432 AND ABOVE EME NEWS
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CONDITIONS: The first 1296 CW EME VK3UM Memorial Contest will be remember for its exceptional conditions and high activity levels, which is certainly appropriate for contest in memory of a Doug (VK3UM) who literally lit up the 1296 band when the Moon appeared over his horizon. The top reported score this year is form OK1DFC with 86x68. Zdenek was just one QSO ahead of OK1KIR group with 85x68. There is nil to report dxpedition wise. SZ9Z (LI75) to be on 70 cm in April but apparently was never QRV. I have nothing yet to report for May. **Coming up the last weekend of April (29/30) is the 9 cm Dubus CW EME Contest.** I am expecting a good turnout for this contest. **The 432 CW Activity Time Period (ATP) is again the same weekend on 30 April from 0800 to 1000 and 1800-2000.** See comments from SM2CEW on the ATP at the end of this newsletter (NL). Perhaps there will be more activity this month as there is not as many stations on 9 cm as some of the other bands. Also in this NL is a report by VK7MO of some amazing 10 GHz weak signal receptions of the DL0SHF Beacon.

VERY SAD NEWS: VE1ALQ IS AN SK. Darrell was very active on 432 and later 1296 until health slowed him down. He contributed several interesting antenna designs, was a regular at the conferences and an EME Elmer to anyone that needed. He will be greatly missed. QRZ.com has a wealth of information and pictures on his life. Darrell's obituary can be seen at http://serenitylindsayfuneralhome.ca/tribute/details/4790/Darrell-Ward/obituary.html.

1296 MOON BEACON ON0EME IS NOW ON THE AIR FOR 5 YEARS!
The beacon started on 31 March 2012. The antenna has made 1,700 Moon passes. The Beacon has TX'd 600 min of CW messages, 400 min of pure carrier. It has consumed 16,000 kW/h of electrical power during this 5 years period. Beside some PA problems in the beginning, the beacon has been on air every moonpass. The license has been extended by the Belgian regulator. (They had wanted to reduce the power to 50 W, but the high power was extended). They received permission for continued use of the beacon location, although the land owner wanted to extend some buildings to the west of the antenna location. This might cause a higher elevation limit to the west in the future. Presently there is an elevation limit at 10° both to the east and west. Congratulations to the team for a truly momentous achievement! They hope to keep the bacon in operation for at least another 5 years. [More info on the beacon can be found at http://users.skynet.be/on0eme/ON0EME/Welcome.html and http://users.skynet.be/on0eme/ON0EME/Publi_files/1296%20MHz%20moon%20beacon.pdf – OK1TEH].

DJ8FR: Jurgen juergen.friedrich@dj8fr.de reports on the Dubus 23 cm CW Contest – It was very nice contest again with low libration and many loud sigs. I worked 71x56 comparedi to 68/54 last year. My QSOs included 7 initials to bring me to initial #134 on 23 cm CW/SSB over the last 6 years. My horizon is high here and limited EL > 20 degs at moonrise and moonset. I am using a 4.9 m dish with 700 W at the feed.

DK3WG: Jurg dk3wg@web.de was active on 432 and 1296 in April – I worked on 70 cm using JT65B CT1XC. On 23 cm using CW during the Dubus contest, I ended with a total of 40 QSOs including initials with OK2ULQ, S53MM, OH2AXH, 9A5AA and F6ETI. Outside the contest with JT65C, I added digital initials with G4CDN, LU1CGB and SM7SJR.

DL6SH: Slawek dl6sh@online.de sends his activity report for the 1296 Dubus contest in April -- I have spent most of my weekend on the Moon, and found good activity with very strong signals especially from Europe (EU). I may have missed some smaller stations and some of the activity from overseas, but worked 71x58 on CW or SSB. I contacted on Saturday: OK2DL, ES5PC, UA3PTW, HB9Q, OK1CS, OK1DFC, JA4BLC, OK1KIR, SP7DCS, G3LTF, OF2DG (OP OH2DG), OK1YK, HB9CW, JA8IAD, LZ1DX, DL3EBJ, OZ4MM, DJ8FR, 9A5AA, OK1CA, F5KUG, I1NDP, SP6ITF, JA6AHB, S53MM, G4RGK, HB9BCD, SP6JLW, F1PYR for an initial (#), I5YDI, PA3FXB, SP3XBO, RA3EC, G4CCH, DK3WG, OK2ULQ, SM4IVE, F6ETI (#), SM2CEW, S59DCD, SP2HMR, NC1I, N8CQ, PA3DZL, WA6PY, DF3RU, N5BF, VE4SA (#), IK5VLS, VE6TA, VE6BGT, KL6M, IK3COJ and ES6FX, and on Sunday: VK4CDI, PI9CAM, IW2FZR, OE5JFL, OH2AXH, LZ2US, YO2BCT, JH1KRC, ON5RR, LX1DB, PA2DW, N4PZ, K2UYH, F5HRY (#), OK1CS (DUP on SSB), IZ1AEM, VA7MM and VE4MA. My RX relay was good over nearly the whole contest, but at the end started acting up and I had to change it. My Swedish SSPA is working really well, and produced nice echoes. I was running my 8 m dish with a septum feed and my new 500 W SSPA at the feed. For rain protection, I use a cheap bucket. I can change my feeds with a tube in tube system. I am QRV on 144, 432 and 1296. (I have added a rotatable ringfeed for 2 m operation).

DL6SH's 8 m dish with 2 m rotatable ring feed in place

[With his new RingFeed (originally described by OM6AA for 23 cm), Slawek measured a sunnoise of 6.4 dB at a SFU = 83, which is 0.2 dB worse than predicted by VK3UM's calculator. For the RX path an HF4002 TR relay and 2 HA8ET 0.6 dB NF and 40 dB gain LNAs were used. More about LNA is at http://www.ha8et.hu/ext.htm - OK1TEH].

EW1AA: Sergej ew1aaminsk@gmail.com has been active for several months with his new 1.2 m dish on both 13 and 23 cm – I operate from the balcony of a big apartment house. With my old 90 cm dish, I had worked 5 stations on 1296. I now have worked many more with my new dish. Most were with a linear feed, but I have recently switched to a circular pol HB septum feed (on both 23 and 13 cm) that gives even better signals. I used the circular feed in the 1296 Dubus contest. On 13 cm with the linear feed, I had worked OK1KIR, UA3PTW, K2UYH and W5LUA plus HB9Q with the old dish. I hope to become also QRV on 6 cm in the near future.

EW1AA's new 1.2 m dish with 1296 septum feed

F1PYR: Andre andre_f1pyr@yahoo.fr had good success during the April 23 cm contest weekend -- I had a very fine time during the contest. For the first time I reached 40 QSOs. On Saturday, I contacted HB9CW, SP6JLW, DJ8FR for an initial (#), G3LTF, I1NDP, OF2DG (#), F5KUG, G4CCH, UA3PTW, HB9Q, OK2DL, DL6SH (#), OK1KIR (#), OK1DFC, OK1CS, IZ1BPN, ES5PC, DL3EBJ, SP7DCS (#), F6ETI, OK1CA, SP3XBO (#), SM4IVE, K2UYH (#), IK5VLS (#), N4PZ, NC1I (#), G4RGK (#), VE6TA and 9A5AA (#), and on Sunday OE5JFL, PI9CAM, LX1DB (#), OK2DL, RA3EC, OK1YK, DF3RU, ES6FX (#), S53MM (#), KL6M and DK3WG. Before the contest, I worked IK3COJ (#), OK1YK (#), F6ETI (#), SM4IVE (#) and SP6ITF. My initial total is now up to #79. My setup consists of a 3.5 m dish with 400 W. Many thanks to all. I hope to be QRV on 23, 13, 6, 3 and 1.25 cm soon. Skeds are very welcome.

F6ETI: Philippe's f6eti@wanadoo.fr March-April 1296 EME NL contribution follows – I was quite busy off the Moon the past month and worked using CW on 2 March OH2DG, on 3 March OK1DFC, G3LTF, G4CCH and ES5PC, on 5 March SP6ITF, I1NDP and OK2DL, on 8 March SP6ITF, on 9 March SP6ITF, on 25 March SP6ITF, on 29 March F5KUG and N4PZ, on 30 March F1PYR, SP6ITF, SP7DCS, SM4IVE, OK1CS and VE6TA, and on 31 SP6ITF, NC1I and VE6TA. Then during the REF-DUBUS 1296 CW EME Contest on ½ April, which was a pure pleasure, I scored 45x37. QSOs were made with OK1CA, HB9Q, UA3PTW, DL3EBJ, OK1CS, OF2DG, SP6JLW, I1NDP, G4CCH, OK2ULQ, OK2DL, G3LTF, F1PYR, DL6SH, OK1DFC, SP7DCS, ES5PC, F5KUG, SM4IVE, S53MM, OK1KIR, HB9CW, NC1I, KL6M, K2UYH, OZ4MM, LZ2US, JA4BLC, PI9CAM, OE5JFL, ON5RR, IK3COJ, RA3EC, JA6AHB, DJ8FR, SM2CEW, F5HRY, DF3RU, 9A5AA, SP3XBO, SP6ITF, F5JWF, ES6FX, VE6TA and DL7YC. Afterwards, on 4 April, just before dismantling my station for the spring-summer season, I worked SM2CEW, DK3WG for initial #59, G4CCH, PA3FXB #60 – (it took close to 40 minutes to identify and finalize this QSO, TNX to Jan for his patience and skill) and SP6ITF. I also heard weakly PA2DW during his QSO with SM2CEW. My stations is a 3 m f/d 0.36 dish with 300 W DF9IC SSPA at an OK1DFC septum feed and 0.25 dB NF G4DDK VLNA to SG-Lab XVTR, IC-202 and Transfox SDR.

G3LTF: Peter g3ltf@btinternet.com EME report for April -- On 29 March I had a test with G4BAO on 6 cm, but couldn't hear him (or see him on my SDR), which was strange. I did have a QSO with OZ1LPR. In the 23 cm VK3UM Memorial Contest, I worked on 1 April 9A5AA, OK1CA, DL6SH, KL6M, LZ1DX, JA6AHB, UA3PTW, G4CCH, SP7DCS, JA4BLC, ES5PC, F5KUG, OK2DL, F1PYR, JA8IAD, DK3WG, OK1DFC, DJ8FR, OF2DG, HB9Q, I1NDP, ES6FX, S53MM, SM4IVE, LZ2US, SM2CEW, RA3EC, OK1YK, PA0BAT, HB9BCD, IW2FZR, G4RGK, IZ1BPN, OK2ULQ, SP6JLW, DL3EBJ, F5HRY, SP3XBO, NC1I, PA3FXB, S59DCD, F6ETI, IK3COJ, YO2BCT, G4YTL, OK1KIR, G4BAO, K2UYH, VE6TA, N8CQ, WA6PY, SP6ITF, OK1CS, IK5VLS, PA3DZL, F6KRK for initial #436, VA7MM, N5BF, N4PZ and VE6BGT, and continuing on 2 April HB9CW, VK5MC, PI9CAM, OE5JFL, OZ4MM, OH2AXH, UA3TCF, DF3RU, LX1DB, DF2VJ #437, ON5RR, SP2HMR, IK6EIW, IZ1AEM, IZ2DJP, F5JWF, DL7YC and PA2DW. Heard on the band but with no CQs were PE1CHQ, G4CDN and VE4SA. CWNR were IK3GHY and JF3HUG. I was called by LA3EQ, but missed him. So, I worked 78x61, but I suspect there were up to 100 stations active over the weekend. T he bottom 35 kHz was full of stations for most of the two days, certainly until well into the NA window. It was truly an excellent weekend of random EME CW. On 4 April I worked ON4AOI on 13 cm CW for initial #133 on that band. Since then I have been very QRL with the garden, but enjoyed meeting several EME ops at the UK Microwave Group Round Table on 8/9 April. We have a house full of family and visitors for the whole of the 9 cm contest weekend. I will try to operate whenever I can, but it will be quite limited if at all. Please make QSOs fairly quick, so I can make the best use of the available time.

G4BAO: John john@g4bao.com besides providing some nice QSOs on 1296 during the CW contest, has completed his first 6 cm EME QSO – I worked OZ1LPR (18DB/14DB) using JT4F. My 5760 system is working, but I need to improve my tracking. I also copied G3LTF (O) on CW but he couldn't copy me. We do not understand why. I am receiving 8 dB of Sun noise, 4.7 dB CS/G noise and can just detect Moon noise. I have a 1.9 m prime focus dish with a CP septum feed loaned from G3LTF – TNX Peter, 0.9 dB preamp. I am interest in skeds; CW & JT, I don't care.

G4DDK: Sam jewell@btinternet.com is pleased to report a 23 cm CW QSO with VK5MC -- Chris was a bit stronger than the beacon, which was (14DB) using WSJT10 in JT65C mode to measure the signal level. Although, I have been QRV on 23 cm EME for more than 10 years, my occasional operation has not resulted in any previous VK QSOs. I have heard and seen (on JT65) a number over the years, including VK3UM, of course. [Sam hoped to be on for the 23 cm contest, but I do not think he made it].

G4RGK: Dave's zen70432@zen.co.uk NL Report for April -- I was QRV for the VK3UM Memorial Contest on 23 cm, and found condx and activity very good. I have a restricted Moon window these days, which loses me 6 hours on every pass. Nevertheless, I managed to make 54 QSOs with 3 dupes for a score 51x42. I worked on 1 April HB9Q, JA6AHB, JA4BLC, OK1KIR, OK1CA, OK2DL, G4CCH, SP6JLW, DL3EBJ, HB9CW, DJ8FR, DL6SH, OK1CS, SM2CEW, OF2DG, SM4IVE, 9A5AA, SP7DCS, I1NDP, IK3COJ, UA3PTW, LZ2US, LZ1DX, G3LTF, OK2ULQ, OK1DFC, F5JLF, SP6ITF, S53MM, RA3EC, S59DCD, NC1I, DJ8FR, ES6FX, OZ4MM, ES5PC, F5KUG, K2UYH, DF3RU, WA6PY, KL6M and F1PYR, and on 2 April PI9CAM, OE5JFL, PA3DZL, JF3HUC, ON5RR, OK1YK, SP3XBO, VE6TA, F5HRY and IK5VLS. Heard and CWNR were N4PZ, N8CQ, IK6EIW, DK3WG, DL7YC, IK3GHY, F6ETI, IW2FTR, VA7MM, N5BF and VE6BGT. My 23 cm station is the same as before, 4.6 m stressed dish, RA3AQ feed, 250 W SSPA and a G4DDK preamp.

IK3COJ: Aldo ik3coj@gmail.com participated in the Dubus 23 cm contest -- I made 50 QSOs on CW including F6ETI an initial (#). I found good signals, especially on Sunday. I used a SSPA with 250 W at feed borrowed from IK3GHY – TNX due to problems with my tube PA. Head but not QSO'd were N4PZ, F1PYR, KL6M, IK2RTI, SP2HMR, JA8IAD, JH1KRC, VK4CDI, LX1DB, VE4MA and DL7YC. Many thanks to all who participated.

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp reports on the 23 cm DUBUS CW contest – I finished with 43 stations worked. QSO'd were K2UYH, VK5MC, VE6TA, JA6AHB, JA8IAD, OK1DFC, OK1KIR, 9A5AA, ES5PC, OK1CA, HB9Q, UA3PTW, SP6ITF, OK1CS, YO2BCT for an initial (#), DL6SH, KL6M, DK3WG, G3LTF, DJ8FR, OZ4MM, G4CCH, OK2DL, HB9CW, G4RGK, SP6JLW, SP7DCS, OF2DG, F5KUG (#), DL3EBJ, OK1YK (#), NC1I, N8CQ (#), VE6BGT, JH3EAO, IK3COJ, PI9CAM, LZ1DX, OH2AXH, S53MM, RA3EC, LZ2US and F6ETI (#). Before the contest, on 27 March I worked on 5760 JA1WQF (559/559). After the contest, I changed the system to 10 GHz with circular pol and worked on 3 April JA1WQF (559/559) and 6 April JA8ERE (O/559). I changed on 8 April my polarization to linear horizontal and worked JA8ERE (559/569) and JA1WQF (559/559).

K6PF: Bob k6pf@sbcglobal.net writes about his EME plans – I am working on 2 m and 23 cm EME. 1296 will be new for me. I'll be putting up a solid 5 m dish and recently received a new BEKO 350 W PA. I am hoping to work some bigger stations on 23 cm SSB EME as well as many on CW. I'm making a concerted effort to be on the air on both bands by end of this summer. Regarding my dish, it has been setting my yard for several years and has deteriorated somewhat with areas of the gel coat and the crinkly paint finish flaking off. Some areas of the AL mesh are exposed. If anyone has had experience refinishing the surface coating over the mesh, PSE contact me. The fiberglass structure supporting the mesh appears to be in good condx. Alternatively, if anyone knows of a solid spun AL 5 m dish that's available at a reasonable cost within a reasonable driving distance to Prescott, AZ, also contact me.

KF8MY: Mik kf8my@aim.com (EN84cb) is QRV on 70 cm with 2x25 el K1FO yagis and 100 W – I have been using JT65B, but I am working on

new 400 W PA and expanding my array to 4x25 el K1FO yagis. I should be ready soon. [Forwarded by OK1TEH – TNX].

KL6M: Mike melum@alaska.net writes about his recent 23 cm contest operation -- I missed the opening window of the contest, but managed to get on for first cycle moonset and worked a dozen EU stations. Prior to contest start my azimuth encoder quit working, so I quickly built a new encoder mount/enclosure for my 'spare' encoder. It was giving me unusual results. It seemed to track ok, but suddenly would break into oscillation and caused rapid incrementing. So I had to track manually and often had to search for the Moon. My feed winch was frozen and I could not install the 23 cm feed. Finally right at the start of the contest, it broke loose. I removed tons of ice from the dish. It warmed up above 40° F here, and when I raised the dish a whole bunch fell out, but still a couple tons in there. So I got the roof rake out and poked around with it. I can only get to the middle of the dish with a 20' rake. But I kept banging away and eventually all came out. The ice in the center of the dish was over 3 inches thick and about 10' in diameter. It finally broke loose and almost landed on me. I miraculously ended up working 52 QSOs. My log is available at http://kl6m.com/DUBUS2017.PDF.

LA3EQ: Jan j-lustru@online.no sends from (JO28xj) info on his CW activity during the Dubus 23 cm contest – My setup is a 2.3 m dish (RAS rotator + MD-02 controller) and septum feed with a 120 W SSPA, G4DDK VLNA and TS-2000X. I worked on Saturday OZ4MM, UA3PTW, HB9Q, I1NDP and G4CCH, and on Sunday SP6JLW, OK1KIR, OE5JFL, OK1DFC and SM4IVE for a total of 10x9. Heard were F1PYR, 9A5AA, OK1YK, PI9CAM, DF3RU, HB9CW, OK2DL, VE6???, G3LTF, and N8CQ.

LU1CGB: Adrian lu1cgb@gmail.com had a great time in the 1296 during the Dubus CW contest – It was great surprise when you turn on the station for a contest and no issues appear. My auto tracking is finally working and makes operation much easier when the weather is bad. I just turn on and make contacts. During the contest activity and conditions were excellent. For the first time I had more CW QSOs than digital. TNX for the patience of the partners; my CW skills are very limited.

N4PZ: Steve n4pz@live.com was only active a short time during the VK3UM Memorial EME CW Contest, but found the signals were many and exceptionally loud -- My list of QSOs made it to 29 when the 240 volt variac that controls the B+ to my TH-327 blew. On the list were DL3EBL, OK2DL, DJ8FR, UA3PTW (589), SM3IVE, G4CCH, 9A5AA, G3LTF (589), ES6FX, VE6TA, KL6M, OK1DFC, SP7DCS, OF2DG, F1PYR, SP6ITF, DL6SR, OK1CS, S53MM, DK3WG, NC1I, PA3DZL, SP6JLW (589), S59DCD, OE5JFL, RA3EC, OK1KIR, DF3RU and N8CQ. K2UYH almost blew my headphones when he came on, but we did not QSO before I was forced to QRT. Very few reports were less than (579). "All" QSOs were CW. My system was a TH-327 PA at 1500 W to VE4MA feed on 4.9 m dish and WD5AGO preamp. On 13 cm, I will soon to be at 300 W with the same dish and preamp after picking up an Erickson SSPA at the Swedish EME Conference in May - TNX SM4IVE.

NC1I: Frank frank@NC1I.COM submits his April report -- The 432 array is still not repaired. When the weather has been good, I have not been able to line up tower help. As it stands now we are scheduled to repair it on Saturday morning 29 April. If the weather is good then and if all goes well, I may possibly be back on 432 sometime that Saturday or hopefully no later than moonrise Sunday 30 April. I had intended on getting on for a couple of hours each day of the DUBUS 1296 contest. As the contest got close, the weather forecast looked pretty discouraging. A day or two before the contest, it seemed unlikely I would make it on at all due to the weather. We did get ice and snow Friday night and Saturday morning, and by moonrise Saturday there was too much ice on the dish to attempt to move it. Temperatures did warm up pretty quickly on Saturday and by 1530 there had been enough melting so that I was at least able to move the dish. Ice was clearly causing degradation in dish performance and signals were not great, but I worked a few stations with weaker signals than normal. About 30 minutes later the rest of the ice melted and signals came way up. I found conditions on Saturday to be excellent! Although I was not on for the entire moonpass on Saturday, I was able to spend more time than I had originally expected and ended up with 50 calls in the log for the first day. I did not think conditions were nearly as good on Sunday, but did manage to work 15 more stations. My QSO total was 65, and if I counted the multipliers correctly my end result was 65/53. It was certainly an enjoyable weekend and great to see all of the CW activity. I believe I added 6 or 7 initials. W1QA and I are continuing to look for a suitable EME location in New Hampshire and hope to put NH on 23 cm sometime this summer. My first priority is to get my 432 array repaired, but once that is done we will put more focus on the NH project. Hopefully I will have more to report next month.

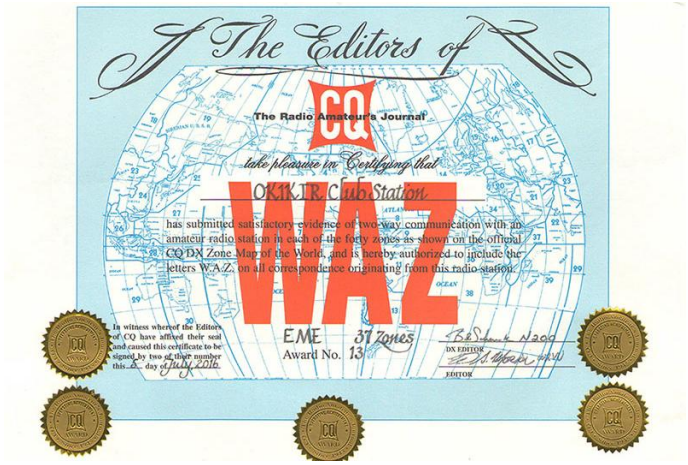
OK1CA: Franta strihavka@upcmail.cz writes on his 1296 contest operation -- I was QRV in the EU Dubus EME Contest on 23 cm only on Saturday. The conditions were very good, but I made no initials. My contact with OZ4MM was my two thousandth QSO on 1296 CW! Making this QSO with Stig an old EME friend made the contact even sweeter. My total score was 58x47. I worked outside of the contest using JT65C VE4MO and G4EZP for digital initial {#28}.

OK1DFC: Zdenek ok1dfc@seznam.cz did outstandingly in the Memorial Contest -- I was very happy to be able to participate in both contest periods. I tested new a 1 kW SSPA in preparation for my autumn EME expedition. I worked overall 86x68. QSOs were with UA3PTW, ES6FX, JA4BLC, OK1CA, OK2DL, OF2DG, KL6M, JA8IAD, VK2JDS, SP6ITF, LZ1DX, IK3COJ, YO2BCT, DL6SH, SP7DCS, S53MM, ES5PC, VK5MC, OK2ULQ, HB9CW, DL3EBJ, HB9Q, SP6JLW, G4CCH, OK1KIR, VK4CDI, OK1YK, OK1CS, JA6AHB, I1NDP, 9A5AA, SP3XBO, DK3WG, S59DCD, G3LTF, PA3FXB, F5HRY, F5JWF, I5YDI, DJ8FR, G4BAO, G4CDN for initial #411, UA3TCF, G4DDK, HB9BCD, F1PYR, F5KUG, IW2FZR, G4RGK, SP2HMR, RA3EC, IK1FJI #412, NC1I, OZ4MM, F6ETI, SM4IVE, G4YTL, SM2CEW, VE4SA, K2UYH, IK6EIW, PA3DZL, VE6TA, WA6PY, N4PZ, F6KRK #413, VA7MM, N8CQ, IK5VLS, PA2DW, OE5JFL, LZ2US, LX1DB, PI9CAM, ON5RR, JF3HUC, LA3EQ, DF3RU, IK3GHY, DL7YC, IZ1AEM, IZ2DJP, VE4MA, LU1CGB, VE6BGT and N5BF. There was great activity from Italy; I worked 10 I stations, than OK, F and G all with 7 stations. Also North America was represented by 11 stations. From South America was only LU1CGB with a great effort. Only Africa was not available to have WAC in 24 hours. Thank you to all for the QSOs. I am looking forward to 3400 in last weekend in April, and am preparing a new very accurate dish for use in the contest. I am expecting to be on small expedition in JN78 locator as OK5EME to give an initial to all. The link for my echo tests with the new SSPA is https://youtu.be/k8DIo7HCHQQ, and for my QSO with VK5MC is https://youtu.be/94XeTGg8aws.

OK1DFC's ham shack with new 1 kW PA at lower left

OK1IL: Ivan ivaknn@gmail.com report on CW and JT65 on 23 cm -- I moved from the 2 m band where almost all traffic is JT65 to 23 cm with its mix of CW and JT65. I am try to adapt to having both here. CW is seemingly obvious, but I have limited experience with only about 10 CW contacts. When I should use TMO or RST reports? [It really does not matter. Both are mixed and accepted by all]. I have difficulty copying CW below -15 dB, but I can produce quiet a big signal with my 3 m dish and 800 W PA. After copying both callsigns I confirmed with (OOO), but QSO partner replied often with RST. [No problem as long as you can copy the RST. If you can't, continue sending O's with no R's until they hopefully will understand]. I find the common reflector for both CW and JT65 on HB9Q works well. After finishing a JT65 QSO, I can easily follow up on CW. Unfortunately I could not participate in the DUBUS 23 cm contest because my transverter failed just before its start – [Murphy]!

OK1KIR: Vlada & Tonda report on EME in April -- In the 23 cm part of Dubus (VK3UM) contest we worked using CW 9A5AA, DF3RU, DJ8FR, DK3WG, DL3EBJ, DL6SH, DL7YC, ES5PC, ES6FX, F1PYR, F5HRY, F5JWF, F5KUG, F6ETI, F6KRK, G3LTF, G4BAO, G4CDN for initial #411, G4CCH, G4RGK, G4YTL, HB9BCD, HB9CW, HB9Q, I1NDP, I5YDI, IK3COJ, IK5VLS, IK5EIW, IW2FZR, IZ1AEM, IZ1BPN, IZ2DJP, JA4BLC, JA6AHB, JA8IAD, JF3HUC, JH1KRC, K2UYH, KL6M, LA3QE #412, LU1GCB #413, LX1DB, LZ1DX, LZ2US, N4PZ, N5BF, N8CQ, NC1I, OE5JFL, OF2DG, OH2AXH, OK1CA, OK1CS, OK1DFC, OK1YK, OK2DL, OK2ULQ, ON5RR, OZ4MM, PA2DW, PA3DZL, PA3FXB, PE1LWT, PI9CAM, RA3EC, S53MM, S59DCD, SM2CEW, SM4IVE, SP2HMR, SP3XBO, SP6ITF, SP6JLW, SP7DCS, UA3PTW, UA3TCF, VA7MM, VE4MA, VE6TA, VK2JDS, VK4CDI, VK5MC, WA6PY and YO2BCT. Overall we ended with 85x 68. More details are on www.ok1kir.cz. On Sunday at 0700, we measured Sun noise of 19.5 dB (at SF105). Out of the contest we worked on 2 April at 1615 GW3XYW (8DB/11DB) with JT65C. On 11 April we received a notice from our local post to pick up an envelope that was too big for our post box. What a surprise to find inside the award for WAZ on EME number 13 for 37 zones (35 from 70 cm plus 2 from 23 cm). It arrived after a long 9 months of waiting!



OK1KIR EME WAZ award

OK1TEH: Matej ok1teh@seznam.cz was on QRV 70 cm just for one weekend in the last month -- The highlight was a JT65B QSO with N7NW (26DB/28DB) for mixed initial #115*. Hal was using 4x28 el M2 yagis and 1 kW PA. I then had nice contacts with DL8DAU (26DB/28DB) and PA2V (21DB/27DB). All 3 QSOs were 1 to 4 yagis.

OK1YK: Mira ok1yk@VOLNY.cz posts at http://ok1yk.blogspot.com info about his participation in the 23 cm EME Contest – During the contest weekend the WX was wonderful and my equipment was working to 100 percent. The conditions were excellent and I heard to my reflections very well. My equipment was a HB 4.5 m dish with a OK!DFC septum feed, 400 W SSPA, G4DDK LNA and DB6NT xverter. I was active during whole weekend. On Saturday I made 25 QSOs and on Sunday 13 QSOs for a total result of 38x19. It's not so much, but I was happy to add 6 initials. During the contest I compared the performance of my FT847 with a newly acquired FT991. For operator comfort the FT991 is definitely better; especially having an XIT is a great advantage due to big Doppler shift on 23 cm. However for listening to weak EME signals at the noise level, the FT847 seems to be better. The NR and CONT filters in the FT991 do not work for me; this may be just my personal feeling. The Dubus contest was CW only, so I didn't try FT991 for JT operation. CU in May for the ARI contest. [TNX to OK1TEH for forwarding and translating this report].

OK2DL: Marek ok2dl@seznam.cz reported on his blog http://ok2dl.blogspot.com about his participation in the 23 cm DUBUS contest – As the Moon rose in the morning, at 0.0 degs elevation, I was QRV. The first station heard was UA3PTW, but that was all. The rest of EU was still sleeping. A bit more traffic showed up in an hour. But when I finished to LZ1DX, I suddenly stopped hearing. The wattmeter's arrow was at zero, so I located a ladder to find out what was wrong. My first suspicion was the problem was related to my Mitsubishi RA18H2313 driver that I run at full out. But, I found that there was no power at the input, and that my MKU13G3 xverter had stopped running after a year of operation. Fortunately, I had an old transverter and I installed it. Unfortunately due to a weak driver, I found that the PA was not delivering full power. I had only 400 W out and my echoes were very weak. For lack of time, I decided to run the contest with this QRP. I made a total of 79 QSOs. During the contest, I had OpenWebRX http://sdr.ok2dl.eu running. After the contest I made a new driver from a MRF9080 with 13 dB of gain. More can be found at http://www.ok2dl.eu/2017/04/novy-budic-pro-23cm.html. [TNX to OK1TEH for forwarding and translating this report].

OK2ULQ: Peter ok2ulq@seznam.cz reported on his blog http://ok2ulq.blogspot.com on his 1296 Dubus contest operation -- I enjoyed the many strong signals all over the band during the contest weekend. I also enjoyed the beautiful and sunny WX. I had new borrowed SDR, but mainly paid attention to contesting instead of testing the SDR. My overall score was 42x38 with 6 initials. The initials were SP2HMR, SP3XBO, DK3WG, F6ETI, ES6FX and VE6TA. These results are the best I've ever achieved in one orbit. [TNX to OK1TEH for forwarding and translating this report].

OZ4MM: Stig gsvestergaard@gmail.com sends an EME update -- During the Dubus contest, we had great spring weather. This affected my contest time due to a conflict with needed outdoor projects. I was QRV for only about 8 hours, but did put 58 stations into the log. My only initial was DF2VJ (449/559). There were many huge signals in the CW band. It was really a very enjoyable weekend here. **Please note my new email address.**

PA0PLY: Jan pa0ply@pa0ply.nl sends some EME info for the NL -- It's now more than a month since the EL actuator of my 432 array stopped movement. Due to busy QRL and bad weather conditions, it is still not fixed. I am working on a new way of supporting the 23 and 13 cm feeds for my 3 m dish. I wanted to calibrate my tracking system first with my 3 cm gear in place. But bad luck again; nothing worked on 3 cm!
After investigation, I found the exciter box was filled up with water. It must have condensed over the years. Unfortunately, it damaged my LO. The preamp box also contained water and my pre-amp was attacked by the moisture. I have arranged to get a very nice replacement PLL-LO from DF9NP, see www.df9np.de, that can be switched between 2 frequencies. Regarding the 10 GHz preamps from DU3BC, we have sold over 70 units, and do not have sufficient parts for another production run. We are quite interested to receive user experiences with the preamps. Please send your reports to me. We received some nice info from VK7MO. His is working extremely well and on 2 March he was able to use it to copy the DL0SHF beacon on QRA-D with a small 20 dBi horn.

PA2DW: Dick qtc@kpnmail.nl writes about his CW EME experiences during the 23 cm contest -- I had a great time on CW EME. On Saturday I did some activity in between family obligations. On Sunday I went to PI9CAM. When I came home, the Moon was exactly right for my window and I made a whole lot of QSOs. I worked a total of 20 stations (20x19) - a new personal record! I only missed SM2CEW and KL6M. In my log are OZ4MM, OK1DFC, SP6JLW, PA3DZL, OE5JFL, PI9CAM, DL6SH, HB9CW, OF2DG, G4CCH, SM4IVE, DJ8FR, SP7DCS, K2UYH, VE6TA, UA3PTW ,G3LTF ,SP6ITW, OK1KIR and OK1CS. I was very happy to catch VE6TA for an initial! My rig is a 2.4 m dish with 500 W SSPA, G4DDK LNA and Elecraft K2 with DB6NT TR1296H TVTR as my K3 is out for repair. TNX all – it was great fun.

PA3DZL: Jac pa3dzl@ziggo.nl reports on his 23 cm CW EME contest results -- I had a great time on 1296. There was very nice activity and great signals! Strongest signals were from PI9CAM, HB9Q, SM4IVE, HB9CW, OK2DL, UA3PTW and K2UYH. I worked 7 OK stations – so much activity from the Czech Republic deserves recognition! I had limited operating time during moonrise because of some family commitments and thus missed the JA stations. I worked on 1 April OZ4MM, SP6JLW, ES5PC, SP6ITF, HB9Q, I1NDP, OK1KIR, SP7DCS, SM4IVE, OF2DG, UA3PTW, NC1I, OK2DL, DL6SH, G4CCH, OK1DFC, WA6PY, F5KUG, OK1CS, IK2RTI for an initial (#), OK2ULQ, OK1CA, LZ1DX, DL3EBJ, VE6TA, S53MM, K2UYH, PA3FXB, G3LTF, 9A5AA, ES6FX, N8CQ, KL6M, IK5VLS and PA2DW, and on 2 April VK5MC (#), LZ2US, PI9CAM, OK1YK, G4RGK, IK3COJ, DJ8FR, F5HRY (#), S59DCD, G4YTL, HB9CW, SP2HMR (#), OE5JFL, F5JWF, SP3BXO, VE4MA, N4PZ and DF3RU. Heard were SM2CEW, IK6EIW and LX1DB on SSB. Overall I did make a score of 53x46 and 4 initials. (In 2015 I made 51 QSOs and 2016 54). My rig is 3.7 m Andrew solid dish with f/d 0.34, VE4MA feed, G4DDK preamp and SSPA with 8 x MRFE6S9160HS water cooled in the shack.

SM2CEW: Peter sm2cew@telia.com reports for the NL -- On 13 March I worked OK1IL for an initial (#) on 23 cm. I was very happy to complete with Ivan despite my tree blockage on moonrise. After having worked on 2 m CW EME, we have been looking forward a 23 cm contact for some time. But, it's been on hold until now due to my dish being unusable during the winter because of icing. I also heard F6ETI. On 25 March, I had a nice 23 cm CW EME chat with SP6ITF. Signals were excellent from Gregory. During the Dubus 23 cm VK3UM Memorial Contest I worked G4RGK, OK1KIR, OK2DL, UA3PTW, G3LTF, OK1CS, RA3EC, SP6JLW, DJ8FR, OF2DG, SP7DCS, DL3EBJ, I1NDP, G4YTL, ES6FX, OK1CA, LZ1DX, DK3WG, IK5VLS, IK3COJ, OK1DFC, DL6SH, 9A5AA, G4CCH, OK1YK (#), HB9CW, LZ2US, PI9CAM, SP2HMR, F6ETI (#), ON5RR, S59DCD, ES5PC, SM4IVE, OE5JFL and NC1I for a total 36x31. The conditions were fantastic. It was just loads of fun, and all done on random CW. On 2 April, again on 23 cm, I worked F6ETI and on 4 April F6ETI and PA2DW (#) with great signals from both stations.

SP6JLW: Andy sp6jlw@wp.pl reports for his group on activity in the 23 cm Dubus contest -- We took part under callsign SP6JLW and ended with a score of 81x64. We heard more stations calling but their signal were too weak - sorry. For next time we'll have to improve our RX. The high number of participating SP stations is almost norm now, but we were impressed to hear so many OK stations. QSO'd were KL6M, NC1I, K2UYH, N8CQ, N5BF, WA6PY, N4PZ, UA3PTW, RA3EC, OF2DG, ES6FX, ES5PC, VK4CDI, VK5MC, SP7DCS, SP6ITF, SP3XBO, SP2HMR, HB9Q, HB9CW, HB9BCD, OK1KIR, OK2ULQ, OK1CS, OK1DFC, OK1CA, OK1YK, OK2DL, S53MM, S59DCD, OZ4MM, 9A5AA, LA3EQ, PA3DZL, PA3FXB, PA2DW, PI9CAM, OE5JFL, DJ8FR, DK3WG, DL6SH, DL3EBJ, DL7YC, DF3RU, ON5RR, YO2BCT, LX1DB, Feti, F1PYR, F5KUG, F5JWF, F5HRY, JA6AHB, JA4BLC, JA8SZW, JA8IAD, JF3HUC, JH1KRC, LZ1DX, LZ2US, G4RGK, G4CCH, G3LTF, G4YTL, I5YDI, IW2FZR, IK3COJ, IZ2DJP, IK5VLS, IZ1BPN, IK6EIW, IK3GHY, IZ1AEM, SM2CEW, SM4IVE, SM7SJR, VE4MA, VE6BGT, VE4SA, VE6TA, VA7MM.

VA7MM: Mark (VE7CMK) and Toby (VE7CNF) va7mm@rac.ca were active during 1296 CW EME contest weekend – We were QRV on both 1 and 2 April, and in 8 hours of operation worked K2UYH, VE6TA, SP6JLW, OK1CA, HB9Q, OK1KIR, OK1DFC, UA3PTW, G3LTF, G4CCH, ES5PC, KL6M, NC1I, VK5MC, VE6BGT, OK1CS, DJ8FR, OE5JFL, DL6SH, PI9CAM and SP6ITF for a total of 21x18. In Dec, we were contacted by Gerry Harp, Senior Astrophysicist at SETI Institute about sending signals to the Moon that would be used for a SETI experiment. We undertook these transmissions on 1296 at the end of the CW contest. The signals were received by SETI at the Allen Telescope Array (ATA) in California where the multi-dish system was set up to create two synthetic beams pointed at different areas of the lunar surface. Our signals were recorded and will be used to assess what is effectively a large scale double slit experiment. Using a cross correlation analysis they intend quantify the interference pattern between the two synthetic beams. The results are not expected for a few months but when we learn of the findings, and we will report back to the NL. On TX we use an OZ9CR water cooled cavity PA. Our power at the feed of our 3 m dish is 200 W. On RX we have a 0.33 dB NF LNA with about 35 dB gain from three stages. We are available for scheduled contacts by e-mail at any time.

VE4MA: Barry ve4ma@shaw.ca April is in VE4 again -- I arrived back from AZ on 30 March. So there was not much time to prepare for the DUBUS 1296 weekend. I arranged for VE4SA to operate the first night and I would take the second night as we are only about 1 km apart. I did listen on the first night and copied 30 different stations. There were many more weaker ones. On the second night I heard another 14 stations that were not heard the first night. I worked 22 stations including 3 during my Asian window. I moved my dish last year so that I now have a limited Western window; and in the early spring, I have no leaves on the trees. I did work VK5MC and JA6AHB outside the contest. Getaways were JA6AHB, LX1DB, VE6BGT and more. I will try to be QRV on 9 cm. I still need to repair my PA.

VE6TA: Grant ve6ta@xplornet.com update us on his results for the Dubus 13 and 23 cm contests -- I found the choice of the 13 cm weekend to be very poor as the lower declination, and middle of the night operation creates a much smaller window to the major activity centers. Also much higher QRM levels were experienced on 2320 as we pointed through the Sirius satellite's footprints. The 23 cm weekend on the other hand was very good, with reasonable operating hours, high declination, and as a result high activity levels. Stations worked on 13 cm in the contest were SP6OPN, OK1CA, OK1KIR, ES5PC, WA9FWD, WA6PY, VE6BGT and K2UYH for a total of 8x7. Stations worked on 23 cm were K2UYH, VA7MM, N6OVP, JA6AHB, VK5MC, N5BF, JA4BLC, VK4CDI, JA8IAD, SM4IVE, UA3PTW, SP6JLW, OK2DL, HB9CW, ES5PC, DJ8FR, OF2DG, OK1DFC, SP6ITF, OK1CA, ES6FX, S59DCD, SP7DCS, OK1CS, G3LTF, F5HRY, OK2ULQ, PA3DZL, HB9Q, NC1I, OK1KIR, DL6SH, F1PYR for an initial (#), IK3COJ, WA6PY, KL6M, G4YTL (#), N4PZ, N8CQ, G4CCH, VA7MM DUP, VE4SA, VE6BGT both CW and SSB, N6OVP DUP, VE4MA, PI9CAM, G4RGK, SP2HMR (#), DL3EBJ, OE5JFL, RA3EC, F6ETI, PA2DW (#), DF3RU, S53MM, IK5VLS and 9A5AA for a total score of 55x49. Watching the SDR bandscope during moonrise was a real treat during the 23 cm event. I typically saw between 15 and 20 stations calling at any one time. I plan to be active during the next Dubus contest segment on 9 cm. It seems there will be a few new stations to work there so I am looking forward to it. Thanks to all for the contacts and fun.

VK7MO: Rex Rex rmoncur@bigpond.net.au has been testing with the DL0SHF Beacon using a small 20 dBi Horn. He compared results with a computer using XP and a newer one with Windows 10. On 2 March the Win 10 machine got 16 decodes compared to 18 on the XP machine. This is around twice that obtained on 1 March when the Win 10 Machine got 7 decodes and conditions were 1 dB worse. He also conducted degradation tests and achieved with 1 dB degradation 11 decodes, with 2 dB degradation 7 decodes, and 3 dB degradation No decodes but 23 good syncs. Rex believes with averaging it would be possible to achieve decodes with a 16 dBi horn!

W3CCX: Rick (K1DS) rick1ds@hotmail.com writes -- During the upcoming ARRL June VHF contest on the weekend of 10-11 June, The Mt Airy VHF Radio Club, the Packrats, using the club call W3CCX will be operating EME on 1296 and 10 GHz CW and WSJT. The contest exchange only includes your call and 4 digit grid. The 1296 station will be using mostly portable equipment from K1DS, including a 3 m dish, 270 W SSPA, WD5AGO preamp and OK1DFC septum feed. The 10 GHz station will be using the WA3LBI portable station. We hope to be operational from moonrise at our mountaintop portable location in FN21hb near Tannersville, PA. We hope that we can QSO with many of you during the moon pass on Saturday night with moonrise at the mountain about 0100 on Sunday 11 June.

WA6PY: Paul pchominski@maxlinear.com was QRV in the Dubus EME contest on 1296, only on 1 April during his first EU window -- I QSO'd 9A5AA, DJ8FR, DL3EBJ, DL6SH, ES5PC, ES6FX, F5HRY, G3LTF, G4CCH, G4RGK, G4YTL, HB9CW, IK3COJ, K2UYH, KL6M, NC1I, OK1CA, OK1CS, OK1DFC, OK1KIR, OK2DL, OK2ULQ, PA3DZL, PA3FXB, S53MM, SM4IVE, SP6JLW, SP7DCS, UA3PTW and VE6TA. Signals were very good. KL6M and VE6TA had some high libration, but their signals were still very nice copy. My highlight of the contest was to QSO F5HRY after so many years of not hearing each other. I plan to be QRV for the 9 cm contest leg.

K2UYH: I alkatz@tcnj.edu found conditions very good during the 1296 VK3UM Memorial Contest. The starting time on Friday local time toward JA and VK worked well for me and NE2U, who joined me during this part of the contest. However, George was unavailable for the remained of the contest and I had to stop operation early on both Saturday and Sunday. By the time I had to leave, EU activity had dropped significantly and I did not feel many stations were missed. We worked on 1 April at 0003 VA7MM (559/559), 0034 VE6TA (549/579), 0044 N6OVP (559/559), 0104 JA6AHB (579/589), 0113 JA8IAD (559/569), 0127 VK4CDI (559/O), 0138 VK5MC (559/559), 0146 JA4BLC (559/559), 0205 N5BF (559/569), 1720 OK1KIR (579/549), 1727 OK1CA (579/579), 1736 DL3EBJ (579/579), 1739 OK1DFC (589/599), 1744 OF2DG (579/579), 1748 OK2DL (579/579), 1753 DJ8FR (569/579), 1759 UA3PTW (579/589), 1802 S57MM (569/569), 1810 SP6JLW (579/579), 1812 LZ1DX (569/589), 1817 IK3COJ (569/569), 1828 ES5PC (569/579), 1833 SP7DCS (569/579), 1838 S59DCD (569/579), 1840 OK1CS (569/589), 1844 G4RGK (569/579), 1855 F1PYR (569/569) for initial #377 (mixed initial #550*), 1905 G4CCH (579/589), 1909 HB9CW (589/599), 1917 SP3XBO (569/569), 1922 IK5VLS (559/569), 1932 DF3RU (559/559), 1937 G3LTF (559/579), 1947 NC1I (589/579), 2000 PA3FXB (559/559), 2005 OK2ULQ (559/589), 2014 PA3DZL (559/559), 2029 F5KUG (559/579), 2041 F5FRY (559/559), 2048 9A5AA (559/579), 2103 F6ETI (559/579), 2109 WA6PY (569/579) and 2128 SM4IVE (599/579), and 2 April 0330 VE6BGT (569/579), 0338 VE4MA (O/O), 1838 SP6ITF (559/579), 1846 LX1DB (57/589) SSB/CW, 1851 N8CQ (569/589), 1858 PI9CAM (599/599), 1909 SP2HMR (559/569) #378,

1918 OE5JFL (579/589), 2002 IW2FZR (559/559), 2024 PA2DW (559/549), 2017 F5JWF (569/599), 2024 ES6FX (569/599), 2029 DL6SH (579/589), 2047 DL7YC (559/569), 2101 IZ1AEM (579/569) #379, 2124 RA3EC (579/599), 2127 DK3WG (569/559), 2157 KL6M (589/579) and 2226 G4BAO (O/O). We ended with a total of 62x49. After the contest I worked on 23 cm on 7 April at 2345 N4CNN (15DB/15DB) using JT65C #553* in SC and at 0015 (O/O) on CW #380. I had worked SC on 1296 tropo before, but never received a QSL. George and I plan to be QRV during the 9 cm contest. During the month I also caught up on my QSL backlog. If anyone still is missing a QSL from me, please let me know.

NETNEWS: **F6KRK** was active during the 23 cm CW contest with 250 W into 2 m dish. **JA6BLS** is almost ready on 10 GHz. He already has his EME license, 2.4 m dish and 20 W TWT. He has copied DL0SHF beacon on 10368 and JA1WQF and JA4BLC on 10450. **JA1GXK** has 250 W on 10450 and expects his license very soon. [TNX JA4BLC for forwarding these reports]. **PI9CAM** was active with the big 25 m Dwingeloo dish and 120 W on Sunday, 2 April of the 23 cm EME contest. Mike **KF8MY** kf8my@aim.com EN84CB is ready for 70cm EME JT65 with 2x25el K1FO and 100W and he's working on new 400W PA with 4x25el K1FO and he should be ready soon. **OK2HRL** is preparing for 23 and 13 cm EME and copied stations during the 1296 Dubus contest. You can see http://www.ok2hrl.cz for more info. **SQ7D/SQ7DQX** is sometimes QRV on 3 cm EME. Mateusz has photos on his web at http://www.enduro.idl.pl/10GHz_eme/index.html and https://www.youtube.com/watch?v=jzQqOtbGdEg.

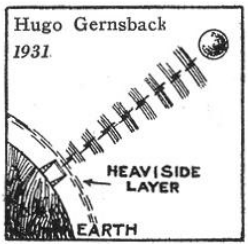
FOR SALE: **WA5VJB**, has new, but limited, stock of my low noise EME preamp kits. If you are located in the North Americas then this may be a more convenient way to buy one of these kits than buying from the UK. The VLNA kits are relatively easy to build, but you should seriously consider whether to tackle building one if you have no previous experience of assembling boards with 0603 size components. Full building details for the kits are available on web page www.g4ddk.com. Sam,G4DDK, I will be at Dayton with Kent in May, if you have any questions. **PA3DZL** reports that RF Hamdesign has very nice 2320 VE4MA feeds for sale. I am using the one and it is working great. See http://www.rfhamdesign.com/usedstuff/2320-13cm-septumfeed/index.php (Jac says RF Hamsdesign is a very nice and reliable company. I have NO business relationship with RF Hamsdesign). **OK1TEH** says if you are looking for zero backslash pointing system, it's described at www.moonbouncers.org/A%20semi%20professional.pdf; then check out solution recommended by UA4HTS at www.h-fang.com. cn. It should be possible to buy there an Hourglas worm gear at for really good price.

EME 35 & 25 YEARS AGO BY PETER, G3LTF: **35 years ago**, April 1982, the NL contained 30 reports on the ARRL contest (held then in the spring). Activity was much lower than in 1981 due to bad weather across virtually all of the USA and much of Europe. The winds that were reported at 50-60 mph were an even bigger problem than today, as nearly everyone then used bigger arrays than today. The highest scores reported were 41x23 on 432 and 7x6 on 1296. K2UYH's Kentucky expedition ran into a lot of problems with both equipment and weather, but did give WAS to K5FF and W1JR and worked a few others. Technical Report 19a from the Crawford Hill VHF Club, W2NFA, is a 6 port hybrid proposed for combining 4 amplifiers on 1296. **25 years ago,** April 1992, there were 44 reports covering activity on 432-2304. Some excellent conditions were reported on 432 with high activity. Steve, K1FO reported the phenomenon of spread polarization on EU signals close to MR (high declination, high solar activity). I made the final QSOs with my old 20' wooden rib dish before I was forced to dismantle it. New stations on 1296 were G3LQR and F1AQC. I6QGA reports being nearly ready for 5760. There was an interesting contribution by DJ9BV on the satisfaction of fully random EME QSOs without the help of call lists or skeds, (something also noted in the post contest comments on the reflectors last week).

TECHNICAL STUFF: **A Peak power monitoring and SSPA protection circuit by OK1VPZ that is** relatively simple to construct and is used in OK1TEH's 432 SSPA is described at: http://www.ok2kkw.com/00003016/komparator/monitoring/peak_monitor.htm. **OK2AQ's** web article about his **50 W SSPA for 10 GHz** can be found at http://www.urel.feec.vutbr.cz/esl/files/EME/Doc/50%20W%20SSPA%2010%20GHz_en.pdf. **IZ4BEH** has a web presentation on his **1296 QRO SSPA** based on DF9IC's modules at http://www.iz4beh.net/SSPA_23.html. Info on the incredible 65 V LDMOS MRFX1K80H that delivers 1,8 kW on 144 is at http://media.nxp.com/phoenix.zhtml?c=254228&p=irol-newsArticle&ID=2260958. When we get such a transistor be available for 432?

RADIO ASTRONOMY SECTION: DJ3JJ has data on sunnoise measurements for 2 m and 70 cm at http://www.do9bc.com/dj3jj/rx-performance-table-144-MHz-stations/. OK1TEH is creating a new table that includes the upper GHz bands. Some values can only be approximate, for example moonnoise on 3 cm and higher depends on the Solar Flux number and the phase of the Moon, but for the purpose of comparison the table should be more than usable. If you have any new data to add, pleased email it to ok1teh@seznam.cz. The table is can be found at http://ok2kkw.com/next/nl_k2uyh/sun_table_2017.xls and http://ok2kkw.com/next/nl_k2uyh/sun_table_2017.pdf. Also see G8KBB,s data at https://www.g8kbb.co.uk/html/noise_meter.html. Some interesting articles related to Sun-noise measurements can be seen at:
http://www.k5so.com/Using_sun_noise.html
http://www.ntms.org/files/sun.pdf
http://www.vk3um.com/SunNoise_Measurements.pdf
http://www.ham-radio.com/sbms/presentations/AF6NA/practical_sun__vs_sky.pdf
http://www.vk3nx.com/files/Noise_Meter.pdf

FINAL: **Many of you know Grote Reber**, considered by many the father of Radio Astronomy, was an active radio amateur as W9GFZ. What you may not know is that he first tried moonbouce, before starting his study of cosmic noise. Back in 1936, he build a 31' dish! His antenna was the prototype for all the parabolic radio telescopes that followed. He tried his EME tests near the present 6 cm band, and was not successful because of the insensitivity of his RX system. I recently came in contact with W1YW. Chip, who told me about his early EME, and directed me to a fascinating video link:https://www.youtube.com/watch?v=oeqR3YGDDq4 that you must see. It should not be missed.



OK1TEH adds that It is also not well known that famous A. C. Clarke tried microwave EME tests too! It's written in his last book, "The Last Theorem" written together with Frederik Pohl in 2008. A.C. Clarke was working during WW2 as RAF radar's assistant at airbase St.Etweal in Cornwall, UK. He was part of team who were developing and testing a radar called CGA Mark I for landing in dense fog. The radar had 2 beams, one on 3.3 GHz and the second on 10 GHz. During one night in 1943**,** he beamed the radar with half a degree wide main lobe to the Moon and was counting seconds to 3, but he didn't hear anything. Anyway, the first ever thoughts about EME were described by Nikola Tesla in 1918, and his idea was discussed by Hugo Gernsback in 1931.

The Swedish EME Meeting 2017 in Örebro 19-21 May is almost here! Lars says Check http://sm4ive.com/participants.html and http://sm4ive.com/agenda.html for info on registration and the program. Lars sm4ive@telia.com says he has closed registration. On the list are VE6TA, AD6IW, DJ8FR, DL1YMK, DL6SH, F2CT, G3LTF, G4BAO, G4NNS, G4RGK, HB9BBD, HB9DUK, N4PZ, OE5JFL, OK1DFC, ON4BCB, ON7UN, OZ6OL, PA2DW, PA3FXB, PA7JB, RW3BP, SM2CEW, SM3BYA, SM4DHN, SM4IVE, SM7FWZ, SM7GEP, SM7GVF, UA3AVR and WB2BYP.

70 cm CW ATP comments from SM2CEW - the were some questions raised regarding dates for the 70 cm CW ATP's in the previous NL; specifically, why some of the times conflicted with contest activities on other (microwave) bands. Unfortunately there is no way around this problem at the moment. Because of the low peak declination of the Moon at present, there is only one good weekend for EME per month. So instead of having NO 70 cm ATPs at all during winter/spring because of all the booked Dubus contest weekends, there are ATPs listed each month for those who choose to spend a few hours on 70 cm CW EME. Mind you, there is no conflict here, it's just a consequence of the increasing MW activity with one contest weekend per band/month. I hope this clarifies the situation.

Yuri's night did not produce the activity expected, mainly because of Moon window problem and timing. But do not give up on Pat, AA6EG. I am sure will hear of another attempt to promote what is primarily a STEM (Science, Technology, Engineering and Math) educational event for youth, and good for Ham Radio.

Please keep the info coming. We hope many of you will be on during the 9 cm Dubus contest and on the other EME bands. 73, Al – K2UYH and Matej – OK1TEH