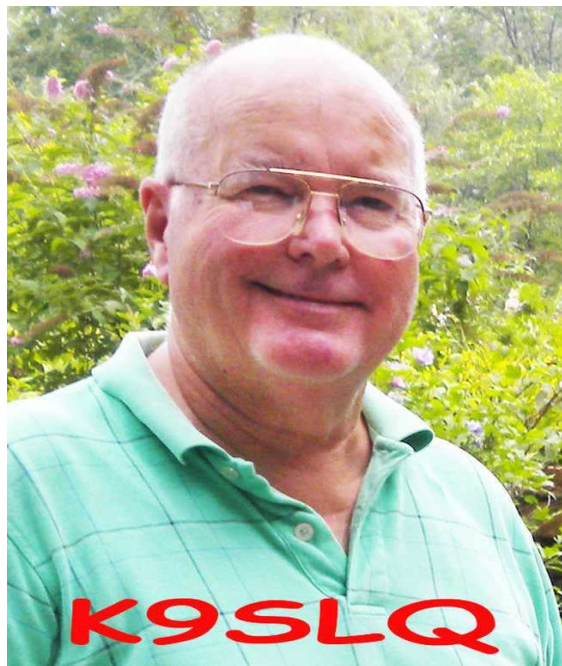


## 432 AND ABOVE EME NEWS APRIL 2020 VOL 49 #4

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\(x\)tcnj.edu](mailto:alkatz(x)tcnj.edu)  
ASSOCIATE EDITOR AND REFLECTOR/NETNEWS MATEJ PETRILKA, OK1TEH, SIMUNKOVA 1609/21, 18200, PRAHA 8, CZECH REPUBLIC, TEL (+420 603 489 490), E-MAIL [ok1teh\(x\)seznam.cz](mailto:ok1teh(x)seznam.cz)  
CW INITIAL LIST G4RGK, DAVID DIBLEY, E-MAIL [zen70432\(x\)zen.co.uk](mailto:zen70432(x)zen.co.uk), AT: <http://www.zen70432.zen.co.uk/Initials/index.html>  
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**CONDITIONS:** This month the majority of the reports are for the 9 cm DUBUS Contest. OK1CA has the top reported score with a total of 22x21. VE6TA has a notable score for his western NA QTH of 17x17. KN0WS also showed up on JT65D to give out MN for the first time on 3400. There are also considerable 24 GHz reports for the same 7/8 March weekend for the ad hoc activity weekend (AW) organized by OK1DFC. The ARI's Trophy EME Contest was on 4/5 April. We had hoped to get this newsletter (NL) before it occurred but did not quite make it. We are holding off ARI Contest reports for the May NL, but can tell you the conditions were truly excellent. A summary of the top scorers of the 2019 ARRL EME Contest is at the end of this NL. **UA3PTW was the top overall scorer. Coming up is the DUBUS 6 cm CW EME Contest on 25/26 April.** Although this contest is for CW/SSB, we want to encourage digital (JT4F and QRA64D) stations to show up as well, and try CW if possible. **The next 432 CW Activity Time Period (ATP) is on 26 April 0730-0930 and 1700-1900.**



**K9SLQ has joined the SKs:** Wayne was a long time EMEer and although not active for some years is remembered for his huge signal on 432 and 1296 EME

with a big 9.2 m HB dish that he constructed. (It eventually ended up with N8CQ and is still in use today). RIP Wayne.

**Dxpeditions News:** During Feb/March, Gene (KB7Q) had an amazingly successful 70 cm PJ2T dxpedition to Curacao. With a single yagi, he worked 50 stations! Despite CORVID-19, it looks that the SV5/HB9COG microwave dxpedition to Rhodes on 23 to 31 May is still go. Also, the TX7EME 1296 dxpedition to Rangiroa atol from 18 to 24 June is still on – see the reports in this NL.

### **REPORTS:**

**4X4AJ:** Andy [andybezh\(x\)hotmail.com](mailto:andybezh(x)hotmail.com) is active on 23 and 13 cm EME with a 3 m stress dish and writes: I am using a HB stress dish with F/D of 0.5 that works well thru C-band. I found that I could achieve a lambda/16 surface accuracy there. This was accomplished by steel cords with turnbuckles from the backside. I got 8 mm accuracy for the dish that means good pattern up to 12 cm and reasonable performance up to C-band. No doubt, a solid dish would have better sidelobe suppression and accuracy, but the stress dish is much easier to build. My own dish without pole and counterweights weighs only 11 kg. I reduced the spillover with square lambda horns (they are optimal for larger F/D); and septums for circular. The worst sidelobe is about -24 dB that gave me ability to work down to about 20 degrees of elevation. I hope to be QRV on 1296 and 2304 for the ARI contest. In the future I plan to 9 cm. The west side of my Moon window is much more noisy due to countless Wi-Fi routers.



#### 4X4AJ's 3 m HB dish with 9 cm feed in place

**9A5AA:** Dragan [dragan9a5aa@gmail.com](mailto:dragan9a5aa@gmail.com) has added 24 GHz to the list of microwave bands where he is QRV – I have a 2.4 m offset dish and 35 W on 1.25 cm. Is anyone interested in the 24 GHz CW EME tests?

**CT1BYM:** Miguel [miguel.pelicano@gmail.com](mailto:miguel.pelicano@gmail.com) has completed his first EME QSO on 24 GHz -- I the first ever 24 GHz EME QSO from Portugal on 7 March after many hours and sleepless nights of testing. I QSO'd OK1KIR (14DB/20DB) using JT4F with the Moon at approximately 50° el, which made it very difficult because there was very adverse spreading (265 Hz)! My Moon noise was 1.3 dB with temp = 8°C and Hum = 95%. At the last microwave meeting in Guadarrama, Madrid, I noticed a problem in my transition from coaxial to waveguide, which connects the PA to a WR42 relay. With 4.5 W output, any attenuation is critical! It was fixed TNX to EB3FRN, who gave me a good transition; a lot of advices from EA3HMJ; and a new feed from PA7JB. On 8 March, I completed a second QSO with OZ1LPR (17DB/21DB); and on 9 March again with OK1KIR (16DB/19DB). I also heard OZ1FF, OK1DFC and PA0BAT. I plan to be QRV next on 3/4 April.

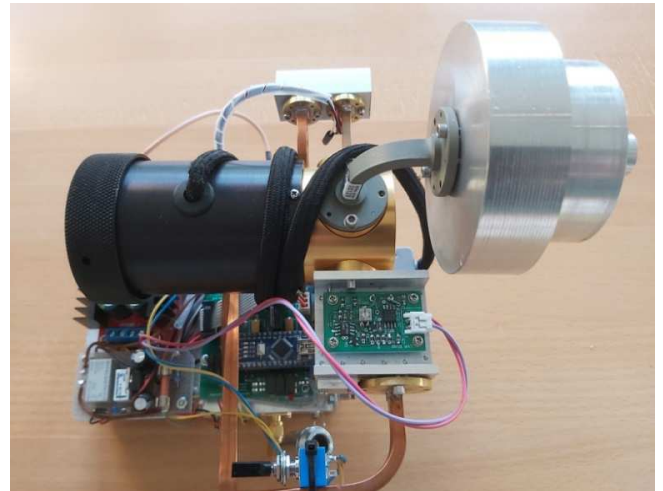


CT1BYM dish with 24 GHz feed in place

**DK7LJ:** Per [per@dudek.de](mailto:per@dudek.de) reports his **10 GHz Beacon is back in operation** after 7 months off the air due to problems in the tracking system. There are still some mechanic problems that need work. Please send reception reports.

**DL7YC:** Manfred [dl7yc@snafu.de](mailto:dl7yc@snafu.de) sends some info about his recent EHF EME experiments: In preparation to receive Sergei, RWBP at 76 GHz off the Moon, I built up a tiny 76 GHz EME setup. It contains a 76 GHz Kuhne transverter, a 5.0dB WA1MBA preamp, a switchable oscillator-box set to the desired frequency and a MORION double shielded 10 MHz OCXO. Last not least and very important is my 2.4 m precision prime focus dish (f/d 0.385). It was designed for 11 GHz TV reception. I used this dish successful at 10 GHz and 24 GHz for EME. I now know after one month of use that it also works at 47 GHz.

I have received W5LUA with it. I do not have much power here to make a two-way contact. After finishing a Super-VE4MA feed for 76 GHz, I measured a return loss of 22 dB! On 4/5 April with super Moon conditions (perigee, clear sky, low humidity), I measured over 3 days sunnoise from 6.5 dB to 5.9 dB and more *stable* moonnoise between 0.51 and 0.53 dB at 40 - 50 deg elevation. All looks good, but still far from what's necessary to get signal detectable by QRA64 or JT4F (> -24dB at least), but the dish and feedhorn seem OK. The preamp is not good enough and has to be improved to a NF of 2.5 - 2.8 dB. This is possible with currently available MMIC chips that have been ordered. Next step will be cooling the preamp with liquid nitrogen down to -190 deg C. [More info can be found at <http://www.pa0ehg.com/what47ghz.htm> and <http://www.pa0ehg.com/47ghzeme.htm>].



DL7YC 47GHz EME station (without SSPA)

**EA3HMJ:** Jose [ea3hmj@gmail.com](mailto:ea3hmj@gmail.com) with EB3FRN and EA5DOM are working to set up station for reception of W5LUA on 47 GHz. They are using a 1.2 m dish, and are working on a 2 W SSPA.



EA3HMJ's 47 GHz experimental EME station



**G3LTF:** Peter [g3lftf\(x\)btinternet.com](mailto:g3lftf(x)btinternet.com) sends news of his March activity -- I was active on 23 cm on 3 March and worked IK1FJI and tried without success to work GM0PJD on CW (he was 559); and on 4 March DJ2DY, SM4GGC and PA2DW with excellent conditions and big SSB echoes. During the 9 cm DUBUS/REF CW Contest there were high winds for a large part of the weekend, which severely restricted my operation. I worked before the contest on 6 March OK1KKD with a nice signal. I then overslept the 0000 start time on 7 March, but was on by 0230 and in the next hour QSO'd 10 stations. The next moonpass was a complete wipe out due to the winds and thus I had no opportunity to work VK, but on Sunday at 1700 the wind dropped enough for me to undo the dish and to work another 7. Worked were OH2DG, ES5PC, OK1CA, WA9FWD, VE6BGT, SA6BUN, OH1LRY, KL6M, VE6TA, K2UYH, SM3BYA, OK1KKD, DF3RU, 9A5AA, PA3DZL, LX1DB and SP3XBO for a total of 17x16. I also worked KL6M and DF3RU with good SSB signals and heard SA6BUN on SSB. I think there must have been at least 24 stations active in the contest, which isn't bad for this time of year and the WX. I measured Sun noise (6 March) as 14.3 dB SF70. Thanks to all for the nice CW and SSB QSOs. I plan to be on for the ARI Contest and I will probably concentrate on 23 and 13 cm. I will also most certainly be on for the 6 cm DUBUS/REF contest, WX permitting of course. I have rebuilt the cooling system of my 13 cm Ericsson PA - it has certainly increased the airflow!



**G3LTF new cooling for his 13 cm 200 W SSPA**

**IK1FJI:** Valter's [valter\\_dls\(x\)yahoo.it](mailto:valter_dls(x)yahoo.it) 1296 report 1296 for March follows -- I worked using CW on 1 March SM5DXG (569/569), SM4GGC (549/559) and WK9P (569/569), on 3 March PA2DW (O/O) and G3LTF (569/569), on 7 March WK9P (569/569), W4OP (579/579) and WK9P (55/55) on SSB, on 8 March KA1GT (O/O) for an initial and N4PZ (589/589), on 9 March SK0UX, and on 28 March SM4GGC (569/559). I also QSO'd some stations using JT65C. I was pleased with my results in the ARRL EME Contest 23 cm single operator CW class. I will be QRV in ARI Contest CW only and hope for good WX.

**JH1KRC:** Mike [jh1krc\(x\)syd.odn.ne.jp](mailto:jh1krc(x)syd.odn.ne.jp) is looking for 23 cm CW ops for South America -- I have cut the trees blocking

my eastern Moon window and can now operate down to 5 deg. The skyline is now available. Please email for a sked. **K7ULS:** Mike [k7uls\(x\)yahoo.com](mailto:k7uls(x)yahoo.com) continues to add initials on 432 with his QRP station -- I was very pleased to work at the end of Feb DF3RU for another new one despite a high Moon pathloss at the time, and also DL7APV again. I continue to look for new states on 222 EME. [Mike's initial successes had a setback in March when he totaled his truck and ended up in the hospital. He is back home and QRV again, but would probably like to hear from you].

**KN0WS:** Carl [carlhasbargen\(x\)g.com](mailto:carlhasbargen(x)g.com) is now on 9 cm -- I shoveled a bit of snow to have access to my 1.8 m dish for the DUBUS 9 cm Contest weekend. We had such mild WX for several days, which made operation possible. The dish had been tied down for 4 months and was pleased when the mount seemed to work well. I did not expect much with a small dish and 50 W. I had troubles with WSJT-X and resorted to WSJT-9. I was pleased to copy K2UYH (17DB) and make my first 9 cm EME QSO with him. I also copied some CW, but no full call signs, but other digital activity. The next moon-pass was better and I worked 4 more stations using JT65C, including PA3DZL (18DB), OK1DFC (21DB), DF3RU (19DB) and OK1CA (14DB). I now have 5 initials on 9 cm. It was heartening to work Zdenek's 40 W from a 2.4 m dish. I also heard KD3UY (26DB), but he did not hear me. These were also my first-ever EME QSO's in the month of March. Now that I have tasted a bit of success on 9 cm, I am looking forward to trying 6 cm. I plan to be around during the DUBUS event in April. I will use a home-made OK1DFC septum feed with 50 W Kuhne SSPA. The 6 cm septum feed I plan to use is made with 40 mm outside dimension, 3 mm wall thickness square aluminum tube from Online Metals. The larger septum feeds I have made from aluminum tubes for different bands had septums that were thick enough to screw into place from the outside of the square tubing. The septum of my 6 cm feed is too thin for that, so I cut the tube open and sandwiched the septums in-between. The problem with aluminum is I can't seem to get the tubing hot enough to solder or braze back together end up using Aluminum adhesive tape billed as having electrically conductive adhesive. I am not sure what that looks like at microwave frequencies. After using this tape at each seam, I took aluminum tape with regular adhesive to add a bit of strength to everything. The SWR looks good.

**LX1DB:** Willi [wbauer\(x\)pt.lu](mailto:wbauer(x)pt.lu) reports his his antennas survived the recent storms and that he is setting up for 48 GHz -- My tracking system has an accuracy of 0.05 degs checked by tracking moonnoise at 48 GHz. I am using a solid prime focus 3 m Andrew f/D 0.3 dish giving a Sun noise of 7.1 dB at a flux of 63 (temp 19 degs C and hum 63%). The Moon noise was 0.45 dB and CS/G 0.8 dB with a commercial LNA from Spacek Labs (model: SL 472-18-3M) with 18 dB gain and a NF: 2.4 ~ 2.8 dB indicated as 2.2 dB on the device data shed at 48 GHz. I expect to be QRV for the 6 cm contest if WX permits.

**N1AV:** Jay [whereisjay\(x\)gmail.com](mailto:whereisjay(x)gmail.com) is QRV on 1296 EME and reports -- In March, I made 10 QSOs and added 9

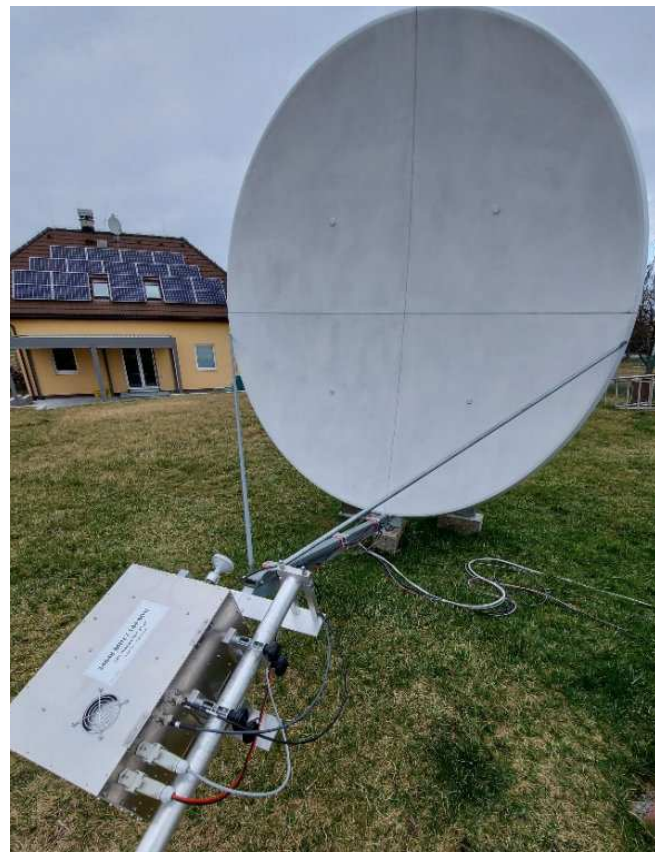
initials including my first QRA64 QSO on 1296 EME with GM0PJB and my first QSO with a station running yagis, G4FUF, both of which were very exciting. I worked VE2UG with 35 W at his dish to add to my personal "low power stations worked" records. Currently the station is down for a DigiLO upgrade of my intermediate 144 MHz transverter to align the frequency and fix a "slight curl" at the start of my TX cycle. It should be back on for the start of April. I looking just about every night for initials or skeds or experiments with different modes. My station is a 3.2 m dish, K6LM septum feed, Fat Daddio cake pan ring and PQL SSPA loafing at 450 W.

**OE6V:** Daniel (HB9CRQ) [dan\(x\)hb9q.ch](mailto:dan(x)hb9q.ch) reports -- All QSLs received for OE6V dxpedition have been confirmed and mailed and should have been received already. If you need a QSL for OE6V please send your QSL with SAE to HB9Q, PO Box 133, CH-5737 Menziken. QSLs without SAE will be mailed by the buro. The OE6V story, results and photos are online at [https://hb9q.ch/2018/?page\\_id=1999](https://hb9q.ch/2018/?page_id=1999).

**OK1CA:** Franta [fr.strihavka\(x\)seznam.cz](mailto:fr.strihavka(x)seznam.cz) [PSE note new email address] writes -- I was QRV in DUBUS 3.4 GHz EME Contest on 7/8 March. In the first part (midnight Friday local time), the activity was pretty high and within 2.5 hours I made 16 CW OSOs. In the second part, on Saturday afternoon, I added VK4AFL for initials #65 and PA3DZL #66. My contest score was 22x21. I also worked using JT65C KN0WS for digital initial {11} and KD3UY {12}. On Sunday morning, I installed my 24 GHz equipment in my 4.2 m dish. It was a beautiful sunny day; and I measured 14.1 dB of sunnoise. The Moon was 2.1 dB; but later dropped to 1.7 dB. However, after 1830 it improved to 2.3 dB. I QSO'd using JT4F OK1DFC (18DB/16DB) for mixed initial #19\*, heard Zdenek on CW during a QSO with OK1KIR, and then easily worked PA0BAT (17DB/15DB) and OZ1LPR (15DB/15DB). CT1BYM, who is a new station on 24 GHz was detected weakly but did not decoded.

**OK1DFC:** Zdenek [ok1dfc\(x\)seznam.cz](mailto:ok1dfc(x)seznam.cz) sends news on his Feb and March EME -- I was QRV during the 9 cm DUBUS Contest weekend. At moonrise on Sunday I switched to 24 GHz and was QRV for the full Moon period. On 3.4 GHz at the start of the contest on Saturday I worked only 2 stations, OK1CA and WA6PY. I am still running only my small dish 2.4 m offset dish and 45 W. It was not enough to get much attention in pileups with the big guns. I focused on monitoring band and hearing who was working whom. Saturday at moonrise, I was QRV again. I heard VK4AFL, but he did not copy my call. From then to moonset (on Sunday), I worked 13 CW QSOs. Out of contest, I added digital initials with WA3RGQ and KN0WS. I also heard K2UYH in QSO, but not calling CQ. I have to speed up my work on the new dish and increase my TX power. RX performance was great, I copied almost all the stations that were QRV. I heard VK4AFL, K2UYH, VE6TA, G3LTF, OZ5G, KL6M and VE6BGT. I worked on 6 March using JT65C K2UYH (5DB/13DB) {#14}, on 7 March using CW OK1CA (579/559), WA6PY (O/O) for initial #26, DF3RU (559/559), SA6BUN (559/529) #27,

OH2DG (559/559), PA3DZL (559/559), SM3BYA (O/O) #28, 9A5AA (O/O) #29 and DXCC 19, ES5PC (559/559) OK1KKD (559/559) #30 and OH1LRY (O/339), and on 8 March using JT65C WA3RGQ (20DB/O) {#15}, WA3RGQ (20DB/O) {#16} and KN0WS (22DB/O) {#16}, and using CW WA9FWD (O/449) #31 and SP6OPN (559/559). My final score was 13x12. I was looking forward to operation on 24 GHz. On Sunday afternoon I put my 24 GHz gear in the dish and waited for moonrise. I am using a 23 W SSPA using 4 x TGA4915CP, a 1.1 dB NF LNA and my 2.4 m offset Prodelin dish. Earlier I measured sunnoise of 11.6 dB and G/CS of 4.2 dB. After moonrise I had 1.8 dB of moonnoise. The temperature was around 0°C with a clear sky - quite good conditions. On the band, I have found 6 stations and QSO'd OK1KIR (15DB/18DB) on JT4F, OK1CA (16DB/18DB) JT4F for digital initial {#15}, OK1KIR (559/O) for my initial #1 on CW, OZ1LPR (15DB/15DB) JT4F {#6} and DXCC 5, PA0BAT (15DB/16DB) JT4F {#7} and DXCC 6, OZ1FF (19DB/16DB) JT4F {#8} and OK1KIR (18DB/17DB) again. I also tested with CT1BYM. Miguel has 4 W to 180 cm prime focus dish. He had a couple of decodes from me, but I saw only traces and no decodes. The spreading was only around 25 Hz. I then had with the very low spreading a CW QSO with OK1KIR (O/O) but the copy was clearly (559).



**OK1DFC's 24 GHz setup**

**OK1KIR:** Vlada [vlada.masek\(x\)volny.cz](mailto:vlada.masek(x)volny.cz) and Tonda report on their EME in Feb-March -- On 13 Feb we heard KB7Q log on HB9Q as a 70 cm dxpedition in PJ2 (Caruso). We immediately installed our 70 cm feed. Unfortunately, PJ2T



did not show up; but we did work using JT65B at 0430 W2HRO (19DB/15DB) for digital initial {#245} and 0644 K7ULS (25DB/26DB). At last on 26 Feb we found PJ2T at 1438 (25DB/28DB) {#246} and a new DXCC on 70 cm. Later we added at 1533 KO4MA (28DB/23DB) {#247} for a new "FL" field. March was dedicated to 24 GHz. We arranged tests with CT1BMY. Miguel at UHF meeting in Madrid had found a faulty WR42/SMA transition – [see Miguel's report]. He was eager to test even earlier with high spread conditions. We missed the 9 cm part of the DUBUS Contest to operate on 1.25 cm. It was a good decision as we worked on Saturday, 7 March, using CW at 1850 DL6ABC (O/O) for initial #27 and then with JT4F at 2042 (14DB/17DB) for digital initial {#44}. After that we started testing with Miguel using JT4F and succeeded at 2116 CT1BYM (20DB/14DB) {#45} for the first CT-OK 24 GHz QSO, new DXCC and IM field, even at time with a predicted spreading of 265 Hz! The WX conditions on our side were very good (almost clear sky) and moonnoise measured at 2.5 dB. It was Miguel's first ever 24 GHz EME QSO! On Sunday, 8 March we QSO'd using JT4F at 1724 OK1DFC (17DB/15DB) and 1922 using CW (O/559) #28 and 1932 OZ1LPR with strong JT4F signal (10DB/15DB). We continued QRV on Monday 9 March but found only with JT4F at 1932 OK1DFC (17DB/21DB) and 2021 CT1BYM (19DB/16DB). We are missing QSLs from LU1CGB (13 cm), LA8LF and GW4DGU for 3 cm.

**PA2V:** Peter [peter\(x\)advipe.nl](mailto:peter(x)advipe.nl) is QRV again on 432 after some turbulent months with lot of storms and little damage on his array, informs us about his activities -- The damage to my array looked to be serious, but it all came down to a loose coax cable from the splitter to the relay at the LNA box. With a little help from my good friend PA9R, we managed to everything fixed during another windy afternoon. (Beware of another big EME signal from the Netherlands; Rob is almost ready to QRV with 8 yagis and sufficient power). In March, I was happy to work 2 new DXCC's: PJ2T with some difficulties the first days but later an outstanding signal when he was able to change polarization. (Gene is an outstanding example for anyone who want to setup an single yagi EME station. Hats off Gene)! The other was A65BR. I saw his traces earlier in the ARRL contest and later once with a decode. But during the perfect conditions in March, I was able to get decodes from his QRP station. Together with all the new initials I sure had some good results the last months. Worked in Feb and March on 70 cm using JT65B unless noted were UB4UAA, RD3FD, DL8DAU, UT6UG, RD3FD, S51WX for mixed initial #210\*, RN6MA, RD3FD, SP6JLW, DL9KR on CW, UA3PTW on CW, SP7DCS on CW #211\*, DF3RU on CW, DK1KW, F8DO, LZ1DX, DL6KAI, N0AKC, YL2GD, RA2FGG #212\*, PJ2T #213\* and DXCC, RD3FD, W2HRO, DF3RU on SSB, RD3FD, IW4ARD #214\*, DL6SH, DL8DAU, DL7APV, DG5CST #215\*, RD3FD, UB4UAA, A65BR #216\* and DXCC, EA5CJ, EB5EEO, R6CS, W2HRO and DG5CST. It was pity to miss out on the GJ dxpedition. Their times did not synchronize with my busy QRL schedule. I hope some other dedicated UHF-SHF dxpedition will go there again.

**PA3DZL:** Jac [PA3DZL\(x\)planet.nl](mailto:PA3DZL(x)planet.nl) reports on his DUBUS 9 cm and other EME – During the contest I was not QRV for the first pass but active during the 2nd and 3rd. Feb was a bad month with very high winds, but for the contest WX was OK. The strongest signals were from OK1CA, OH2DG and SA6BUN. Michael was a nice beacon both days! There was some nice activity although i missed a number of stations. It would really be a pity if we lose the 9 cm band. I QSO'd on CW VK3NX, SM3BYA for an initial (#), OH2DG, SP6OPN, OK1CA, OK1KKD, SA6BUN (#), DF3RU, PAØBAT, ES5PC, OK1DFC, OH1LRY, 9A5AA, WA9FWD, VK4AFL (#), SA6BUN DUP, 9A5AA DUP, SP3XBO and G3LTF for a contest total of 17x15. I also made out of the contest 3 JT65C QSOs with KD3UY for a mixed initial (#)\*, WA3RGQ (#)\* and KNØWS (#)\*. Thanks for the nice QSOs including 6 initials. I am looking forward the DUBUS 6 cm CW contest at the end of April.



PA3DZL's dish at new QTH

**PA7JB:** John [pa7jb\(x\)ziggo.nl](mailto:pa7jb(x)ziggo.nl) plans to be on 24 GHz for the 4/5 April weekend – I hope to receive some signals during the 24 GHz AW proposed by OK1DFC. It has been a long time since I did something on this band. 7 years ago I received LX1DB, OK1KIR, W5LUA, and later DL7YC and G3WDG, all in CW. I hope there will be additional stations active that weekend. My set up is still a 2.4 m offset dish, but now with a DB6NT preamp and a W2IMU feed and a conical horn similar to W5LUA's feed. I am seeing 12.2 dB of sunnoise, so there is hope to receive some more stations. Last time I was copying only 9.5 dB of sunnoise. If I am happy with the RX results, I try for a QSO. I have the TX side also working thanks to the help of DL7YC with a TWT. I hope to have 40 W.

**PJ2T:** Gene (KB7Q) [geneshea\(x\)gmail.com](mailto:geneshea(x)gmail.com) had a super 432 EME dxpediton with his small station from Curacao –

My EME started on 26 Feb, just past new moon. Things kicked off with a nice CW QSO with DL9KR (529) once I found a paddle that would work, then it was JT65B and off to the races. I logged UA3PTW (20DB), DL5FN (25DB), OH2DG (23DB), OK1KIR (28DB), UT6UG (24DB), UT5DL (22DB), HB9Q (14DB), and UX5UL (27DX). This was a great start. On 27 Feb tried for over an hour with K5DOG (22DB) but no joy, and QSO'd LZ1DX (19DB) easily for his #100 country and ES3RF (29DB) before I ran out of el. On 28 Feb was added K5DOG (23DB) then an easy contact after Steve changed preamps, XE2AT (25DB) completed with 3 degs of Moon; after taking friends on an island outing for lunch, I got back on for DL7APV (8DB), SM7THS (25DB) and K2UYH (25DB). I also heard G4FUF and ZS4TX but did not work.



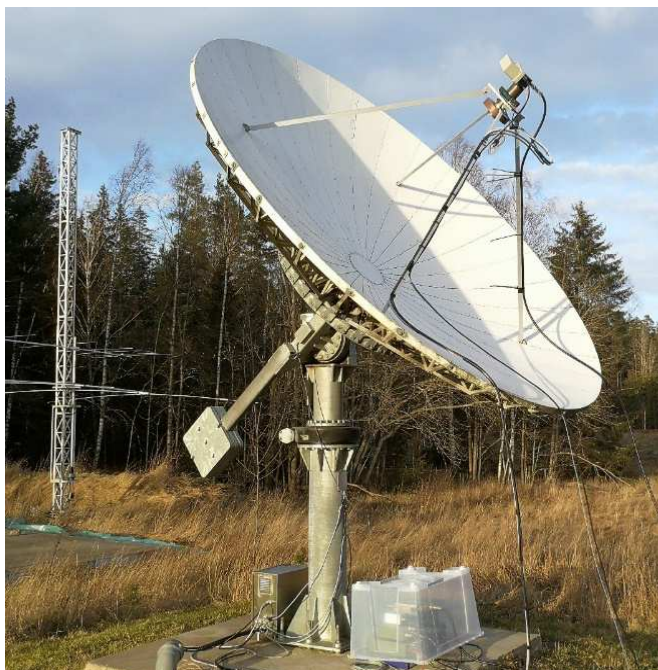
**PJ2T's yagi at 45 deg pol angle seems to add +3 dB to EU**

On 29 Feb after supper on a setting moon, I caught VK4EME (28DB) and VE6TA (26DB); then at moonrise had an excellent session working ZS4TX (27DB), ZS6JON (27DB), DL8GP (30DB), G4RGK (25DB), ON4AOI (28DB), DF3RU (14DB), G4FUF (27DB), PA0BAT (27DB) and G4EZP (26DB). W2HRO (21DB) and DK4RC (26DB) were copied many times. 1 March was a total bust! I chased W2HRO and PA2V for several hours but Faraday kept us at V/H crossed polarity. 2 March was a little better but still lots of crossed pol and very high winds. I worked PA2V (23DB) easily, UX0FF (26DB) and had near miss with DK4RC - didn't receive my Rs. On 3 March added JA6AHB (25DB). 4 March was another tough Faraday day with V/H lock out, but I got the bright idea to twist the

Yagi's boom 45 degs. Surprise, surprise! I added DF3RU (22DB), UR7DWW (27DB), W2HRO (28DB), PA9R (23DB) and YL2GD (28DB). On 5 March in a post-midnight session, I netted ZL3AAD (28DB) and copied but did not complete with N0AKC on setting Moon. At moonrise, I worked DK3WG (25DB), DF3RU (28) again, G4YTL (26DB), W5LUA (24DB), DL8DAU (21DB) and OH6UW (26DB). By 6 March it seemed that I was running out of folks to work, then added DL6SH (19DB), DK0NHF (26DB) and DK5SO (25DB) a bit later; and on 7 March DL8FBD (30DB), DG5CST (29DB), DK4RC (DB26) finally and UB4UAA (25DB). DL2HWA was heard quite well. It is very nice to have a near full moon to aim at. On 8 March, my final day, rolled out of bed in the middle of the night to give W7MEM (23DB) a QSO and me contact 50! What a great way to finish off the dxpediton; rinse the salt off the antenna and pack for the trip home. I will send some special QSL cards to each and every station worked. We were very lucky to leave when we did with all the travel complications associated with Covit-19. I would not have dreamed that my oh-so-modest station could make so many contacts - it's good to be the DX!

**SA6BUN:** Michael (DL1YMK) [sa6bun\(x\)gmail.com](mailto:sa6bun(x)gmail.com) report on his participation in the **DUBUS 9 cm Contest** from his holiday QTH is Sweden -- I was active in all three moonpasses and had a lot of fun, although sleep was dearly missed! Thanks to all participants for making the contest such a fun event. Due to activities of the Swedish SSA, I was able to prolong my 9 and 13 cm high power permits until mid 2020. My setup was very much provisional as in the previous 9 cm contests, using parts of the my well proven dxpediton equipment. The equipment was positioned right underneath the 3 m solid dish, protected against the rain with a typically Swedish solution: an IKEA staple box. Unfortunately, temperatures during night times dropped to -6°C, but the 20 years old transverter, which had been upgraded before the contest with a reflocked LO, worked flawlessly. The LNA is an unconditionally stable DJ9BV type, giving 0.55 dB NF (x) 38 dB gain, which is directly mounted to a HB round septum feed. RF output was 400 W, rendering sideband contacts with DF3RU, LX1DB and PY2BS (Bruce came on 1 day after the contest) in arm chair copy quality. If anybody is interested in working SM on 9 cm before the band is lost, please email me.





**SA6BUN's 3 m dish and 9 cm equipment**

**SM3BYA:** Gudmund [SM3BYA\(x\)wannberg.net](mailto:SM3BYA(x)wannberg.net) writes about his **DUBUS 3.4 GHz Contest experiences** -- SM stations were able to take part in the 3.4 GHz event thanks to the unexpected postponement by our P&T of the spectrum auctions that had been scheduled for early Feb. In addition to myself, I copied SM6PGP and SA6BUN. The week before the contest we had a late snowstorm that filled my dish with heavy wet snow. It took me the better part of a day just to dig it out. Knowing that time on this band is running out, I concentrated on working new stations rather than trying to maximize my QSO count. In the first pass, I QSO'd ES5PC, then called OH2DG, but my transmitter refused to come on. It took me several hours to find the problem, a bad relay in the transverter. When finally fixed, I had almost run out of Moon time. All was OK for the second and third passes, but there was very low activity during the third pass. Guess everybody had worked each other by then. I ended with a score of **16x15** and one dupe. Initials were PA3DZL, DF3RU and OK1DFC bringing me initial #31. I heard 9A5AA but too weak for a good QSO. I plan to contact him for a sked soon. I also copied VE6TA and WA9FWD when had TX problems, and VK4AFL briefly. I will leave my 3.4 GHz feed in the dish for the April high declination weekend and then change to 2.3 GHz. Sked requests are always welcome!



**SM3BYA dish before 9 cm Contest**

**SP6ITF:** Gregory [sp6itf\(x\)neostrada.pl](mailto:sp6itf(x)neostrada.pl) (JO81Ib) submits a late report on his **23 cm SSB Funtest results** – I used my 4.5 m dish with 300 W PQL SSPA. I QSO'd all on SSB DL3EBJ (55/55) JO, OH2DG (55/55) KP, G3LTF (55/54) IO, OK2DL (57/57) JN, DK0SF (55/55) JN, DF3RU (55/55) JN, SP6JLW (55/54) JO, HB9Q (59/55) JN, DK4RC (55/53) JO and LX1DB (59/56) JN. I ended with **10 QSOs** in 4 mults for a score of  $(10 \times 2) \times 4 = 80$  points.



SP6ITF's 4.5 m dish used in 1296 Funtest

**SV5/HB9COG:** Dan (HB9Q) [dan\(x\)hb9q.ch](mailto:dan(x)hb9q.ch) reports the Q-team's dxpediton to Rhodes on 23 thru 3 cm from 23 to 31 May is still on -- We have the flight tickets for SV5. So far the flight is not canceled. The house is payed for. So we still hope to go there, but will watch the situation carefully. We will post at [https://hb9q.ch/2018/?page\\_id=2003](https://hb9q.ch/2018/?page_id=2003) up to date info. [See the last NL for more detail information].

**TX7EME:** Giulio (IW3HVB) announces that he and IK3YBX will be back on 1296 (call to be confirmed) from Rangiroa atoll, French Polynesia from 18 to 24 June. We will use a 2 m dish with good power, ensuring opportunities or both digital and CW QSOs. Windows for Europe at our moonrise (BH65EA) will be fairly short, but with takeoff on the ocean. We will suggest stations call starting from eastern EU, then for the second part of the window towards north west. G and EI stations should be the last, given their longer common moon window. For further details see my website [www.iw3hvb.it](http://www.iw3hvb.it).

**UR5LX:** Sergey's [ur5lx\(x\)ukr.net](mailto:ur5lx(x)ukr.net) recent activity has concentrated on 3 and 6 cm – I QSO'd on 10368 using QRA64D on 2 Feb IK0HWJ (12DB\19DB) who has 1.8 m dish and 50 W for mixed initial #106\*, on 7 Feb the OE6V dxpediton (12DB/16DB) #107\* and new DXCC, and on 8 Feb IK6CAK (20DB/17DB) 1.2 m dish and 7 W #108\*; and on 5760 6 Feb OE6V dxpediton (13DB/16DB) for mixed initial #47\* and new DXCC and OK1DFC (10DB/10DB) #48\*. My station is a 2.4 m offset

dish with on 6 cm 40 W and on 3 cm 20 W. I am open for skeds by email.

**VE3KRP:** Fast Eddie [eddie\(x\)tbaytel.net](mailto:eddie(x)tbaytel.net) Feb/March report follows – The WX here is still an issue. Hopefully I won't have to dance with the snowblower anymore. On 23 cm, I contacted using JT65C on 3 Jan DF3RU, AA4MD, IK1FJI and W2P, on 4 Jan RA4HL, PA3DZL, G4CCH and N1AV for a mixed initial (#\*) and on 29 Feb RA2FGG, G4FQI, N2QG (#\*) and N1AV.

**VE6TA:** Grant [ve6ta\(x\)xplornet.com](mailto:ve6ta(x)xplornet.com) updates us on his recent 3400 EME activity in the DUBUS Contest -- I worked ES5PC, OH2DG, OK1CA, K2UYH, SA6BUN, WA6PY, WA9FWD, VE6BGT, KL6M, G3LTF, VK3NX, VK4AFL, DF3RU, SP6OPN, 9A5AA, SM6PGP and WB2BYP for a total of 17x17. Both OK1CA and VE6BGT had huge signals (S7-9) and there were lots of stations on my SDR during my EU window. G3LTF was heard very well calling on SSB, but not enough power on my end to get more than a QRZ from Peter. Overall the activity was encouraging. We will see what happens over the next few months. Let's hope next year is as good. Next month is the 5.7 GHz weekend so I will be gearing up for that one and testing my newly converted 100 W surplus amp.

**VK4AFL:** Trevor [tbenton\(x\)bigpond.net.au](mailto:tbenton(x)bigpond.net.au) has some excellent results during the 9 cm DUBUS Contest -- I had some good CW contacts during contest. I worked KL6M, WA6PY, VE6TA, OK1CA, OH2DG, SA6BUN, PA0BAT, ES5PC and PA3DZL for a total of 9x9. Following the contest, I added QSOs with VK3NX and HB9Q. Signals were very good. Indeed, 9 cm is an excellent band!

**W4OP:** Dale [parinc1\(x\)frontier.com](mailto:parinc1(x)frontier.com) reports on 1296 -- I was on briefly active on 4 March on CW and worked WK9P, N4PZ, IK1FJI and K5DOG. Signals were great with low libration at this end. Material for the surface expansion to 15' of my dish is finally here. I hope to have the present 13.5' surface off the mount and the new one on, along with a new SM6FHZ 5 step septum feed by late May; in plenty of time for DUBUS 1296 Contest.

**WA9FWD:** John [WA9FWD\(x\)outlook.com](mailto:WA9FWD(x)outlook.com) sends the following report on his recent operation and problems -- I have been having some bad luck as of late. It started when I turned the equipment on and was getting ready for the 1296 SSB contest. When I hit the transmit switch there was an explosion and fire that came shooting out of the amp. A subsequent investigation showed that the W6PQL FET switch that switches the 50 Volt line on during transmit had failed in a spectacular way. Jim is selling upgrade kits for the mica insulator that he had originally used and I strongly recommend doing the upgrade to a ceramic insulator. Fortunately, the amplifiers were not damaged and all is repaired now. I installed the 9 cm feed for the DUBUS Contest. The receiver sounded very noisy and I was having a difficult time working even the strongest stations. I finally changed to my backup TS2000 and things started working much better. I ended up with a score of 17x15. QSO'd were OH2DG, WA6PY, SA6BUN,



OK1CA, VE6TA, OH1LRY, VE6BGT, G3LTF, DF3RU, PA3DZL, OK1KKD, K2UYH, OK1DFC, ES5PC, WB2BYP, SM6PGP and KL6M. I heard but didn't work SM3BYA and 9A5AA.

**WB2BYP:** John [storyavenue\(x\)hotmail.com](mailto:storyavenue(x)hotmail.com) was QRV for the 9 cm DUBUS Contest – On 3400, I worked on 8 March SA6BUN, OK1CA, WA9FWD, K2UYH, SP6OPN, ES5PC, KL6M and VE6TA. All on random CW for a total of 8x8. Several others were called with no reply. I also worked on 10 March PY2BS on sked. I seemed to have a feed position problem as the echoes and moonnoise were down considerably. I am looking into the cause; the 9 cm feed is still in place, and I am hoping to work some sked requests. I am planning to put in a 6 cm feed to listen during the April DUBUS Contest.

**K2UYH:** I (AI) [alkatz\(x\)tcnj.edu](mailto:alkatz(x)tcnj.edu) was QRV on 70, 23, 13 and 9 cm from the end of Feb thru the end of March. I worked on 432 using JT65B on 28 Feb at 1900 PJ2T (20DB/27DB) dxpedition for mixed initial #1009\* [previously worked Caruso on 432, how about 1296?] and on 29 Feb at 1833 UR5EE (13DB/18DB) #1010\*, then switched to 1296 at 1920 WK9P (569/569) using CW for initial #416 (mixed initial #632\*), 1942 SM5GDX (569/579) CW #417, 1956 CX2S (16DB/17DB) using JT65C #634\* [have Uruguay], 2013 RA2FGG (12DB/15DB) JT65C and 2023 LU1CGB (14DB/5DB) JT65C. Prior to the DUBUS 9 cm Contest, I worked on 3400 using JT65C on 6 March at 2346 OK1DFC (13DB/5DB) for mixed initial #63\* and on 7 March at 0003 KN0WS (16DB/0DB) #64\* for State of MN – Carl's first 9 cm QSO; then in the 9 cm Contest all on CW unless noted at 0031 OH1LRY (569/569), 0037 SM6PGP (569/579), 0041 VE6TA (569/579), 0048 ES5PC (569/589), 0100 9A5AA QRZ, 0123 WA6PY (569/569), 0130 OH2DG (579/579), 0136 SA6BUN (569/559), 0156 OK1CA (569/569), 0240 9A5AA (559/569), 0255 OK1KDD (559/559), 0315 G3LTF (579/579), 0320 KL6M (569/569), 0326 VE6BGT (569/569), 0359 WA3RGQ (13DB/O) using JT65C out of the contest, and 8 March at 0008 SP6OPN (569/579), 0028 WA9FWD (579/579), 0055 DF3RU (569/579) and 0218 WB2BYP (549/559) for a total of 17x15. I was on 13 cm on 30 March to work at 01800 4X4AJ (16DB/23DB) using JT65C mixed initial #118\* and DXCC 34. Andy was running only 20 W because he had a problem with his SSPA. On 31 March, I was back on 3400 to finally add at 0355 VK4AFL (559/559) on CW for initial #53 (mixed initial #65\*). I plan to be QRV in the 6 cm DUBUS and the ARI Contests.

**DU3BC (designer of XLNA & KLNA) meets K2UYH at Satellite show in WDC in March**

**NET/CHAT/LOGGER NEWS:** **DL1DWI** is QRV on 23 cm EME with a 70 el yagi and 460 W SSPA with remote control. You can arrange a sked with Gerhard at [dl1dwi\(x\)gmx.de](mailto:dl1dwi(x)gmx.de). **HB9DUK** reports copying the 10 GHz Beacon between (9DB and 12DB) with a 1.8 m Andrew offset dish. **VE4MA** is copying 3 cm Beacon at (7DB). **HB9Q** was not able to be QRV of the 3400 Contest weekend, but was QRV later in the month. **JA6AHB** is looking for new DXCC contacts on 432 and 1296. If you can help please email Toshio at [ja6ahb\(x\)plala.to](mailto:ja6ahb(x)plala.to). **VK4CDI** is very frustrated and feels he may be permanently QRT on 9 cm. A wireless Internet tower has appeared 1 km from away on 3410 with a 20 MHz BW. **WA6PY** was QRV during the 9 cm contest but had a problem with his email report. Paul planned to TX in the VK band. **OK2DL** has new PA consisting of 2 x W6PQL 600 W SSPAs with MRF13750s. Marek's blog <http://www.ok2dl.eu> contain more info. **RK3T** is QRV on 70cm EME with 8x33 el yagis and 700 W PA. **PA4VHF** is a new station on 70 cm with 4x21 el F9FT yagis and 200 W PA. Rick has already worked small stations such as OK1TEH. **DG5CST** is finally QRV on 432 EME with OK1DFC's old 10 m dish and a 300 W PA. **JH3BHB** is new big-gun station QRV on 70 cm EME with 8x24 el yagis. **SM7GVF** has a new big dish but needs to cut some trees see some fantastic pics at <http://sm7gvf.dyndns.org/sm7gvf/sm4gvf/Dishantenna.html>. **OK2ULQ** is now QRV on 10 GHz EME as well as and he completed already several QSOs.



**DL1DWI 70 el yagi used on 1296 EME**



**RADIOASTRONOMICAL CORNER BY OK1TEH:** Mario, IONAA has released his updated version of Murmur to 13.0.0 with new ATNF Catalogue ( 1.63 ) and new features, see more at <http://i0naa.altervista.org/index.php/downloads/send/2-downloads/44-murmur>. This time we have only one interesting piece on radio-astronomy. The news comes from the Event Horizon Telescope and is related to Quasar 3C 279, the story can be read at <https://public.nrao.edu/news/something-is-lurking-in-the-heart-of-quasar-3c-279/>. If you have ever wondered how a big radio-astronomy dish is dismantled or installed, I recommend a visit to the SkyBroker channel at YT: <https://www.youtube.com/user/Skybrokers/videos>.

**TECHNICAL CORNER:** DB6NT's Kuhne company has **stopped** selling their famous 76 GHz transverter due to unavailable chips, it's not possible to produce it. **OK1VPZ** has an article focused to simple test of various N connectors quality at:

[http://www.ok2kkw.com/00000104/info/n\\_konektory/n\\_konektory\\_en.htm](http://www.ok2kkw.com/00000104/info/n_konektory/n_konektory_en.htm). Do you know **DB6NT's private archive** of his microwave articles?

<http://www.db6nt.de/download-archiv.html>

**FOR SALE:** **PA0PLY** reports COVID-19 is affecting the production schedule for the KLNA and XLNA LNAs. DU3BC is stuck in the Philippines and cannot travel to Germany as planned. We will need to reestablish the schedule when the situation is back to normal. **OK1DFC** is looking for WR-19 to WR22 waveguide transition. Contact Zdenek at [ok1dfc\(x\)seznam.cz](mailto:ok1dfc(x)seznam.cz) If you can help. **PA3DZL** is looking for modified 1127 TWT us on 24 GHz EME. Contact Jac at [PA3DZL\(x\)planet.nl](mailto:PA3DZL(x)planet.nl) if have something. **SM7FWZ** is looking for a FLK 057, EZ k057, HW K057 or similar. Contact Ronny at [sm7fwz\(x\)arlembeke.se](mailto:sm7fwz(x)arlembeke.se). **W3XS** (OR) is looking for a 23 cm SSPA – Bill can be reached at [billw3xs\(x\)gmail.com](mailto:billw3xs(x)gmail.com).

**MEETINGS:** as already announced, many of the upcoming meetings have been cancelled. However, we suggest to visit **JA microwave meeting documents** available at [http://darkside.cz/~pics20/ja\\_microwave\\_meeting/](http://darkside.cz/~pics20/ja_microwave_meeting/). It's written in Japanese but you can see many interesting things such as a 5 W PA for 47 GHz.

**FINAL: Stay healthy** - The IARU and ARI are not recommending multi operator and portable station operation in the ARI EME Contest because of the Covid-19 virus. We urge you to follow the rules and stay well. We need everyone on the Moon!

► The results of the 2019 ARRL EME Contest are posted at <http://contests.arrl.org/> with the exception of line scores, which will appear in the "Line Scores" section in the near future. Congratulations to UA3PTW with the top overall score (although single op higher than the top multi op score)! Top CW overall scorer was G3LTF (also single operator). Top scorers were all modes on 432 DL7APV, on 1296 OK2DL, on 2300 OK1KIR and 10 GHz OZ1LPR; CW on 432 I2FHI, on 1296 SM4IVE – all single op except OK1KIR. A big thanks to K1DS for compiling and writing up the results.

► EME2020 Prague is still scheduled to be held in original date and is taking registrations. They already have 130 participants and hope for more. They are hoping the COVID-19 situation will allow the conference to be held on schedule. They have a backup plan "B", which will be made public at beginning of July if the situation does not allow it to occur as planned. All information will be posted at <https://www.eme2020.cz/>.

► Please keep sending in your reports, news and tech info. Both of us have been busier than ever at QRL despite the virus. We have already started on the ARI reports. Look for K2UYH in the 6 cm Contest and both of us off the Moon. 73, AI – K2UYH and Matej – OK1TEH