432 AND ABOVE EME NEWS

August – September 2022 VOL 52 #8-9

EDITOR: AL KATZ, K2UYH; DEPT. ELECTRICAL/COMPUTER ENGINEERING, THE COLLEGE OF NEW JERSEY, PO BOX 7718 EWING, NJ 08628, TEL (W 609-584-8424), (C 609-947-3889), E-MAIL alkatz@tcnj.edu.
ASSOCIATE EDITOR AND REFLECTOR/NETNEWS MATEJ PETRZILKA, OK1TEH, SIMUNKOVA 1609/21, 18200, PRAHA 8, CZECH REPUBLIC, TEL (+420 603 489 490), E-MAIL ok1teh@seznam.cz
CW INITIAL LIST G4RGK, DAVID DIBLEY, E-MAIL zen70432@zen.co.uk, AT: http://www.zen70432.zen.co.uk/Initials/index.html
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There was a great turnout (136), especially considering the lingering COVID concerns, for the 19th EME Conference in Prague that will be remembered for quality of the tech talks and wonderful comradery

CONDITIONS: This summer has been anything but slow! The main event of the last two months was the International EME Conference, Prague 2022 – see picture above. A huge thanks to OK1DFC and his team for making it all happen under such difficult conditions. Zdenek did it and in such a great way! It was truly terrific. And very welcome after the 2-year delay caused by Covid.

- Since the conference there have been 3 major contest weekends (ARRL Microwave (MW) EME Contest 1 and 2, and the ARI Fall Contest) plus the 9 cm DUBUS Contest shortly before. All are covered in this NL.

- The high reported score for the MW weekends is from **OK1CA with 59 QSOs and 42 mults.**
- OM4XA reports total of 56 QSOs on 1296 in the ARI Contest.
- In the 9 cm event both DB6NT and G3LTF are tied with a reported score of 15x15.
- **G3LTF reports a score of 2.16 M points in the overall DUBUS Contest.**

- **JA6AHB has joined the elite 432 DXCC Club**; he is a long time EMEer and the oldest moonbounce operator in JA. [Toshio made all his QSOs on EME and wants the recognize EME QSOs as a special mode for DXCC].

- **KA6U's State dxpedition has been at the *heart* of EME activity on 432 and 1296 for the last couple of months** – see the reports in this newsletter (NL)! Peter's operation has generated a run of WAS's! **This month NC1I writes that *on 1 Sept, I was issued 1296 WAS #4*. Both OK1DFC and OK1KIR also report completing their 50th State and WAS on 1296!**

- **There were also two highly successful dxpeditions: OJ0DX to Märket Reef and 4U1ITU at the ITU, both on 432 and reported on in this NL.**

- **We hope you are looking forward to upcoming 50 to 1296 ARRL EME Contest as much as we are. The dates are 15-16 Oct and 12-13 Nov.**

- **WR8AA, the 70 and 23 cm WVA dxpedition is on for Friday 14 Oct (70 cm) and Saturday 15 Oct and Sunday 16 Oct (23 cm). See their detailed report later in this NL.**

- **N1AV is proposing a 902 EME activity weekend for Dec 2, 3 and 4.** There seems to be considerable interest.

- **UA3TCF is SK** – We are very sad to report that EMEer and good friend UA3TCF passed 16 April. Alex was a regular on the EME on the UHF and microwave bands. Alex will be greatly missed. May he rest in peace.

REPORTS:

4U1ITU: Chris (PA2CHR) post@pa2chr.nl writes results of EME expedition to ITU (JN36bf) made together with OM1AM and PA3CMC – We operated from the roof of the 4U1 building with generally beautiful WX. We started

operation on 13 Sept on 2 m where we worked 48 stations on EME and 2 on tropo. One problem was that my new laptop would not start up. We had to use an older (10 years) one that was not capable of running Q65. Very sorry, because we had planned to use Q65 mode as our preferred mode. But all worked fine on JT65. On Thursday we changed the antenna to a 27 el X-pol for 70 cm and were able to work 11 stations via EME that night. There was also QRM problems on 432 similar to that on 2 m. We think our results are not bad considering the local situation. This activity is for sure the last possible (EME) before the complete renovation of the ITU building. A new building will be ready around 2029 with possible less space for antennas. We took down all equipment on Friday and drove to HB9Q's station where we had a very nice meeting and dinner with Dan, his YL Sue and HB9COG. We hope to CU soon from another DXCC.

9A5AA: Dragan dragan9a5aa@gmail.com has problems on 6 cm EME Contest with QRN -- For 2 years I have battling strong WIFI interference. It is so strong that I cannot measure Sun noise! In the DUBUS-REF 6 cm CW/SSB EME Contest on 2/3 July, I was able to QSO OK1KIR, OK1CA, RA3EME, VE4MA and PA0BAT for a total of 5 x 4. I congratulate these stations on their good signals that were strong enough that I was able to dig them out of the *muck*.

DB6NT: Mike db6nt@gmx.de reports on his recent contest activity -- I was QRV on the weekend 30/31 July for the DUBUS 9 cm CW Contest. I built a EME transverter for 9 cm and was QRV for the first time on this band. The weather conditions were good; and I worked in the following stations: OH1LRY, OH2DG, G4NNS, G3LTF, SP6OPN, DL4DTU, WA6PY, VE4MA, PA3DZL, KL6M, WA9FWD, VK4AFL, PA100THALES, OK1KKD and VE6GBT for a score of 15x15. It was a very nice introduction to 3400 EME. [Mike was also active during the first weekend of the ARRL MW EME Contest on 27/28 Aug on 3 cm and possibly 6 cm, but we have not yet received his report].

DK3WG: Jurg dk3wg@darc.de writes on his activity in mid July/Aug. I added on 70 cm using Q65B VP8EME (GD08), DL4DTU, OJ0DX dxpedition on Market Reef Island for DXCC #144, K4CO and the KA6U States/grids dxpedition in EM49, FN31 and FN21; and on 23 cm using Q65C KA6U in EM29, EM49, EM79, FN31 (for his mixed initial #400*), FN21 and in FM19, N6ZRJ and KN2K.

F6ETI: Philippe f6eti@wanadoo.fr writes about his participation in the ARI EME Contest on 24/25 Sept -- I used CW on 1296 (random) only on Saturday because the Sun was too close to the Moon on Sunday. Echoes were constantly received, but activity was low. I worked only 11 QSOs in 8 hours of uninterrupted calling and listening. I logged 3 new initials, and worked I1NDP, CT1FGW for initial #96, G4CCH, OK1DFC, DG5CST, RA4HL #97, IK3MAC, OK1KIR, IK1FJI, G3LTF and SA6BUN #98. Missed just OH2DG because of a problem with antenna tracking. Out of the 11 QSOs, 9 answered my calls and I called 2. My station was a 3 m dish with 300 W into a septum feed and 0.37 dB NF VLNA. Sun/Cold Sky was 12.5 dB with a SFI 146. During this event I had the opportunity to promote the magical world of amateur radio to visitors... See http://ph-martin.pagesperso-orange.fr/f6eti/index.

G3LTF: Peter g3ltf@btinternet.com was active in the last leg of the DUBUS-REF Contest on 9 cm and the first leg of the ARRL MW Contest on 6 cm – On 29 July, the night before the 9 cm event, I worked KL6M while checking out my equipment. Sun noise measured at 17dB (SF93) and Moon noise at 1.0 dB. In the 9 cm contest, I worked on 30 July OH2DG, OH1LRY, OZ5G, DB6NT, DL4DTU, SP6OPN, G4NNS, PA100THALES, VE4MA, WA9FWD, PA3DZL, WA6PY and KL6M and on 31 July OK1KKD and VE6BGT- the loudest signal heard in the contest. My score was 15 x 15, and my total **final claimed score for 5 bands in the DUBUS Contest 2,160,000 points**. My next EME operation was in ARRL MW Contest on 27 Aug, when I worked on 6 cm CW SM6FHZ, UA5Y, SP3XBO for initial #95, WA6PY, SQ6OPG, KL6M and on 28 Aug DF3RU, SM6PGP, PE1CKK #96 with 35 W to a 1.8 m dish - barely visible on the SDR but we had a solid QSO at the second attempt, very satisfying, W5LUA and VE4MA for a total of 11 x 10. I was disappointed in the turn out on 6 cm. Many of the 6 cm regulars chose to stay on 3 cm where there was much more activity. Sun noise was 14.9 dB (SF128) and Moon noise 1.2 dB. **On the following day, 29 Aug, the massive CME (solar storm) that started on the previous day passed through, so at 1100 the Sun noise had risen to 16.7 dB and at 1800 it was an unbelievable 20.6 dB!** The next day, it was back close to the normal level at 15.6 dB. On 31 Aug, I checked KA6U's signal on 23 cm, he was in TN, and was at a (549-559) level. Easily workable on CW, but the queue of digi stations was far too long to ever be able to work him, but it was an impressive effort. In the ARRL microwave, 2nd leg, I worked using CW starting on 13 cm on 17 Sept UA5Y, PA3DZL, DF3RU, OK1KKD, K2UYH, IK3COJ, OK1CA, WA6PY, KL6M, SP7DCS, OH1LRY, DL1SUZ for initial #156, OK1KIR, K3WM #157 and G4RGK for a 13 cm total 15x13; and on 18 Sept on 9 cm OK1CA, DF3RU, VE6TA, K2UYH and WA6PY for a 9 cm total 5x5. My Sun noise on 13 cm was 20.4 dB and on 9 cm 18.3 dB. In the ARI contest I worked using CW on 24 Sept, starting on 70 cm DL1VPL, G4YTL, and G0JLO - the Sun noise was 16.2 dB, but activity was low that I changed the feed to 23 cm for G4CCH, IK1FJI, F6ETI, IK5VLS, IQ2DB, IK2DDR, OK2PE, I1NDP, DG5CST, SA6BUN, DJ3JJ, PA3FXB, OM4XA, OZ6OL, OK1KIR, AA4MD, N5BF, K2UYH; and on 25 Sept OK1DFC, IK3MAC, JH1KRC, DL1AT and DL4DTU. Activity on the second day was very sparse, partly because the Sun was very close and low declination. I ended with 3 QSOs on 432 and 22 on 1296. It was very good to see so many Italian stations active, and a real pleasure to again work OZ6OL and JH1KRC.

G4DDK: Sam jewell@btinternet.com was very pleased at how well the whole Prague EME Conference went off -- Spurred on by the various talks, when I got back, I returned

to rebuilding my 10 GHz EME system. It has been long in gestation. I started it around 7 years ago! A series of setbacks due to inaccurate tracking, frequency stability and other interests, slowed my progress. Although the transmit side has still to be completed, I used the Aug ARRL EME MW Contest weekend, as a 'shake-down' for the tracking system and receiver optimization. I measured 0.9 -1.0 dB of Moon noise and up to 12.5 dB Sun noise with my 2.5 m dish. After some further optimization on the tracking side, I was able to decode 14 stations on Saturday and a further 4 on Sunday. The best using Q65E were GB2FRA at (2DB) and OZ1LPR (4DB). Most others were in the (10 to 16DB) range. Although, I decoded one station as low as (20DB), very few others decoded once their level dropped below (17DB). My apologies to those who requested a contact. I was unable to oblige due to my lack of transmit. I hope to enable the transmit side before the next round.

G4RFR & GB4RFA: Julian (G3YFG) Julian@ygf.org.uk sends new on his clubs 3 cm EME – In July/August, we operated on 10 GHz using our club call G4RFR. We QSO'd PA0PLY (14DB/2DB), IK0HWJ (9DB/3DB), I4TTZ (17DB/8DB), PA100THALES (8DB/**+3DB**), OK2AQ (10DB/4DB) and G4BAO (15DB/6DB) - particularly strong for a 1.2 m dish and 25 W. During the ARRL MW Contest we are using the call GB2FRA to celebrate our club's 40th anniversary. The first day was busier than the second. We worked OZ1LPR, UA5Y, OK2AQ, DJ5SBV, OK1CA, LZ4OC, ON5TA, UR3VKE, DL0EF, W3SZ, PA0PLY, PA0BAT, PA3DZL, SM6CKU, G4BAO, DJ7FJ, VE4MA, I4TTZ, IK6CAK, OH1LRY, W5LUA, WA3RGQ, OK1DFC, and on the second day DL6ABC, IW2FZR, OE4WOG, F6BKB, CX2SC, DL7NN, K2UYH, IK0HWJ and G4YTL for a total of 32 x 29. We were heard by F5HRY (549) on CW, G0OLX (9DB), UR3VKC (15DB) and VE6TA (8DB) with the Moon into the trees. We lost ZS1LS (11DB/-) who had to abandon the QSO due to the wind. We will be on for the next weekend of the contest. We are puzzled why we are not getting any decodes for signals weaker than (18DB). There should be some in (<20DB). We are also trying some experiments with a chirp up to 1 MHz wide, to look at the signal strength from various parts of the Moon.

HB9Q: Dan dan@hb9q.ch updates his activity from May until 18 Sept -- All initials are using Q65 or JT65 if not marked CW or SSB. I added on 70 cm: F4FET/P with 2 x 26 el yagis and 1 kW, KB7Q in DN45kq with 1 x 9 wl yagi and 500 W, W5EME with 4 x 21 el yagis and 400 W, KA6U in DN05kw with 2 x 25 el xyagis and 600 W, W5AFY with 5 m dish and 1 kW, N1AV with 2 x 25 el yagis and 700 W, KA6U in DN66gd with 2 x 25 xy yagis and 600 W, OJ0DX with 1 x 9 wl yagi and 450 W for 1st OJ0-HB9 QSO and DXCC #170, LY1G with 2 x 25 el yagi, 50 W and no LNA – his 1st EME, VP8EME in new grid, GD08ME with 1 x 25 el xyagi and 300 W, N9LHS, and K7KQA with 2 x 6 wl yagis and 250 W **for mixed initial of #1250*;** on 1296: JS6UJS with 3 m dish and 250 W, NQ7B using CW with 4.5 m dish and 600 W, W2BYP using CW with 8.4 m mesh dish and 300 W, SM0BSO using CW with a 2.2 m dish and 350 W, PA0PLY using CW with 3 m dish and 400 W, TK/HB9CRQ in JN41ml using CW with 1.5 m dish and 100 W, BG0DXC, KA6U in EM34 using CW 2.4 m dish and 300 W, KA6U in DN06mq using CW with 2.4 m dish and 300 W, OK2AQ in JN89eu with a 1.8 m offset dish and 250 W, DL6ABC with a 2.4 m dish and 200 W, AE6GD with 3 m dish and 300 W, KA6U in DN66gd using CW with 2.4 m dish and 300 W, KA6U in DN86he using CW with a 2.4 m dish and 300 W, KA6U in DN85ht using CW with 2.4 m dish and 300 W, **KA6U in FM19 with a 2.4 m dish and 300 W to complete WAS (State 50!)**, W7JW with 3 m dish and 300 W, EA2BRI with 2.2 m dish and 200 W, OK2UZL with 1.9 m dish and 250 W, KA6U in EM86 with 2.4 m dish and 300 W, and N5TM with 2 m dish and 200 W **for mixed initial #858*;** on 13 cm: TK/HB9CRQ in JN41ml using CW with 1.5 m dish and 90 W, and K3WM with 4.5 m dish and 60 W **for mixed initial #201*;** on 6 cm: TK/HB9CRQ in JN41ml using CW with 1.5 m dish and 80 W for DXCC 46, SP3XBO in JO81 with 3 m dish and 10 W for mixed initial #104*; and on 3 cm: TK/HB9CRQ in JN41ml using CW with 1.5 m dish and 50 W for DXCC 44, LZ4OC with 1.8 m offset dish and 20 W, 1st LZ-HB9 QSO and DXCC 45, ON5TA with 1.8 m offset dish and 13 W for DXCC 46, UR3VKC with 2.6 m dish and 16 W, GB2FRA with 3.4 m dish and 100 W, G4YTL with 1.8 m offset dish and 20 W, UR3VKE with 1.8 m offset dish and 30 W, and DJ7FJ with 3.3 m dish and 30 W **for mixed initial #205*.** We are always looking for initials. QRP stations are very welcome! During our activities we are stand-by on the HB9Q band-loggers. If you like to work us, send an e-mail to dan@ hb9q.ch or look for us on the loggers.

IK1FJI: Valter valter_dls@yahoo.it is QRV on 1296 with his new dish and writes -- Not much activity here due to holidays and other chores. I did work on 1296 using CW or SSB as noted on 21 July DL1AT (559/569), PI9CAM (57/58) on SSB, 21 Aug RA4HL (559/569), UA9FAD (539/559), SM5DGX (589/599), IK2DDR (559/569); on 24 Aug DL1AT (559/569); and on 25 Aug N0CTR (549/559) and N5BF (549/559). I'm very happy with the new dish; it works great! Meanwhile, I'm building a new spare output line for my TH327 PA, as I had a problem but solved with the original piece. If WX is good, I'll be QRI in the Sept ARI Contest. I have been setting to RX on 10 GHz with advice from N1BUG and KA1GT. So far, I have been able to receive the beacon and G4RFR. I tried to decode Q65E but G4RFR was on Q65D; their signal as seen on SDR was nice. My setup is a 1.2 me offset dish, modified LNB and locked PLL. I am getting 5 to 6 dB of Sun noise. Pointing the antenna is manual with 4/5 minutes needed to maintain tracking using the Moon's shadow. Now that RX is working, TX is next, but a long way off.

IQ2DB: Alessandro (I2SVA) i2sva@i2sva.it sends A Volta EME Team's report for July/August on 23 cm -- We try to be active most of the time, although we noticed days with very, very low activity. Overall, we added only 8 initials with K2M, PA100THALES, K5LA, AC0RA, OK2UZL, ZS1LS, RK9Y and RA3EME. We were active during the 23 cm leg of the RU EME Contest using WSJT only to make 31 QSOs and 19 mults. We found the participation was quite marginal. Very interesting and really challenging has been the trip by KA6U to activate many States and grids. Peter

has allowed us to reach 40 US States, so far. Thank you, Peter!! It was also very interesting to **participate in the 21 July SSTV Tests from PI9CAM**. After some initial problems - (mainly the automatic Doppler tracking), we were able to receive good quality images. Unfortunately, we were not prepared for a two-way QSO! We hope to see much more activity during the ARI EME Contest on 24/25 Sept. More info can be seen on our website at www.alessandrovoltaemecomo.com.

JA6AHB: Toshio <ja6ahb@plala.to> **has joined the elite 432 DXCC Club**; he is a long time EMEer and the oldest moonbounce operator in JA -- It took me 43 years from 1979 to successfully QSO with 104 entities on 70 cm purely by EME. When I had 103 QSL cards, I applied for 432 EME DXCC. I was very disappointed to learn that there would be no special mention of EME on the award. Even though there is a satellite communication mode DXCC award, there is still no EME mode award, even after several decades of EME communication. [Toshio urges EMEers from all over the World to petition the ARRL to recognize all EME QSOs for DXCC. He would also have CW DXCC by band recognized].

JH1KRC: Mike qq363gud@voice.ocn.ne.jp writes 3 days before the Prague EME conference – I strongly hope the 2022 EME Conference is a great success. I wish I could see my many friends world-wide, and specially UR5LX. Unfortunately, none of JA moonbouncers will attend the conference, mainly because of the restrictions in Japan due to COVID-19. The Japanese government still has not loosened its restrictions. Here the disease has become very infectious, but has already become less lethal. This situation has caused delays in many fields. It is still very difficult to go abroad; and back home many restrictions apply, especially for ordinary working people. We must be tested before return from travel and must isolate for two more days after arrival at home before we begin to work! The war in Ukraine is another worry for those of us who might have to travel over Russia. Flight schedules are reduced, and costly. **Regarding news of JA EME activities**: A group of primarily 2 m operators are planning dxpeditions to the Pacific again. It is not yet known if they will also operate on the higher bands. On 70 cm, JA6AHB has just completed QSOs with 100 entities. Toshio is the JA with the most years of EME operation. JG2TSL and others are making QSOs on the horizon on EME with modest power (50 W). Many of the JA 23 cm op's such as JA1WQF, JA4BLC, JA8ERE, and JA8IAD have moved up to the microwave bands; but JF3HUC, JA4LJB and JH1KRC are still active using CW/SSB. JH5LUZ is repairing his 5 m dish. JH3AZC and other JA op's are only active on EME using the digital modes. JA6CZD stopped EME operation some years ago, but has given his dish and systems for up to 24 GHz to JA4BLC. JA1WQF now has his 47 GHz license and is waiting for the dry season to begin 47 GHz operation with high power. Our greatest sorrow is missing two of our good friends: JA9BOH, vice-president of JARL, and a retired professor of the National Technical College. He was a pioneer in JA EME since the 1970's, and his strong CW fist was heard from 160 m up to 70 cm. Kimio slipped off his roof during antenna maintenance, and has been a silent key since 21 Feb, 2021. JA8CMZ, a skilled microwave engineer, who built many 23 cm thru 47 GHz SSPAs, passed away due to physical problems on 12 May, 2021. His test equipment and microwave tools/parts were inherited by his local JA8 friends. Please give a silent pray to these two.

K4CO: Joe (WA8OGS) gkreute@gmail.com sends the results of the Northern KY Amateur Radio Club's 432 EME dxpedition – Our members completed an introductory 3-hour EME operation on 30 July. This was at the QTH of KA4CTW in Union, KY (EM78). WC8RK, WA8OGS and KA4CTW started setting up around 1300 and were operational by 1500. The weather was nice, but the Moon was not visible. Contacts were OH2DG, DK3WG, DL8DP, PA2CHR, K5DOG, PA2V, W5AFY and DL1VPL. The three NKARC members operated the station with a number of others observing/learning about EME. One of the K4CO members was AB4WS – Jack, a Radio Show Podcaster that covered the EME operation on his weekly podcast both prior to and after the event. Equipment was IC-9700, TAJFUN 1000 running 450-500 W, antenna mounted LNA, 4x15 el 15LFA-JT horizontal homebrew yagis. It was overall a very successful operation. This group using the call N8GA also operated on 144 and 432 EME during the ARRL Sept Tropo Contest from EN80 in OH on 11 Sept, starting shortly after moonrise at about 0100.

K4CO KY dxpedition group

KB7Q: Gene geneshea@gmail.com has finally gotten his 23 cm station back together after a new updated 2.4 m W2HRO folding dish arrived -- I know a guy has to be ready for the ARRL EME contest! I worked a few stations while checking out the dish, and a new i7 laptop on 21 Sept; and logged SM5DGX (8DB), RD4D (12DB), RA4HL (15DB), N0CTR (22DB), IK1FJI (16DB), K5DOG (15DB), KD5FZX (12DB) and IK2DDR (21) all using Q65C.

KL6M: Mike melum@alaska.net was QRV on 5760 in the new first weekend of the ARRL MW EME Contest -- I am now calling it an 'event' rather than a contest because the often poor choices of low declination weekends preclude me from really competing. [If the DEC is far negative, Mike does not see the Moon at all. Of Course, if it high, he sees the Moon all the time!] Anyway, I managed to work five stations, OH2DG through the trees (559/449), G3LTF

(569/569), W5LUA (559/549) with tree blockage again, VE4MA (O/O) and K2UYH (559/559). Still great fun, even if just one QSO I claim success! For the next weekend I plan to work 13 cm and 9 cm.

KN0WS: Carl carlhasbargen@q.com sends his report for Aug -- I kept the chicken wire mesh off my 20' dish in 2020 when the pandemic hit. In 2021, right at the start of the ARRL Contest, a solder joint broke on my 70 cm loop feed, so I abandoned the band to operate 23 cm exclusively. This summer I placed the repaired loop feed back on the dish and the SWR measured a wonderful 1.03! So, I took my BEKO HLV-550 SSPA up north to try some power into the feed before the contest. Guess what? It was putting nothing out! I switched radios and then tried a simple switch, but could never get the PTT signal to be recognized. Hopefully my backup amplifier works in Oct. Not sure what to do with the BEKO, since shipping it and paying the customs that my local postal worker demands (even for repair work) would add up to quite a bit. I was looking forward to the "new" 4th ARRL weekend where operators might be focused on just 3 and 6 cm. Alas, in spite of about 5 hours of set-up and trouble-shooting the day before, I achieved zero QSO's over the course of 5 hours watching the Moon on 3 cm for the first moonpass. There were numerous issues, but the major one seems to be getting my computer with WSJT-X and my radio to work together. The laptop is new this year, it seems to randomly lose CODECS for sending and receiving audio signals and may be prioritizing software updates over Q65 decodes, as near as I can figure. It was very frustrating. I adjusted my definition of a "successful" moonpass to just completing one 3 cm QSO, but was still NOT successful. In spite of it all, I did take down the 3 cm gear and put up the 6 cm equipment for the second moonpass. I immediately saw G3LFT, UA5Y and PE1CKK on my MAP65 waterfall; but when I put the signals from the latter onto my screen, I got no decodes… Q65? check. Mode D check, 60s? check. Setup instructions to decode after EME delay? check. Clock OK? GPS software said I was within 5 mS of correct. Fast decode mode? Normal decode mode? Deep decode mode? Tried all three. I have to say that I hate "X" a bit more each time I use it. I am thinking of learning to use Linux and buying a machine that takes the latest Windows OS out of the equation, just to remove that variable. My "X" version is 2.5.4. Maybe I have to wait for the next version to have success again? This makes me worry about the future contest weekends, as my setup each time may look just fine - until a big, beautiful signal on my screen refuses to decode for some reason. I am at a loss, but perhaps someone out there has simple advice? Since I had no success on either 3 cm or 6 cm in Aug (I had not checked the "VHF and sub band" box in setting up WSJT), I was thus happy the 2nd ARRL MW Contest weekend! I setup the gear at my northern QTH knowing the WX forecast was for intermittent rain. I always wrap nylon electrical tape, use plastic bags, etc. to strategically protect my gear. The cloud cover gave me no visual cue for Moon position and I have discovered my long 2" dia solid steel polar mount shaft results in up to a ~ 2 deg error - not good on 13 cm. WSJT-X and Windows only agree on port settings on my laptops about 2-3% of the time, so rather than the usual several hours of struggle, I put "none" in for the radio and did without CAT control. I had dish pointing troubles, but was able to decode DF3RU (11DB), UA5Y(14DB), OH1LRY (14DB), DL1SUZ (14DB) and OK1KKD (21DB). I had forgotten my reading glasses, so had a bit of eyestrain trying to read my screen! Using Q65C I worked OK1CA (6DB/11DB), K2UYH (15DB/22DB) and initials with K3WM (10DB/12DB) and OK1KIR (10DB/18DB). My first year on 13 cm in 2017, I had 11 QSOs. Before the moonpass was over, a great thunderstorm hit. Lots of lightning, so I shutdown and moved away from my operating tent under the dish. About 2 hours and 1.5" of rain later, I was noting water getting into coaxial connections and my mount electrical controller, so I packed up very wet and drove home. I told my XYL I could not have been wetter, if I had gone swimming. Once home, where the WX was clearer, I set up for 9 cm for the 2nd Moon pass. After having waterfall screens full of interference on 13 cm, it was nice to see a clear waterfall except for EME signals. Not many were on the band. I tried to TX to several, who did not see me. I almost went to bed, but discovered a broken solder joint at my amplifier PTT line. Once that was fixed, I got three Q65C QSOs in 20 mins with OK1CA (8DB/12DB), DF3RU (15DB/14DB), VE6TA (14DB/17DB) and K2UYH (9DB/14DB). A little spider bit my ring finger when up north, so I took my wedding band off and then discovered I was missing my 37 year-old wedding band. Oh well, at least I was not hit by lightning! My 2022 ARRL MW totals were zero on 3 and 6 cm, 4x3 on 9 cm and 4x4 on 13 cm.

N1AV: Jay whereisjay@gmail.com reports on his busy summer adding States on EME, but is thinking about another dxpedition to HI -- I have spent the past month chasing KA6U in several new States and grids. Currently, I am sitting at 43 States on 1296 due to his and other rover efforts this summer. It has been very exciting. I see a path to all 50 by the end of the year. My monsoon season this year has been making it very difficult to keep my dish aligned with several 70+km wind gusts that keep blowing the dish off axis. A lot of work was done by headlamp to keep it operational. On 432, my array's aiming is still not perfect, but I am enjoying working folks on this new band for me. I plan on being active on 144, 222, 432, and 1296 EME for the upcoming 50 - 1296 ARRL EME Contest weekends. I want to talk with any *smaller* 1.2 m ~ 1.5 m dish users operating on 10 GHz EME. I want to bounce several questions off them on their systems.

N5BF: Courtney's courtney.duncan.n5bf@gmail.com 23 cm Sept EME report follows -- New stations worked since my last report are KN2K (16DB/21DB) for mixed initial #292*, KA6U WV (18DB/22DB) #293*, K5LA (21DB/20DB) #294*, DJ7FJ (14DB/12DB) #295*, AC0RA (32DB/26DB) #296* in IO, N6RZJ (26DB/25DB) #297*, and KA6U (22DB/25DB) #298* in TN. With KB7Q and KA6U active, N1AV's trip to HI last spring, and new portable stations such as AC0RA indicating they might also do some State dxpeditions, many are expecting to soon complete 23 cm WAS. Many are in the high 40s States count. TN makes State #36 for me, which is surprising since WAS was never

a 23 cm EME goal of mine. I did, of course, keep track and so now I'm up to the point where I need to make up a list of "still needed" States and take this seriously! My current IF rig is an IC-705 (operating on 2 m). This rig is also used for terrestrial contesting on 3 cm; I was active in the "10 GHz and Up" tropo contest. For 3 cm, I use the IC-705 as a 70 cm IF. Upon return from the field after that weekend, there were some issues with the setup of the IF rig. Some, such as being off frequency by 500 Hz, have been resolved. I forgot to turn XIT off. Some, such as the USB AF levels from the computer being changed are still not resolved. This is all the more odd because the same computer and same version of WSJT-X are also used in the field on 3 cm as are used on 23 cm EME in the shack. Back on 23 cm EME I learned something very interesting. The 23 cm EME setup at my QTH has the feature that horizons to the east are at about 15 degs due to hills and 30 degs due to trees. To the west, my horizons are about 5 degs due to hills, but most of my western sky is below about 60 degs elevation and obscured by backyard trees. I had learned over the years not to let this stop me from operating at moonrise to the east. I would just watch starting at elevations 10-14 degs and when I started getting decodes would start calling stations. The trees don't block the signal, they just attenuate it and add noise to the receiver, but it is still possible to work the larger stations through them. Curious as to whether something like this might also be true do the west (though there are fewer stations to work there) and possibly just because some good westward viewing times occurred in the last few months that were convenient to me and others around the Pacific rim, I tried some operation to the west. As I might have expected, the pine trees in the back yard did attenuate and add noise but completions with moderate to large stations are still possible. Below those pines, there is a layer of oaks, which I had heretofore considered to be just pure 50 ohm absorbers at 23 cm for any elevation below about 15 degs. Just as I was getting down into the oaks 28 Aug VK2JDS started calling me. David reports 5 m and 130 W. so that would ordinarily be a big signal. I have worked him several times in the past with reports such as (17DB/11DB) but this evening, despite my warnings on coordination not to bother since I was down in the thick of the "absorber" already, he started calling and we started getting decodes both ways. We did not formally complete, and signals were down 1-2 dB on every over, but the reports were still (22DB/26DB). There are at least two things to be learned here. First, oaks, even in the height of summer are not "perfect" absorbers. Some signal still get through. Second, Q65 will dig signals out of the noise down to its theoretical limits; and if you have 15 dB additional over "typical" in the current situation that is every reason to give it a go. At the end of last year's ARRL EME contest, I worked HS0ZOP (25DB/21DB) under similar circumstances. I have also tried "CW through the trees" with less stellar results but some success where it had been heretofore unexpected.

NC1I: Frank frank@NC1I.COM writes that **the big news for here is that on 1 Sept, I was issued 1296 WAS #4**. I never expected to reach WAS so quickly and receive such a low number. My goal was to make the top 10 and as recently as six months ago I doubted that would even be achievable. I worked my last State (KA6U in TN) on 31 Aug. Peter uploaded to LOTW almost immediately confirming my #50. That gave me 38 States confirmed on LOTW and I had paper QSL cards for the remaining 12 States. ARRL Headquarters is just a 40-minute drive for me, so I brought my completed application along with my 12-QSL cards down to the ARRL on Thursday morning 1 Sept. My cards were checked, and the award was processed while I waited. It was a very good day! I would like to give special thanks to KA6U for providing 12 States, KB7Q for 7 States, and N1AV for Hawaii! W2HRO also played a significant role with his design and fabrication of the folding dishes and patch feeds these stations used. I am sure there will be quite a few more 1296 WAS applications received at ARRL in the near future due to the huge contributions from all four of these gentlemen. Thanks to all of you! BTW, I have worked all 50 States on EME, but I do not have an EME confirmation for my own State of MA; so, I had to use a QSL for a non-EME QSO. All other 49 States submitted for the award were EME QSO's. My first 1296 EME QSO was with K2UYH on 9 Nov 2013. Other than chasing KA6U around the country this past summer for my last four States on 1296, I have not been very active. I took a lightning strike back in late May and still have problems on 432. I was in Maine at the time of the lightning hit and fortunately all of my shack equipment was disconnected. The 432 relays and preamp up on the tower did sustain damage. After some work the station is operational again, but my RX is down 4 – 5 dB. It will be late Nov or early Dec before I can make complete repairs. My home (3 km from my shack) sustained far more damage. Two big screen TV's, my brand new computer, two cable TV boxes, and my well pump controller were all destroyed. After our WV (WR8AA, see at end) dxpedition, W1QA and I hope to activate VT on both 432 and 1296 in late Nov. We will see how our schedules go and how the VT weather is at that time. Hopefully by late Dec or Jan I can be more active from the home station (operating remotely).

OJ0DX: Sebastian (DG5CST) ***dl3dxx@darc.de*** was QRV 70 cm EME from Market Reef as OJ0DX (JP90NH) on 25-26 July. It was mainly a HF/6 m dexpedition by group consisting of DG5CST, DL3DXX, DL6FBL and SM0W. So EME operation was just an additional activity. Sebastian was running 70 cm with single 38 el 9WL M2 H-pol antenna and 500 W SSPA, which was amodified TV amplifier. He was QRV 70 cm (Q65B only) for 2 days and worked following 30 QSOs: HB9Q (15DB), DL7APV (15DB), OZ4MM (12DB), OK1KIR (16DB), OK1DFC (14DB), W7JW (25DB), PA3DZL (20DB), DK4RC (14DB), PA3CSG (21DB), DL6SH (19DB), OH2DG (21DB), ZS4TX (31DB), UA3PTW (24DB), NC1I (20DB), PA5Y (28DB), AA5C (26DB), DL4DTU (23DB), DK3WG (25DB), ON4AOI (24DB), PA2CHR (24DB), PA2V (22DB), ZS6JON (23DB), K5DOG (25DB), SM7THS (23DB), W5AFY (27DB), W2HRO (26DB), NN3Y (23DB), S56P (26DB), S57M (27DB) and DL1VPL (32DB) - smallest station worked). [OJ0 is a separated DXCC and different than better known OH0, which is Åland Islands].

OK1CA: Franta fr.strihavka@seznam.cz reports on his recent MW activity -- I was QRV on 3 cm in the first part of ARRL EME Contest. The conditions were not very good because of high attenuation on the path from Earth-Moon and high spreading of signals. There was heavy fog at my QTH on Saturday and a heavy thunderstorm came through in the afternoon; luckily, there was no damage. Activity was high with around 40 stations and traffic was mostly on Q65D. Just OZ1LPR, F5JWF, OH2DG, DL0EF and WA6PY were on CW. Using Q65D and E, I added initials with JA1WQF, ON5TA, LZ4OC, UR3VKE, DL7NN, CX2SC, OH1LRY, VE4MA, BD4SY, IW2FZR, G0OLX, DJ7FJ and DL6ABC to bring me to digital initial {#81}. My total score for 1st weekend was 34 QSOs and 22 multipliers. I was happy to add 3 to my DXCC list with LZ, CX and BD. I also QSO'd OH1LRY on our 6th EME band from his club station! I was QRV again in Sept for part 2 on the 13 and 9 cm bands. I used an assembly with feed + LNA for 13 cm and feed + TRV+LNA+SSPA for 9 cm. The whole assembly weighing 12.5 kg was placed in the focus of my 10 m dish and allows a quick change between 13 and 9 cm. On Saturday I was QRV on 13 cm and made 3 digi initials with K3WM, OK1USW and OK1KKD {#31}; and a CW initial with DL1SUZ #166. My total 13 cm score for the contest was 19x14. The activity was low; no stations were heard from VK and JA; and a lot of stations from EU were missing. On Sunday I was on 9 cm and QSO'd using CW G3LTF, VE6TA, DF3RU, WA6PY and K2UYH, and using Q65C KN0WS. My 9 cm score for the contest was 6x6. Out of the contest I worked using Q65C DF3RU {#14}. There was good activity from NA; only KL6M was missing due to strong winds in Alaska. Bad weather also affected the participation of EU stations on both 9 and 13 cm. My total score for both parts of the ARRL MW EME Contest on 13, 9 and 3 cm bands was 59 QSOs and 42 multipliers. I think two MW weekends (6+3 cm and 13+9 cm) in the ARRL EME Contest is a good idea.

OK1CA's 13 and 9 cm multi-band feed

OK1DFC: Zdenek ok1dfc@seznam.cz reports on the first leg of the ARRL MW Contest – I wanted to operate during both windows on the weekend, 27/28 Aug on the 10368 and 24048 bands. Unfortunately, I was in the UK on business the week before the contest, and had to leave before completion of the new control unit enabling parallel control of both my 8 and 2.6 m dishes. On the Saturday of my return, bad weather prevailed, which gave me little excuse for not being QRV on at least some of the MW bands. When I finally finished the control unit and tested the parallel rotation of the two antennas, the Moon was already below the horizon. So, I prepared my equipment for the next morning and went to sleep peacefully. I was up relatively early on Sunday morning, and did another test of the Sun noise measurements using the updated Console 3.2 software and its Continuum add-on. I was surprised at the accuracy of the readings and, in truth, the readings I took with several repetitions to see if there was an error. Minor adjustments to the RX path resulted in improved reception. I listened to the Sun at 3 cm through clouds and relatively high humidity and measured 14.6 dB and the Moon after its rising above the horizon gave 2 to 2.3 dB depending on cloud density. After that, I turned my attention to traffic. Due to the large spread on signals, I opted for Q65D operation and devoted the entire orbit to digital operation. I never had a chance to test the 24 GHz band. I decoded all stations very easily and the decoded reports convinced that the work on the RX path was not in vain. I finished just before moonset with 31 QSOs and 21 mults, including 3 DXCCs (BD, ON and LZ) and a number of JT initials. Contacted were at 0652 JA1WQF (8DB/9DB), 0702 UA5Y (0DB/11DB) for digital initial {#78}, 0708 OK1CA (3DB/8DB), 0712 PA3DZL (8DB/11DB), 0743 BD4SY (12DB/17DB) {#79} DXCC 37, 0752 OK2AQ (6DB/15DB), 0759 OZ1LPR (5DB/6DB), 0827 GB2FRA (**+6DB**/12DB), 0835 F6BKB (5DB/11DB), 0848 UR3VKE (11DB/14DB) {#80}, 0856 IK6CAK (10DB/14DB), 0918 LZ4OC (12DB/16DB) {#81} DXCC 38, 0927 ON5TA (12DB/13DB) {#82} DXCC 39, 0936 PA0PLY (6DB/14DB), DJ7FJ (4DB/6DB), DL6ABC (0DB/11DB), 1002 DL7NN (3DB/14DB) {#83}, 1014, IW2FZR (11DB/12DB), 1029 OE4WOG (6DB/10DB), 1053 ZS1LS (12DB/14DB), 1128 OH1LRY (8DB/13DB) {#84}, 1305 G0OLX (15DB/21DB) {#85}, 1309 W3SZ (+**3DB**/13DB), 1318 CX2SC (10DB/15DB), 1401 OH2DG (0DB/9DB) {#86}, 1416 WA3RGQ (9DB/19DB), 1444 VE4MA (3DB/10DB), 1456 K2UYH (16DB/13DB), 1501 F5VKQ (6DB/10DB), 1552 IK0HWJ (**+1DB**/12DB) and 1614 G4YTL (10DB/12DB). I plan to focus on 13 cm in round two. I was also QRV the following weekend on 1296 using Q65C when KA6U was again active. Unfortunately, I had missed him the week before the contest in West Virginia, which was one of the two last US States I needed for WAS. When Peter was in Vermont, I worked him very easily; he said that he would pack up his gear and return to WV to contact me. He did indeed appear operating from a parking lot of a hotel in WV; and I made a last minute QSO with him **to give me State 49!** The Moon was almost over the horizon, but the QSO was made, at 1745 on 29 Aug. The next day, I worked KA6U (8DB) from VA. Then on 31 Aug, Peter moved to Tennessee. The moon was just over my horizon, but he decoded an excellent (8DB) signal from me to give me my **50th State (TN) and WAS on 1296**. I was overjoyed to have achieved this rare award after nearly thirty years of EME operation. Many thanks to **KA6U**, **KB7Q**, **K6MG** and **N9JIM** for their dxpeditions in the USA that made my dream possible. Special thanks to **N1V** for his expedition to **Hawaii** in March of this year. And of course, to all the others who are on my WAS 1296 list – see my website.

OK1IL: Ivan **ivankait@netscape.net** writes about his pleasure in attending the Prague EME Conference, and his recent 1296 EME activity -- Since May, I worked initials on 23 cm using Q65C with the TK/HB9CRQ dxpedition for my DXCC 70, VE7ZD, W7JW, GI4DOH with a 2.4 m dish and only 20 W for my DXCC 71, OH3DP, OK2AQ, K2M and W5AFY. My biggest enjoyment was 23 QSOs with KA6U in 23 different US States! It brought my WAS score to State 45. I am missing only IA, OH, LA, GA and HI. I missed N1V in HI to my great frustration. My last State worked with Peter in TN, after 22 states worked relatively easily; TN developed into a real thriller. After KA6U announced on the HB9Q logger that I was next; nervously, I increased my exciter power to the PA slightly. This caused my BEKO SSPA overload alarm to trigger. Nov even more excited, I reset the alarm without decreasing my drive power. The overload triggered again, and this time generated a spike that killed my G4DDK LNA. I announced feverishly that I needed to QRX for 20 min. I moved my telescoping mast down, tilted it, opened the preamp box, and replaced the preamp, and then had to bring the mast back to its operating position. After coming back to the shack, I found that Peter now had an RFI of 8dB, and could not decode anyone. It took another hour until Peter installed a cavity filter in front of his LNA and started to decode again. The RX line of my WSJT display finally colored RED and a QSO completed about 15 mins before my moonset. My shirt was sweated wet. Big thanks to Peter for his great roving dxpedition across the US. I hope, that all of us made him a donation for his unplanned ed travel costs. The fun was worth of it!

OK1KIR: Vlada vlada.masek@volny.cz and Tonda send their latest EME report -- Last month on 70 cm we worked using Q65B on 25 July at 1021 OJ0DX (21DB/16DB) for digital initial {#323} 1st OJ0-OK QSO on 70 cm and new DXCC; on 21 Aug at 0800 KA6U (16DB/28DB) {#324} in NY State (we mistakenly used H pol on TX while Peter was best on RX V pol; our own echoes returned with a 90 deg shift). On 23 cm using Q65C we worked on 21 Aug at 0535 KA6U (14DB/18DB) for digital initial {#489} in NY State and 0551 RA3EME (4DB/4DB); on 22 Aug at 1015 KA6U (11DB/14DB) {#490} in DE; **on 23 Aug at 1333 KA6U (14DB/16DB) {#491} in WV as the last missing US state for WAS on 1296 - finally completed after 41 years spent on 23 cm! -** many TNX to Peter; 1351 F4DWB (15DB/12DB) {#492}, 1459 KN2K (13DB/16DB) {#493}, 1508 VE7ZD (13DB/15DB) and 1535 W5GLD (6DB/12DB) {#494}; on 29 Aug at 1335 KA6U (15DB/14DB) {#495} in MD; on 30 Aug at 1352 YL2FZ (19DB/16DB) {#496}, 1411 KA6U (21DB/21DB) {#497} in VA and 1445 OK2UZL (9DB/9DB) {#498}; on 31 Aug at 1407 UA1OEJ (23DB/21DB) {#499}, 1520 EA2BRI (16DB/9DB) {#500} and 1554 KA6U (12DB/17DB) {#501} in TN.

OK2AQ: Mirek mirek@kasals.com writes on his recent 3 cm activity -- The 1st weekend of the ARRL MW EME Contest took place on 27/28 Aug; and the participation was, at least on the 3 cm band, very decent. Around 40 stations from five continents participated (only Australia was missing). I added since 18 Aug, on which I immediately made two digital initials with DL7NN {#120} and LZ4OC {#121} and DXCC 41; and on 20 Aug ON5TA {#122} and DXCC 42. I had a total of 17 QSOs pre-contest, and in the contest a total of 34 QSOs with 23 mults. Worked using Q65D were UA5Y, OZ1LPR, UR3VKE {#123}, OK1CA, IK6CAK, GB2FRA, DJ7FJ, DL0EF, PA0PLY, W3SZ, PA3DZL, ON5TA, WA3RGQ IK0HWJ, W5LUA, VE4MA, OH1LRY {#124}, CX2SC, OE4WOG, DL7NN, K2UYH, BD4SY {#125} and DXCC 43, JA1WQF, OK2DFC, F6BKB, G0OLX {#126}, IW2FZR, LZ4OC, ZS1LS, OH2DG, G4BAO, G4YTL and VE6TA. CW was relatively difficult with the large spreading. I only worked on CW DL0EF (twice) and DB6NT (569/559). Several QSOs were made under truly boundary conditions. Apart from the G0OLX (24DB/21DB), when we made the connection only after switching from Q65D to Q65E, there were QSOs on Saturday with K2UYH (18DB/17DB) and on Sunday with VE6TA (26DB/24DB), during which I already had the Moon between the trees just before moonset. The joy was all the greater we were successful. My complete log can be found at https://www.radio.feec.vutbr.cz/esl/files/EME/LOG/EME_LOG_10G.htm.

OK2PE: Karel ok2pe@kbb.cz sends his report for the ARI EME Contest on 23 cm using CW only: The start of the contest on Saturday was a bit strange. I could not hear anything. I think possibly because it was only 7:00 local time. I try to listen to the local OK0EK beacon and nothing. So, I tried my own echoes and heard myself come back FB. I logged my first contact at 0559 with IK3MAC. After that it was quite good; I made a QSO ~ every hour. Unfortunately, the contest date was not well chosen. The Sun was too close to the Moon and was making a lot of noise. I made my last contact with OK1KIR with the Moon in the forest. On Sunday, the situation was repeated, minimal activity early in the morning, and then as the stations got up, activity improved. I QSO'd first at 0843 IK5VLS, and my last at 1231 with DF3RU. I was pleased to add an initial with SA6BUN. I was unable to work OM4XA. I heard him, but did reply. Many regular stations were not in the contest this year. I made a total of 12 QSOs and sent in my log. In the Spring I made 17 QSOs but did not send my log in. If I did I woujld have been in 2nd place!

OM4XA: Fero ***cesnekf@gmail.com*** was inactive because of health but was QRV again for the ARI Contest – I did not expect to be off the air for so long a period. I was still in the hospital on Friday before the contest on 23 Sept. They released me in the afternoon, so I checked my setup in the evening and Saturday morning just after moonrise started listening on 1296. At first it didn't look like there was any contest, but gradually stations started showing up and traffic picked up. By moonset I had logged 34 QSOs, 9 on CW and the rest using Q65C. The next morning the situation was repeated and the activity started even later. By the end, I had added 24 more stations with 3 on CW and two DUPs for a total of 56 QSOs. I added 10 digi initials with JS6UJS, W2ZQ, W7JW, N5TM, OH3MCK, OK2UZL, LU1CGB, W3HZU, OE5VRL and VE6TA {#172}. I am looking forward to the Oct ARRL Contest weekend on 23

cm. Hopefully nothing will go wrong and I will enjoy the Contest.

ON5TA: Eric eric.vanoffelen@gmail.com was very pleased to meet so many old friends in Prague; his EME report follows -- I was QRV on 10 GHz for the first leg of the ARRL MW Contest with a 1.8 m offset dish and just 13 W at the feed. Working with such low power was a challenge but I was able to complete a total of 15 Q65D QSOs and added 2 DXCCs with BD4SY and UR3VKE. I copied CX2SC with a nice Q65D signal but a little more power on my side was needed to work him. On 27 July, I was also very happy to QSO LZ4OC on 10 GHz for a another DXCC. I am now rebuilding my 6 cm EME station and hope to be QRV there also in a month or two.

PA0PLY: Jan pa0ply@pa0ply.nl has been concentrating on 3 cm –I worked on 24 July CX2SC on 10 GHz. Rick is using a 1.8 m dish and 10 W. It turned out to be quite a challenge. I copied him with Q65D with good signal, but he did not copy me. We then switched to Q65E and we got copies on both ends (19DB/20DB) but it took several cycles and needed averaging results. I was next on 3 cm for the ARRL MW Contest on 27/28 Aug. Conditions with the Moon at Apogee did not seem good enough to run CW here. Therefor I concentrated on the digi QSOs only. There was a lot of activity in this mode. Two high power stations could be copied easily all the time: OZ1LPR and UA5Y. Later GB3FRA showed up with a big signal, but appeared to have some RX issues. In the 1st moonpass I worked UA5Y, OK1CA, JA1WQF XB, OZ1LPR, F6BKB, UR3VKE for mixed initial #62*, IK6CAK, DL0EF, LZ4OC, W3SZ, GB3FRA, WA3RGQ #63*, OK2AQ, G4BAO, PA3DZL, OH1LRY, K2UYH, DL7NN and VE4MA; and in the 2nd BD4SY #64*, OE4WOG, OK1DFC, ON5TA, ZS1LS #65 **for WAC** [only station in the African on 3 cm], IW2FZR and DL6ABC for a total of 27x20. The performance of my system was doubtful, since I measured only 1 dB of moonnoise. After the contest, I performed Hot/Cold tests with the feed and found only 3 dB max, which indicated a system NF of 2 dB. This confirms something is not optimal. I believed that under illuminating my dish (f/D= 0.3) using a SM6FHZ feed (optimized for an f/D of 0.35) would be near optimal on RX. Further investigation showed I have losses due to switching for WG16 to WG17, using to much flanges etc. Unfortunately, I was stopped from further investigate by my Eaton 2075 NG analyzer failure with a big bang. Some of the capacitors exploded in the power supply. I'm quite happy with the results of the contest; particularly knowing that I have a far from an optimal system.

PA2V: Peter pa2v@advipe.nl reports on the ARI EME Contest -- I was on 432 for on for only a few hours but was able to add 2 initials. Conditions were good with strong signals from EU, NA and VP8EME. I do not participate in this or any contest as long our Ukraine friends cannot be on, but will send in a check log.

PA3DZL: Jac pa3dzl@icloud.com enjoyed the EME2022 in Prague, and reports on his recent activity thru the beginning of Sept – I was active on 30/31 July in the 9 cm DUBUS EME Contest using CW unless noted and worked VE4MA with Q65C as a non-contest QSO, G3LTF, WA6PY, DB6NT for mixed initial #72*, KL6M, OH1LRY, OH2DG, SP6OPN, VK4AFL (XB), DL4DTU, G4NNS, OK1KKD, PA100THALES, GM4PMK with Q65C #73* and DXCC 32 as a non-contest QSO, VE4MA and VE6BGT for a score of 14x14. I also QSO'd on 70 cm using Q65B unless noted R1NW (JT65C) for mixed initial #323*, PA3FWV #324*, KA6U in FN32 #325* and State of NH, GW4ZHI #326*, N1AV #327* and KA6U in FN21 #328* for State of NY; and on 23 cm using Q65C KA6U in FM29 for mixed initial #495* and State of DE, BG0DXC #496*, KN2K #497*, KA6U in FM19 #498* for State of WV, K5LA #499*, KA6U in FM19 for State of MD, OK2UZL #500*, KA6U in FM19 for State of VA, YL2FZ #501*, EA2BRI #502* and KA6U in EM86 #503* for State of TN. During the ARRL MW Contest on 27/28 Aug, I worked on 3 cm using Q65D GB2FRA for mixed initial #104*, UR3VKE #105*, OZ1LPR, OK2AQ, UA5Y #106*, PA0PLY, DJ7FJ, W3SZ, VE4MA, IK0HWJ, OK1CA, LZ4OC, OH1LRY, JA1WQF (XB), OK1DFC, BD4SY #107* and DXCC 37, F6BKB, OE4WOG, ON5TA, DL7NN, IW2FZR, G4YTL and G0OLX #108* for a total of 22x18.

PI9CAM: Jan (PA3FXB) jvnvmu@gmail.com reports on CAMRAS' annual Lunar Landing EME SSTV party -- 53 years ago Neil Armstrong set foot on the Moon. It has become a tradition since the 50th anniversary of this event to celebrate this event with SSTV on 23 cm EME. On 21 July we partied despite the fact it was a normal weekday and were pleased to have a good number of 'visitors' join us! Stations watching the images and reporting their results were IK1FJI, LU8ENU, XE1XA, KB2SA, OK1DFC, OH2DG, IK7EZN, IQ2DB, K5DOG, OK2AQ, VE3NXK, OK2DL and CT1FGW. We sent several Apollo 11 images to the Moon using MMSSTV in Martin 2 mode. We also sent some images form the James Webb Space Telescope to the Moon. OK2AQ with his 1.8 m dish was able to receive our images! We had a complete SSTV QSO with XE1XA via the Moon with great quality images. We were surprised that KB2SA with only a 1.9 m dish also managed to have a QSO in SSTV with us! SSTV via the moon is not easy but this party once again proved that it is possible even with small systems. Because it was such fun, we are considering organizing a 'end of the year' EME SSTV party in Dec.

SA6BUN: Michael (SA6BUN/DL3YMK) is QRV on 23 cm – I have been QRV since 12 Aug with a new 5 m dish (f/D 0.4). My first QSOs using CW have been completed and the performance is exactly as theoretically anticipated. The pedestal was CAD-designed by DL3YBR and built by a dedicated metal shop in DL, using slewing gears for AZ and EL rotation. This system was successfully integrated some years ago with the existing 3 m solid dish used for 6, 3 and 1.2 cm, providing very precise tracking. The feed is a modified RA3AQ-type with a homebrew LNA (0.25 dB NF @ 40 dB gain), directly flanged to the feed. The SSPA mounted at the dish delivers 1 kW into the horn (legal limit in SM). For the time being the dish will be used for 23 cm EME, after the expected loss of the band after WRC '23, it

will be used for 6 and 3 cm, as well as for DSN observations.

SA6BUN's new 5 m dish now on 23 cm

UR5LX: Sergey ur5lx@ukr.net made it to EME2922 Prague Conference and had a wonderful time. He sends his greetings and great thanks for all the help with the trip! He is back in Poltava town and is anticipating a time when he can return to his home near to Kharkiv (only few km from UR/UA border). He writes about the situation in Ukraine -- *In three days, the aggressor troops almost completely left the Kharkov region. There was a small strip across the Oskol River and part of the city of Kupyansk on the other side of Oskol. There is little to change in my village. Shelling of neighboring villages continues. Few days ago, a large thermal power plant, CHPP5, was hit. Near Kharkov. Several regions of Ukraine were left without electricity. During the day, it was possible to restore power in almost all areas. I think it's still to dangerous to go home and wait for now".*

VE3KRP: Fast Eddie's eddie@tbaytel.net report for the end of Aug -- I haven't been on EME since May of this year due to many things, which I won't bore you with. I received a nice welcome back on 28 Aug when I worked on 23 cm using Q65C RA4HL, IQ2DB, W7JW for a mixed initial (#*), IK7EZN, DF2VJ, I7FNW, KB2SA, KC2HFQ (#*), LA1TN (#*), VE3NXK, N0CTR, XE1XA and N1AV. It was nice to see all the activity and new stations on the air. Hopefully I will find some time for more activity as I make the most of our short summer or as I call it "two weeks of bad skiing".

VK4AFL: Trevor tbenton@bigpond.net.au was active in the DUBUS-REF 9 cm Contest on 30/31 July – The weekend produced some very good signals especially during the last Moon pass. I worked on CW KL6M, WA6PY, OH2DG, DB6NT for an initial (#), PA3DZL, DL4DTU (#) and PA100HALES (#) for a score of 7x7. I am using 3.7 m dish with 70 W at the feed. [Trevor was also QRV during the ARRL MW Contest weekends, but we have not yet received his report].

W3SZ: Roger w3sz73@gmail.com was active on 10 GHz EME during the ARRL MW EME Contest weekends. He is using an 8' dish that can track the Moon to a tenth of a deg; and is running about 275 W from a TWTA. He uses waveguide to get power from his shack to his feed horn. He completed 28 QSO on 3 cm using both CW and Q65D during the 1st MW EME weekend.

W3SZ with 8' dish used on 3 cm

W5AFY: Dan wb5afy@wb5afy.net sends news of his EME on 23 cm in Aug -- It was a busy month on 1296 following KA6U around to add lots of new States and grids. Stations worked were on 13 Aug KA6U in KS, on 14 Aug KA6U in MO, OK1IL, YO2LAM and DK3WG, on 15 Aug KA6U in IN, on 17 Aug KA6U in VT, on 20 Aug KA6U in NH, RX6AIA and RA3EME, on 22 Aug KA6U in DE, on 23 Aug KA6U in WV, on 29 Aug KA6U in MD, RA4HL, DG5CST, AA4MD and KD5FZX. My States total is now on 23 cm at 40 worked and confirmed, and total mixed initials #161*. I am in the process of working on a TH-347 amp and am searching for some spare tubes. If anyone has extra TH-347's that they would like to sell or trade please let me know. You can reach me at 972-839-6992 cell.

W5LUA: Al w5lua@sbcglobal.net reports on his Aug activity -- In mid Aug, on 23 cm I worked KA6U in 3 new grids, FN32, FN41, and FM19. Then on the first weekend of the ARRL MW Contest (27/28 Aug), I spent a few hours on 3 cm on Saturday working OK2AQ, OZ1LPR, LZ4OC, UA5Y, GB2FRA, DL7NN, VE4MA, OK1CA, W3SZ, WA3RGQ, and K2UYH using Q65D. On Sunday I operated on 6 cm and QSO'd UA5Y, PE1CKK, IK3COJ, WA3RGQ, DF3RU, CX2SC, VE4MA and K2UYH using Q65D. On CW, I worked G3LTF, SM6FHZ, SQ6OPG, WA6PY and KL6M. I ended with a score on 3 cm of 11x11 and on 6 cm of 13x13 and overall 24x24. For some reason, the next segment of the ARRL microwave EME contest is on the same weekend as the ARRL 10 GHz contest. I will be concentrating on 10 GHz terrestrial and do not expect to be on EME.

WA6PY: Paul pchomins@san.rr.com has sent his report for the ARRL MW Contest – During the 1st weekend (Aug) and the 2nd (Sept) I worked using only CW by band: **on 13 cm** on 17 Sept G3LTF, K3WM, OK1CA, SP7DCS, KL6M and OK1KKD for a score of 7x6 – (more stations were heard on 2320, but I couldn't get their attention); **on 9 cm** on 18 Sept VE6TA, OK1CA, DF3RU, K2UYH and G3LTF for a score of 5x5 – (for the first time on this band I had very bad QRM from digital transmissions with drifting carriers every 300-400 Hz, a continuous signal with no bursts as on 6 cm making copy difficult for even big signals but at 1037 the QRM suddenly disappeared; the noise floor on the power meter went down by 3 dB); **on 6 cm** on 27/28 Aug G3LTF, SM6PGP, DF3RU, VE4MA and W5LUA for a score of 5x5 – (had relatively high libration burred in with WiFi like QRM made copy a real challenge); **on 3 cm** 28 Aug OH2DG and OK1CA, and on 17/18 Sept DB6NT, OZ1LPR, HB9BBD and HB9BHU – (on 18 Sept I was called by JT station, but I didn't have my laptop in the shack to see the callsign). I was unable to participate in ARI contest due to conflicting activities. My total score for the MW part was 23x21.

WR8AA: Frank (NC1I) frank@NC1I.COM writes that the 70 and 23 cm WVA dxpedition is on -- For those that missed KA6U's very successful 1296 activity from WVA there will be another opportunity to work this rare State. After two postponements over the last 15-months due to the pandemic, health issues, and busy schedules, W1QA and NC1I plan on activating WV on 432 and 1296 in Oct. We plan on operating a single moon pass on 432 and two full moon passes on 1296. Operation on 432 will be on Friday 14 Oct and 1296 operation will be on Saturday 15 Oct and Sunday 16 Oct. Yes, that puts our 1296 activity during the ARRL contest. Ideally, we would not schedule a dxpedition during the contest but unfortunately due to our schedules and other factors these are the only dates that we could make work. We will be using the call WR8AA and the grid is FM09 (different grid from where KA6U was active). Activity will primarily be Q65 but once we have worked through the digital callers, we can switch to CW on request. Our 1296 station will be a 2.4 m TVRO dish, a G4DDK preamp, and about 450 W at the feed from a BEKO amp. Our 432 equipment will be the same as we used last year from CT and NH, 4 x 12 el M2 yagis with full polarity rotation and about 600 W at the feed. This will allow us to work single yagi stations with modest power. BTW we have replaced the phasing lines on this array after having some issues with them last year in both CT and NH. As with all our past dxpeditions, we will automatically mail QSL cards to everyone in our log. If your qrz.com address is incorrect, please email NC1I with your correct mailing address. We will need to have QSLs printed after we return, so it will likely be mid-Nov before we can get QSL cards in the mail. If you wish to send a card in return it can be mailed to NC1I's qrz.com address. We also expect that we will be able to get all QSOs uploaded to LOTW. A day or two prior to our operation we will post an update on MoonNet and on the Make More Miles on VHF site. There is some uncertainty if we will have Internet or cellular access, and unfortunately we will not know if we will have reliable service until we get to the site. If we do have Internet access, we will be logged into HB9Q during our activity. There is a chance that we will activate VT on 432 and 1296 in Nov or Dec depending on the early winter WX. Our last activation from VT was in 2015.

K2UYH: I (Al) alkatz@tcnj.edu am still catching up from our trip and the Prague EME 2022 Conference. It was a truly memorable event that will be remembered by many as one of the best! Despite many non-EME distractions, I was able to be QRV for the 1st ARRL MW weekend to contact using Q65D unless noted on 27 Aug on 10368 at 1610 W3SZ (11DB/19DB), 1612 OZ1LPR (15DB/15DB), 1657 PA0PLY (18DB/17DB), 1700 OK2AQ (17DB/18DB), 1709 IK2CAK (18DB/19DB) and 1759 W5LUA (11DB/19DB); and on 28 Aug on 10368 at 1452 OK1DFC (13DB/16DB), 1503 GB2FRA (2DB/13DB)for a mixed initial #72*, 1520 DL7NN (10DB/18DB) #73*, 1530 F5VKQ (16DB/13DB), 1541 IK0HWJ (16DB/13DB), 1548 OE4WOG (14DB/15DB) #74*, 1555 G4YTL (17DB/14DB) #75*, 1624 OH1LRY (17DB/16DB) #76*, 1700 DB6NT (559/559) using CW and 1755 WA3RGQ (21DB/18DB), and on 5760 at 1903 W5LUA (5DB/10DB), 1909 CX2SC (18DB/18DB), 1916 WA3RGQ (18DB/16DB) and 1930 KL6M (559/559) using CW to end with on 3 cm 16x4 and on 6 cm 4x4. I waited too long to switch to 6 cm and did not feel my 3 cm was back to where it was before the fall – see last NL. I was next on the Moon for the ARRL's Sept Tropo Contest on 4 Sept on 432 using JT65B to work at 0426 K5QE (11DB/O), 0441 VE3MIS (10DB/28DB), 0450 N8GA (12DB/15DB) for mixed initial 1073*, 0457 KD2LGX (7DB/11DB), 0504 NN3Y (12DB/22DB), 0516 W5EME (24DB/O) #1074*, 0526 W4NH (24DB/O), 0533 DF2VJ (20DB/4DB) for **a total of 8x8**. I was then on for the 2nd leg of the ARRL MW Contest to QSO using CW unless noted on 17 Sept on 2304 at 0642 DF3RU (559/569) (XB), 0647 OK1CA (589/579) (XB), 0655 PA3DZL (569/579) (XB), 0725 G3LTF (579/579) (XB), 0737 K3WM (569/569) for initial #115, 0745 KL6M (569/569), 0751 SP7DCS (579/589) (XB), 0758 UA5Y (569/559) #116 (XB), 0821 OH1LRY (559/579), 0934 OK1USW (12DB/13DB) using Q65C for mixed initial #140*, 0942 OK1KKD (2DB/2DB) Q65C, 0951 WA3RGQ (13DB/6DB) Q65C, 1054 KN0WS (22DB/15DB) Q65C and 1124 OK1KIR (579/579); and on 18 Sept still on 2304 at 0708 DL1SUZ (10DB/7DB) Q65C (XB) and 0744 DL1MEA (16DB/6DB) Q65C #141* (XB); then switched 9 cm using CW unless noted at 0904 OK1CA (569/559), 0910 DF3RU (569/579), 0915 VE6TA (569/579), 0919 G3LTF (569/569), 0939 WA6PY (559/569) and 0954 KN0WS (15DB/19DB) on Q65C, and finally 6 cm using CW unless noted at 1117 SM6FHZ (569/559), 1121 OH1LRY (569/569) for initial #63 and 1153 CX2SC (18DB/15DB) Q65D DUP. We ended for both MW Contest weekends on 13 cm 16x12, on 9 cm 6x6, on 6 cm 6x6, and on 3 cm 16x12 or overall 44x36. On 24 Sept we operated briefly the ARI EME Contest on 1296 using Q65C unless noted to work at 1524 G3LTF (579/579) CW, 1531 OM4XA (559/559) CW, 1537 N5BF (559/559) CW, 1536 W7JF (8DB/10DB) #732, 1600 LU8ENU (7DB/O), 1605 W2ZQ (5DB/O), 1612 W3CJX (12DB/11DB) #733*, 1614 PA2DW (15DB/14DB), 1627 N0CTR (9DB/11DB), 1628 N5TM (13DB/12DB) #734*, 1634

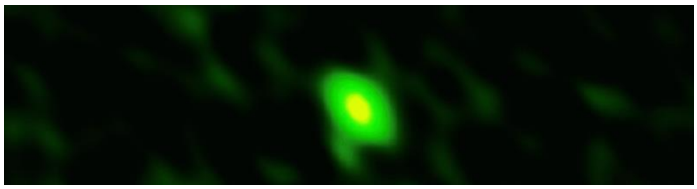
KC2HFQ (18DB/15DB), 1641 K5LA (18DB/17DB) and 1655 N5BF (7DB/6DB) for 13 QSOs. We are planning to be on 432 and 1296 for the Oct ARRL EME Contest weekend.

NET/CHAT/LOGGER NEWS: **N6OVP** is moving from a 10' to a 12' dish and moving location to give him a much better window to EU. Look for Dave in the ARRL EME Contest in Oct and Nov. **K7ATN** plans on being up in the middle of the night to be QRV on 432 in the ARRL EME Contest weekend. Etienne is also working 13 cm EME and looking for stations with which to test. **WB7QXU** is working on a 23 cm EME station and hopefully will be QRV soon. **RD3FD** moved from his old QTH KO95 to his new QTH in more exotic LOC LO05UT. So far his is qrv 2m EME only with 1 yagi but he is preparing new 70cm antenna for EME/MS, GL! **OK1TEH** is looking for EME stations for 70 cm skeds. **KS2K** is building a 70 cm EME station. Paul can be reached at mcmp@slic.com and has questions on EME operation. **N8CQ** plans to be at his EME QTH from 11-29 Nov and QRV during Nov ARRL EME Contest most likely on 1296 or 432. **ON5RR** will be active again soon. Marc plans to be QRV on 6 cm. **WB8HRW** has cut down a couple trees to improve his EU window. Look for Roger (in OH) on 1296 during the Oct and Nov ARRL Contest weekends. **OZ1LPR** had TWTA problems during the ARRL MW Contest weekends and was operating at less power than usual but still made many QSOs. **CX2SC** had good success on 3 and 6 cm during ARRL MW weekends. Ric is now working on adding 24 GHz.

FOR SALE: **OK1TEH** ok1tehlist@seznam.cz has still for sale his robust solid 3 m DISH and cheap (290Eur) OK1FPC's 2 m/10GHz transverters, see more at updated pdf: https://ok2kkw.com/next/ok1fpc_10g.pdf already few pieces were sold. Just a note – transverters are handmade by OK1FPC and Ales is able to make 1-2 pieces per 1 month, so it's not wide spread commercial manufacture; the main purpose is to support the serious 3 cm DX operation on EME and Rainscatter in East EU, Balkan, Asia and South America. We don't want to compete with Kuhne. So far there are about 10 stations on the wanted list and Ales is willing to continue his manufacture. More via email. **N8CQ** has added features and improved performance to his WinTrak EME Tracking System now for Windows and Linux. He has ported his RazTrak software to Windows 10 and designed the WinTrak I/O board for VA3TO. WinTrak connects to PCs using a USB port and provides the necessary interfaces for motor controls including speed control using built-in BTS-7960 modules. The encoder bus uses the US Digital SEI bus to communicate with many popular encoders. Absolute and Incremental encoders are supported using MABMPU encoder boards. SDD-3 Slew drives and many rotary quadrature encoders are supported using the MABMPU v2.0 encoder boards. For those preferring to DIY their own custom solution, I am making the WinTrak I/O board available also (including the PC software). Project files, installers, schematics, notes are available in this dropbox: https://www.dropbox.com/sh/whkxqeb9phkxxml/AACNyqsVDBglm04AA3MCG3dRa?dl=0. Please contact Gary at gabercr@gmail.com for more information. **UR3VKC** has for sale a 24 GHz WG switch. Info can be found at https://linkprotect.cudasvc.com/url?a=https%3a%2f%2flavky.com%2f016uM2c.&c=E,1,JdUERA8du359D4gFAuyK1m_VkpM9Dwiyksx2eCEH-rfJ9k5j1FDVJ-BRcWZytYGMW6sHcxsDI00DioI79BCnsk16i0qd9N1CiCiMak_acWa_WhLoLDni1PfG0g,,&typo=1.

TECHNICAL NEWS: Some guys asked us about availability of 47 GHz 1 W PA from KUHNE as they noticed that PA is currently out of stock. I asked them as well as about a possible 24 GHz QRO SSPA, and they sent me the following: *"A revision of the MKU PA 6MM – 1 W is under development and will be available in Q4/22 or Q1/23. It will be published in the web shop as soon as it is available.* Related to 24 GHz QRO SSPA*: At the moment we have no new 24 GHz PA upcoming. Our long term agenda includes new 24 GHz PAs."* So, we keep finger crossed as TGA4915 are too rare and expensive now.

RADIOASTRONOMICAL CORNER OF OK1TEH:
Hello, I'd like make you aware of that SARA (Society of (US) Amateur Radio Astronomers) annual conference was held on 30/31 July. They had many interesting presentations, which can be seen at https://www.youtube.com/channel/UC-SzptAQZ-20c9CkRb9ZPxw/videos.



Explosive Neutron Star Merger Captured for the First Time in Millimeter Light

Scientists using the Atacama Large Millimeter/ submillimeter Array (ALMA)— an international observatory co-operated with the US National Science Foundation's National Radio Astronomy Observatory (NRAO)— have for the first time recorded millimeter-wavelength light from a fiery explosion caused by the merger of a neutron star with another star. The team also confirmed this flash of light to be one of the most energetic short-duration gamma-ray bursts ever observed, leaving behind one of the most luminous afterglows on record. The results of the research will be published in an upcoming edition of The Astrophysical Journal Letters. Gamma-ray bursts (GRBs) are the brightest and most energetic explosions in the Universe, capable of emitting more energy in a matter of seconds than our Sun will emit during its entire lifetime. GRB 211106A belongs to a GRB sub-class known as short-duration gamma-ray bursts. However, they're difficult to detect; only half-a-dozen short-duration GRBs have been detected at radio wavelengths, and until now none had been detected in millimeter wavelengths. Laskar, who led the research while an Excellence Fellow at Radboud University in The Netherlands, said that the difficulty is the immense distance to GRBs, and the technological

capabilities of telescopes. “Short-duration GRB afterglows are very luminous and energetic. But these explosions take place in distant galaxies, which means the light from them can be quite faint on Earth. Before ALMA, millimeter telescopes were not sensitive enough to detect these afterglows.” See more at: https://www.almaobservatory.org/en/press-releases/protected-out-with-a-bang-explosive-neutron-star-merger-captured-for-the-first-time-in-millimeter-light/

Astronomers Find Evidence for Most Powerful Pulsar in Distant Galaxy

Astronomers analyzing data from the VLA Sky Survey (VLASS) on 2-4 GHz have discovered one of the youngest known neutron stars — the superdense remnant of a massive star that exploded as a supernova. Soon it turned out that this star was a very special case. The Pulsar object VT 1137-0337 (located at RA = 11:37:06.19, Dec = -03:37:37.3) is extremely bright, much brighter than normal pulsars. At the same time, it seems to be very young. A previous similar survey took place in this part of the sky in 1998 and astronomers found nothing like it then. It could be the youngest Pulsar with a pulse nebula that we have encountered so far. In 1054, Chinese, Japanese and Islamic astronomers discovered a "new star" in the constellation Taurus. Today we know that it was a supernova, whose remnant, in the Crab nebula, a pulsar, has a diameter of 11 light-years and is one of the most studied objects in the sky. Due to a relatively small distance of 6,500 light -years, it is the brightest "permanent" source of gamma radiation in our sky. Pulsar VT 1137-0337; however, is in absolute numbers 10,000 times brighter. Nevertheless, Dillon Dong of Caltech and his colleagues believe that the crab Pulsar and Pulsar VT 1137-0337 have a lot in common. In both cases, the Pulsars produce a by a distinctive pulse. We know, such a nebula creates a magnetic field pulser, when it accelerates the particles of the material ejected by the supernova explosion to a speed of close light. According to Dong, Pulsar VT 1137-0337 is not only many times brighter than crab pulsar, but also has a much stronger magnetic field. Therefore, researchers speak of it as a "super crab". Pulsar VT 1137-0337 cannot be over 60 to 80 years. It could only be 14 years old. But as Gregg Hallinan of Caltech, who was also a member of the research team, points out, there is a possibility that "super crab" is actually older than 24 years old, but its pulse nebula was so dense in the first years of its existence that Pulsar radiation was not visible first by earthly devices. Pulsars quickly weaken during their youth. VT 1137-0337 loses about 5 percent per year. This means that astronomers have to work quickly before thr pulsar weakens too much. In order for the Pulsar VT 1137-0337 to have a pulsar nebula, it must be equipped with a very strong magnetic field. In fact, this could be a young Magnetar. That would be a great success, because magnetars are extremely rare and we have never had the opportunity to observe their "baby steps". More at: https://arxiv.org/pdf/2206.11911.pdf

► **FINAL:** We are sorry for the delay in this NL. We wanted to get out more than a month ago, but obligation by both of us did not allow this to happen. [Catching up on work missed during the travel to the conference and extra touring, has been very difficult]. We know that this NL is still not complete and many items we wanted to include are missing because of lack of time. We want to at least have it out before the Oct. EME Contest weekend. We will try to do better in the future.

► F2CT has what appears a mild heart attack. Guy is doing well but will not be QRV for the Oct Contest weekend. He plans to make the Nov weekend. [We send our wishes for a speedily recovery].

► DK7LJ reports the 10 GHz dish tracking system is under construction and that the beacon the beacon should be back in operation by the time you read this.

► **ARI Autumn EME Contest – PSE send your logs in to** Enrico (I5WBE).

► **T**hanks to all for your support of the EME NL. Please don’t forget to send us your reports and tech info.

►Photos from the Prague 2022 Conference and comments on the tech program by OK1TEH follow. For more see - https://ok1teh.rajce.idnes.cz/19th_International_EME_Conference_Prague2022.

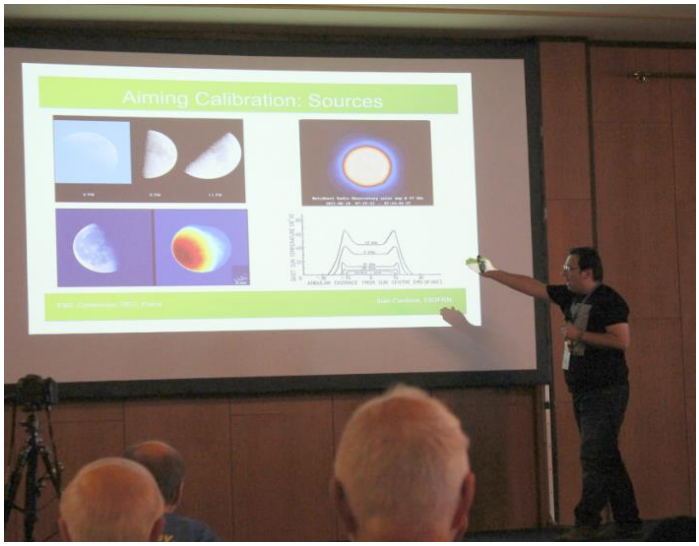
► BTW the next EME Conference will be held near Trenton, New Jersey and organizers will be Al, K2UYH. It will be in 2024 by the way exactly 20 years since the previous meeting in this location. [I am organizing an international steering committee that will meet by Zoom to help plan the event – Al, K2UYH]

► 3 cm EME video by N1BUG is recommended by VE1KG. See https://www.youtube.com/watch?v=Beurcep8Tj0

► The big one is here, the ARRL 50-1296 EME Contest is here. **The dates are 15-16 Oct and 12-13 Nov.** Don’t miss it. We will be looking for you. **73, Al – K2UYH and Matej – OK1TEH**

Conference Talks by OK1TEH: Personally, I especially enjoyed the talk by PA3DZL in which he described his long journey from the beginnings of EME in the 90s to the construction of the new SHF EME station. Other lectures

covered precision parabola tracking for moon-noise and tracking on 47 GHz, EME history both in OK and for individual stations, EME antenna fabrication - see OK1DFC lecture, but there were also lectures devoted to e.g., the 2 m band - see OK1DIX; and the introduction of a new antenna design by G4SWX, and measuring phase noise of oscillators. There was also an interesting lecture by G4DDK about his famous VLNA. G4BAO, HB9BBD and others presented. An interesting and somewhat controversial talk was given by OM1AM (former ITU employee), PA2DW and G4SJH regarding the acute problem of the endangered 1296 band by commercial services like GNSS and Galileo. While I appreciate the work of those involved, I can't shake the feeling that, despite the great urgency, this is rather a secondary issue for IARU HQ and the main interest of the IARU rather falls in the area of the struggle for the 5 and 40 MHz band... That is, that the fight to preserve the 23 cm band with reasonable power for EME isn't a priority for the IARU and that this matter would deserve much more attention, practical issues and less polite political-like talks.. In this case, I would like to refer to the analysis of OK1VPZ: https://www.ok2kkw.com/more/zieleniec_2022/poznamky_vpz_en.ppt. [There is a great deal of concern over the future of 1296. This is a real issue and will not disappear. It seems from what I have heard is that 1296 EME most likely will be moved 2 MHz up in frequency to 1298-1300. This seems a reasonable compromise. Al – K2UYH].



Ivan, EB3FRN, EB3FRN's XYL Eva and Jose EA3HMJ

Dick PA2DW and Barry, G4SJH