

## 432 AND ABOVE EME NEWS DECEMBER 2019 VOL 48 #11

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### VERY BEST SEASONS GREETINGS FOR A WONDERFUL NEW YEAR FROM ALL ON 70 CM & UP EME TO ALL

**CONDITIONS:** This Nov activity was dominated by the final leg of ARRL's 50 thru 1296 EME Contest. DL7APV with the help of his super array showed that 432 EME is very much alive making 127 mixed QSOs; more than reported for any other band above 144. On 1296 OK2DL leads with 125 mixed QSOs (56 on CW and 69 on JT). In the CW only class on 23 cm SM4IVE leads with 94 CW QSOs 366,600 pts. **Please note that contest lags are due by 16 Dec.** **There are no dxpeditions announced for Jan.** **Coming up on the weekend of 18/19 Jan is the SSB Contest on 23 and 13 cm – see following rules.** The 432 CW Activity Time Period (ATP) is 15 Dec from 0400-0600 and 2000-2200 – (a good time to be on for the ATP with no conflicting activities). **Coming up on 8/9 Feb is the DUBUS 144/432 CW Contest.**

**SSB CONTEST:** The 23 cm SSB Funtest will be on 18 Jan (0000 to 2359), and the 13 cm SSB Funtest on 19 Jan (0000 to 2359). 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. This is a **Funtest** and meant to be similar to an activity event – the goal is to have fun. Communication on Loggers (HB9Q) is OK - ["TU FB QSO", "GM..", "73", etc. is OK]. Logs should be sent to the 432 and Up EME NL by email to [alkatz@tcnj.edu](mailto: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 (Prague 2020).

**PY5ZBU SK:** It is with a heavy heart that we report Don suddenly became a silent key at age of 82. He organized the ninth EME Conference in 2000 at Rio de Janeiro, Brazil. Although not one of the largest EME conferences, it was

one of the best. For many years, he provided PY and WAC on 70 and 23 cm. He will be greatly missed. RIP Don.



**PY5ZBU and EME QTH with 5 m dish used on 1296 and behind 432 yagi array**



**One of the many dinners at EME2000 Rio**

**WAC CLUB:** We are pleased to announce that **F2CT** has joined the 1296 CW WAC Club. Congratulations to Guy!

**DJ3JJ:** Andreas [dj3jj@gmx.net](mailto:dj3jj@gmx.net) ARRL Contest report for 23 cm -- I was QRV only in the Nov part of the contest on 23 cm CW. I worked LZ2US, SM4IVE for an initial (#), UA3PTW, OZ4MM, SP6JLW, G4CCH, KL6M, OK2DL, OE5JFL, HB9Q, SP6ITF, IZ1BPN (#), OK1KIR, PI9CAM (#) and when Moon was very low in the west G3LTF for a score of 15x12.

**DK3WG:** Jurg [dk3wg@web.de](mailto:dk3wg@web.de) was active in the ARRL Contest on both 70 and 23 cm during Nov, but added only two initials both on 1296 with LU1C and VE2UG.

**DL0SHF:** Chris (DF9CY) [df9cy@web.de](mailto:df9cy@web.de) sends news of EME activity from DL0SHF -- I have been very busy, but found a little time to put DL0SHF on the Moon during **the Nov contest weekend**. On 16 Nov, I contacted using CW on 1296 OK2DL, DL3EBJ, W4OP, SP6JLW, WA6PY, SK0UX, F5KUG, G4CCH, 9A5AA, SM4GGC, IK3COJ, OH1LRY, KL6M, N5BF, VA7MM and SM4IVE; and on 17 Nov using JT65C near moonset – unfortunately my computer's VPN connection was very unstable and I experienced more than 20 interruptions in less than 90 mins, nevertheless, I worked VE2UG, OK1DFC, DL7UDA, LU1C, IK5VLS, NC1I, K4EME, ES3RF and W8MQW for **an overall score of 24x20**. I will not be QRV on the weekend 14/15 Dec, but may be QRV the days after. In Jan, I should find some time and I will be on the HB9Q logger when the station is available. Please send QSL cards for QSOs directly to me.

**DL4DTU:** Rüdiger [dl4dtu@gmx.net](mailto:dl4dtu@gmx.net) is now QRV on 10 GHz EME – I am running a 1.8 m dish with 75 W from (JO60tr). I have worked thus far on 29 Sept with CW OK1KIR (O/529) and DB6NT (559/529), and using JT4F DC7KY (17DB/17DB), OK1KIR (15DB/16DB), OK2AQ (17DB/19DB), DL6ABC (17DB/16DB) and W3SZ (14/17DB); and on 18 Nov using QRA65D UR5LX (9DB/13DB) and HB9Q (9DB/13DB) and with JT4F HB9Q (10DB/15DB) and using CW HB9Q (559/599).



**DL4DTU 1.8 m offset dish with 3 cm feed.**

**DL7APV:** Bern [dl7apv@gmx.de](mailto:dl7apv@gmx.de) was not on for the whole ARRL Contest, but still **had the top score on 70 cm** – This year I slept a little more than in the past, and spent more time looking for new stations. In addition, during the last moonpass I allowed DK5OZ to use my station to make 31 CW QSOs. Thorsten had great fun operating from a big station. His call caused a small pile up! Despite the distractions, **my mixed score was not bad at 121x48**; and about the same as last year with an additional moonpass. (Due to DK5OZ use of my station I will only send in a

checklog. During Nov there were not so many new stations, and condx were mixed all weekend. The Oct weekend had much better condx. Initials added in Nov were W1FKF, AK4WQ (first EME QSO), F6FXU, G1MHU and W5YD. QSO statistics for the complete contest show that the US provided the most stations; worked were 27x W, 16x DL, 10x G, 9x JA and 8x Russia. Some calls showed up that I never heard before, and they were not on the logger. I made a nice random QSO with **W5YD in Mississippi** - the most welcome surprises in contest!! There were also exotic calls such as **A65BR**. This year I worked W5RZ on CW after dozens of JT QSOs. He was using 2x19 el yagis and 80 W. I know that I can work stations with 60 W ERP; however, working UA3MBJ with a single 20 el yagi, 12 m RG213 feedline and 9 W (~ 240 W ERP) on his moonset (no el) is always exciting!

**G3LTF:** Peter's [g3lft@btinternet.com](mailto:g3lft@btinternet.com) Nov EME report -- I concentrated on 70 cm CW during **the final ARRL Contest weekend**. I added on 16 Nov OK1CA, SM7THS, VE6TA, DL7APV, LZ1DX, G0JLO, WA6PY, DK5OZ (DUP), JA0TJU, S51LF, PI9CAM, UB4UAA for initial #487, JA6AHB, G4RGK, F6HLC and SP9VFD (DUP), and on 17 Nov OZ4MM, ZS4TX, KL6M, and DF3RU. **My 70 cm total was 25 x 18 and is my highest for 8 years**. It is sad that the NA activity on 70 cm CW is so low these days. Conditions seemed good with sharp polarization peaking and moderate Faraday rotation. I had planned to be on 23 cm CW at the first pass near moon-set, but a cable failure prevented that. Changing the feed at 4 AM LT, I neglected to securely tighten the N connector and the pin burned. **On 1296** on 17 Nov, I added SM2CEW, PI9CAM, VE6BGT, RA3EC, N5BF, DJ3JJ and KA1GT **giving a total of 70 x 33**. I plan to be QRV for the 14/15 Dec weekend, hopefully concentrating on 9 and 13 cm, weather permitting.

**IK1FJI:** Valter [valter\\_dls@yahoo.it](mailto:valter_dls@yahoo.it) was **active in both the Oct and Nov legs of the EME Contest**, but his Oct report was lost and was not included in the last NL – In Oct, I was QRV on 23 cm using CW on Sunday night of the contest weekend until 0230; it became quite windy and I had to QRT. I QSO's 36 CW stations. During the Nov contest weekend I added 32 CW QSO's **for a total of 69 with some dupe and 28 mults**. I added initials with SK0UX, RA3EME, F6CGJ, SP3XBO, W7JM, OK2ULQ, RA4HL to bring me to initial #128. OK1DCF had an especially good CW signal with his small offset dish. I worked before and after contest weekends using CW on 13 Oct ES3RF (559) for mixed initial #539\*, on 14 Oct DL4EBJ (579/569), on 23 Oct PA2DW (549/559), IONAA on SSB #122 and LA3EQ (539/559), on 26 Oct SM6CKU (579/579) and IW2FZR (569/569), on 27 Oct G3LTF (579/589), on 9 Nov IK3MAC #123, ON5GS and G4CHH, on 10 Nov DL3EBJ, FR5DN #124 and OK1KIR, on 22 Nov DJ3JJ (O/O) #129, and on 24 Nov G4CCH (589/589), PE1LWT (559/569) and again DJ3JJ (539/549). I also worked using JT65C on 26 Oct **A21EME (24DB/16DB)** – and on 2 m too. I am running a 3.2 m dish with about 600 W PA and a <0.3 dB NF LNA. I am testing a new TH327 PA by LZ2US, and have found that it makes a big difference! Now, the power is about double at the feed.

**JA4BLC:** Yoshiro's [ja4blc@web-sanin.co.jp](mailto:ja4blc@web-sanin.co.jp) Oct/Nov EME report follows -- I joined [the ARRL Contest fun on 23 cm](#) in Oct on CW. I worked on Saturday 19 Oct JH1KRC (559/559), WA9FWD (559/O), VE6TA (559/559), VK5MC (559/559), VA7MM (O/O), OK1CA (579/579), KL6M (569/559), SM4IVE (579/559), OK2DL (569/559), SP7DCS (569/579), G3LTF (569/579), SP6ITF (569/569), G4CCH(579/579), SP6JLW(579/579), DL6SH (579/589) and DL3EBJ (569/579); and on Sunday 20 Oct F6CGJ (569/569) and F5KUG (559/559) [for a total of 18x13](#). YL2GD was missed due to a failure of my AZ tracking. On 28 Oct my 6 m dish was down on the ground after 25 years of operation on 432, 1296 and 2400/2424 and 5760. I have dismantled my 6 m dish and stopped operation on 1296 and 2400 EME. The 6 m dish and my 23 cm TH308 PA were QSY'd to a local friend. I have also decided that my 3 m Cassegrain dish for the microwave bands will also QSY to my friend soon. I will concentrate on EME with a 2.4 m offset dish on the 5.7 thru 24 GHz bands next year.

**K1DS:** Rick [rick1ds@hotmail.com](mailto:rick1ds@hotmail.com) desperately tried to be [on 23 cm for the last weekend of the ARRL Contest, but Murphy visited too many times](#) -- I was unable to set up my portable station and antennas until Saturday afternoon due to rain from Thursday afternoon until Friday evening. I finally got things done, but the final problem was being unable to validate accurate single WIMO Yagi antenna aiming due to a thick cloud cover. Hopefully there will be other opportunities to get 23 cm things set up again soon. (I did add a few QSOs on 2 m where my yagi pattern in very broad).

**K7ULS:** Mike [k7uls@yahoo.com](mailto:k7uls@yahoo.com) continues to have success on 222 and 432 EME with single yagis -- On 222, after 2 very late nights of trying I finally [worked VE6TA in DO33](#). I was plagued by bad connectors and coax but finally made it for a [new DXCC on 222](#) - how often does that happen? Grant is running 800 W to his 5.5 m dish with full pol rotation, which helped us complete. I was running a single 17 el yagi on an AZ/EL mount with 600 W. On 432, I worked HB9Q, UT5DL, ZS4TX and UA9PTW. On 432, I have a single M2-432-9wl and 200 W on a full AZ/EL mount.

**KD3UY:** Bob [kd3uy@comcast.net](mailto:kd3uy@comcast.net) in MD has been busy on 9 cm EME -- I have now essentially completed my 2.7 m dish system, and feel that the pointing is now pretty good. I have a G4DDK preamp and 55 W at the feed. I have completed 13 initials; all of which were done at lower power, 25 ~ 30 W or less at feed. I feel that I can work a bunch more. Currently I have only made JT65 and QRA64 QSOs, but am now ready to try CW. I should be able to copy slow CW with a big gun... The problem is not primarily my modest hardware, it is my brain -- Hi. I also need to figure out how to use WSJTX on CW. [Just switch to WSJT9 and use the CW mode]. I am also willing to try SSB. Skeds are desired. Please email me or leave a note on the HB9Q chat.

**KNOWS:** Carl [carlhasbargen@q.com](mailto:carlhasbargen@q.com) writes about his experiences during [the Nov contest weekend](#) -- I headed north on Friday, 15 Nov hoping to add at least 8 QSO's over the weekend. This was because I had a total of 56 QSO's in the 2018 ARRL Contest and was just 8 shy of that

number at the end of the Oct weekend. My poor experience last month on 70 m cm had set me back. My "secret weapon" now was that I had put up a 2 m yagi, thinking I might get a few 2 m super-stations this year with it. As it turned out, I made two 2 m QSOs, but they were from guys here in Minnesota and appear to have been tropo. On the first Moon pass it was cold - large portions of the US had a record cold weekend. On 23 cm JT65C, I was able to work UA3PTW, LU1CGB, SP5GDM, IK5VLS, DL7UDA, K6MG, DK3WG, HB9Q, W2HRO, JA8SZW and AA4MD. I also had initials with YO2LEL and ZL3DXT. I tried a bit of CW and was able to work OZ4MM, SM4IVE and KL6M. I have no key, but used a keyboard. With KL6M, I had entered K6ML in the keyboard and happily sent the wrong call over and over - wondering why he kept sending his call back to me - (I copied it over and over from him). I fear at the next international EME conference there may be a motion to ban me from doing CW ever again - Hi! On the second Moon pass on 23 cm JT, it was a bit warmer. I worked NC1I, YL2GD, W1PV, OK1KIR and had initials with VE2UG, DL4DTU and ON5GS. Weather turned to a cold rain and then to snow. I decided to stop early and take down camp early before getting stuck in mud and snow. I thus missed a chance to work PI9CAM and to try with G3LFT yet again. I have to work Peter before one of us goes deaf or is hit by a bus. My ARRL Contest totals are [on 3 cm 4x2, on 70 cm 8x8 and on 23 cm 58x34](#). I am done for 2019, but may be able to try some 3 cm or 6 cm from my back yard, if the snow is not burying the encoder and linear actuator. (I am happy to share that after 2 months to the day my daughter-in-law was discharged from the hospital; the same day I was setting up my EME camp. No matter how the contest turned out, I was very happy).

**LU1C:** Adrian (LU1CGB) [lu1cgb@gmail.com](mailto:lu1cgb@gmail.com) sends news of his team's ARRL Contest results -- The LU1C team composed of LU8ENU, LU1AEE, LU9DO and LU1CGB had a great time in the contest. Conditions and weather were excellent and allowed us to have great performance on all the bands we operated. All Moon passes were worked with [a score on 13 cm of 3 QSOs, on 23 cm 58 QSOs - the only band we used both JT and CW, on 70 cm 24 QSOs and on 2 m 54 QSOs](#). On 13 cm we had problems due to an instability in our Pluto SDR for TX and RX. After some changes in the second half, we were able to solve this issue.

**N5BF:** Courtney's [courtney.duncan.n5bf@gmail.com](mailto:courtney.duncan.n5bf@gmail.com) 23 cm EME report for both Oct and Nov -- I attended Microwave Update (MUD) 2019 in Lewisville, TX on 3-5 Oct. I had all of my LNAs measured their and received some useful advice and suggestions from W1GHZ, WD5AGO, WA1MBA, KL6M, K6MG, and many other highly experienced operators. It was also an opportunity for me to take my first GNU Radio tutorial put on by N5EG, N5BRG, and KK6RUM; and I was able to meet and eyeball with many of the amateurs I've heard or seen in the waterfall off the Moon on 23 cm. It was a great experience to get together for a long weekend with such an inspiring crowd. Back home, after reinstalling my LNAs and refocusing the dish feed, I was ready for the Oct ARRL EME [weekend](#) where my unofficial [first weekend count](#) was 42

QSOs including mixed initials with ON4QQ #161\*, PA3CSG #162\*, OZ9KY #163\*, SK0UX #164\*, F6CGJ #165\* - CW initial #46, and OH1LRY #166\*. Early Saturday morning, 26 Oct, I worked **A21EME** (26DB/24DB) #167\* while still looking through trees. This QSO was possibly their last of the expedition; and, by a hair's breadth, my first chance after moonrise to complete with the group on 23 cm. Inspired by re-reading W2RSs article "The Weak-Signal Capability of the Human Ear" (2002 Prague EME Conference), I came home midday on 30 Oct and QSO'd on CW LU8DQ (539/519) #168\* and #47 during the LU5EWR activation of the 30 m radio telescope. Signals were not as good as expected from such a large aperture, but they were advertising only 30 W. In Nov, I had my best ARRL EME Contest weekend ever. Not yet scrubbed, the unofficial total is 64 QSOs (14 on CW and 50 on JT) and 34 mults with 10 new initials over the two months plus 7 dups and 5 failed QSOs. I'll have my log into the ARRL and LoTW in the next several days and plan a QSL session to get caught up before the end of the year. New mixed initials were RA4HL #170\*, LU1C #171\*, GX3EEZ #172\*, W8MQW #173\*. Also, in the week before the Nov contest weekend, I worked another initial, VE2UG #169\*. Collecting and analyzing operating time and stations-worked statistics over the past four contest years (2016 to present), I find that 2/3 of the activity is in Oct and 1/3 in Nov. On each weekend 2/3 of the activity is on Saturday (Friday night local) and 1/3 on Sunday. On each pass, 70%-80% of the activity is in the few hours between my moonrise and moonset in EU with only 10%-20% during the NA and the few remaining from my Asia/Pacific window. I appreciate all of you who hang in there over all the days and hours to give us a shot down here on the bottom of the EME world.

**OK1DFC:** Zdenek [ok1dfc@seznam.cz](mailto:ok1dfc@seznam.cz) was active in the final part of ARRL EME Contest with very nice results using only his 2.4 m offset dish – The first part of Saturday I spend on 24 GHz due to a low spread and excellent conditions here. Finally, my system is working well. I have 12 dB of Sun noise and 1.8 dB of Moon noise. I QSO'd OK1KIR (16DB/17DB) using first JT4F and then with the same reports QRA64D; then PA0BAT appeared with a great signal (17DB), but we did not finish due to failure of GPS connection on Geert end. I am sure we will work next time. I then change to 1296 and worked in the contest another 21 stations, including using JT65C VE2UG for mixed initial #367\* and K6MG #368\*, and on CW WK9P for initial #443. My contest total is 82x38 with my 2.4 m offset dish, 1 kW SSPA running only at 500 W and 0.2 dB NF LNA. I heard another 5 stations but did not find them calling CQ or answering my CQs. I am temporary not on 432 because my 38 el yagi is down, while I am installing a new elevation system for my new 8.25 m offset dish – see info at [http://www.ok1dfc.com/eme/8moffset/8m\\_offset.htm](http://www.ok1dfc.com/eme/8moffset/8m_offset.htm) .

**OK1CA:** Franta [strijavka@upcmail.cz](mailto:strijavka@upcmail.cz) sends report for the NL -- In the Nov part of the ARRL EME Contest I was QRV on 70 cm and worked 14 on CW in 10 mults. Initials were SM7THS, JA0TJU and SP9VFD to bring me to #190. Many more stations on the band were QRV on JT65B. Using JT65B, I worked a total of 24 QSOs, and a series of initials

including K9MRI to bring me to digital initial {#53}. Among these was a new DXCC, A65BR in the United Arab Emirates.

**OK1KIR:** Vlada and Tonna [vlada.masek@volny.cz](mailto:vlada.masek@volny.cz) have a shorter than normal EME report for Nov – During the final weekend of the ARRL Contest, we worked before the contest on 23 cm with CW on 15 Nov at 2330 IK1FJI (569/589), then on Saturday 16 Nov at 0425 W4OP (569/599), 0430 W7JM (569/589), 2039 SK0UX (579/579), 2043 SM4GGC (579/579) and 2049 SM4IVE (579/559), and on Sun 17 Nov at 0646 WK9P (569/579) for initial #457, 0702 ON4QQ (559/559) #458, 0708 VE6BGT (569/589), 0710 OE5JFL (579/579), 0715 LZ2US (559/579) and 0722 DJ3JJ (549/569) #459; and using JT65C on Saturday 16 Nov at 0015 ON4BCV (17DB/13DB) for digital initial {#348}, 0101 PA3FXB (6DB/4DB)}, 0106 DL3EBJ (2DB/7DB), 0122 DL1DWI (15DB/15DB) {#349}, 0157 W3CJK (20DB/12DB) {#350}, 0233 KA1GT (8DB/1DB), 0257 AA4MD (8DB/O) {#351}, 0357 VE2UG (11DB/1DB) {#352} and 1908 OK2DL (4DB/1DB) and on Sun 17 Nov at 0529 W1PV (13DB/8DB), 0618 VA7MM (11DB/O), 0629 KN0WS (12DB/O), 0722 GX3EEZ (9DB/8DB) {#353} and 0842 W8MQW (17DB/O) for a total of on CW of 12 and on JT65C 14 for a weekend total of 26x20. Off the contest on 24 GHz on Sat 16 Nov, we worked easy OK1DFC first at 0651 with JT4F (17DB/16DB) and continued with QRA64D at 0703 (21DB/16DB). After these QSOs, we measured a sunnoise = 12.7 dB and a moonnoise = 2.3 dB. No one else was available on 24 GHz due to bad weather and extremely high spreading during both Moon passes.

**PA2DW:** Dick [qtc@kpnmail.nl](mailto:qtc@kpnmail.nl) writes about his adventures off the Moon in Nov (during contest) -- It started so well with good echoes, Moon clear of the trees, lots of activity. What more can an EMEer want? However, the fun was quickly spoiled. After working K2UYH (JT65C), WA6PY (CW) and IK1FJI (CW), I decided to stick to CW and called CQ. I got a small pile-up in which I heard OZ4MM (fell of my chair because Stig was so loud!) and SM4GGC also armchair copy. But when I tried and work both in one 3-way QSO (Hi!), my foot slipped off my footswitch causing a timing glitch in my sequencer. The sudden lack of noise made clear that not only my signals from the Moon, but also my preamp was gone. I took the preamp to the shack and replaced both transistors. I could not check the result, because the battery in my noise meter was low. I was obviously in a downturn. So, I put the preamp in the focus box without testing and alas, the preamp still refused to work. I had loaned my spare preamp to PA0SSB, so the only solution was to try an old surplus amp. After mounting it, I heard a weak signal so there was hope! But, it was KL6M just audible, and this was no good news. I worked Mike in the first leg and he is normally (559-569). The signal went even weaker and weaker and disappeared! Then only did I realized that I applied 24 V to a 12 V preamp – ouch, game over!

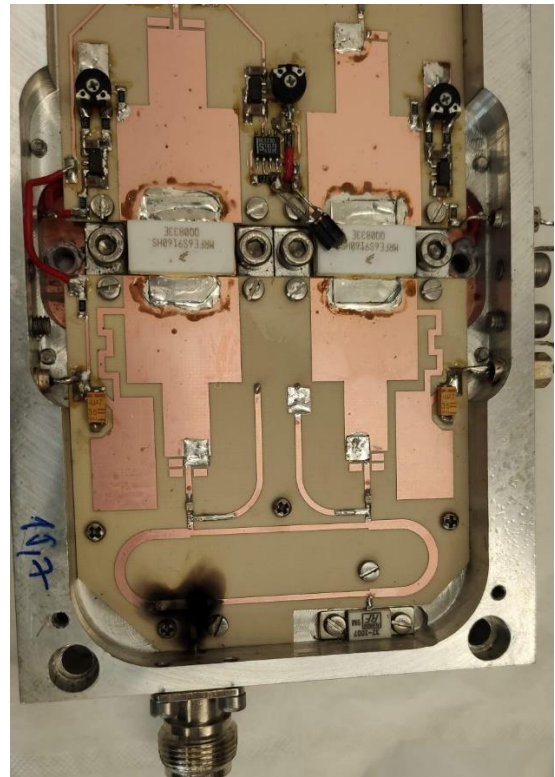
**OK1YK:** Mirek [burian@okya.cz](mailto:burian@okya.cz) reports via his blog on the ARRL EME Contest – In Nov, I started the contest on Saturday evening on 23 cm. Conditions were not as good as in Oct, but plenty of stations were on the band. I worked

using JT65C DL6SH with a beautiful (8DB/5DB) signal and HB9Q (2DB/1DB), but heard no ZL, VK or JA stations, and lower UA activity. Most of the QSOs I made were from EU including OK2ULQ, OK2DL and OK1DFC. I did catch FR5DN (12DB/10DB) and closed the night with UA1PTW (9DB/6DB). I took off a few hours for sleep. After waking up, I was unpleasantly surprised by strong wind that forced me to park the antenna quickly and could not continue in the contest. I am sure that I lost some nice QSOs with NA and other areas. In total I made 25 QSOs in Nov of which two were on CW. I hope the good conditions will continue and am interested in more QSOs. [TNX to OK1TEH for translating from Blog].

**OK2AQ:** Mirek [mirek@kasals.com](mailto:mirek@kasals.com) writes -- A successful EME dxpedition is always offers a good opportunity for collateral QSOs. The microwave part of the A21EME began on a Monday, and every day moved to a higher band; 3 cm was scheduled for Friday, 25 Oct. I was QRV already on Thursday afternoon and managed the necessary calibration with the Sun. I came to my EME QTH on Friday at 4:30 am local time. The weather was beautiful, though cold, but a completely clear sky and calm with the Moon only a little ball in the south-east. What was a surprise, was how often I had to compensate for the spatial offset to Botswana. I had to go out after only one half hour to change the feed polarization. A21EME was already working the big guns. Right after VK7ZBX using a 75 cm dish, I caught their attention and we QSO'd A21EME (18DB/21DB) for mixed initial #83\* and a DXCC. I then worked VK7ZBX (21DB/22DB) #84\* without a problem. The rest of the moonpass was also very nice as there were many active stations on the band. I did not complete WAC, but was very pleased to work five continents in one pass.

**OK2DL:** Marek [ok2dl@seznam.cz](mailto:ok2dl@seznam.cz) had great result on 23 cm in the ARRL EME Contest with his 6 m dish -- During the Oct leg I worked 98 stations using all modes. My biggest problem during the contest was the failure of one of the PE1RK1 modules in my SSPA. For the Nov leg, I was able to repair the module, but had a bigger problem finding satisfactory weather for mounting the PA back on my dish. In Nov the contest was slower than it was expected; many stations missed earlier weren't active. As a result, I ended with only 125 QSOs. These included 12 initials with RA4HL, ES3RF, W8MQW, G0LBK, ON4BCV, A21EME, VE2UG, DL1DWI, UA3RAW, WK9P, W3CJK and GX3EEZ. QSO'd were on 19 Oct SP6JLW CW, 9A5AA CW, SP7DCS CW, UA3PTW CW, SP6ITF CW, SK0UX CW, F6ETI CW, DL3EBJ CW, SM4GGC CW, PA0PLY CW, F5KUG CW, DL7UDA JT, PA3FXB JT, OH1LRY JT, ON4QQ JT, YL2GD JT, W1PV JT, K2UYH JT, F1RJ JT, RA4HL JT, WA3GFZ JT, UA3TCF JT, G3LTF CW, 4X1AJ JT, WA3RGQ JT, OZ4MM CW, VE3NXX JT, W4OP CW, IK5VLS CW, SP5GDM JT, ES3RF JT, W8MQW JT, RA2FGG JT, RA3EME JT, SV1CAL JT, LZ4OC JT, G0LBK JT, DK0ZAB JT, WA2FGK JT, K6MG JT, ES6FX JT, DL7YC CW, OE5JDL CW, W5LUA CW, OH1LRY CW, KL6M CW, DJ8FR CW, VE6TA CW, VA7MM JT, SM6CKU JT, OK2ULQ CW, I0NAA JT, OZ9KY JT, K4EME JT, IK5VLS JT, LU1C CW, N5BF CW, G4CCH CW, VE3KRP JT, OK1CA CW, SM4IVE CW, VK4CDI JT, DL6SH JT,

OK1DFC CW, VK5MC CW, YO2LEL JT, OK1IL JT, JA4BLC CW, F6CGJ CW, LZ2US CW, SP3XBO CW, JA8SZW JT, RN6MA JT, EA8DBM JT, JH1KRC CW and JA4LJB CW; on 20 Oct DF3RU JT, JA6AHB JT, JA6XED CW, IK1FJI CW, BD4SY CW, KN0WS JT, ON4BCV JT, OH2DG CW, KA1GT JT, I1NDP CW, DL7AIG JT, FR5DN JT, G4BAO JT, IW2FZW CW, SM6PGP CW, WA2FGK CW, DK3WG JT, OK1YK JT, IK3COJ CW, PA2DW JT, IW8RRF JT, F6KRK CW, I7FNW JT, K5DOG JT and A21EME JT, on 16 Nov W7JM CW, ON5GS CW, VE2UG JT, F1RJ JT, DL1DWI JT, AA4MD JT, N4PZ CW, UA3RAW JT, WK9P CW, DL0SHF CW, DJ3JJ CW, AA4MD CW, WA6PY CW, VE6BGT CW, HB9Q JT, OK1KIR JT, RA3EC CW, JR4AEP CW, VK5MC CW, DF2VJ JT, G4FQI JT and DL4DTU JT; and on 17 Nov W3CJK JT, NC1I JT, P19CAM CW, SM2CEW CW, GX3EEZ JT, DL1SUZ JT, G4EZP JT and VE4MA JT. [TNX to OK1TEH for translating from Blog].



OK2DL's damaged SSPA module

**OK2ULQ:** Peter [ok2ulq@seznam.cz](mailto:ok2ulq@seznam.cz) was QRV on 1296 in the ARRL EME Contest – I was only on for a limited time in Nov as was also the case in Oct. I was active on Saturday morning and evening. Especially in the morning, conditions seemed excellent. Due to my limited time, I planned to use JT, but the many strong CW signals caused me to change my plans. In total I made 25 QSOs in Nov; almost the same as in Oct, but I added more initials. On CW I made initials with VE6BGT and K6MG, and on JT65C with JA8SZW, RA4HL, FR5DN, DL4DTU and G4BAO. [TNX to OK1TEH for translating from Blog].

**ON5GS:** Dirk [dirk.reyners@telenet.be](mailto:dirk.reyners@telenet.be) wrote on his ARRL EME Contest operation – I had a very nice weekend in Nov on the Moon on 23 cm! There was so much activity going on. I worked on CW SK0UX, SP6ITF, SP6JLW, DL3EBJ,

FR5DN, G4CCH, IK1FJI, DF3RU, W4OP, K5DN, LZ2US, SM4IVE, F5KUG, OK2DL, DJ8FR, KL6M, OE5JFL, UA3PTW, WA9FWD and SP3XBO; and on JT65C YO2LEL, PA3FXB, ON4BCV, W8MQW, ON4QQ, LU1C, RA3EME, N5BF, VA7MM, OK1DFC, SM4GGC, YL2GD, OH1LRY, OK1YK, G4BAO, DL7UDA, IK5VLS, PI9CAM, RA4HL, W1PV, KN0WS, N5BF, G0LBK, K6MG, DL7YC, WA3RGQ, VE2UG and NC1I for a total score of 48x29. A video of the 100 kHz waterfall from my SDR (with my 6 m dish) can be seen at <https://www.youtube.com/watch?v=ObRoi5091Jw&feature=youtu.be>.



ON5GS's 6 m dish

**PA2V:** Peter [peter@pa2v.com](mailto:peter@pa2v.com) sends info on his Nov leg contest results and overall score -- I ended up on 432 with 71 contacts and 38 mults. It was lots of fun, but also frustrating because of the Faraday rotation nulled out many NA stations. EU to EU was fine, and the activity was not bad. I QSO'd on 16 Nov at 0005 JA6AHB (O/O), 0015 DL5FN (O/O), 0023 DK5SO (O/O), 0031 UB4UAA (O/O), 0042 OK1CA (559/559) CW, 0155 G4FUF (O/O), 0227 UT5DL (O/O) DUP, 0329 G4EZP (O/O), 0359 ZS4TX (O/O), 0413 DL8DAU (O/O), 0444 VE6TA (O/O), 0605 PA2CHR (O/O), 0615 GM6VXB (O/O), 0651 HB9Q (O/O), 0700 US7GY (O/O), 0743 G0JLO (459/559), 0809 DF3RU (O/O), 0825 SM2CEW (559/569) DUP, 2020 DK5OZ (579/579), 2033 PI9CAM (O/O), 2059 VK4CDI (O/O), 2105 VK4EME (O/O) DUP and 2205 EA5CJ (O/O), and on 17 Nov at 0353 DL9KR (599/599) CW, 0401 SP6JLW (O/O), 0433 W5LUA (O/O), 0443 UY5HF (O/O), 0738 KL6M (559/559) CW, 0811 YO2NAA (O/O), 0850 DL2HWA (O/O), 0914 OH4LA (O/O), 0932 IK4PMB (O/O), 1031 OK2POI (O/O) and 2005 ON4AOI (O/O).

**PA3FXB:** Jan [jym@netvisit.nl](mailto:jym@netvisit.nl) was active in the ARRL Contest from his home station on 1296 when not operating PI9CAM – I did well this year with a score of 98 QSO's and 42 mults using all modes. The activity was excellent! I did miss one Moon pass because of my operation at PI9CAM. The contest gave me 5 initials and brings my mixed initial total to initial #423\*. Thanks to the A21EME dxpedition my DXCC count is now 85. My station is still a homebrew 2.91 m dish that I extended to 3.5 m for the contest. This

expansion improves RX about 1.5 dB by keeping some noise away and making my RX extra 'cold'. This helps me a lot in hearing weak CW signals! On the TX side it does not help much because the dish is of course very much under illuminated when it is extended. I have used a N2UO round septum feed for quite some years.

**PI9CAM:** Jan (PA3FXB) Jan [jym@netvisit.nl](mailto:jym@netvisit.nl) reports on the CAMRAS group's activity during the Nov contest weekend – We used the 25 m Dwingeloo dish during the 16/17 Nov moon pass. We were active on both 70 and 23 cm, and used all modes to make 28 QSOs on 432 and 69 QSOs on 1296 for a total of 97. It was great fun and activity was very good. We can only operate one band at the time, so it's always very difficult to decide when to be on which band... It's really impossible to make everyone happy. We are sorry for those we missed.

**SM4GGC:** Stig [sm4ggc@gmail.com](mailto:sm4ggc@gmail.com) was QRV in the Nov Contest weekend on 1296 -- I added 38 QSOs, 13 on CW and 26 on JT65C. My total in the two legs appears to be 102 QSO with 43 mults. Worked on CW were IK1FJI, DL0SHF, VK5MC, OK1KIR, DL4DTU, SM3AKW, SP3XBO, PI9CAM, WK9P, WA9FWD, IZ1BPN and RA3EC, and on JT65C were YO2LEL, AA4MD, VE2UG, DL1DWI, VE3KRP, K6MG, SP5GDM, IK5VLS, W8MQW, DL7UDA, RN6MA, JA8SZW, HB9Q, DL1SUZ, ON5GS, G4BAO, DK0ZAB, G4EZP, LA3EQ, W1PV, NC1I, GX3EEZ, WA6HTP, DG0FE, VK4CDI and G4FUF. All my equipment worked without any problem during the two contest weekends. The conditions were somewhat poorer than expected during the last weekend end, perhaps because of the rainy weather here in Sweden. In any case, I am pleased with my results and the good activity. It was real fun!

**SP9VFD:** Raf [sp9vfd@protonmail.com](mailto:sp9vfd@protonmail.com) operated in the ARRL EME Contest for the first time on 432 – I was QRV in Nov from Saturday evening to Sunday morning. I worked CW only on 432, random style without Internet assist. I'm a beginner on 70 cm and still discovering this band with my new homebrew EME array consisting 8 x 23 (8 wl) yagis. Before the contest, I added an GS35B cavity PA. Two days before, I was ready to attempt to get more power on 432. With 50 W drive from my TS-2000X, I was able to achieve 1100 W output without and thermal stability problems. Unfortunately after one day heavy duty testing, the input circuit of the GS35B tube produced smoke and flame. The reason was simply... The high voltage RX type capacitors used in the input circuit are not suitable for even the 50 W drive power. I was disappointed because I had hoped to have more power. Without the big amplifier, I was active with a homemade 400 W LDMOS PA (about 300 W at the 8-port splitter near the antennas). Regardless of my low power, I did manage few QSOs and to get some new stations in log. I worked DK5OZ, OZ4MM, OK1CA, G3LTF, I2FHW, PI9CAM, DL9KR and SP6JLW for 8 QSOs. I plan to be active on the weekend 14/15 Dec on 432 for the ATP. Now, I am work on GS35B PA input circuit and will have it working for my next activity.

**SM4IVE:** Lars [sm4ive@telia.com](mailto:sm4ive@telia.com) updates us on his [contest results on 23 cm](#) -- It's amazing that I was able to work any stations since my LNA was very deaf. I noted after the Oct contest weekend that my RX did not seem right. I visited SM4DHN to checkout my LNA's NF. It was only 4.5 dB with 32 dB gain! No wonder I had problems coping some stations. With a new MGF 4919, I was back on track in Nov. I ended with 94 QSOs and 39 mults including 12 US states, 3 VE call areas and 24 DXCC all on CW only. Initials in Oct were RA4HL, FR5DN, G0LBK, BD4SY and ES3RF (in the contest), and after A21EME and 4X1AJ. In Nov I added WB8HRW, DJ3JJ, AA4MD, KN0WS and WK9P for 12 additional initials! I did not spend that much time; I don't have the energy any more. It is sad that one has to ask stations on the HB9 chat to operate CW. My 2010 result was 117 QSOs without any chat requests and 100% random. I know if my LNA had been OK more than half the time, that I would have added more of the weaker stations. There were at least 5 more that I know called but due to the bad LNA were lost. Today I tested for moonnoise and it was not detected and my receiver noise was S9. Anyhow with help from SM4EMO to climb my service tower to take down my LNA, should be back in operation soon. I don't want to risk my recent hip surgery (8 weeks ago). I would prefer that the ARRL changed the contest rules to have separate times for digital and analog operation – for example the Oct part could be digital only, and the Nov part analog only. I note that despite its a US [ and VE sponsored] contest, the participants from US on 1296 are terribly low.

**SM6CKU:** Ben [ben@sm6cku.se](mailto:ben@sm6cku.se) writes on the [Nov contest weekend on 1296](#) -- The [Oct weekend](#) was productive, but this last one was not. Early on Saturday, I noticed weakening of echoes. I discovered that my output power was way down. I stopped operating. I need to take down the outdoor box to find out what went wrong. Due to bad weather, I have been able to do anything yet. All together I completed 82 QSO's, 50 on CW and 32 on JT. I will send in a check log.

**SM7THS:** Sven [sm7ths@live.se](mailto:sm7ths@live.se) reports on his recent activity on 70 cm but [does not include his Oct contest results](#) -- Last spring I decided to make some changes in my life that will require moving all my equipment. Until I find a new acceptable QTH, the setup will remain the same and is still in good operating order. It may take some time to find a new QTH that fulfills my wish list, but it will happen eventually. I am actually not in any big hurry. I worked [KB7Q in all 3 of his dxpedition states](#) with good signals using the vert part of the array at all the locations. Polarization was locked for very long periods of time; and those Europeans able to use vert pol worked him easy, but for those without vert pol, it was struggle. [The A21EME dxpedition was also worked](#) with very strong and was often audible in the speaker. I was on early (Monday morning) before work and called them only once before they answered me. So, it was a quick QSO and then back to bed again. In the ARRL EME contest in Oct on 432, I worked some stations, but did not make a seriously effort. I was only on a few hours each morning for a total of 27 QSOs and put a few new stations in the log. For the Nov part, I finished a JFL controller, but have not put it in use with the

array but will do so before the Nov part. Besides from this project, most of my time was spent finalizing the garage and workshop as the plan is to keep that for a few years after I move until I been able to build one at the new QTH. [TNX to OK1TEH for translating from Sven's Blog].



**SM7THS' 8 x 25 el DG7YBN yagis array**

**SP6JLW:** Andy (SP6JLW) [sp6jlw@wp.pl](mailto:sp6jlw@wp.pl) (and SP6OPN and SQ6OPG) report on the Klodzka Group's [activity during the overall ARRL EME Contest](#) -- Last year in the contest, our group started on four bands, traditionally in the category "Multioperator CW Only". This year, in the 50-1296 parts and on 3 cm, we used the callsign SP6JLW. On 2320 we used the callsign SP6OPN. The weather was good on all three weekends. The result, in our opinion, was very good, given that the number of stations working on CW decreases year by year. (A new SP station has appeared, SP9VFD, Rafal - congratulations from our team). On 70 cm, we (SP6JLW) scored 11x8. QSO'd were I2FHW, SM6FHZ, DL7APV, OZ4MM, UA3PTW, DK5OZ, OK1CA, DL9KR, PA2V, SP9VFD and SM2CEW. On 23 cm, we (SP6JLW) scored 82x36. QSO'd were SK0UX, F6ETI, RA4HL, F1PYR, SM4GGC, IK1FJI, SP7DCS, 9A5AA, PA0PLY, F5KUG, DL3EBJ, OK2DL, FR5DNDXCC, UA3PTW, SP6ITF, OZ4MM, W4OP, SP3XBO, G3LTF, W5LUA, IK5VLS, VE6TA, WA2FGK, K6MG, DL6SH, DL7YC, RN6MA, SM6CKU, DF3RU, OH1LRY, I1NDP, DJ8FR, OK2ULQ, KL6M, F5JWF, WA6PY, LU1HKO, N5BF, YL2DG, VA7MM, SM4IVE, OK1CA, IK3COJ, LZ2US, OK1DFC, RA3EME, JA4BLC, F6CGJ, JH1KRC, JA6XED, ES3RF, PA3FXB, OH2DG, SM6PGP, OK1YK, F6KRK, IW2FZR, RA3EC, OE5JFL, G4BAO, K2UYH, G4CCH, G4RGK, BD4SYDXCC, FR5DN, ON5GS, W7JM, VE6BGT, KA1GT, VE4SA, N4PZ, DJ3JJ, AA4MD, DL0SHF, VK5MC, JR4AEP, SM3AKW, DL7UDA, PI9CAM, WA9FWD, K5DOG, SM2CEW and VE4MA/K7. On 13 cm, we (SP6OPN) scored 12x10. QSO'd were RA3EME,

UA3PTW, OK1KIR, OK1CA, G3LTF, SP3XBO, K2UYH, WA6PY, KL6M, F5JWF, ON5RR and VE6TA. On 3 cm, we (SP6JLW) scored 23x19. QSO'd were OZ1LPR, RA3EME, DL0EF, SP3XBO, IW2FZR, F5JWF, WA6PY, F5IGK, WA9FWD, OH2DG, SM3CEW, W7CJO, OK1DFC, OK1CA, JA1WQF, OK2AQ, W3SZ, DB6NT, 9A5AA, UR5LX, G4NNS, VE4MA and K2UYH. [TNX to OK1TEH for forwarding this report].

**UA3PTW:** Dmitry [ua3ptw@inbox.ru](mailto:ua3ptw@inbox.ru) had in Nov a big signal in the ARRL EME Contest -- He report adding initials on 432 using JT65B with DK5OZ, G8VHI, YO2NAA, JR0WFF and W5YD; and on 1296 using CW with WK9P and using JT65C with VE2UG, GX3EEZ, SM3KPX and OZ1CTZ. [TNX to DK3WG for forwarding this report].

**VA7MM:** Mark (VE7CMK) and Toby (VE7CNF) [va7mm@rac.ca](mailto:va7mm@rac.ca) operated on 1296 for both the Oct and Nov parts of the ARRL EME contest, multi-operator and all mode -- Our overall summary for the two weekends is 87 QSOs (19 CW, 68 digital) x 40 multipliers for 348,000 points. This QSO count and score is our highest in 17 years of participation. We obtained 17 initial contacts, all digital mode (ON4QQ, DK0AZB, ES3RF, PA0PLY, G0LBK, DJ2DY, PE1CHQ, I0NAA, DF2GB, RA4HL, W8MQW, VE2UG, ZL3DXT, YO2EL, G4EZP, DL1SUZ and WA6HTP), which brings us to a mixed initial count of #259\*. We're running a vintage water cooled OZ9CR cavity amplifier that produces about 200 W of RF power at the feed of our 3 m parabolic dish antenna. On receive we have a 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 e-mail.

**VE3KRP:** Eddie [eddie@tbaytel.net](mailto:eddie@tbaytel.net) sends news on his Nov ARRL Contest 1296 activity -- I worked using JT65C on 16 Nov DF3RU, RA4HL, FR5DN, DL3EBJ, PA3FXB, YO3LEL, RA3EME, VE2UG, SM4GGC, SP5GDM, KA1GT and ZL3DXT for an initial (#\*), and KL6M on (CW), and on 17 Nov DL4DTU, DL7UDA, OK1DFC, NC1I, YL2GD, WA3RGQ, N5BF, W1PV and K5DOG. There was nice contest activity except for the Asian/Pacific window. However, high winds and bad weather limited operating time here.

**VE6BGT:** Skip [macaulay.skip@gmail.com](mailto:macaulay.skip@gmail.com) writes about his Nov activity -- I had a good time in the ARRL Nov weekend on 23 cm. Conditions were quite good from my QTH. The first night I worked SP6JLW (579/579), SM6CKU (579/559), SM4IVE (579/589), L72US (579/579), F5KUG (579/559), W4OP (579/579), SP6ITF (579/569), DL3EBJ (579/569), OK2ULQ (579/579), OZ4MM (569/569), KL6M (579/589), G4CCH (589/589), N5BF (569/549), K2UYH (569/569), WA6PY (569/569), VA7MM (579/559) and OK2DL (579/589); and on the second RA3EM (549/569) - he couldn't get my call, PI9CAM (599/599) - switched to SSB (55), N4PZ (589/589), OK1KIR (589/569), IW2FZR (559/559), OE5JFL (579/589), K6MG (559/579) and then on SSB (52/54) and G3LTF (589/579). Over the next few nights, I worked by sked on 9 cm SM3BYA (569/339) - the

Moon was barely over my horizon. If we had waited, signals would have been stronger. It was a lot of fun.

**W2ZQ:** Paul (W2ORH) [w2hro.fn20@gmail.com](mailto:w2hro.fn20@gmail.com) writes about his EME projects -- During Nov I operate with the K2UYH group during the EME Contest (mainly on 2 m at K2TXB's QTH), but was also on 1296 under my own call and caught the A21EME dxpedition and others. A major accomplishment was setting up a 1296 EME station at the DVRA's club station that consist of a 3 m dish with a 250 W SSPA and a circular patch feed. W2ZQ made its first EME QSO on 7 Dec at 2336 using JT65C with PA3FXB. NJ3U operated me. Since then we have made several more QSOs and plan to be regularly on 23 cm. At home I plan to focus again on 432 EME.



**W2ZQ 3 m dish with 3 cm feed at DVRA club station**

**W3CJK:** Bill [n46jenny@gmail.com](mailto:n46jenny@gmail.com) was quite active on 23 cm during the ARRL EME Contest but reports for the NL on his contest QSO on 70 cm -- At my moonrise during the Nov contest weekend, I had one QSO on 432 using JT65B. I was using my terrestrial station, an ICOM 9700, barefoot at 50 W with a 15 el yagi on the horizon only. At my Jamestown, RI QTH (FN41) QTH we have a 50 W power limit on 432 due to a radar at Otis Air Force base in MA. I answered a CQ by DL7APV, whose signal was an amazing (1DB) and quickly completed a perfect QSO. He gave me (27DB). This was the Biggest thrill of the weekend -- WOW! Overall, I made at total of 51 QSOs on 144, 432 and 1296.

**W4OP:** Dale [parinc1@frontier.com](mailto:parinc1@frontier.com) took part in ARRL Contest on 1296 -- I operated both weekends, but without a west window. I finished with a score of 61x26 with all QSOs on CW; 42 QSOs the 1st weekend and 19 the second. My goal was to reach 60. I left a few out there as I quit at 61 and went to bed. This was my best effort to date. There was wonderful conditions and a lot of fun, except for the lack of sleep. I am using a 13.5' dish, VE4MA feed, W7CNK LNA and DB6NT kW SSPA running 850 W at the feed.

**W8MQW:** Chuck [maccluer13@gmail.com](mailto:maccluer13@gmail.com) wrote the following -- The ARRL EME Contest marks my return to EME after exactly 20 years, but this time on 1296 rather than 432. My total score for the two weekends was 48x27, which prophetically equals 1296. My 150 W amplifier from



PE1RKI arrived one day before the contest began, and played well with my 2.4 m dish. The unusually cold Nov weather found a flaw in my hereto flawless AZ readout. It depends upon the elasticity and slight tackiness of a hobby robot 8 mm rubber belt. In the cold the tackiness disappeared and the belt initially slipped, requiring emergency visual recalibration. Fortunately, the Moon was visible both nights.



**W8MQW's readout**

**WA6PY:** Paul [pchominski@maxlinear.com](mailto:pchominski@maxlinear.com) was QRV using CW in the ARRL EME Contest -- On 19/20 Oct on 432, 1 QSO'd DL7APV, I2FHW, OH2DG, OZ4MM and SM2CEW, and on 1296 9A5AA, DL3EBJ, DF3RU, DL7YC, EA8DBM, F5KUG, G3LTF, G4CCH, I1NDP, IK1FJI, KL6M, LZ2US, OE5JFL, OH1LRY, OH2DG, OK1CA, SK0UX, SM4DHN, SM4GGC, SM4IVE, SM6CKU, SP6ITF, SP6JLW, VE6TA, SP7DCS, UA3PTW and W4OP. Heard were F5JWF, OK2ULQ, and VA7MM. On Sunday after about 1 hour of operation my HV PS badly burned up and forced me to QRT. Damage was too bad to be fixed during the night. On 16/17 Nov, on 432 I QSO'd VE6TA, G0JLO, G3LTF, SM2CEW, KL6M, UA3PTW and DK5OZ, and on 1296 DJ8FR, SK0UX, F6ETI, PA3FXB, PA2DW, OZ4MM, N4PZ, OK2ULQ, K2UYH, WB8HRW, DL0SHF, VE6BGT, OK2DL, JR4AEP, VK5MC, PI9CAM, YL2DG, SP3XBO, K5DOG, IW2FZR, IK3COJ, VA7MM, VE4SA, N5BF, K6MG and SM2CEW. During my first JA/VK widow, I was called by someone, but libration was so bad that I couldn't catch all the letters. I also heard a weak carrier on my RX frequency, and slowly QSY'd 1 kHz up, but this station never come back. Unfortunately, this station was kept repeating my callsign multiple times, but his own only 3 times and that was it. When calling QRZ, I expect to hear only the other station callsign. Unfortunately, this pattern is repeated very often. I plan to be QRV on 14/15 Dec.

**WK9P:** Tim [tcherrone@yahoo.com](mailto:tcherrone@yahoo.com) writes for the NL -- I was happy with the times that I was QRV for the ARRL Contest in Nov. I was on 1296 EME CW. I started approx 3 hours after moonrise, and operated for about 2.5 hours on both nights. I began the first pass with 200 W at the feed, but spent much of the first half fumbling. In the second half, I was able to increase my power to 450 W at the feed, and did a little less fumbling this time despite my excitement. I lost a couple calls due to a birdie on .023, and moved to .024, but did log OK1DFC, DL3EBJ, SM4GGC, DL4DTU, UA3PTW, OZ4MM, EA8DBM, SM4IVE, OK1KIR, HB9Q, G4CCH, OK2DL, KL6M and DF3RU in Nov. I appreciate the advice and tips from the seasoned operators and look forward to future activity.

**OK1TEH:** Matej [ok1tehlist@seznam.cz](mailto:ok1tehlist@seznam.cz) writes on his Oct/Nov activity -- Just the same as in 2018, I took part in the ARRL EME Contest on the 70 cm band. I used my good old single 23 el DK7ZB yagi. I worked using JT65B unless noted in Oct 23 QSOs with DL7APV, K2UYH, G4RGK, UT5DL, UA3PTW, LZ1DX, PA2V, OH2DG, DF7KB for mixed initial #131\*, VK4EME, VK3NX #132\*, DL8FBD, F6HLC, SM7THS, DL9KR (CW), DK3WG, OZ4MM (CW), DL2HWA, UB4UAA, S51LF and YL2GD; and during the Nov leg 14 QSOs with G4EZP #133\* (1 yagi to 2 yagis), ZS4TX, VE6TA, OK1CA, HB9Q, W7MEM, K4EME, DF3RU, DK5OZ (CW), JA6AHB, PI9CAM, DL5FN, G4FUF and ON4AOI for a total score of 35x20 for 70,000 points. This result is probably about the limit what can be worked with just a single yagi from the noisy Czech capital city. Decoded but not worked were LU8ENU (in both legs 28DB), R6CS, SM5EPO, N0AKC, K5QE and ES3RF. My best and most surprising QSO was with VK3NX. I was also very pleased to finally work DF7KB and G4EZP. If you decoded me and I didn't answer at your calling, please pass me an email and I'll be pleased to make a sked with you. Outside of contest, I was very happy to **worked on 70 cm A21EME** operated by PA2CHR with only 2 x 28 el yagis. Chris was my 53rd DXCC on 70 cm with my single yagi. I also nearly worked VK5MC. Arranging the sked wasn't easy as Chris does not often check his email. We heard each other, but a QSO wasn't finished. Hopefully we'll try again during the winter.

**K2UYH:** Al [alkatz@tcnj.edu](mailto:alkatz@tcnj.edu) reports of on the Nov part of ARRL EME Contest -- Our team (W2HRO, K2TXB, K2QFA, NE2U, K2YY [not able to op in Nov] and me worked on 1296 on 16 Nov at 0411 4X1AJ JT65C (20DB/O) for mixed initial #626\*, 0418 DL1DWI JT65C (14DB/19DB) #627\*, 0420 K6MG JT65C (1DB/O), 0425 ON4BVC JT65C (15DB/16DB) DUP, 0436 F1RJ JT65C (4DB/3DB) DUP, 0441 ON4QQ JT65C (4DB/1DB) #628\*, 0448 W3HMS JT65C (13DB/O), 0504 PA2DW JT65C (17DB/11DB), 0523 VE2UG JT65C (4DB/O) #629\*, 0533 WA6HTP JT65C (3DB/25DB), 0541 AA4MD JT65C (O/O), 0549 DL7UDA JT65C (1DB/7DB), 0603 DL7YC JT65C (4DB/1DB), 0636 ES3RF JT65C (9DB/10DB), 0650 WA6PY CW (569/579), 0700 W4OP CW (569/599), 0710 SM6CKU CW (559/579), 0714 IK1FJI CW (579/579), 0722 DF3RU CW (559/559), 0730 F6ETI CW (559/579), 0749 VE6BGT CW (569/569), 0804 DK3WG JT65C (12DB/O) and 0817 LU1C CW (O/O); on 16 Nov on 432 at 0902 DK5SO JT65B (O/O), 0914 DL8DAU JT65B (O/O), 0934 DL5FN JT65B (O/O) and 1226 JA6AHB JT65B (6DB/8DB); on 16 Nov back to 1296 at 1312 JA8SZW JT65C (10DB/6DB), 1326 K5DOG JT65C (3DB/1DB) DUP and 1336 ZL3DXT JT65C (11DB/14DB) #630\*; on 17 Nov on 432 at 0413 PI9CAM JT65B (O/O), 0511 CW DK5OZ (579/559), 0527 DL9KR CW (589/589), 0549 UB4UAA JT65B (13DB/O), 0619 HB9Q JT65B (1DB/10DB), 0628 DF3RU JT65B (O/O), 0637 S51LF JT65B (O/O) DUP, 0647 UX5UL JT65B (O/O) #999\*, 0720 GM6VXB JT65B (O/O) for our #1000\* mixed initial, 0748 UY5HF JT65B (12DB/O) 1001\*, 0758 VE6TA JT65B (5DB/O), 0820 DL2HWA JT55B (6DB/O), 0856 G4FUF JT65B (13DB/O), 0907 W7TZ JT65B (20DB/16DB) #1002\*, 0953 OH4LA JT65B (13DB/15DB), 1010 OK2POI JT65B (16DB/O), 1020 F1DUZ JT65B (15DB/O) #1003\* and 1026

IK4PMG JT65B (17DB/O) #1004; and 17 Nov back to 1296 at 1056 HB9Q JT65C (1DB/1DB), 1123 VE4MA/7 JT65C (14DB/O), 1130 W3CJK JT65C (O/O) #631\*, 1350 JR4AEP CW (559/559), 1402 JA4LJB CW (559/569) and 1440 BD4SY CW (559/569) for initial #414. We ended with a score on 432 of 62x30 and 1296 of 84x46 with on 70 cm 8 CW QSOs and on 23 cm 24.

**NET/LOGGER/CHAT NEWS:** **DK5OZ** operated from DL7APV's QTH during the Nov contest week and thus does not officially count as an initial unless you have not worked DL7APV. **LZ2US** says there were many stations in the contest whose call signs he could not dig out of the noise. He is interested in hearing from stations that called him that he did not reply to. [Unfortunately, we do not have an email address for Marko. Can anyone help?] **R9CQ** is a new 432 EME station with 8 x 19 el yagis and 100 W. Vladimir [r9cq@mail.ru](mailto:r9cq@mail.ru) is located in MO17ua. **NC1I** has taken down his big 432 for repair. He does not expect to be QRV on 432 for about a year. He was QRV on 23 cm for a short time during the ARRL contest. **UR5LX** was active on the microwave bands in Nov and added initials on 3 cm using QRA64D with DL4DTU and F6BKB. [TNX DK3WG for forwarding this info].

**FOR SALE:** **ON4AOI** has many interesting things for sale including a Meanwell SD-1000L-24 PS Input between 19 and 72 V DC, Out 24-30 V 40 A max, perfect for 23-13 cm outside amp, 249€. 2 CX600N coax relays, 100€ each. A 400 W 1296 circulator by PE1RKI asking 125€. A OE5JFL new controller DIY version, price depends on options and addons such as ETS25 encoders. Mini-VNA (to 3 GHz) 365€. A PFM3000 3 GHz counter, 199€. 2.7 GHz Spectrum analyzer. 2.7 GHz RF Generator. Power meter to 2,7 GHz and 50 W max. Get complete list and more info from email [on4aoi\\_pda@skynet.be](mailto:on4aoi_pda@skynet.be). **VE4MA** has an old VK3UM Interface board, but need an OLD version of the VK3UM software that is still supported by Autotrack. Does anyone have a copy? **I3OPW** has for sale 47 GHz WG WR19 relays. Look at his webpage at <https://www.i3opw.it/rele47GHz/disegno.htm>. Also see <https://ik2of0.jimdo.com/equipment/47-ghz/> and <https://qlfecv.wordpress.com/2019/10/07/blending-wr19/>.

**RADIOASTRONOMICAL CORNER:** Maybe you can remember KP4AO at Arecibo activation on 70 cm some 10 years ago. While updating the Sun noise measurements list including SgrA, CasA, TauA, I [Matej] asked K1JT about the details. Joe sent the following very interesting info: Some basic parameters of the Arecibo antenna are described in our QST article on the KP4AO moonbounce operation in 2010; also see [http://physics.princeton.edu/pulsar/k1jt/Moonbounce\\_at\\_Arecibo.pdf](http://physics.princeton.edu/pulsar/k1jt/Moonbounce_at_Arecibo.pdf). Your gain figure of 58.4 dBd is about right for the 430 MHz system. The dish shape is a spherical cap, not a paraboloid of revolution. Hence at 430 MHz we used a "line feed" about 30 m long, rather than a point feed. There is no unique "f/D" ratio. The feedline is 1500 feet of WR2100 waveguide. The Arecibo telescope is \*never\* pointed at the Sun! When pointed at cold sky, the system temperature with our 430 MHz EME setup is around

140K. When pointed at the Moon, the system noise temperature is about 350 K, dominated by the Moon's 210 K surface temperature. Thus, the "Moon noise" is roughly  $10 \cdot \log(350/140) = 4$  dB. Sgr A is too far south for Arecibo, Cyg A and Cas A are too far north. Tau A is about  $10 \cdot \log(12000/140) = 19.3$  dB stronger than the system noise temperature on cold sky.

**TECHNICAL STUFF:** A very helpful webpage by WA1MBA offers an online calculator of waveguides cut-off frequencies and WG attenuations at <http://www.wa1mba.org/WGCalc.htm>. If you are looking for method how to measure the exact curvature of your dish's surface without using methods such as holographic techniques, check out: <http://www.dl2am.de/spiegelfolie.pdf> or [http://www.ham-radio.com/n6ca/appnotes/dish/dish\\_lzr.html](http://www.ham-radio.com/n6ca/appnotes/dish/dish_lzr.html). [[I know of the excellent work of RW3BP on measuring reflector surface accuracy, but has anybody else done similar measurements for bigger dishes, >2 m dia. using a laser pointer? - OK1TEH]. Other methods for the measurements of dish accuracy can be found at <http://www.ham-radio.com/n6ca/appnotes/dish/dishlzr.html> and <http://www.dl2am.de/spiegelfolie.pdf> (<http://www.dl2am.de/spiegelfolie.pdf>).

**G3YGF's TWT question:** I am concerned about what is the safe level for Helix dissipation? The TH3759A tube we are using is rated at 300 W at 14 GHz. The datasheet specs an absolute maximum of 15 W of reflected power (VSWR = 1.6). It also mentions a max harmonic power of 25 W, which can be reflected back into the tube without concern. The helix current is spec'd as an absolute max 10mA at 9 kV, which is 90 W; although it is typically 3 mA (27 W). Is Helix diss just  $V_{helix} \cdot I_{helix}$ , or does the reflected RF power make an additional contribution? We use a circulator that has a recommended max VSWR of 2 - I assume this is to protect the circulator's load, which would get 30 W. [Circulators do not have internal loads, but can be turned into an isolator by adding an external load]. We are using it well below its normal freq spec - does the comment re disregarding harmonics still apply? We currently get 200 W out with about 7 W of reflected, with all harmonic reflected back to the tube. Does anyone have any detailed knowledge of this tube? The specs seem somewhat inconsistent. I want to understand the margins involved as I don't want to end up with a melted Helix! Any advice welcomed. [Julian@ygf.org.uk](mailto:Julian@ygf.org.uk)

**How to connect OE5JFL's system with SPID-RAS** see [http://www.ok2kkw.com/next/g4bao\\_2018.pdf](http://www.ok2kkw.com/next/g4bao_2018.pdf) and [http://www.ntms.org/eme/presentations/w5lua/DL1YMK\\_Prresentation\\_final\\_2.pdf](http://www.ntms.org/eme/presentations/w5lua/DL1YMK_Prresentation_final_2.pdf).

**FINAL:** This month we have DL7APV's Moon Calendar at the end of this NL. TNX Bernd.

► We have more sad news of other EME silent keys (SKs) to report. R1AY become an SK on 3 Dec. He was a well known VHF DX station. Another great loss happed in Nov. OK2SBL (father of OK2BDQ and OK2MWR) and OK2BPR were active on 70 cm EME and very well known Czech UHF/SHF operators. Down under VK2FLR passed away in

mid Nov. Mike was active on 23 cm and 2 m EME for many years and QRV during the Oct part of ARRL EME Contest. May they all rest in peace.

► K1DS asks everyone to please submit their ARRL EME Contest logs, no matter how big or small by the 16 Dec deadline. The number of logs submitted is continuing to grow and is an important indicator of our use of the VHF/UHF/microwave bands. There were well over 200 stations that were active in the contest. As of 1 Dec, there were 98 logs submitted. If anyone needs help with submitting their log or making a Cabrillo report, Rick can assist. From the ARRL EME site: Entries must include complete log - QSO - EME Exchange data - and mailed entries must include official ARRL EME Contest Summary Sheet. Official forms are available at ARRL webpage "Entry Methods and Forms" or with a SASE request to the Contest Branch. No other forms of the summary sheet will be accepted. Each line of QSO data in the log must contain band, mode, date and time in UTC, callsign of station worked, EME exchange sent, EME exchange received,

each new multiplier, and points earned. Photocopies of the log form and official Summary Sheet are acceptable. **Participants must submit their event entry by the submission deadline via [web app](#), or by postal mail as follows:** Via our new web app at [contests.arrl.org/arlemescoresubmission.php](http://contests.arrl.org/arlemescoresubmission.php) - provide your event summary form detail in the web app header, then attach your Cabrillo file to your submission. Or by mail to: **ARRL EME Contest, 225 Main St, Newington, CT 06111.**

► RA3EC reports the results of the first Russian EME Contest can be found at <http://www.vhfdx.ru/faylyi/view-details/rezultatyi-sorevnovaniy/1st-russian-eme-contest-results>.

► We hope that you liked current issue, Merry Christmas, Happy Holiday (Hanukah or whatever you celebrate) and all the best of DX for the New year in 2020! 73, AI – K2UYH and Matej – OK1TEH

# Lunar weekend calendar 2020

Compiled by DL7APV

| 2400_Sat/<br>0000_Sun | Decl/<br>°   | Loss/<br>dB | Sun<br>offset/<br>° | Temp<br>432/<br>K | <a href="#">librati<br/>on</a> | contest dates &<br>meetings  | Comment<br>s     |
|-----------------------|--------------|-------------|---------------------|-------------------|--------------------------------|--|------------------|
| Jan 04/05             | +7,7         | -1,6        | -109                | 30                | -                              |  | Day AM           |
| <b>Jan 11/12</b>      | <b>+20,4</b> | <b>-0,2</b> | 161                 | <b>20</b>         | -                              | SSB fun contest<br>Sat 23cm, Sun 13cm<br><b>ATP</b> 4-6 & 20-22    | Day PM           |
| Jan 18/19             | -13,8        | -0,6        | 72                  | 35                | -                              |  | Day PM           |
| Jan 25/26             | <b>-19,1</b> | <b>-1,6</b> | <b>-17</b>          | 30                | -                              |  | <b>Sun close</b> |
| Feb 01/02             | +10,5        | <b>-1,6</b> | -89                 | 30                | -                              |  | Day AM           |
| <b>Feb 08/09</b>      | <b>+18,7</b> | <b>-0,0</b> | 180                 | <b>15</b>         | -                              | <a href="#">DUBUS contest<br/>144/432</a>                          | Day PM           |
| Feb 15/16             | <b>-17,2</b> | -0,6        | 89                  | 40                | -                              |  | Day PM           |
| Feb 22/23             | <b>-16,8</b> | <b>-1,8</b> | <b>2</b>            | 30                | -                              |  | <b>Sun noise</b> |
| Mar 00/01             | +13,5        | <b>-1,7</b> | -69                 | 30                | -                              |  | Day AM           |
| Mar 07/08             | <b>+16,7</b> | <b>+0,1</b> | -161                | <b>20</b>         | -                              | <a href="#">Eu VHF/UHF Tropo<br/>DUBUS contest 9cm</a>             | Day AM           |
| Mar 14/15             | -20,1        | -0,5        | 107                 | 50                | -                              |  | Day PM           |
| Mar 21/22             | -14,1        | -1,9        | <b>21</b>           | 25                | -                              |  | <b>Sun close</b> |
| <b>Mar 28/29</b>      | <b>+16,4</b> | -1,7        | -51                 | 30                | -                              | Daylight saving time in EU<br>start<br><b>ATP</b> 9-11&18:30-20:30 | Day AM           |
| Apr 04/05             | +14,2        | <b>-0,0</b> | -141                | <b>20</b>         | -                              | <a href="#">Contest Trophy ARI<br/>EME2020</a>                     | Day AM           |

|                   |       |      |      |     |     |   |                  |
|-------------------|-------|------|------|-----|-----|---|------------------|
| Apr 11/12         | -22,3 | -0,4 | 126  | 100 | -   |   | Day PM           |
| Apr 18/19         | -11,1 | -1,9 | 40   | 25  | -   |   | Day PM           |
| <b>Apr 25/26</b>  | +19,0 | -1,6 | -33  | 40  | -   | <a href="#">DUBUS contest 6cm ATP</a> 7:30-9:30 & 17-19                   | Day AM           |
| May 02/03         | +11,2 | -0,2 | -123 | 20  | -   | <a href="#">Eu VHF/UHF Tropo DUBUS contest 10G &amp; up</a>               | Day AM           |
| May 09/10         | -23,8 | -0,4 | 144  | 180 | -   |   | Day PM           |
| May 16/17         | -8,1  | -1,9 | 59   | 25  | -   | <a href="#">Dayton (Xenia) Hamvention</a>                                 | Day PM           |
| <b>May 23/24</b>  | +21,0 | -1,4 | -15  | 40  | -   | <a href="#">DUBUS contest 13cm ATP</a> 6-8 & 15:30-17:30                  | <b>Sun close</b> |
| May 30/31         | +7,5  | -0,3 | -105 | 20  | -   |   | Day AM           |
| June 06/07        | -24,7 | -0,5 | 163  | 200 | -   | <a href="#">EU 23&amp;up Tropo</a>  | Day PM           |
| June 13/14        | -5,0  | -1,9 | 79   | 25  | -   | <a href="#">ARRL VHF Tropo</a>  | Day PM           |
| June 20/21        | +22,3 | -1,2 | 3    | 40  | +/- |   | <b>Sun noise</b> |
| <b>June 27/28</b> | +3,2  | -0,3 | -88  | 30  | -   | <a href="#">HAM Radio ATP</a> 13-15 & 20-22                               | Day AM           |
| July 04/05        | -25,0 | -0,7 | -179 | 100 | -   | <a href="#">Eu VHF/UHF Tropo</a>  | Day AM           |
| July 11/12        | -1,7  | -1,8 | 100  | 25  | -   |   | Day PM           |
| <b>July 18/19</b> | +23,0 | -1,0 | 30   | 40  | +/- | <a href="#">CQ WW VHF ES-Tropo DUBUS contest 23cm ATP</a> 46 & 13-15      | <b>Sun close</b> |
| July 25/26        | -1,4  | -0,3 | -70  | 30  | -   |   | Day AM           |
| Aug 01/02         | -24,7 | -1,0 | -161 | 50  | +   | <a href="#">ARRL UHF Tropo</a>  | Day AM           |
| Aug 08/09         | +1,7  | -1,9 | 120  | 30  | -   |   | Day PM           |
| <b>Aug 15/16</b>  | +23,3 | -0,9 | 40   | 35  | ++  | ATP 4-6 & 12-14   | Day PM           |
| <b>Aug 22/23</b>  | -5,8  | -0,1 | -52  | 25  | -   | <b>19<sup>th</sup> EME Conference Praha</b>                               | Day AM           |
| Aug 29/30         | -23,7 | -1,2 | -144 | 35  | +   |   | Day AM           |
| Sept 05/06        | +5,2  | -1,9 | 140  | 30  | -   | <a href="#">Eu VHF Tropo</a>  | Day PM           |
| <b>Sept 12/13</b> | +23,2 | -0,9 | 59   | 30  | ++  | <a href="#">ARRL VHF Tropo ARRL EME contest 13cm&amp;up Weinheim (DL)</a> | Day PM           |
| Sept 19/20        | -9,7  | +0,1 | -33  | 30  | -   | <a href="#">Contest Trophy ARI EME2020</a>                                | Day AM           |

|                  |              |             |            |           |           |  |                  |
|------------------|--------------|-------------|------------|-----------|-----------|--|------------------|
| Sept 26/27       | -22,1        | -1,3        | -127       | 30        | +         |  | Day AM           |
| Oct 03/04        | +8,8         | -2,0        | 160        | 30        | -         | <a href="#">Eu UHF Tropo</a>               | Day PM           |
| <b>Oct 10/11</b> | <b>+23,9</b> | -1,2        | 91         | 30        | +         | <a href="#">ARRL EME contest 6m – 23cm</a> | Day PM           |
| Oct 17/18        | -13,0        | <b>+0,3</b> | <b>-14</b> | 35        | -         |  | <b>Sun close</b> |
| Oct 24/25        | <b>-20,0</b> | -1,4        | -109       | 30        | +         | Daylight saving time in EU ends            | Day AM           |
| Nov 00/01        | +12,2        | <b>-1,9</b> | 179        | 35        | -         |  | Day PM           |
| Nov 07/08        | <b>+21,1</b> | -1,0        | 95         | <b>15</b> | +         | <a href="#">Eu VHF CW Tropo</a>            | Day PM           |
| Nov 14/15        | <b>-15,8</b> | <b>+0,3</b> | <b>6</b>   | 35        | -         |  | <b>Sun noise</b> |
| Nov 21/22        | <b>-17,4</b> | -1,4        | -90        | 25        | +/-       |  | Day AM           |
| <b>Nov 28/29</b> | <b>+15,3</b> | <b>-1,9</b> | -162       | 30        | -         | <a href="#">ARRL EME contest 6m – 23cm</a> | Day AM           |
| <b>Dec 05/06</b> | <b>+18,8</b> | -1,0        | 112        | 20        | <b>++</b> | <b>ATP</b> 7-9 & 22-00                     | Day PM           |
| Dec 12/13        | -18,5        | <b>+0,1</b> | <b>26</b>  | 40        | -         |  | <b>Sun close</b> |
| Dec 19/20        | -14,7        | -1,3        | -71        | 25        | +         | Xmas                                       | Day AM           |
| Dec 26/27        | <b>+17,9</b> | <b>-1,8</b> | -142       | 35        | -         | HNY  | Day AM           |
|                  |              |             |            |           |           |  |                  |

**OK1TEH wish you**  
*all the best in New Year 2020*  
*good health, happiness*  
*and prosperity*

**OK1TEH vám**  
*přeje úspěšný*  
*nový rok*  
*hodně zdraví*  
*a štěstí*



fire above Prague Castle - Photo was taken by OK1TEH on 1st January 2018