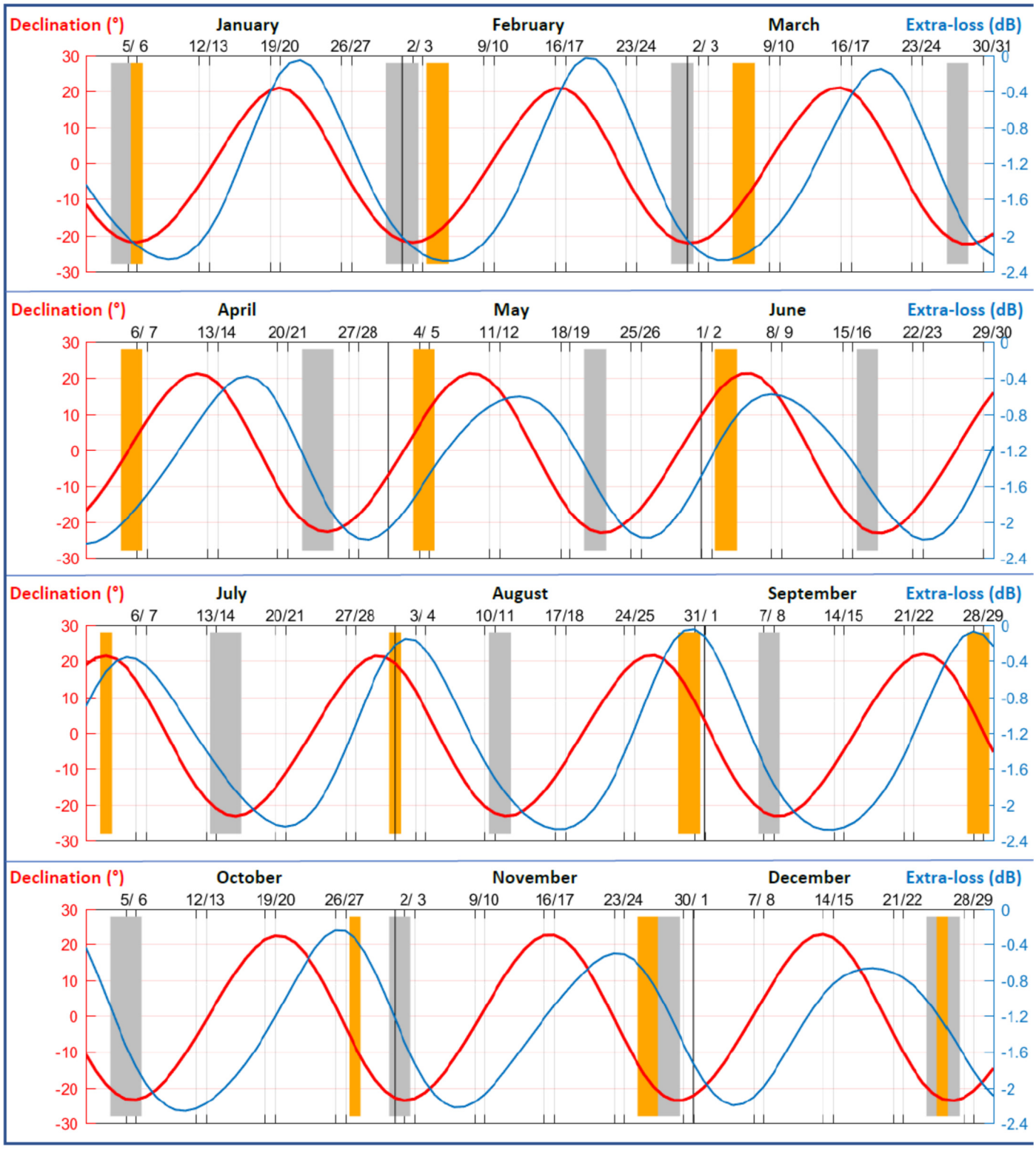
► Good luck in the last leg of the EME Contest. We are both planning to be QRV in the contest. We will be looking for you off the Moon. TNX for the all the reports and support. 73, Al - K2UYH and Matej – OK1TEH



ZL/VK7MO end of 3 cm World Distance Record QSO

K6GM dish in NV on 1296 EME during Oct contest WE. They will be QRV from OR during the Nov WE.

Moon Ephemeris Overview for the Year 2019, by JJ F1EHN



- Vertical grey bars show the days where the sky temp is high and could degrade the system temperature.
- Vertical orange bars show the days where the moon is close to the sun (<10°). Near the new moon dates.
- Extra-loss is the range extra-loss in dB compared to the minimum pathloss at Moon perigee
- The WE dates are displayed at the top of ephemeris graph. The declination is plotted as red curve and extra-loss as blue curve.