

432 AND ABOVE EME NEWS SEPTEMBER 2023 VOL 52 #6

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CONDITIONS: Coming up is the 1st of the two ARRL EME Contest weekends (WEs) for 6 m thru 23 cm on 28 and 29 Oct. Although the microwave (MW) WEs are challenging and fun, these 2 weekends are considered the World Cup of moonbounce! During the Sept and extended into Oct period covered by this newsletter (NL) were the 2nd WE of the MW part of the ARRL Contest and ARI (Italy) Autumn EME Trophy Contest. In the MW Contest the most activity was on 3 cm. The TOP scorer in the MW part was **OK1CA** who had the top overall score (all MW bands) of 72x44 and the top 3 cm score of 51x28. **OK1DFC** did well with 56x40 overall for only the 1st WE. Zdenek had the flu during the 2nd WE. On CW only **G3LTF** ended with 36x28 but was not on 3 cm. In the ARI Contest which covers all EME bands, 23 cm was the dominant band along with 3 cm to a lesser extent. **IK2DDR** had the top score by far with 71 QSOs, 24 using CW and 47 on Q65C all on 1296.



Top Scorer in ARI Contest **IK2DDR**'s 3.7 m dish
(See report in this NL)

DXPEDITIONS: A surprise this month was the **OH0/EA8DBM** 1296 dxpedition by EA8DBM to Aland Island on 2-5 Oct. Unfortunately the news arrive too

late for the dates. See report in this NL. There is no info on results; several QSOs have been reported. Coming up is **4W8X** to Timor-Leste on 12 thru 27 Nov that will include 70 and 23 cm – see report in last month's (Aug) NL. **KA6U** has been on the road focusing on 902 EME with great success in the eastern half of US but should be moving west. Reminders from last month **BG0DXC** is now QRV on 13 cm and **9H1BN** was QRV again on 1296.

REPORTS:

DK3WG: Jurg dk3wg@web.de (JO72gi) reports on his Sept EME – I added initials on 70 cm using Q65B with ON5GS, SA5IKN and W6UC; and on 23 cm using SSB with K0PRT, and using Q65C with **GI4DOH** for **DXCC 84** and OZ1CTZ.

F2CT: Guy f2ct@wanadoo.fr was QRV on 10 GHz during the ARRL MW EME Contest weekends in Aug and Sept, and during the ARI EME Autumn Contest on 30 Sept/1 Oct -- I enjoy 3 cm activity and worked many news stations using Q65D despite some troubles with drift from my IC9700 and CFOM settings. My apologies because I was obliged to ask all I worked to RX on their own echoes. In the ARRL event I worked OZ1LPR, DL3WDG, PA0PLY, DL4DTU, GB2FRA, SP6JLW, OK2AQ, OH2DG, OK1KIR, OK1DFC, **CT2GUR** for **DXCC 35**, UA5Y, OK1CA, **LZ4OC** for **DXCC 36**, PE1CKK, DJ7FJ, HB9Q, IK0HWJ, G4YTL, OH1LRY, SA6BUN, W5LUA, VE4MA, DB6NT, R3YAV, IW2FZR, VK7ZBX, PA3DZL, G0OLX, **GW3TKH** for **DXCC 37** and SM7FWZ for a total of 27x17 on 3 cm only. In the ARI, I worked IZ2DJP, I4TTZ, IK6CAK, IK0HWJ, IU0BTM, DK4KRC, DJ7FJ, G0OLX, G4HSK, GW3TKH, JA1WQF, K2UYH, K5DOG, OK2AQ, OZ1LPR, PE1CKK, RA3EME, UR3VKC, VK7ZBX, and **YO8RHI** for **DXCC 37** for a total of 20 QSOs. I also heard F5JWF and F6BKB. The Moon was near perigee and signals were solid despite spreading. My rig is a 4 m solid dish and 35 W SSPA. I'm available for skeds – email F2CT@wanadoo.fr.

F6ETI: Philippe f6eti@wanadoo.fr reports on the **ARI Autumn EME Contest** -- I participated on 1296 using CW and random only – what I call “the magic of radio” for four hours on each moonpass; from moonrise on Saturday, and on Sunday evening. I ended with only 6 QSOs, 3 on Saturday (DG5CST, IK3MAC and IK1FJI) and 3 on Sunday (IK5VLS, G3LTF and IK2DDR). EU activity was weak but conditions terrific. I called and listened for long hours and heard my echoes constantly. I am hoping a better turnout for the ARRL Contest at the end of Oct and Nov. My station is a 3 m dish, 300 W at septum feed and NF 0.37 dB. My Sun/CS was 12.6 dB with an SFI of 148.

FR5DN: Philippe phil.m974@gmail.com – was QRV on 1296 on 29 Sept, before ARI Contest but not during it – I’m sad to say one of the 2 MRFE6S9160HS from my 23 cm PA died. I had no time to repair – frustrating as conditions seemed good. I hope to be QRV for ARRL Oct WE.

G3LTF: Peter g3lft@btinternet.com was active in the 2nd ARRL MW Contest WE, but only in the daylight hours – As my new 13 cm PSU was not finished, I was only on 6 cm. I worked on 9 Sept (all contacts on CW) DL3WDG, OH2DG, UA5Y, OH1LRY, SQ6OPG, OK1CA, VE4MA, VE6TA, WA9FWD, VE6BGT, PY2BS and K2UYH, and on 10 Sept IK0HWJ, SP6GWN, ES5PC and IK3COJ for a total of 16x10. Overall in the MW part, on 13, 9 and 6 cm and only on CW I had a total of 36x28. My Sun noise was 16.2 dB with SF161 and Moon noise 1.1dB. Activity seemed low, I worked everyone I could hear or find on the logger with CW capability. In the Autumn ARI Contest on 23 cm using CW and worked on 30 Sept IK3COJ, IK3MAC, IK2DDR, IK5VLS, IK1FJI, IQ2DB, G0LBK, F5KDK, RA3EME, PA3FXB, DG5CST, OM4XA and DL1AT; and on 1 Oct F6ETI, UA9FAD, OK2PE, RA4HL, JJ3JHP for initial #542, DL4DTU and DL1SUZ for a total of 20 QSOs. Activity seemed lower than last year, but I was not on for the NA windows. I enjoyed a nice pile-up at the start with the Italian stations! Hlro, JJ3JHP has a good signal with only 80 W to a 4 m dish. My new PSU for the 13 cm PA has 3 separate 28 V x 12.5 A SMPSUs for the 3 RF transistors and another for the driver and fans. It is much lighter than the old 75A unit, which was getting hard to transport up to the dish, especially when it then refused to start - Hi!

G4DDK: Sam jewell@btinternet.com has returned to 9 cm to catch HB9Q before he is forced to QRT on 3400 -- I recommissioned my cannibalized 9 cm transverter. It is now rebuilt. My VLNA9 had disappeared, so had to replace it. I rebuilt an old VLNA9 and got a bit lower NF (0.42 dB) than the original. With the system back on the dish, but the PA in the shack, I get about 20 W at the feed. With the WSJT-X Echo mode, I get around -24 dB returns. Working a big dish should be OK with Q65C. I will try to find time and the enthusiasm to

replace the Toshiba PA bias board with the modified one bought a few years ago – need to find the info.

IK1FJI: Valter valter_dls@yahoo.it sends his 23 cm report for Sept – I was QRV about 6 hours in the ARI Contest and worked using CW a total of 28 stations. I added one initial with JJ3JHP to bring me to #164. I plan to be on during the ARRL EME Contest in Oct. My station includes a 3.8 m dish with a septum/choke feed, a TH327 PA with about 1400 W @ feed, and a HB9BBD LNA.

IK2DDR: Francesco frankddr@yahoo.it writes on his 1296 ARI Autumn Contest EME -- I was active in the mixed mode class. I found good activity from EU but was disappointed by the lack of USA big guns. I ended with 24 CW and 47 Q65C QSOs for a total of 71. Initials were LA3PNA and OE3JPC with 2 x 55 el modified F9FT yagis - both were on Q65C. The conditions were good with very low degradation. My weather (WX) was also very good. My setup is still a 3.7 m dish and OM6AA septum feed, and VHF Design 300 W SSPA and LNA. For software, I used Linrad, Trakbox, MAP65 and MSHV. All worked perfectly. I am now waiting for the Oct leg of the ARRL Contest.

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp brings us up to date on his EME for July to Oct -- I been back on 10 GHz since 20 July. I worked using CW on 21 July JA6XED (O/O), on 11 Aug PA0PLY (559/559) for initial #53 cross band (XB) and with CFOM, on 14 Aug JA6XED (559/559); during ARRL MW Contest on 9 Sept GB2FRA (579/559) #54 XB and CFOM, and on 10 Sept OZ1LPR (579/559) XB and OK1KIR (559/559), on 12 Sept PA0PLY (559/559) XB and CFOM; and in ARI Contest on 1 Oct JA6XED (559/559). Heard very well were HB9BBD and OZ1LPR XB, but I could not get their attention.

JH1KRC: Mike gq363qud@voice.ocn.ne.jp planned to be QRV for the ARI EME Autumn Contest on 23 cm CW -- My old tube HPA stopped working and I had no time to fix it. It was last used 3 months ago for the OJO dxpedition. I am concerned that JAs will lose the use of 1296 soon and am available for skeds by anyone needing JA (CW) on 1296.

KN0WS: Carl carlhasbargen@q.com had his troubles in Sept, but finally had some success in both the ARRL 2nd MW WE and the ARI Contest -- For the 9/10 Sept MW Contest WE, in the wake of my pointing troubles on 3 cm in Aug, I spent two sunny mornings recalibrating my dish. However, I still wanted to go north to my 16’ dish to try 13 cm from there. Each year the footings of this dish sinks deeper into the mud. I went up on Monday to track the Sun and do some calibration prior to the contest. Alas, I had equipment troubles and spent a long day in 97 deg heat NOT finding Sun noise. I called my friend who was going to be with me for the contest to tell him that 13 cm was

out, and he said he had Covid and could not go anyway. On 9 Sept from my home [different grid than the northern location], I was pleased to have my GPS clock working with my laptop and the greatest output ever from my 3 cm SSPA. But when the Moon came up, I had no RX. A break in the clouds confirmed my pointing was good. I tried replacing everything, but nothing mattered. I went back to bed frustrated. The next day after checking again, I switched to 6 cm where I noticed my monitor pin voltage was not right. It turns out that a relay had failed and was applying PTT to my transverter when in RX mode. Having found the problem, I decided to go back to 3 cm. RX was now OK, but my output was low. I found this problem was due to having the wrong attenuator before my SSPA, but during my fiddling I lost my RX again! I was ready to quit. My wife saw my poor mood, made me a sandwich, and encouraged me to start over again. She was right! I was then able to get everything working and QSO'd OZ1LPR (6DB), OK2AQ (18DB), OK1KIR (12DB) and OK1CA (17DB). I had initials with GB2FRA (8DB), DL3WDG (15DB), PA0PLY (15DB) and UA5Y (11DB). So, after two months of ARRL contesting, I have 8 QSOs and 6 mults on 3 cm! By the end of the moonpass my pointing may have been off. It is hard to calibrate for 70 degs of Moon EL when the Sun only rises to 50 degs. For the ARI Contest on 30 Sept, although it had rained the night before, I was eager to go north to set up on 70 cm. I had not used my 20' dish since putting the mesh on in the spring and wanted to test my equipment before the end of Oct. My Oct ARRL WE will be reduced to one 6 hour EU window because of a wedding, so that will be my last chance to get 70 cm QSOs before I remove the mesh again (pre-snow). Driving onto the property was worrisome. I almost got my truck stuck due to mud in the first 100'! I decided to take out my John Deere tractor to ferry my gear in stages to my dish. Everything was wet and muddy, but I completed the setup. There was rain, thunder and a bit of distant lightning as moonrise approached. I worked W7JW (23DB) and saw N1AV (19DB) but when I tried to work him, my PA reported a "load failure". It was too dark to make repairs, so I went to bed. It rained another 1.5" overnight. By morning my operating tent had a 1.5" deep puddle near my feet and my cables were running through puddles, including the 110 volt cords. I threw some particle board over the ground to help somewhat. I cannot believe how many contests are compromised by rain or snow up there! I discovered my loop feed (repaired last year) had failed. The plastic spacer between the center of the coaxial line and the outer copper tube had melted. I drove to the nearest town and bought some Teflon tape, which I used to wrap around the center conductor and covered with vinyl tape. This field engineering worked and allowed me to operate the 2nd Moon pass. I worked using Q65B NC1I (12DB) in trees, DL1VPL (18DB), DL7APV (4DB), DL3WG (11DB) and N1AV. I had initials with S51ZO (14DB), UR3VKC (20DB), W7TZ (18DB), PA3FWV (12DB) and OH3AWW (24DB) for a

total of 10 QSOS. I heard LU8ENU (20DB) but while in QSO, my PA quit. It was the power supply. I use two 24 V units to produce 51 V. The voltage was down to 25 V, and I was done for the weekend. If it is NOT raining for the Oct ARRL event, I will try my Teflon-taped feed and fixed power supply again. My biggest pleasures were working OH3 and UR3. Matti reminded me of my very first EME QSO on 1 Dec 2012 with another 70 cm OH: OH2PO. The UR3 QSO was special because **after almost 11 years, it was my 100th 70 cm EME initial!** EME is like a gambling addiction. No matter how much frustration, it just takes a little payoff to be hooked again!



LZ2OC new 3 cm potential DXCC

N5BF: Courtney courtney.duncan.n5bf@gmail.com reports on his recent 23 cm results – On 5 Oct, I completed using Q65-120D with OH0/EA8DBM (27DB/29DB) on Aland Island for mixed initial #348*, and DXCC 61. This was a tough QSO due to the geometry as my operating windows - both east and west paths barely overlapped. The previous WE, I operated in ARI Trophy Contest and ended with a total of 27 QSOs and a score of 288 with four CW and 23 digital contacts including six Italian stations, two on CW and four on digital. I added mixed initials with VK3NFI (22DB/18DB) #347* and JJ3JHP (23DB/15DB) #346* through the trees. I was glad to work again UA9YLU (17DB/13DB) and CT8/W6PQL (13DB/15DB) #345* and DXCC 60. (I'm accustomed to hearing Jim work Ralph, K6TSK every Friday evening on our terrestrial 1296 net in southern California. I'm blocked by mountains, but Ralph, much further south sees right over them). I also picked up R3YAV (20DB/20DB) #344* in the Russian Contest and LA3PNA (18DB/19DB) #342*.

NC1I: Frank's frank@NC1I.COM Sept report follows -- Due to frequent thunderstorms I was not able to be QRV for many of the best EME days from late Aug thru early Oct, but I was still quite active when the WX cooperated. On 70 cm, I completed 68 QSOs using Q65B including 20 initials, most of which were single yagi, low power stations. I don't know my overall initial count (guessing somewhere around 900) but **I did reach a milestone by surpassing digital initials #600**. The following digital initials have been added since my report last month: on 21 Aug IW2OGZ (24DB/17DB) with a single 15 el yagi and 55 W {#581}; on 22 Aug SV8YM (28DB/20DB) with single 19-el yagi and 50 W {#582}; on 23 Aug W4HTB (27DB/20DB) with 2 x 22 el yagis and 120 W {#583}, and W8KHP (25DB/19DB) with single 25 el yagi and 40 W {#584}; on 31 Aug W8LR (25DB/22DB) with single 15-el yagi and 75 W {#585}; on 1 Sept G0MOH (26DB/22DB) with single 8 el CP yagi and 58 W {#586}, N9EAT (28DB/20DB) with single 30 el CP yagi and 40 W for {#587}, VE1CWJ (24DB/25DB) with single 10 el yagi and 70 W {#588}, and K8DP (25DB/15DB) with a single CP 42 el yagi and 38 W {#589}; on 2 Sept LU2FGL (24DB/24DB) with single 11 el yagi and 75 W {#590}; on 3 Sept E70W (26DB/21DB) with single 7 el yagi and 120 W {#591}; on 6 Sept M0CTP (9DB/9DB) with 4 x 19 el yagis and 400 W {#592}; on 7 Sept ON5GS (7DB/5DB) with 6 m dish and 200 W {#593}; on 28 Sept W8PU (24DB/14DB) with single 25 el yagi and 100 W {#594}; on 29 Sept W6UC (22DB/12DB) with 4 x 22 el yagis and 1000 W {#595}, and W6BVB (25DB/12DB) with single 18 el yagi and 75 W {#596} – 1st 70 cm EME QSO; on 30 Sept XQ3SA (Chile) (28DB/29DB) with single 20 el yagi and 50 W {#597} and DXCC 101- first 70 cm EME QSO; on 1 Oct KA6U in NC (18DB/14DB) {#598}; and on 3 Oct KA6U in VA (24DB/17DB) {#599}, KA6U in WV (12DB/14DB) {#600}, and EA3EA (30DB/28DB) with single 16 el yagi and 70 W {#601}. During Sept I was also active on 1296 and completed 38 QSOs but did not add any initials. My 4.5 m dish was taken down on 16 Sept and is already up at its new home. I hope to have my new dish up by late Oct or early Nov and have it ready for the last WE of the ARRL EME Contest. I have a conflict during the Oct Contest WE but hope to get on 70 cm for at least a few hours.

OH0/EA8BM: Alex (EA8DBM) ea8dbm@gmail.com announced that Åland Island would be back on 1296 EME after many years [unfortunately the notice arrive long after our Aug deadline] -- I am excited to share the news that from 2 to 5 Oct the Åland Islands will be QRV on 23 cm EME. It's important to note that the Finnish regulatory authority, Traficom, has recently announced that this will be the final opportunity for radio amateurs in Finland to operate on the 23 cm band. Starting in 2024, This frequency range will no longer be available to us. During this period, I will be running my station with a power output of 200 W with a 1.8 m W2HRO folding dish. Let's hope for favorable

WX during my operation. [There has been a number of reports of successful QSOs with him].

OK1CA: Franta fr.strihavka@seznam.cz sends his report for the NL – During the 2nd MW part of the ARRL EME Contest, I was QRV mostly on 6 cm. However, I could quickly switch to 3 cm. The change over was simple and done in less than 15 min. On Saturday at the beginning of the Contest, the activity on 6 cm was very weak; no stations from JA or VK were found. QRV were only UA5Y and SQ6OPG. I continued on 5760 during the morning and ended up making 17 QSOs for the day. New digi initials were HB9Q, OH1LRY, DL3WDG and IK3COJ to bring me to {#30}. On Sunday morning again there was nil from the east with no JAs at all. I only worked SP6GWN using CW. I switched to 3 cm to QSO using Q65D G4HSK for digi initial {#95}. But when I heard activity on 6 cm, I switched back to add five more QSOs using Q65D. Digi initials were IK0HWJ {#31}, W5LUA {#32} and K2UYH {#33}. After these QSOs, the dish was already only at 25° EL, so I switched back to 3 cm. Activity was high there and I made 9 QSOs in 50 mins. The only new station was ON4CDU {#96}. I made in total over both WEs on 3 cm 51 QSOs x 28 mults, and on 6 cm 21 QSOs x 16 mults for a MW total of 74x44. On the MW bands above 2 GHz, the greatest activity was on 3 cm. The other bands seem to have just the same enthusiasts. It was two nice WEs with excellent WX.

OK1IL: Ivan ivan@kaimann.cz reported on his recent 23 cm EME – I made initials using Q65C during the last several weeks with the OJ0EME dxpedition for DXCC 76, W4NH, YU1SAN DXCC #77, 9H1BN DXCC #78, CT8/W6PQL DXCC #79 [same as Azores?], and LA3PNA. A big disappointment was OH0/EA8DBM; I didn't copy Alex even with Q65-120D mode. After lot of effort I gave up, Alex confirmed that he decoded me (26dB) all the time. I had a high noise level up to 10 dB above quiet sky over the whole width of my MAP65 waterfall. I am energizing all the units in shack remotely using serial port RTS line and power relay. Switching the relay OFF/ON reduced noise to my normal level. A visual inspection of the relay confirmed suspicion of burned contacts. My question is how long my sensitivity has been impaired. A new industry level relay is on the way.

OK1KIR: Vlada vlada.masek@volny.cz and Tonda send news on their recent EME operation in the 2nd part of the ARRL MW EME Contest, the ARI EME Contest and the OH0 dxpedition -- On Saturday, 9 Sept in ARRL Contest we worked using Q65C unless noted on 13 cm at 0015 UA5Y (5DB/3DB); then left an empty band to move to 9 cm at 0322 DL3WDG (8DB/9DB) for digi initial {#50} and mixed initial #106*, and 0332 DL3WDG (O/O) using CW for initial #90; on 6 cm using CW at 0429 OK1CA (569/579), 0435 SQ6OPG (569/579) CW, 0601 UA5Y (559/559) using Q65D, 0648 HB9Q (0DB/1DB) Q65D, 0715 UA5Y (1DB/5DB)

Q65D, 0727 OH1LRY (5DB/5DB) Q65D, and 0735 DL3WDG (8DB/4DB) Q65D; back to 13 cm at 0856 OK1USW (13DB/13DB), 0927 K3WM (11DB/3DB), 0934 KU4XO (9DB/12DB) {#96} and #231* in SC as new state, 1250 G4DDK (12DB/10DB) {#97}, and 1153 WA6PY (559/569) CW; and on Sunday 10 Sept on 3 cm (only) using Q65D or CW when noted at 0259 JA4BLC (559/559) CW on 10450, 0328 OK2AQ (9DB/7DB), 0448 JF3HUC (O/O) CW on 10450, 0556 IW2FZR (10DB/6DB), 0609 UR3VKC (16DB/9DB), 0644 OH1LRY (8DB/5DB), 0712 PE1CKK (8DB/7DB), 0718 DJ7FJ (14DB/1DB), 0822 HB9BHU (559/539), 0836 GW3TKH (18DB/6DB), 0846 OH2DG (4DB/8DB), 0854 OZ7Z (17DB/15DB), 1001 ON4CDU (14DB/10DB) {#249} and #330*, 1056 SP3XBO (O/559) CW, 1133 DL3WDG (559/569) CW #155, 1149 WA6PY (559/569) CW, 1157 SM7FWZ (559/579) CW, 1210 CX2SC (18DB/14DB), 1243 KN0WS (20DB/11DB), 1251 PA3CSG (15DB/9DB) {#250}, 1322 IK6CAK (14DB/9DB), and 1331 IU0BTM (19DB/10DB) for a total 22 QSOs on 3 cm for 2nd WE. Overall, in both WEs we scored on 3 cm 43 x26, on 13 cm we had a score of 6x6, on 9 cm 2x2, and on 6 cm 6x6; and for a MW total of 57x40. During the ARI Contest we searched mainly for new stations with no late-night operation on 23 cm. We QSO'd using Q65C unless noted on 30 Sept and 1 Oct VK3NFI for digi initial {#531} and mixed initial #826*, OE3JPC {#532}, UA1ALD {#533} and #827*, G7TZZ, LA3PNA {#534} and #828*, and DK3EE {#535} and #829*; and using CW OE3JPC, OZ1CTZ initial #515, OK2PE and IK2DDR. On the other bands, no one new was found except K5DOG on 3 cm. Unfortunately, Steve was not able to wait over midnight for us to swap feeds to 3 cm, so he remains as a potential new one. We left our 23 cm feed in place for OH0. We contacted on Monday, 2 Oct using Q65C OH0/EA8DBM (25DB/24DB) {#536} and #830*, and easily YU1SAN (6DB/3DB) {#537} and #831*. OH0/EA8DBM had a weaker signal than expected – possibly a pointing problem.

OK2AQ: Mirek kasal@vut.cz reports on his recent 10 GHz EME -- The ARRL MW EME Contest WE again had very nice WX, as did the whole week before. During the contest many stations prepared and tested their equipment. I managed to make a QSO using Q65D with G4HSK for digi initial {#125}. He was using only 1.2 m dish with 10 W and a coaxial connection to his feed – basically a standard tropo station. I managed to decode him with averaging. Other new stations worked were ON4CDU {#126}, with a 1.2 m dish and 25 W and PA3CSG {#127} with a 3 m dish and 20 W. In the contest there was a good turnout from EU. Other continents were represented by JA1WQF, VK7ZBX and CX2SC. From the USA was K2YUH and KN0WS {#128}. In the 2nd round I made 14 QSOs and a few DUPs. Overall, for both WEs, I scored 44X24 for 105,600 points. I was also on 10 GHz for the ARI Autumn Contest. The beautiful Indian summer WX continued but with light showers on Friday night. The

lunar declination was optimal and station activity good. Again, most activity was from EU. This year there was very good activity from Italy. In total I made 23 QSOs, of which 5 QSOs were CW and the rest Q65. After several previous attempts, I finally managed QSO with K5DOG for mixed initial #143* using Q65-120E. My total score was 2128 points. You can see my log at https://www.radio.feec.vutbr.cz/esl/files/EME/LOG/EME_LOG_10G.htm.

OK2PE: Karel ok2pe@kbb.cz writes about his participation on 1296 in the ARI EME Contest – I did not have good success back in the spring when I only made four contacts and had to shut down early because of a PA failure. The Autumn Contest was much better. I managed to improve my SWR with new cables that seemed to make a significant difference. The antenna tracked the Moon very well (EL max 57 degs). When the contest started on Saturday, the stations QRV were mostly using the digi mode. This was a problem because I only operate CW. I called CQ an hour before I managed to make my first CW contact with DL1AT. My last QSO was with OZ6OL. In total I operated for 14 hours and made 28 CW QSOs with 6 initials for 1568 points. Everything worked fine, only my sleep was a bit lacking. I plan to be on again in the ARRL Contest in Oct and Nov.

OM4XA: Fero cesnefk@gmail.com wrote us about his participation in the ARI Autumn EME Contest on 1296 - - It was my first EME contest this year, and I was surprised by the large turnout of stations. In total I made 60 QSOs, 15 using CW and the rest on Q65C. Digi initials were KN2K, LA3PNA, VK3NFI, IU0BTM, OZ1CTZ, UA1ALD, F5KDK, PA0TBR, OE3JPC and YU1SAN to bring me to {#225}, and two CW initials with DL1AT and UA9FAD for #53. Outside the contest I made a few more QSOs including digi initials with CT8/W6PQL, EA2BRI and OH0/EA8DBM. I now have 795 EME QSOs on 23 cm. I have worked mixed initial #246* (stations) and 53 DXCC. I am looking forward to being active in the Oct ARRL EME Contest WE.

PA0PLY: Jan adsl583321@telfort.nl writes on both legs of the ARRL MW Contest – I was active on 10 GHz solely, after installing my new feed based on the OM6AA design - (details are on my website). I can now see 2 dB Moonnoise! In the 1st leg I made 22 QSOs and 2 initials, and in the 2nd leg 21 QSOs [43 QSOs overall?] and 5 initials. I worked using CW only OH2DG and F5JWF; and with Q65D VK7ZBX, OK2AQ, YO8RHI, IW2ZFR, PA3CSG, ON4CDU, CX2SC, K2UYH, IK0HWJ, UK3VKC, G0OLX, HB9DUK, IK6CAK, GW3TKH, PE1CKK (DUP), KN0WS, VE6TA, SM7FWZ, IU0BTM and G0OLX (16DB/19DB) – the smallest with 1.2 m dish and 15 W. After the contest, I made the following QSOs on 12 Sept using CW JA4BLC (559/569); and on 10 Oct using Q65D OZ1FF (09DB/13DB) and GI7UGV (17DB/15DB) with a (1.2 m offset dish and 20 W. I tried

several times with JA6XED, but no success. I finally QSO'd Hisoa on 11 Oct using CW (529/449). I was struggling with the tracking. Manual tracking is cumbersome, especially in 2.5 m periods. I lose more than 1dB of moonnoise. It improved after correcting the mechanical alignment of the pedestal. There are also some other nonlinearities of the encoder system, which add to my tracking error. I am awaiting a new digital level to be able to better align my pedestal.

PA0TBR: Ton ton@mubo.nl after a long period of inactivity is again QRV on 23 cm EME – I have a 3.5 m dish up again and have added a W6PQL SSPA, which is a major improvement over the 3 W I made my previous QSO's with. W6PQL was very helpful to supply bits and pieces besides the amplifier pallet. I am very happy with the result and learned that the efficiency of a SSPA running at low power can be very poor but is nothing to worry about. I am using liquid cooling, which is very quiet and effective. I have included remote monitoring for the PA because I plan to move it into the garden near the dish to reduce my cable loss; now 5.1 dB. If I had to build this amp again, I would put it in a screened box to reduce the number of points needing for decoupling. During the ARI EME Contest I gave the amp a real workout, and worked 36 stations, of which 27 were initials. On 5 Oct I added OH0/EA8DBM for a new DXCC.

PA3DZL: Jac <pa3dzl@icloud.com> says he has been busy with home projects and QRL but still made some QSOs – On 1296 in Sept I made initials using Q65C with LA3NPA and OE3JPC (14DB) from only 2 x 55 el yagis – amazing; and in Oct the OH0/EA8DBM dxpedition. During the ARI Contest on 1 Oct I added 6 QSOs with 3 using Q65C and 3 using CW for 9 QSOs overall.

VE4MA: Barry barryve4ma@gmail.com reports on his recent EME activities -- I have been QRV on 33 cm (902) since June and added W2HRO for a mixed initial (#*) and N1AV (#*); then in Aug W5LUA, KL6M, VE6TA, W6TCP (#*), W5AFY (#*) and KA6U (#*) in FL; and in Oct a lot more 33 cm activity due to KA6U's State dxpedition for AC0RA (#*), K0DSP (#*) and KU4XO (#*). In June, I was also on 10 GHz and worked LZ4OC, PE1CKK, IW2FZR, OJ0EME, UR2VKC (heard at 15 DB), DL3WDG, DL7YC, W3SZ, DL6ABC, OZ1LPR (+2DB), DJ7FJ, IV0BTM, CX2SC, CT2GUR, OK1CA, OK2AQ, and G4RFR (0DB). In July during the DUBUS 6 cm Contest, I QSO'd 20 stations. For the 1st ARRL MW WE in Aug, I operated on 3 and 13 cm. On 3 cm I worked 27 and on 13 cm 11 stations. In Sept in the 2nd ARRL MW WE, I operated on 6 and 13 cm. I felt bad for not operating on 9 cm but did not expect much activity. I worked 11 stations on 6 cm and 7 additional stations for a total of 18 on 13 cm; for a MW total of 56x?. I have continued to work on upgrading my 47 GHz EME station and it is now ready to use with 30+ W into a 2.4 m

dish. Unfortunately, I have missed the good Moon windows this month and I am heading to AZ for the winter starting 1 Nov, so my activity will have to wait until April 2024 when it will be my priority. The WX has turned cool (+10 deg C) and rainy, which is not great for 13 kV power connections! For the Oct ARRL 50-1296 EME WE, I intend to operate on 432. VE4SA will operate on 23 cm.



YO8RHI was QRV in ARRL MW Contest on 3 cm offering a new DXCC to many

VE6BGT: Skip ve6bgt@gmail.com was QRV on 6 cm during the Sept ARRL MW EME WE – I was on late the first morning as I just can't get up that early anymore and caught G3LTF with a great signal on CW. I was on during the second pass for my Asian/west Moon window. I called CQ on CW several times after I saw a digital signal pop up but had no responses.

VK4AFL: Trevor tbenton@bigpond.net.au reports on his ARI Contest efforts – I was active for a few hours on 9 cm on 30 Sept but only heard/worked using CW KL6M (569/569) split frequency as I am limited to operation below 3400. This is not ideal plus I think activity was low. As has been noted previously, there are too many microwave band options for one weekend. A single band per day would be better. I changed feeds from 9 cm to 23 cm for the 2nd day, 1 Oct. I heard nothing from NA but worked using CW JJ3JHP for an initial (#), DG5CST with a huge signal, IK3MAC (#) and G0LBK (#). Thus only 5 QSOs for the contest. I will be QRV especially for the ARRL Contest WEs on only 23 cm over the next few months.

VK7ZBX: Richard vk7zbx@gmail.com has been active on 3 cm – I was on during the ARI Contest on 1 Oct to QSO using Q65D OK2AQ (12DB), OZ1LPR (3DB), F2CT (11DB), IK6CAK (15DB), UR3VKC (18DB), DL2WDG (10DB) and IW2FZR (14DB) for a total of 7 contacts. I copied the beacon (6DB) as well; it had

been running (12DB). There were some really good signals. I need to study my moonrise blockage to locate a position to put my dish that enables me to work some NA stations. Getting on 23 cm is next to do with a 2.4 m mesh dish and a VHF design SSPA and preamp. Not sure what to do for 9 cm. We are stuck below 3400 (we have 3398-3400) and we typically use 3398.150.

W2HRO: Paul paul@sub-lunar.com has upgraded his station to a 4.5 m dish – My new dish was previously at NC11 who is upgrading to a 6 m dish. My 3 m dish is now with W1PV. Skip will be ready for the next ARRL EME WE. I have been on 902 EME (Sun noise is 14 dB) on 902 with the new dish; and following KA6U as he tours the US with a 2.4 m folding dish with a linear patch feed and 200 W on 902. We might see the first 902 WAS during the next few months.

K2UYH: I (AI) alkatz@tcnj.edu am getting closer to normal after my lightning disaster -- My auto Moon tracking using K2TXB's board is working very well even on 3 cm with my big dish. I planned to focus on **3 cm in the 2nd MW EME WE**, and while checking out my 10 GHz system worked using Q65D on 21 Aug at 1856 CT2GUR (15DB/16DB) for mixed initial #77*; and on 2 Sept at 0602 CX2SC (18DB/19DB); then in the **ARRL MW WE** on 9 Sept at 0932 OZ1LPR (18DB/17DB), 0951 PA3CSG (18DB/19DB) #78*, 1025 PA0PLY (15DB/15DB), 1048 GB4FRA (4DB/14DB) Q65D #79*, 1052 OK2AQ (18DB/19DB), 1107 IK0HWJ (12DB/17DB), **1126 LZ4OC (18DB/18DB) #80* and DXCC* 32**, **1136 ON4CDU (19DB/17DB) #81* and DXCC* 33**. I then switched to 6 cm to QSO still on 9 Sept at 1420 G3LTF (559/559) using CW and 1710 VE6TA (13DB/19DB) using Q65D; and on 10 Sept using Q65D (still on 6 cm) at 1238 OK1CA (10DB/13DB), 1248 VE4MA (13DB/19DB), 1310 PY2BS (10DB/12DB) and 1754 W5LUA (4DB/11DB) – also tried with WA3RGQ but Dan could not find me. At one point I wanted to move to 3 cm, but it started to rain heavily, which prevented me from making the switch. I ended with total for both WEs on 3 cm of 8x8, on 6 cm of 6x6, on 9 cm 2x2 and on 13 cm 6x6 or an overall MW total of 22x22. **In the ARI EME Contest** I was only able to operate on 1 Oct and only on 3 cm. I worked using Q65D on 0329 OK2AQ (14DB/15DB), 0336 RA3EME (5DB/11DB), 0342 OZ1LPR (9DB/22DB), 0354 IK6CAK (14DB/14DB), 0406 IK0HWJ (6DB/12DB), **0410 YO8RHI (21DB/16DB) #82* and DXCC 34**, 0512 UR3VKC (18DB/18DB) #83*, and 0618 F2CT (14DB/15DB) for a total of 8 QSOS. I plan to be active in the ARRL EME Contest (6 m – 23 cm) as part of the W2ZQ multiop club group that I am a member. They have built up a very nice 1296 EME station at their club station. W2HRO and K1JT are mainly responsible for this station. We will operate on 1296 using the W2ZQ club call. I will operate on 432 using my K2UYH call, and K2TXB using his call will

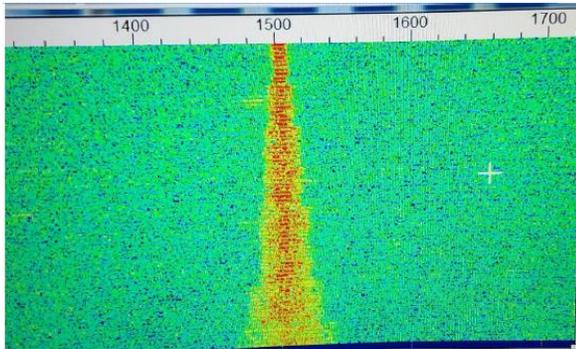
operate on 2 m as part of the team. Look for us during the contest.

LOGGER/NET NEWS: DL1SUZ: was active in the **ARI EME Contest** 30 Sept on 13 cm and on 1 Oct after changing feeds to 23 cm. Uwe used both digital and CW. **OK1DFC** had the flu and could not be QRV during the **2nd ARRL MW WE**. **HB9BBD** could not be QRV for the **1st ARRL MW Contest weekend** but planned to be active for the 2nd weekend on 3 cm – **[but did not, but was on for ARI Contest]**. **HB9Q** will be QRT on 9 cm after 1 Jan 2024. Dan's permit for operation on 3400 has not been renewed. if you need HB9 he is happy to provide you with a QSO while he can! **K5QE** was QRV on 432 and 1296 EME on 9/10 Oct in the ARRL Sept VHF Contest - (also the WE of the ARI Contest). Expect him on during the ARRL EME Contest. **KL7UW** is planning to activate 3400 with a 4.9 m dish and 10368 with a 1.8 m dish. Ed is hoping to be hearing 10 GHz signals before serious snow falls. 9 cm will probably take the winter to get the TX ready. With a major hearing loss copy of weak CW is very difficult; and thus, he will concentrate on the digital modes. **ON5GS** is preparing for 3 cm EME. **OK1TEH** has good news. He is making progress on becoming QRV on 3 cm EME with a 3 m solid dish. Matej reports that work on the welding of his zero-backlash drive and bearings for the dish elevation is completed. There is still much to do. Matej hopes to be QRV for the DUBUS 10 GHz Contest in 2024. **W5AK** is coming back on 432 after many years of absence. He has everything but is still trying to decide on the best array. Back in the 80's he used RIW yagis. You can reach Richard at rbeersr@att.net. **W6ZQ** is listening on 1296 with a W2HRO fold up 2.4 m dish, but still needs a PA to TX. You can reach Ron at ron.w6zq@gmail.com.

DIGI NOTES BY DL3WDG: 1) Noise reduction and optimistic signal reports from WSJT-X: Some stations have been experimenting with so-called "noise reduction" (NR) techniques, in the hope that they could improve receive sensitivity for digital modes. Several modern radios have this feature, and also SDR-Console (the "NR1" button). I have looked at wave files recorded with and without NR using WSJT-X's degradation function (Settings->Advanced) (TNX to CT2GUR, KA1GT and G0OLX who provided the wave files), there seems to be no discernible difference in decode threshold when using NR. Using these techniques does not make any improvement in the ability to decode weak signals. However, there is an effect in using NR. The signal reports are wrong, and in all cases are optimistic, sometimes by many dB! Its worth noting that other receiver characteristics can also lead to significant errors in signal reports, such as a non-flat receiver passband. For example, using a narrow IF filter which rolls off the passband on either side of where the signal appears is also known to lead to optimistic reports. If the receiver passband is not flat, this can usually be corrected using the 'reference

spectrum' facility in WSJT-X. https://drive.google.com/file/d/1hGXCZk0TqwhtO-wojgkwCBlqM_gCgP51/view?usp=sharing. Results of some careful tests by KA1GT and CT2GUR, including example wave files that can be played back on WSJT-X are at: <https://drive.google.com/drive/folders/1MvVyxPXfKMkHwCeck6r78k0hm-f3TN8C?usp=sharing>.

2) I discovered that Echo Graph displays the average of what you set as Avg. The two videos in the link show the difference - one had Avg=10 the other Avg=1. I thought it was just the numerical value that was averaged. With Avg 1 you can really see the change in shape from echo to echo. See graph below.



Echo testing on 10 GHz as libration was decreasing towards a minimum of about 12 Hz. Data spans just over 90 mins with 9 runs, each about 10 echoes

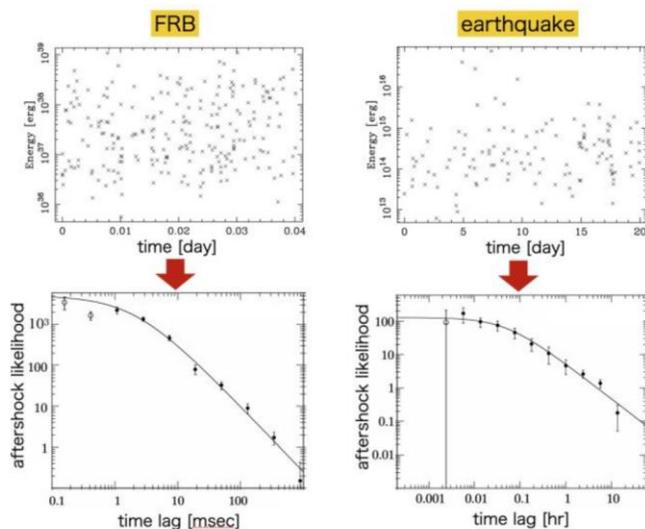
SUN NOISE: Here are some real Sun noise measurements from G3LTF that can give you a feel for of how your system is performing. These were taken at 6 cm. [Perhaps Peter could do the same for 1296]. He notes that there isn't much variation with SF change unless something massive happens on the Sun; and that his 6 m dish is inefficient at 6 cm due to profile errors and the 6 mm mesh is starting to leak with a contribution close to that from spillover. His feed is a SM6FHZ Kumar 0.71L and the NF is ~ 0.7 dB: 26-04-20 15.1 dB SF69, 16-06-21 14.4 dB SF81, 28-08-21 15.1 dB SF93, 27-05-22 15 dB SF114, 02-07-22 14.7 dB SF103, 09-07-22 15 dB SF130, 27-08-22 14.9 dB SF128, 29-08-22 (1100) 16.7 dB SF252, 29-08-22 (1800) 20.6 dB SF357 (massive CME was on 28-08-22), 30-08-22 15.6 dB SF148.

FOR SALE: W2HRO is now offering a non-folding version of my stress dish. I add a rigid perimeter loop to fix the diameter of the dish. The dish is covered by 1/2" hex wire. 1296 is probably the upper limit for the dish but that is the target. The entire dish weighs 12 lbs and is nearly invisible. KODSP has one of the 1st dishes. Doug lives in the windy Midwest and wanted a dish that he can operate in high winds. For more info contact Paul at paul@sub-lunar.com. **N2CEI** has 9 cm Toshiba UM2683A 3.4 GHz unmodified stock 40 W PAs available. Tested but never in service. Details

at http://g4fre.com/Toshiba_amp.htm. Price is \$250 shipped CON USA. Pay Pal preferred to Suwannee ARC. Contact Steve directly for more details at n2cei@downeastmicrowave.com. **W7TXT** offers to needing a 50 V dc at 40 A PSU. He has used Eltek Flatpack2 PSUs. These provide 2 kW or 3 kW at 50 V, and can be run in parallel if needed. He has released of an Open Source control utility for these, for Arduino-type MCUs with a CAN bus shield at https://github.com/xjamesmorris/fp_util. This release uses a serial terminal interface. He'll be adding support for an LCD or OLED soon, but it should be easy to extend. Contact James at morrisjl@gmail.com if interested. **W9IP** has a new, unused turntable ring gear (slew bearing) to give away. It is about 32" in dia and capable of supporting over 6,000 lbs. It comes with full specs and drawings. It was intended to support a radar antenna. It's free but you have to pick it up near Syracuse, NY. The weight is well over 100 lbs. **OK1FPC** still offers his cheap 10 GHz and 5.6 GHz and new 9 cm transverters as well as 4,5 W SSPAs for 10 GHz; prices on request but will be a good deal. If you are interested write to ok1fpc@seznam.cz. Please let him know if you need an IF for 2 m or 70 cm. Alternatively you can write to ok1tehlist@seznam.cz. **OK1TEH** has for free pick-up a 3 m Al dish with robust ribs. It is the same type of dish as was used by OK1UWA for 24 GHz EME.

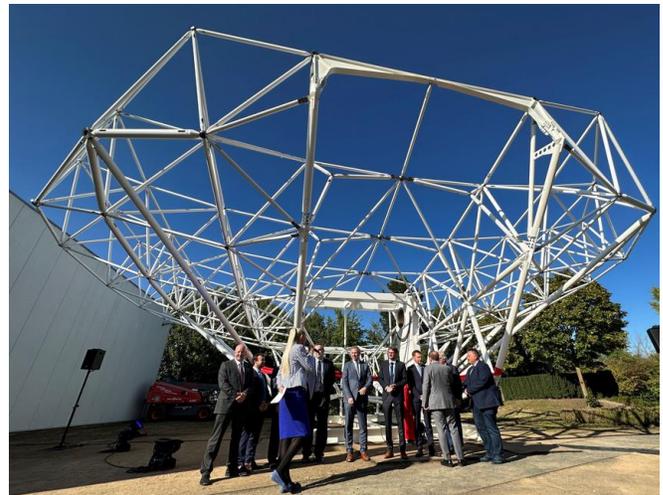
RADIOASTRONOMY CORNER by OK1TEH: Hello readers, I'll first discuss neutron stars again. The question is do fast radio bursts (FRBs) originate from 'star-quakes' at neutron stars? 16 years after their discovery at the Parks radio telescope, their origin remains unclear. These transient radio pulses are most often 1-10 ms in length and with strength that can be close to 1 Jy at 23 cm. [This is about the same as a Pulsars, so some of FRBs may be detectable by EMEers if big dishes are used]. Their signals are typically highly polarized (which suggests events in very strong magnetic fields) and have a large degree of scattering ($DMs \geq 300 \text{ pc cm}^{-3}$), well in excess of the maximum expected by line-of-sight contribution in the NE2001 galactic electron density model (Cordes & Lazio 2002); and are therefore assumed to be of extragalactic in origin. Some of the pulses have also been found to repeat after a few hours to days. The exact origin and cause of FRBs are still under investigation; suggestions for their origin range from a rapidly rotating neutron star, a black hole, to extraterrestrial intelligence. Recurrent pulses have long been thought to be the source of the events taking place on special types of neutron stars - magnetars - but the exact mechanism was unknown. Now, Japanese astronomers Tomonori Totani and Yuya Tsuzuki from the University of Tokyo have come up with a possible answer. Their research focuses on comparing multiple neutron stars with FRBs. The researchers analyzed thousands of flashes from three such "stellar generators" (FRB 20121102A, FRB

20201124A, FRB 20220912A) with data taken from the Arecibo radio telescope and China's FAST and managed to find a remarkable correlation. However, these are not stellar flares, but star-quakes. **[1] FRB 20121102A (RA/DEC(2000): 05:32:09.000 +33:05:13.00, 0.4 Jy @ 1375 MHz) is the first discovered, highly active, and most well-studied repeater located in a star-forming dwarf galaxy at redshift $z = 0.193$.** **[2] FRB 20201124A (RA/DEC(2000): 05:07:57.600 +26:11:24.00) is another repeater known for its high activity. It is in a Milky Way-like, barred spiral galaxy at $z = 0.0979$.** **[3] FRB 20220912A is located at a position that is consistent with a likely host galaxy of stellar mass $\sim 10^{10} M_{\odot}$ at $z = 0.0771$. The redshifts of these FRB sources are not large enough for cosmological effects to be significant, and hence no correction for the cosmological time dilation is made].** The scientists used the same type of analysis (time-energy correlation analysis) that seismologists use to study earthquake data. In their research, they used data from domestic, i.e. Japanese, earthquakes. They also analysed solar flares in the same way, so that they could compare everything with each other. It turned out that the rapid radio bursts of repeating sources were not similar in nature to solar flares, but rather to terrestrial earthquakes. In terms of the details of the similarities, for both FRBs and earthquakes, the probability of "aftershocks" for each event is 10 to 50 percent. Their occurrence decreases with a power of time. The frequency of "aftershocks" is always constant, and there is no correlation between the energy of the shock or flash and the "aftershock." Nothing is certain yet. There are other explanations in play. Not to mention that different radio flashes can have different origins. But as Totani says, the attention of fast radio hunters is now definitely focused on neutron stars and their astroseismology.



More details can be found in the article:
<https://academic.oup.com/mnras/article/526/2/2795/7295484>

German tech factory reveals next generation Very Large Array (ngVLA) dish prototype: The (US) National Radio Astronomy Observatory's (NRAO) is working on new ambitious project called ngVLA, which should bring 214 newly designed offset dishes of 18 m diameter operating from 1.2 to 116 GHz and 19 smaller 6 m dishes. In total, the ngVLA will have approximately ten times the sensitivity of the present VLA, VLBA, and ALMA, continental-scale baselines providing sub-milliarcsecond-resolution, and a dense core on km scales for high surface brightness sensitivity. For instance, the ngVLA will resolve protoplanetary disks on scales more than 20 times smaller than ALMA. The project has already received a \$21 million grant from NSF. Much of the news is coming from Germany where the collaboration of NRAO/AUI and NSF with Max Planck Institute for Mathematics in the Sciences in Leipzig resulted in first prototype built by mtex company (mtex-at.com). Hundreds of folks gathered at mtex antenna technology in Schkeuditz close to Leipzig, not far from border of Germany and Czech Republic to see the new antenna.



The prototype antenna's 18-meter dish, just under the height of a six-story building, is composed of 76 individual aluminium panels assembled in a striking 8-sided shape. "This design allows the surface of the dish to withstand whatever the environment throws at it—extreme temperature, wind, gravity - the reflector

will maintain its precise shape within several microns, the equivalent of three human hairs,” explained Lutz Stenvers, managing director of mtex antenna technology. “The structure has 724 pieces, held together with 2,500 screws, weighing 43 tons. This design can be shipped in multiple containers to anywhere in the world, and assembled in very little time.” The first antenna should be operational around mid of year 2024. More at

<https://public.nrao.edu/news/ngvla-prototype-debut/> and:
https://science.nrao.edu/science/astro2020/apc-white-papers/137-fe4771da409a7413465c9bb1cb579ae7_McKinnonMarkM.pdf

FINAL: EME2024 near Trenton is now only 10 months away! It's time to complete your travel plans, submit your reservations/plan to attend and talk/paper ideas to WWW.EME2024TRENTON.ORG. We have time for just talking and hospitality, plus a great tech program, sales and swapping, tours for spouses and family and more. We have an excellent, truly first class hotel, the Marriot Springhill Suites in Ewing, NJ. It is only 2 miles from TCNJ and will provide shuttle service. Reservation should be made directly with the Springhill. Indicate it is for EME2024. The conference webpage <EME2024Trenton.org> is now coming up first on the Internet. [We have had a problem with someone reserving <EME2024.org>. We cannot find out who did it and cannot get it turned off. Please ignore this URL]. Info is also available on social media. Our next planning meeting will be 25 Oct at 1600 UTC (1200 NY Time). Email K2UYH or ask one of the committee members for the Zoom link. You are welcome to join in or just listen in.

9, 10 & 11 Aug 2024 at TCNJ



► **The Swiss license authority informed HB9Q** that starting 1.1.2024 there will be no licenses for ham-radio on 3400-3500 MHz anymore.

► **Interested in MW EME** check out the following presentation by W5LUA. It includes many pictures and station details at https://www.ntms.org/files/Sept2023-RWK/W5LUA_RWK_Sept11_2023.pdf.

► **Czech Radio Event from OK1DFC:** [This information is out of date; however Zdenek would consider retransmitting the broadcast off the Moon with adequate lead time for more of you to participate]. Greetings to all EME fans. This year Czech Radio celebrates 100 years of regular broadcasting. I apologize if you are not interested, but hopefully there will be those of us who will want to make this attempt. In addition to 100 years of Czech Radio, on 9 Sept at 1400, it will also be 60 years since the popular science and technology magazine METEOR began its regular broadcasts. On this occasion I was asked by the radio staff if it would be possible to retransmit the jingles of this program over the Moon, to which I agreed. Your task was to listen to these jingles and make recordings of them. If you mailed them back to my address, Czech Radio planned to publish on its website a map of wherever the jingles were received, including your calls and antenna descriptions. Czech Radio also offered to reward the best recordings with a souvenir prize. I did the transmission as planned on 1296.120. I also did a repeat transmission on the following Monday and provided information and coordination via HB9Q. Personally, I have been listening to this program since 1966 and it consistently brings me a lot of new insights and information. I received a file from KB2SA copied with his 1.9 m dish with an excellent signal.

► We hope you will be ready for the 50 to 1296 part of the ARRL EME Contest. The 28/29 Oct WE is moderate declination (DEC), so operating time will be limited. Most of the activity will be late afternoon thru evening and again in early morning at moonset. Someone us will keep going all night but the DEC will slow activity in the wee hours. Good luck and have a super time off of the Moon. We will be looking for you. **73, Al – K2UYH and Matej – OK1TEH**



KA6U on the road focusing on 902 EME