432 AND ABOVE EME NEWS
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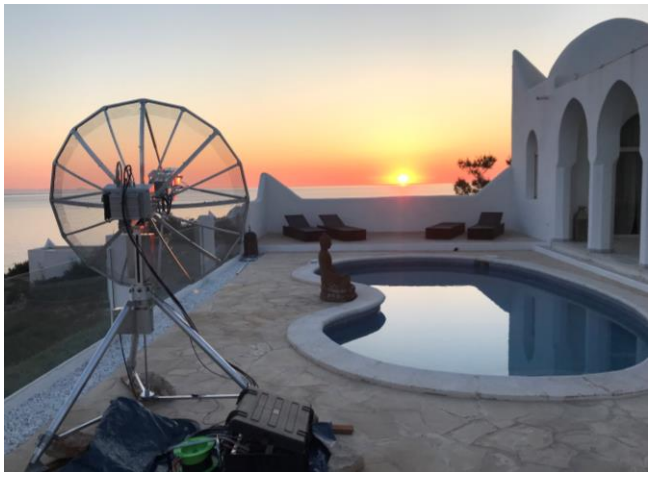
CONDITIONS: Activity seems down during the EU/DUBUS 6 cm CW EME Contest. I think the problem was too many conflicting EME activities. G3LTF has the top reported score of 32x30. The ARI Contest running at the same time had to have some effect on 6 cm activity. It generated considerable interest and more reports than in the past. Even a bigger factor could have been the dxpedition activity. The excellent EA6/HB9COG dxpedition may have increased 6 cm activity on Saturday of the contest, but on Sunday when they were on 3 cm, must have significantly reduced 6 cm station density. The full report on the Q-team's dxpedition, which netted 73 stations on 23 cm, and 28 stations on 3 cm appears in this newsletter (NL). VK7MO's Australian 3 cm grid dxpedition also started this week and impacted the contest - see Rex's report. The production date of this NL is not ideal. It is being completed on the ARRL June VHF (tropo) Contest weekend. This contest attracts EME activity – see K5QE's report. June. **Coming up is the EU/DUBUS 3 cm & up EME CW Contest on 16/17 June.** The related 10 GHz microwave activity weekend (MWAW) is on the 9/10 June. The only June/July dxpedition is AA1KK's 23 cm dxpedition to RI on 14-16 June – reports follow for both in this NL. Sept will be the next big dxpedition month with PQ0F in Fernando de Noronha (HI36te) from 31 Aug to 13 Sept on 2 m thru 3 cm; and 4U1ITU on 432 thru 24 GHz from 22 Sept to 1 Oct - see the June NL for more details on both these dxpeditions. **The next 70 cm CW ATP (activity time period) is on 17 June 0800-1000 and 1700-1900.**



EA6/HB9COG's dxpedition QTH with 1.5 m dish and 13 cm feed at moonrise

AA1KK: Bob (W1QA) bob@W1QA.COM writes that the 1296 dxpedition to RI (FN41) is on. Our team NC1I, KA1QFE and W1QA have completely setup the station again, tested everything out, and packed everything back up ready to go. We did make one change to the station. We have replaced the heavy/bulky Yaesu FTDX5000 with an Elecraft K3S. The FTDX5000 worked great but the K3S literally ways about 1/10 of what the Yaesu weighed. The station will be a 2.4 m dish and about 500 W at the feed. The QRG will be 1296.100 +/- QRM. AA1KK will TX first using JT65C and CW on request. Operation will be on **14 June from about 1400 to 2400, on 15 June from 1200 to 0130 and on 16 June from 1300 to 0215**. We may also operate for a few hours on Sunday 17 June on our moonrise (1400). However, if we feel we worked everyone on the band, we will break the station down early Sunday morning and not be on. Because of the high declination and long moon pass, we may QRT when there is no activity. We will make announcements on the HB9Q logger. While all QSO's will be on random, if you have a small window with us or limited opportunity to get on (especially Asia/Pacific stations) please advise what times are good for you and we'll make sure we are available. **[For more information see the more detailed announcement in the last NL]**.

DK3WG: Jurg dk3wg@web.de reports on his May initials – I added on 70 cm using JT65B KC0V for mixed initial (#*), and on 1296 using JT65C EA6/HB9COG for both mixed initial (#*) and DXCC 60, DL7YC (#*) and W3HZU (#*).

DK7LJ: Per per@per-dudek.de writes on the 3 cm EME Beacon – The beacon had some problems but is now back on whenever the Moon is higher than 20 degs – [see FINAL in the last NL]. The beacon now has a web page: http://moonbeacon.dl0shf.de/ with info about the beacon's status and operating modes, which include CW and QRA64D identification.

DL7APV: Bernd dl7apv@gmx.de reports on his new 432 super array -- The new array is 99,9% complete – [see last NL]. I am still missing a 7/8" TX cable to run around the rotor, but with 500 W at feed it works pretty fine. I have to optimize the backlash of about 0.5°. With a 1.8° beamwidth at -3 dB, it is not easy to be in the -1 dB zone for QSOs. In May during the ARI Contest I added 4 new stations: TA1IFV in KN31 (single 21 el yagi and 40 W) for his first EME QSO on 432, DL5OCD in JO42 (2 x 23 el yagis and 25 W), G4BRK (single 21el yagi with preamp and 50 W in

shack) and VK4KAY in QG61 (single 20 el yagi and 50 W). In the contest I completed about 30 QSOs using JT65B and one with CW. Surprisingly, I worked no "I" stations.

EA6/HB9COG: Dan (HB9CRQ) dan@hb9q.ch and Sam (HB9CQG) send details on their very successful EA6 dxpedition -- The Q-Team used exactly the same equipment as at 3DA0MB, but without 9 cm, which is not allocated in EA: a 1.5 m HB dish with on 23 cm 100 W and LNA at cir-pol feed, 13 cm 90 W and LNA at cir-pol feed, 6 cm 80 W and LNA at cir-pol feed, and 3 cm 50 W and LNA at V-pol feed. This was our second dxpedition with this portable" station. This time we experienced very high gusty winds (well over 50 km/h peaking probably to 80 km/h) and very strong rain. We are very happy to report that we had no wind or rain damage at all. We can confirm that we are capable of operating with winds up to 50 Km/h during heavy rain. We experienced no technical problems. We are very happy with the performance of our station. The only unexpected problem was on 1296. We had very strong noise (up to 10 dB/noise floor) on our MR up to almost 30 degs elevation. We relocated the dish a few m and the maximal noise went down to 7dB/. Never the less we were able to work many stations through the noise. From 3DA0MB we worked a total of 160 QSOs and 140 initials on 5 bands. From EA6/HB9COG we worked a total of 179 QSOs and 152 initials on "only" 4 bands! On all bands we were CQing for hours with no takers, so there is obviously a lot of opportunity to work more stations! On 23 cm we had 85 QSOs (10 CW, 75 JT65C) and 73 initials with 26 DXCCs and WAC. QSO'd were HB9Q, PA3FXB, SP5GDM, JA6AHB, OK1IL, DL8FBD, OK1KIR, DK5YA, PAØBAT, PE1CHQ, DL7UDA, UA3PTW, SP3XBO, DF2GB, DGØFE, DF2VJ, ZS1LS, ON4AOI, DL7YC, ZS6JON, I1NDP, DK3WG, IK1FJI, YL2GD, G4IDR, G4CCH, OK1KIR, HB9Q, G4CCH, OH2DG, IK3COJ, W2HRO, IK5QLO, NC1I, VE3KRP, RA3EC, VA6EME, K5DN, W5LUA, K5DOG, K2UYH, LU1CGB, N5BF, LA3EQ, I5YDI, G4CDN, G4CCH, VK4CDI, VK3AXH, JA1WQF, G4DML, G4YTL, EA8DBM, G4RGK, JA8SZW, YO3DDZ, I1NDP, OH2DG, G3LTF, IK1FJI, DC7KY/P, DK3WG, I7FNW, SM2CEW, WA3RGQ, F1RJ, DC7YS, PA7JB, OK1DFC, IK5VLS, DL6SH, OK1DFC, LA3EQ, OZ4MM, IK5EHI, PA2DW, DF3RU, W3HZU, ES6FX, VK2JDS, IK2MMB, UA9FA, LX1DB, W2HRO and IK1FJI. The smallest station worked was DF2VJ (26DB/ 24DB) on JT65C with a 2.6 m dish and 140 W at feed. On 13 cm we had 32 QSOs (7 CW, 25 JT65C) and 25 initials with 17 DXCC and 4 continents. QSO'd were ON4AOI, HB9Q, OK1KIR, UA3PTW, OK1CA, OK1DFC, PAØBAT, JA6AHB, ZS6EME, OZ5G, OH2DG, SP3XBO, OK1KIR, OH2DG, YO2BCT, IK3COJ, DL7YC, OK1CA, G3LTF, HB9Q, DF3RU, OZ4MM, G4BAO, G4CBW, PA7JB, W5LUA, LX1DB, ZS6EME, K2UYH, K2UYH, ES5PC and ES5PC. The smallest station worked was G4BAO (18DB/28DB) with a 1.9 m dish and 210 W at the feed. On 6 cm we had 30 QSOs (10 CW, 3 JT4F, 2 JT65C and 15 QRA64D) and 26 initials with 17 DXCC and 3 continents. QSO'd were HB9Q, OK1KIR, JA1WQF, OK1CA, PAØBAT, UA3PTW, OH2DG, OZ1LPR, UN6PD, OH2DG, JA6AHB, UR5LX, PA7JB, OK1DFC, UR7DWW, UZ5DZ, DF3RU, W5LUA, K2UYH, OK1KIR, PAØBAT, HB9Q, IK3COJ, SM6CKU, G3LTF, KL6M, JA4BLC, SA6BUN, ES5PC and LX1DB. The smallest station worked was PA7JB (18DB/12DB) with a 2.4 m offset dish and 30 W. On 3 cm we had 32 QSOs (4 CW and 28 QRA64D) and 28 initials with 17 DXCC and 4 continents. QSO'd were HB9Q, JA1WQF, OK1KIR, DF1OI, OZ1LPR, OK1CA, UN6PD, OH2DG, DL6ABC, YO2BCT, PAØBAT, UR5LX, OK1DFC, HA/G3WDG, DL7YC, SP3XBO, OZ1FF, HA/G4KGC, PA7JB, OK1DFC, G4CBW, EA3HMJ, HB9BHU, LX1DB, OK1KIR, OK2AQ, W5LUA, HB9Q, UR5LX, K2UYH, VK7MO and JA4BLC. The smallest station worked was OK2AQ (18DB/17DB) with a 1.2 m offset dish and 40 W at the feed. We used WSJT-X for all bands and the Doppler-control modes CFOM (Constant Frequency On Moon), Own Echo and Full Doppler to DX grid. It is a great help to have those modes available. It would make everything easier and more efficient if all stations would use CFOM. Hopefully more people start to take advantage of automated Doppler control modes. Especially on 6 and 3 cm where it is a must for successful QRP operation. It was nice to work a total of 31 CW QSOs on the 4 bands. However, CW QSOs were only possible with the big-guns. Looking at the smaller stations worked per band, it is obvious that we could have worked many more if they were QRV. It is great to see that on 23 cm we can work stations using less than 3 m dish and less than 200 W. On 13 we can even work stations of about our size and on 6 and 3 cm even smaller then us! It is obvious that we have the capability to work many more stations than we actually did. This is very promising for the future and we hope this generates more interest and activity during dxpeditions. We are looking forward to work even more stations during our next dxpeditions! Stay tuned! Please QSL direct with SAE to HB9Q, P.O. Box 133, CH-5737, Menziken, Switzerland. Thanks to all who have called and worked us, and our regrets to those we could not QSO!

G3LTF: Peter g3ltf@btinternet.com had great time off the Moon in May -- On 17 May I was delighted to work on CW on 23 cm EA6/HB9COG for initial #450 and also IK1FJI. On 18 May I ran a sked with VK4AFL on 9 cm but although I copied him (559), he did not hear me. We now have to work cross-band for VK, so that might have been a contributory factor. We'll try again in June. Later the same day, I worked using CW on 13 cm EA6/HB9COG for initial #139 and DXCC 45. On 19 May during the DUBUS 6 cm CW EME Contest, I had amazingly good weather. It was almost dead calm all weekend, so antenna pointing was simple. Activity seemed the same as last year despite some other attractions; one or two regulars were missing. I worked a total of 32x30. QSO'd were SQ6OPG, JA4BLC, OH2DG, KL6M, OZ1LPR, OK1CA, SA6BUN, UR5LX, JA8IAD, JA1WQF, DF3RU, SM6CKU, F1PYR, UR7DWW, OH1LRY, F5IGK for initial #80, PA7JB, UA3PTW, ES5PC, OK1DFC, IZ2DJP, IK2RTI, WA9FWD, VE6TA, K2UYH, EA6/HB9COG #81 and DXCC 35, JA6AHB, SM6PGP, IK3COJ, HB9BCD #82, WA6PY and SP6GWN. Heard but not worked were UN6PD and JF3HUC. Special thanks to HB9BCD and SP6GWN for persisting with weak signals and difficult libration fading. On 21 May I had a great QSO on 3400 with VE6BGT for initial #64 on both CW and SSB.

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp send news of his May activity -- On 16 May, I worked using CW on 6 cm JA1WQF (M/M) when Mitsuo used his experimental 1.2 m dish. On 18 May, I worked using CW on 23 cm N6OVP (O/O) for a new initial (#). During the DUBUS 6 cm CW Contest, I scored 13x13. The 13 stations worked was down from 19 worked last year. QSO'd were JA1WQF, OH2DG, UA3PTW, OK1CA, SQ6OPG, JA8IAD, G3LTF, KL6M, UR5LX, SA6BUN #48, OZ1LPR, JF3HUC and UR7DWW. I worked on 3 cm, on 20 May JA1WQF (569/569) with his regular 2.4 m dish, and the next day JF3HUC (559/559). I had mixed success with the EA6 dxpedition, and worked using CW on 21 May on 3 cm EA6/HB9COG (O/O) for initial #48, and on 23 May on 6 cm EA6/HB9COG (O/O) for initial #49. I was not able to complete on 23 or 13 cm, but very much appreciated Dan trying on CW.

JA6AHB: Toshio ja6ahb@plala.to reports on his May activity – I worked on 432 using JT65B on 12 May S57M (17DB/19DB) for a mixed initial (#) and S56P (17DB/21DB) (#); on 1296 using JT65C on 13 May UA9FA (14DB/13DB) and EA6/HB9COG (18DB/21DB) for a mixed initial (#*) and new DXCC; on 2320/2400 XB using JT65C on 18 May EA6/HB9COG (22DB/15DB) for again a mixed initial (#*) and new DXCC; on 5760 on 19 May using QRA64D EA6/HB9COG (16DB/O) for one more mixed initial (#*) and new DXCC, and on 20 May (in DUBUS 6 cm Contest) using CW G3LTF (O/O), SQ6OPG (O/539), UA3PTW (O/O), SM6CKU (O/O) and OZ1LPR (549/539) for total of 5x5. I belatedly announce that Bruce (PY2BS) and I completed new EME distance records (18,853 km) for 70 cm using JT65B on 11 Nov 2012, for 23 cm using JT65C on 1 May 2009, and for 13 cm on 30 Dec 2017 – see http://www15.plala.or.jp/ja6ahb/page025.html, …/page026.html, and …/page033.html respectively.

K1DS: Rick rick1ds@hotmail.com writes – As a result of my spending more time in FL and less in PA and the loss of my rover van used for EME due to age and the need for costly repairs, I have sold my 3 m dish and trailer and all of my 13 cm EME gear and my 23 cm feed to a fellow Packrat, W0RSJ. I maintained my 23 cm PE1RKI 270 W SSPA and my radios. I also recently acquired a Yaesu G5400 AZ-EL rotor. My plan is to try EME from my PA QTH with long yagis on 70 and 23 cm. My XYL (Jani) and I are looking forward to seeing you all at EME2018 in the Netherlands this August.

IK1FJI: Valter valter_dls@yahoo.it was QRV on 1296 during May – I worked on 13 May using CW IK5QLO (539/559) for initial #107, G3LTF (569/569), DL7YC (569/549) and OK1DFC (579/579), and on 22 May I5YDI (O/O), I1NDP (57/55) on SSB and (579/579) on CW. During the ARI Contest on 19/20 May, I operated only on CW and QSO'd 22 stations, most on Saturday. On Sunday, I was busy and QRV only 2 hours, but I really enjoy the increase in activity. Using JT65C, I contacted EA6/HB9COG (21DB/18DB), and had a very good QSO with PA3DZL (27DB/28DB). Jac was running only one 67 el yagi and 120 W at the driven element.

K5QE: Marshall k5qe@k5qe.com writes to 432 EME operators – The ARRL June VHF Contest is on 9/10. We want to work as many 432 EME stations as possible to increase our grid count. Please help us by working us on JT65B or CW. EU (tropo) contests do not allow EME, but the ARRL contests do. EME is a nice portion of our scores, and we value every EME contact. Assistance is now allowed to everyone. The new rules for Assistance are extremely liberal. Basically, you can do just about anything, except posting contact information. This means that we cannot post "Thank you" after a contact, because it confirms that the contact is complete. Please understand if we don't send you a thank you post. We have two moon passes this contest: 9 June 1800 to 2050, and 10 June 0900 to 2200. (1200 to 1500 is "prime time" for tropo type contacts). We use the N0UK EME-1 page. We will be on 432.080, on **second sequence**. If you only operate CW, please call on CW. We will use 16 x 28 el M2 yagis all horiz and 1000 W with a tower mounted cavity preamp. [Sorry - this arrived too late for the previous NL].

KA1GT: Bob ka1gt@hotmail.com sends a 1296 EME update from Maine -- I've added a 6-8" extension to my 2.4 m dish, which makes it a dodecagon with area equal to about a 2.7 m circular dish. I used a couple of 5' x 24" rolls of 1/2 " hardware cloth from Home Depot (<$15) cut into 8" strips. It took a couple of hours to do. With a square to circular flare on my septum feed, sun noise (8.75 dB) is up by about 1 dB; so it was well worth it. I've also increased my power to about 150 W at the feed if the PA is in the shack and 250 W if it's not raining an the PA out at the base of the dish. I've worked a few more stations with good reports, but activity has been low when I've been on. New initials include LA3EQ, XE1XA, IK1FJI, AA7HC, N6BF and W1PV. XE1XA was strong enough to work on CW and he copied me (M) but no two way. I can work CW, but I am currently only using WSJT10 in the CW mode. This means that I'm time sequenced just like JT65 and I'm sending a keyed 800 Hz tone. By default, I use a 1 min sequence but this can be changed to 2 or 2.5 min. This can all be a little confusing for stations not used to working stations using the WSJT CW mode, so be aware of this if you hear me or want to try on CW. I expect to be QRV in June whenever I have a clear shot at the Moon, including during the AA1KK dxpedition to RI and the ARRL's June VHF (tropo) Contest. When I'm on, I monitor the HB9Q logger.

KA1GT's simple hardware cloth dish extension ~+1 dB

KL7UW: Ed kl7uw@acsalaska.net sends his report for May -- The new 1296 600 W SSPA is tested and working. I am getting 562 W with 23A being drawn at 49V. It looks that the amplifier is saturating at about 530 W. I will not push for 600 W. I still need to install the amp at the dish and repair the dish to be functional. I will wait until my new 6 m EME array is completed. We leave for extended vacation at the end of June. I do not expect to finish 1296 before we leave. Will are looking forward to seeing old friends at CSVHF in Wichita, KS in July.

KN0WS: Carl carlhasbargen@q.com is making progress on his 3 cm station -- I have been trying to put together a tiny 3 cm system for a few months. I am now ready to test. The original idea was to have something I could use from my home backyard when the Moon was clear of the trees. I am now planning to also use the 3 cm system during the warmer months from my regular EME location up north. If all goes as planned I should be testing on Friday and Saturday 8/9 June. If 3 cm does not work, I may try to get on 432 on Saturday. It is 7 months since I last operated off the Moon. On 3 cm, I have a 1.2 m dish with about 22 W to a linear feed (set for horiz). I'll try to be on the HB9Q logger.

N5BF: Courtney courtney.duncan.n5bf@gmail.com sends his 23 cm EME report for May -- In the ARI Contest I worked 16 JT65C QSOs including 5 Italian stations, two of which were initials: IK5QLO for mixed initial #125* and I0NAA #126*. The following week I added KA1GT for #127* and state 14.

NC1I: Frank frank@NC1I.COM reports on his May activity -- In May I was limited in time; however, I was still able to make repairs to my 432 polarity system, and it is now fully functional again! I worked using JT unless noted on 432 starting on 19 May (during the ARI Contest) KF8MY, ON4CGX, G3LGR, MR0CNS, LA3EQ, and OK1TEH, and on 22 May XE2AT for an initial (#); and on 1296 starting on 13 May EA6/HB9COG for an initial and a new country - thanks to Dan and his crew for another outstanding dxpedition, on 18 May IK5VLS, DK3WG, DL6SH, F1RJ, and PA3DZL (using 1 x 67 el yagi and120 W), on 19 May (during the ARI Contest) IK5VLS, DL7UDA, OK1YK, LZ1DX, PA3FXB, RU4HU, DL3EBJ, W3HZU, I7FNW, EA8DBM, I1NDP, IK3QLO, LZ2US (CW), IK1FJI (CW), F6KRK (CW), and N5BF. Activity from home in June will be extremely limited, but I will try and get on for a couple of hours on the weekend of the 9/10 June. We will be active in June on 1296 from RI using AA1KK (see report).

OK1CA: Franta strihavka@upcmail.cz sends his May report -- I worked on 13 cm on 18 May EA6/HB9COG using both JT65C and CW for initial #149. I then changed feeds to be QRV on 6 cm in the EU DUBUS EME Contest, but only on Saturday 19 May. I ended with a total 26 QSOs. Initials were UR5LX, SA6BUN, OK1DFC and HB9BCD to bring me up to #76. I worked on 19 May EA6/HB9COGusii (13DB/13DB) with JT65C outside of the contest. I was QRV on 3 cm for the EA6 dxpedition on Sunday. My measured Sun noise was 18.3 dB and Moon noise was 3.3 dB. I worked EA6/HB9COG (15DB/15DB) using QRA64D, and OK2AQ, OK1DFC, UN6PD, G4CBW, EA3HMJ and SP3XBO, all with QRA64D.

OK1DFC: Zdenek ok1dfc@seznam.cz was QRV during the DUBUS 6 cm Contest -- I setup my portable microwave EME station on my terrace. My main goal was to test my new upgraded station in preparation for my 4U1ITU dxpedition in Sept; however, I also operated the DUBUS Contest. Every contact was very welcome. I was QRV on CW, QRA64 and JT4F. I used the HB9Q logger for coordination during my testing. With the new system, I can easily change to 3 cm and 24 GHz. I will start RX tests on 24 GHz very soon. My RF power is now only 2.6 W, but soon I will increase it to more than 10 W.

OK1KIR: Vlada and Tonna vlada.masek@volny.cz sends an overview of their group's EME in May – On 23 cm we QSO'd on 13 May with JT65C at 0608 EA6/HB9COG (15DB/8DB) for digital initial {#304} and 0811 DL7YC (1DB/1DB) {#305}, and with CW at 0846 DL7UDA (559/579) for initial #430 and 0928 EA6/HB9COG (O/O) #431. On 13 cm we QSO'd on 18 May with JT65C at 0812 EA6/HB9COG (13DB/19DB) {#55} and with CW at 0952 EA6/HB9COG (539/539) #163. On 6 cm we QSO'd on 19 May with QRA64D at 0930 EA6/HB9COG (12DB/14DB) for digital initial {#39} and 1st EA6-OK 6 cm QSO, 1650 OK1DFC (11DB/7DB), and with CW at 1900 EA6/HB9COG for initial #104. On 3 cm we QSO'd on 20 May with QRA64D at 1138 EA6/HB9COG (12DB/14DB) for digital initial {#154} and 1st EA6-OK on 3 cm, 1748 HA/G3WDG (15DB/13DB), and with CW on 20 May at 1816 EA6/HB9COG (O/O) for initial #121. The next day, 21 May, we QSO'd at 1016 VK7MO (12DB/12DB) {#155} with QRA64D in grid QG52 at the start of Rex's next phase of his Australian grid dxpedition. We also worked at 1104 OK2AQ (16DB/12DB), and on 22 May at 1120 VK7MO (12DB/12DB) {#156} in QG53, on 28 May at 1840 VK7MO (11DB/16DB) {#157} in QG41, on 29 May. at 1951 VK7MO (12DB/14DB) {#158} in QG42, on 30 May at 2102 VK7MO (15DB/13DB) {#159} in QG43 and 2151 G3WDG (8DB/9DB) – conducted tests comparing QRA64D vs C and E at about a 215 Hz spreading, and on 31 May at 2158 VK7MO (13DB/14DB) {#160} in in QG44.

OK1TEH: Matej ok1teh@seznam.cz was active during ARI EME contest on 70 cm and worked 6 QSOs using JT65 with DL7APV (19DB), VK4EME (28DB), NC1I (15DB), UT5DL (25DB), UX4IJ (25DB) and SM7THS (26DB) and 1 QSO using CW with DL9KR.

OK1YK: Mirek ok1yk@volny.cz: Mirek was QRV 23 cm during ARI contest and writes – On Saturday (19 May) thunderstorms forced me to park my antenna several times and stop early at 1930. Sunday was beautiful with sunny weather, so there was no problem to continue contesting. The conditions seemed excellent as shown by the reports. Unfortunately, the activity was not that great; probably because of the 6 cm DUBUS contest taking place at the same time. But the Italian station turnout was excellent with I5YDI, IK5VLS, I0NAA and more QRV. My results were beyond my expectations; I had a total of 38 QSOs, 10 initials and added 2 DXCCs. I had an interesting QSO with

4X4AJ. Andrey had only 30 W to a small dish. BV3CE gave me another new country. [Translated by OK1TEH].

PA3DZL's temporary EME station being used while moving QTHs – on 1296 67 el yagi and 120 W

OK2AQ: Mirek kasal@feec.vutbr.cz writes about his recent EME -- For the third week of May I planned to be QRV 3 cm EME for the Q-team's dxpedition to the Balearic Islands also the ARI EME Contest, which promised more activity at the end of the week. The EME conditions looked to be very good. After many weeks of drought, however, it began to rain starting on Wednesday for two days. Thus, I could not setup my dish until Thursday afternoon. On Friday, I tested the EME system and had a perfect QSO with HA/G3WDG (18DB/19DB). Charlie also has only a 1.2 m dish and 50 W power. There followed (19 May) QSOs with W5LUA (12DB/16DB), DL6ABC (13DB/21DB) for digital initial {#36}, on Saturday moonrise (20 May) HA/G3WDG (18DB/19DB) again, and on Sunday OK1DFC (17DB/16DB) {#37}, OK1CA (15DB/15DB), EA6/HB9COG (17DB/18DB) {#38} - easy, EA3HMJ (14DB/17DB), OK1DFC (18DB/19DB) - on random, UR5LX (16DB/16DB) and K2UYH (18DB/17DB) {#39}. I worked on Monday (21 May) VK7MO (15DB/18DB) {#40} in QG52xi after he successfully demonstrated EME operations with W5LUA at the WIA (Wireless Institute of Australia) conference in Brisbane. Rex used a 113 cm dish and 90 W. I had a final test QSO with OK1KIR (12DB/16DB) for a very satisfying week of 3 cm EME!

PA3DZL: Jac pa3dzl@ziggo.nl is in transition -- In Sept I am moving to a new QTH, the new locator is JO21LS. So, no new initials because I am in JO21hm now. In preparation for the move, I took down my 3.7 m dish and tower. However, I am still QRV off the Moon. I have the EME virus very bad! On 24 May I heard the ONØEME beacon on 23 cm with nice signals - digital (21DB) and could also copy the CW! I was using a SHF 67 el yagi (19.9 dBd) with horz pol and a G4DDK 0.3 dB NF. I have built up a portable station for 70, 23 and 13 cm using yagi antennas and using it from my current home. I started with manual AZ and EL moon tracking, but after a few days I upgraded AZ by adding a Spid rotator and a digital readout (LIDL inclinometer) for elevation. I am still elevating by hand. I am using an IC-9100, which i modified for separate TX and RX and an ext. 32 MHz ref osc with 10 MHz lock. On 70 cm using a 10 el yagi and 55 W, I worked on 20 April DL7APV (22DB) on random twice. For 23 cm I added an SSPA with 120W @ yagi to QSO on 18 April DL6SH, G4CCH and NC1I (18DB) - speaker copy and on 24 April EA8DBM, IK2MMB, G4CCH, PAØBAT, IK1FJI and I5YDI – 3 m dish and 200 W. Also heard were DF3RU, IK5VLS and traces from EA6/HB9COG! On 13 cm, I am using a SHF 67 el (20 dBd) yagi, 150 W @ ant and G4DDK 0.35 dB NF LNA; and on 22 April heard ZS6EME and made my first QSO with HB9Q (16DB) - speaker copy. It is amazing to see that with my QRP setup EME QSOs are possible. I am sure CW QSOs can be made also.

SA6BUN: Michael (DL1YMK) dl1ymk@aol.com has been active on the microwaves from his holiday QTH in Sweden -- Thanks to all for great fun in the DUBUS 6 cm event. If anyone missed me and would like to add an initial on 6 cm, email me. I will be switching over to 3 cm for the next DUBUS event.

SP6JLW: Jacek (SP6JLW) sp6jlw@wp.pl send news on the Klodzka EME group's EME activity during the ARI and DUBUS 6 cm EME Contests – We worked on 5760 JA1WQF, OH2DG, JA4BLC, OK1CA, UA3PTW, G3LTF, UR5LX, KL6M, OZ1LPR, DF3RU, SA6BUN, SM6CKU, F1PYR, OK1DFC, OH1LRY, ES5PC, UR7DWW, IZ2DJP, W5LUA, WA9FWD, IK2RTI, PA0BAT, K2UYH, PA7JB, VE6TA, JA8ERE, JA8IAD, JF3HUC and JA6AHB for a total of 29x27. See http://emejo80jk.cba.pl/aktualnosci.html for more info. [Translated by OK1TEH].

UR5LX: Sergey ur5lx@ukr.net has added in May on 6 cm EME during May (DUBUS Contest) CW initials with G3LTF #15, OH2DG #16, SM6KMU #17, KL6M #18, UR7D #19, SQ6OPG #20, OK1CA #21, EA6/HB9COG #22 and DXCC and SA6BUN #23, and on 3 cm using QRA64D EA6/HB9COG for mixed initial #43* and a DXCC, OK1DFC #44*, HA/G3WDG #45* and a DXCC and VK7MO in grids QG42 #46* and QG43 #47*. [TNX DK3WG for forwarding this report].

VE3KRP: Fast Eddie eddie@tbaytel.net sends his May report -- All my EME is on 23 cm. I worked on 12 May

G4CDN (JT) and K5DOG (JT), on 13 May EA6/HB9COG (JT) for a mixed initial (#*) and DXCC and DL7YC (JT) (#*), on 19 May during the ARI Contest PA3FXB (JT), DL3EBJ (JT), I0NAA (JT), EA8DBM (JT), DL7UDA (JT), I1NDP (JT), LZ1DX (JT), K5DOG (JT), W2HRO (JT), IK5VLS (JT) and N5BF (JT), and on 20 May OK1YK (JT), IK5QLO (JT), I7FNW (JT), IW8RRF(JT) (#*) and IK2MMB (JT). I will be in EN37td during the ARRL June VHF (tropo) Contest on 9/10 June using the call N0EO.

VK7MO: Rex rmoncur@bigpond.net.au is on another 10 GHz Australian grid dxpedition – I went to the Gold Coast for the Wireless Institute of Australia (WIA) Conference in Brisbane to give a talk on FT8 and comparing it with other WSJT-X slow modes (19 May) and the following morning (20 May) a demonstration of 10 GHz EME (QG62). The conference organizers had advertised the event as including a wide range of amateur demonstrations up to 77 GHz as well as modern government communication systems. One youngster is doing a presentation on EME for a school project. My EME demonstration produced some public interest and I was caught between helping stations new to QRA64D, dish pointing and answering lots of questions. Fortunately, VK2JDS was there to take over the dish tracking, so I could concentrate on answering questions. During the demonstration I QSO'd W5LUA using my 60 cm dish and 50 W with QRA64D. It went very well. The degradation was good at 0.4 dB but spreading was over 100 Hz. Signals were low at the start and Al had difficulty in copying me, but once the Moon was visible and we were able to track it accurately, Al had no problems with random callsigns. In all 9 different stations had EME contacts with W5LUA. After the conference, I traveled west, first to QG52, and then others. I used my 113 cm dish and 90 W PA to provide new grids and initials to interested stations (W5LUA, G3WGD, OK1KIR, OK2QA, OZ1LPR, HB9Q, OK1DFC…). I worked EA6/HB9COG. I operated primarily with CFOM on 10368.2 and used when possible the HB9Q logger. Once tracking was sorted out signals were generally (20DB) at W5LUA and (18DB) at my end, which would be explained by the extra Moon noise with Al's larger dish. [Rex's grid dxpedition is continuing. The will be more details and a progress report in the next NL].

VK7MO 3 cm EME demonstration at WIA Conference. Rex is behind 60 cm EME dish (most to the right)

WB8HRW: Roger roger2954@frontier.com is a relatively new station on 1296 EME – I am using a 3.8 m Paraclipse dish with KL6M design HB septum feed/cake pan scalar ring, W6PQL 150 W MRF286 (kit-built) SSPA and G4DDK (kit-built) LNA. I also use HB 23 cm and 144 MHz transverters to an Icom 751 IF rig. A HB sequencer and AZ/EL controller (old-school with 3 turn potentiometers and DVMs). I want to thank K2UYH, W1JR, W1GHZ, W5LUA, W7ZOI, and many others for teaching me about EME and RF. I am only at initial #12; all on CW so far, but I plan to also try JT65 in the future. I am always working to optimize my station so as to be able to contact stations similar to mine. I am interested in skeds and can be reached by email.

WB8HRW's 3.8 m dish used on 1296 EME

K2UYH: Al's alkatz@tcnj.edu main Moon activity in May was the 6 cm DUBUS Contest -- On 12 May I was QRV for the 6 cm MWAW, but found very little activity and only QSO'd at 1255 OZ1LPR (559/559). The next day, 13 May, I caught on 1296 at 1343 EA6/HB9COG (15DB/12DB) with JT65C for mixed initial #590*. The next weekend I and NE2U operated the 5760 contest, but missed our first Asian window due to conflicting events and the end of the contest due to conflicting 3 cm activity. I QSO'd on 19 May just before starting contest operation at 1746 EA6/HB9COG (15DB/12DB) using QRA64D for mixed initial #57* and DXCC 29 with the Moon still in the trees. During the contest we (George and I) worked using CW at 1817 OZ1LPR (569/549), 1826 OH2DG (559/559), 1832 UA3PTW (559/559), 1837 ES5PC (559/559), 1842 OK1CA (559/559), 1849 SA6BUN (569/549) for initial #54, 1856 OH1LRY (559/559), 1911 SQ6OPG (559/559), 2009 SM6CKU (559/559), 2024 G3LTF (559/559), 2047 KL6M

(559/559) and 2054 VE6TA (559/559), and on 20 May at 0310 JA8ERE (559/559), 0330 JF3HUC (559/559), 1842 DF3RU (569/559) and 1927 SM6PGP (559/559) for a total of 16x15. I switched to 10,368 to work at 2024 EA6/HB9COG (15DB/17DB) with QRA64D for mixed initial #36* and DXCC 21, 2047 OK2AQ (17DB/18DB) with QRA64D #37* and 2212 partial F1PYR (O/-) on CW – waited too long and had too much spread and pol shift (~ 45 degs). Later (21 May at 0331) I tried to QSO using QRA64D VK7MO (16DB/?) in QG52 but had problems with my version of WSJT-X and could not decode consistently. I tried again on 24 May with similar results. I had much better success on 22 May on 2304/2320 XB using JT65C at 2130 EA6/HB9COG (11DB/08DB) for mixed initial #105* and DXCC 38 JT65C – my 2320 RX was +2 kHz and 2140 EA6/HB9COG (O/O) on CW for initial #95. June is a very busy month with the International Microwave Symposium (IMS) in Philadelphia. I hope to see some of you at the IMS Ham Social chaired by NU2O. Despite IMS, K2UYH should be on 3 cm during the DUBUS Contest.

NETNEWS: **9A5AA** is now QRV on 24 GHz EME and interested in CW QSOs. **RN4AT** was active on 23 cm EME with JT65C during the ARI EME Contest – [TNX DK3WG for forwarding this report]. **RC18SA** (special events call) will be on 23 cm from 1 to 15 June to celebrate the football World Cup - [also from DK3WG]. **SP7DCS** has had a problem with noise on 432 and spent his time during the ARI Contest on 144 CW. Chris did check CW activity on 70 cm several times but heard only DL9KR. **VE6BGT** is now working on adding 6 cm EME, and busy building a 100 W 6 cm SSPA using SM6PGP's 2 x CGH40035 GaN FET design. **W6YX** will be demonstrating their 1296 8 m EME dish during the ARRL Field Day on 24 June shortly after their moonrise in CM87wj. They will check in on the HB9Q logger around 0000.

HARDWARE NEWS: How to make 70 cm SSPA? Vladimir OK1VPZ did it in this way. We bought 2x Telefunken SV5379 1 kW SSPAs from PA3CMC. (It's a popular PA used by PA2V and others). Vladimir used just the power modules and created twin PAs for 2 x 750 W in 19" rack housing. It consists of RF power box and separated 2 x 90 A 29 V Menwell power supplies. The heatsink was cut by a water spray, and the power modules are place on each side. OK1VPZ noticed that original Telefunken PA didn't use thermal paste between transistors and the heatsink of each module. Originally when used for TV, the modules were operated at lower power and less stress than they can experience with JT65 or even CW/SSB. Additional details will be provided in the next NL.

RADIOASTRONOMICAL CORNER: Have you noticed that telescopes for radioastronomy can be commercially purchased from Italy? See https://www.primalucelab.com/radioastronomy/blog/amateur-radio-astronomy-radioastronomia-amatoriale#sthash.KDWFBlcp.dpuf and https://www.primalucelab.com/radioastronomy/radiotelescopes/spider230c-compact-radio-telescope.htm.
Maybe these antennas will give some inspiration. An interesting movie about history of VLA can be seen at https://www.youtube.com/watch?v=RqX9vLj3_7w

FOR SALE: **K6PF** has for sale Andrew Type SGL5-15B4 Sureground LDF5 Grounding Kit w/ 2-hole lug for 7/8" heliax. New in bag. Hv 5 available at $15 ea. **PA3DZL** has Electraft K3EXREF and microHAM cable DB37-EL-K3R. K3EXREF is the Frequency lock option for K3/K3S. It locks the K3S or K3 to a 10 MHz ext. reference. Price is EU60 + shipping. Contact Jac at pa3dzl@ziggo.nl if interested. PA5Y is looking to buy a WR90/WG16 switch. Contact Conrad at g0ruz@g0ruz.com.

FINAL: We are continuing to make changes to the format of the NL. This month we have lightened the density of some of the shading we use to indicate information of special interest. Let's use know what you like or want changed.

► EME 2018 Holland is almost here. For those who have not made their reservations it is still possible until the end of June. On the website (www.eme2018.nl) it's only possible to make reservations for some standard arrangements. That was done to make it easy for most of you and to avoid a lot of choices. Booking on the website is a two-step process: 1. Hotel room and basic entrance fee, 2. Meetings and excursions. If you want to book something not standard, it's very well possible! You can come earlier, you can stay longer, it's all possible whatever you like. To make special arrangements just contact the hotel at t.schripsema@zuiderduin.nl. Simply send them an e-mail and tell them what you would like and it can all be arranged. We are looking forward to welcoming you to Egmond aan Zee and of course in Dwingeloo at PI9CAM! 73, Jan - PA3FXB and the PI9CAM team (jvm@netvisit.nl, janvmu@gmail.com, pa3fxb@amsat.org).

► EME 2018 Program Schedule (preliminary/subject to change) -- Saturday: 8:45 Opening; 9:00 PA0SSB; 9:45 G3LTF; 10:15 Coffee break; 10:45 DL7APV; 1:15 W1GHZ; 11:45 OK1DFC; 12:15 Lunch break; 13:30 ZS6EME; 14:00 PA2CHR/PA3CMC; 14:30 G4DDK; 15:00 Coffee/tea break; 15:30 IK1UWL/IK3XTV; 16:00 G4BAO; 16:30 Short soft drink break; 16:45 G4LDR; 17:15 PA0PLY; 17:45 END of day one (family photo)

Sunday: 9:00 DJ5YL; 9:30 F2CT; 10:00 OE5JFL/I1NDP/IW5BHY/I0NAA; 10:30 Coffee break; 11:00 PA0HRK; 11:30 K2UYH; 12:00 Some discussion and voting for EME 2020; 12:30 Goodbye lunch; 14:00 End of conference.

Conference Presenters: If you have not done so already please send in you abstracts ASAP! They will be on the web site as soon as they are received. **Complete presentations are needed by the end of June** (Power Point, PPT, is preferred). If you cannot do PPT, please bring your own laptop to connect to our projector. We will print a book containing all presentations. Maximum number of pages is 10 per presentation. The full presentation will also be on the EME 2018 Conference DVD. Papers should be in Microsoft Word format or equivalent. Conrad, PA5Y, will review and edit all papers.

► Congratulation's to the OK1KIR Club for receipt of the first award for making EME QSOs with 50 ITU zones! This award is the "P75P" award issued by the Czech Radio Club and was completed on 20 Dec, 2017 - see http://www.crk.cz/ENG/AWARDE.

► The OK1KIR Club notes that before everyone was applying for awards as WAC and DXCC on the microwave bands, there was less sensitivity with regard to operating frequency regulations. The attitude was who could hear you, and some stations bent the rules. In many cases, we were not even aware of the regulations. Operation on 9 cm has not been permitted in F, OE and UA. If you have cards for 9 cm QSO with these countries they will not be accepted as valid for awards from IARU member countries. The OK1KIR Club has removed from its web log all 9 cm QSOs with stations that were not properly licensed.

► Missing from the EME 35 and 25 Years Ago by G3LTF was a note on the "Big Ear" Radio Telescope visited by many of us as part of the 8th EME Conference in 1998.Information on this amazing instrument can be found at http://www.nitehawk.com/rasmit/ws1_3.html.

► We to get the Microwave WAC Club started but received few responses to our request in the last NL. Please email to alkatz@tcnj.edu information on your WACs on 1296 and above and the dates they were awarded. We are still looking for a volunteer to keep track of the database and manage the overall WAC Club. This topic and related issues such as should we include 432 will be discussed at EME2018

► I5WBE reports ARI EME Trophy 2017 winners include DF3RU, F6ETI, LZ2US, OK1KIR, PA2CHR, SP3XBO, SP6ITF, SP6GWN, SP7DCS, SV1CAL, N5BF, WD5AGO and YL2GD.

► Time is again short this month and we have not been able to include everything – [Mainly because of my (K2UYH) involvement in the IEEE/MTT International Microwave Symposium (IMS2018) in Philadelphia this year (10-15 June). There will be a Ham Social event on 12 June chaired by N2UO and support by the Mount Airy VHF Radio Club (Pack Rats). I hope to some EMEers there as in the past. K1JT will be the speaker]. Please keep the reports and tech material coming. 73 Al – K2UYH and Matej – OK1TEH

VE6BGT improved dish mount – see report last NL

VK7MO's grid square dxpedition 3 cm setup with 113 cm dish and 90 W

EA6/HB9COG 1.5 dish with 3 cm feed