

432 AND ABOVE EME NEWS APRIL 2017 VOL 46 #3

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CONDITIONS: The big activity this month was associated with the Dubus VK3UM Memorial Contest for 13 cm CW EME. The top score was reported by OK1KIR with 42x36 and is closely followed by OK1CA with 41x36. There are also a few late reports from the 70 cm Dubus Contest that was reported on in the last newsletter (NL).

Dominant in this month's news is the FR/DL2NUD microwave dxpedition. Hermann made over 40 initials on 1296 – see his report. The only dxpedition in April is S79Z to Mahe Island (LI75) on 2 m and 70 cm. Operation is from 6 to 18 April. I have no other details. The final results of the 2016 ARRL EME Contest are in. K1DS reported total sum of 6,048 QSOs in MGM and 2,616 CW/SSB, so total number of all contacts was 8,664 QSOs and 164 submitted logs, which means an increase of 25% from last year. Winners in each category were OK1CA, UA3PTW, DL8UCC, PA5Y, SM4IVE, DL7APV, G4CCH, OK2DL, LZ1DX, OK1KIR, OZ1LPR, SP6JLW, F5KUG, W6YX, DL0EF, K2UYH, S50P and OH2PO; congratulations! For more info see the ARRL web page. Unfortunately there is considerable controversy over the dates selected for the 2017 EME Contest as they conflict with several major EU tropo contests. This conflicted is predicted to negatively impact the expected activity. The upcoming event for April is the very popular 23 cm Dubus CW EME Contest during 1st/2nd April. See for more info http://www.marsport.org.uk/dubus/EMECContest_2017.pdf and the web for announcing the expected activity by OK1TEH at: <http://www.darksidedz.cz/eme.php>. You do not want to miss it!

DK3WG: Jurg dk3wg@web.de added on 432 in March using JT65B F8DO, JH3BHB, JH7BAY, BG6LQZ and 4Z5CP. On 1296 he added using JT65C FR/DL2NUD for his DXCC 52 and EA5DOM.

F1PYR: André andre_f1pyr@yahoo.fr had problems during the Dubus 13 cm contest – I had good luck during my first moonpass and made 16 QSOs including VE6BGT and WA9FWD. However at about 0000 my power dropped and was not able to fix the problem before the contest ended.

FR5DN: Phil fr5dn@izi.re is again QRV on 70 cm from Reunion Island, well known in the EME world due to Phil's EME activity, which allowed many 70 cm operators to get their last continent for WAC. A few years ago he lost his 8 x 21 el F9FT array in a gale, but he is back with a new smaller 4x21el LY array, and has an excellent signal on CW and JT. More recently, FR/DL1RPL had a very successful 432 dxpedition to Reunion. Phil is also working on getting on 1296 with a 3.6 m dish. During March he QSO'd with JT65B DL8NUD and K2UYH among likely others.

FR/DL2NUD: Hermann had a very successful dxpedition to Reunion Island (LG78uv) despite multiple problems. The lady in the next door bungalow was going crazy and forced Hermann to relocate the dish to the back of his bungalow, which only permitted operation from 30 degs elevation on moonrise (MR) to 20 degs at moonset (MS). And then FR was hit by a tropical storm. High gusty winds and at times very heavy rain forced him to stop operation many times. Never the less he put the FR DXCC on 23/13/9 cm on EME for the first time. He operated JT only. Here is the complete story began in the last NL. Hermann arrived at the island on 1 March and began build up the station. When he was installing the dish for 23 cm band, a lava rock wall collapsed and Hermann and the dish felt down. Hermann wasn't harmed, but the dish's system for horizontal adjustment was damaged. The first day of operation was 2 March on 23 cm. He worked HB9Q, OK1KIR, UA3PTW, OH2DG, YL2GD, PA3FXB, UA9YLU, YO3DDZ, PA3DZL, ON4AOI, OZ4MM, PA3CSG, DK3WG, I1NDP, IK3COJ, PY2BS, OZ6OL, G4RGK, RA3EC, PE1CHQ, SP5GDM, DF3RU and VK4CDI.



FR/DL2NUD on 23 cm

The next day, 3 March, he added OK1DFC, OK1CA, ES6RQ, OK2DL, VK2JDS, VK2CU, YO2BCT, DJ9YW, OK1YK, PA0BAT, LX1DB, G4CCH, DL6SH, ES5PC and OK1IL. The number of worked station on 1296 was much larger compared to his earlier dxpeditions to XT and D4. On 4 March he moved to 13 cm and again made several nice contacts with OK1KIR, HB9Q, OF2DG, OZ4MM, OK1CA, UA3PTW, PA0BAT, OK1DFC, ZS6EME, OZ5G, IK3COJ and YO2BCT. The next day the cyclone hit with strong winds that prevented him from additional 13 cm activity. Hermann reported that 6-7 cm of water was flowing through his bungalow - so much that he had to walk without shoes. Despite the WX problems, Hermann stayed determined to start activity on the 9 cm band the next day (6 March). He worked on 3400 HB9Q, OF2DG, OK1KIR, OK1CA and PA0BAT. He ended on 7 March, on 1296 again adding QSOs with JA1WQF, PA7JB, PE1CHQ and NC1I for over 40 initials on 23 cm, 13 initials on 13 cm and 5 stations on 9 cm. Hermann was completely on his own for this dxpedition. He had to carry 65 kg of luggage from his home to FR and back (by car to the railway station, by train to the airport (Berlin), by plane to Paris CDG airport, by bus to Paris Orly airport, by plane to FR, by taxi to his QTH. All the setup and operation was done by him. He enjoyed very much FR5DN's visit. QSL card please send direct to his home-address (QRZ.com) and include SAE and US\$2 for stamp. Donations are of course very welcome and will be used for his next dxpedition. For donations by paypal, please use dan@hb9q.ch. [TNX to HB9Q for relaying the reports from Hermann].



FR/DL2NUD's bungalow (TNX OK1KIR for picture)

G3LTF: Peter g3lft@btinternet.com writes on his Moon experience in March -- On 3 March, I was on 23 cm and worked using CW IZ1AEM, F6ETI and G4FUF to bring me to initial #435. I could just hear the FR dxpedition, but very much weaker than in E44. I had heard that Herman wasn't going to try CW on this trip. On 8 March, I was on 13 cm for some pre-contest activity and worked ZS6EME on CW and SSB, SP7DCS on CW, PY2BS on SSB and G4BAO on CW and SSB. John was using only a 1.9 m dish and is my smallest EME SSB station so far on any band. On 9 March, I completed with VE4MA/7 (M/O) for initial #68 on 6 cm. **During the 13 cm Dubus Contest** the WX was calm here until the last session, when the wind became quite strong. Thanks to IQ5QLO for hanging in when my dish kept blowing off the moon! On 11 March I worked on 2320 LZ1DX, ZS6EME, OZ4MM, OF2DG, PY2BS, UA3PTW, WA9FWD crossband (X), SP3XBO, SP6OPN, DF3RU, OK1KKD, OK1KIR, N4PZ (X), WA6PY (X), ES5PC, G4RGK, OK2ULQ, SM3BYA, OK1DFC, S59DCD, HB9BCD, OK1YK, G4CCH, ON5RR, OK1CA, IK3COJ, OH1LRY, IW2FZR, F1PYR, F5JWF and F5HRY, and on the 12 March K2UYH (X), VE6BGT (X) for initial #132, YO2BCT, PA3DZL and IK5QLO. CWNr were G4BAO, SP2HMR (many times) and heard were SP7DCS, K8ZR (X), VE6TA (X), IK2RTI and WD5AGO (X). I looked for JAs on 2400, but late in their window due to tree blockage at the low declination, but didn't hear any. I checked all three sub-bands on sunnoise and they were between 17 and 17.3 dB (SF=70). **I ended up working 36x31.** After the contest, on 13 and 14 March I ran skeds with JA6XED cross-band to 2400, but although he peaked (569) with me, he could not find my signal. We will try again on the next moon cycle.

G4BAO: John john@g4bao.com reports on his Dubus contest 13 cm results -- This weekend at all but "ungodly hours" - (I just can't function after 1 am local time even on weekends) I suffered from tree blockage resulting in around at peak about 4 dB of excess noise. I apologies to those I missed. I operated "search and pounce" on CW during my short windows of lower tree blockage, and worked OK1CA, ES5PC, HB9Q, G4CCH and OF2DG for **a total of 5x5**. I also had a pre contest QSO using JT65C QSO on Friday with OK1KIR. There were plenty of other signals visible, but just too weak for CW copy. A *getaway* was SP6OPN (549), who I called for about 15 minutes with just the "QRZ" as a reply. Considering the tree blockage and the high excess loss, I am happy with what my little system, 200 W to a 1.9 m dish, managed to pull in. I have plans to be QRV on 6 cm very soon, but just with QRP (20 W) to my small dish. So watch/listen carefully, if you want a new one on 6 cm.

G4CCH: Howard howard@g4cch.com sends news on his Dubus contest 13 cm activity -- I spent most of the day of the contest swapping my system from 23 cm to 13 cm. I ran into a few problems including no 2304 RX at 2 am LT. It turned out to be a bad cable. The problem also affected 2301 RX, but I don't think I missed much from VK. I was never able to get 2424 going this time -- but was reminded later that the JAs are now on 2400! I need to work on a better system to switch bands - I say this every year but there is just never enough time. In the log for this weekend are CW contacts with SP6OPN, UA3PTW, ES5PC, OF2DG, LZ1DX, DF3RU, IK3COJ, OK1DFC, OK1CA, HB9BCD, ON5RR, SM3BYA - best every copy from Gudmund on 2320, F5JWF, SP3XBO, G3LTF, IK2RTI for initial #112, OK2ULQ, F5HRY #113, S59DCD, PA3DZL, OZ4MM, OH1LRY, PY2BS, OK1KIR, OK1YK, K2UYH (XB), VE6BGT (XB) and WA6PY (XB), and during the last piece I added ZS6EME #114, new DXCC and WAC on 13 cm after several failed attempts, IK5QLO # 115, IW2FZR and G4BAO - **making a total score of 32x28** for the weekend. I also thought I had QSO'd OK1KK, but later learned the call was OK1KKD. My system is a 5.4 m dish, round septum feed (sub optimum for my f/d), 200 W at the feed and a G4DDK LNA. My reports indicated that stations were hearing me better than I hear my own echoes. So, it seems it is time to make a new feed.

G4RGK: Dave zen70432@zen.co.uk sends his Feb/March report -- It's not been a bad winter this year. No snow to speak of and very few cold spells. I was on for just a few hours **in the Dubus 432 CW Contest**; conditions were difficult with constantly rotating polarization in the 3 hours I was active. I worked on 11 Feb OF2DG (559/559), ES5PC (O/O), LZ1DX (O/559), G3LTF (559/559), OK1KIR (559/559), DF3RU (559/559) and DL6SH (569/569), and on 12 Feb SP7DCS (559/559), W5LUA (449/559), K2UYH (569/559) and VE6TA (449/449) for **a total of 11x11**. I was called by WA6PY with a good signal but lost him. I have been very inactive on 1296 this year, but did make it on for Hermann's FR/DL2NUD dxpedition and worked him quite easily on JT65C. I planned to get the 13 cm station going again. I reshaped the dish after the winter storms to try and improve the efficiency, which is very low on my stressed dish. I have a very limited window and can only operate for about 4 hours during

each Moon pass, so I rarely work NA on 13 cm. I completed QSOs **in the Dubus contest on 2320** with HB9Q (O/O), G3LTF (O/O), OF2DG (O/O), UA3PTW (559/449), OK1CA (559/559), ES5PC (O/O), OK1DFC (O/O), OZ4MM (O/O) and OK1KIR (559/559) **for a total of 9x7**. I called SP6OPN many, many times. He had a huge signal, but no response from them, so I guess they had an RX problem. I used on 70 cm 8 x 27 el yagis with 2x3CX800A7 PA and MGF1302 Cavity preamp with 0.4 dB NF. On 23 cm, I have a 4.6 m stressed dish, 250 W SSPA and DDK 0.25 dB NF preamp. On 13 cm, I use the same 4.6 m stressed dish, 80 W SSPA and DDK 0.45 dB NF preamp.

JA4BLC: Yoshiro's ja4blc@web-sanin.co.jp Feb/March EME report follows -- I was sadly **not QRV for the 2400 Dubus contest** because of the failure of a FET in my 13 cm transverter. My activity since my last report was on 1296 and 5760. On 6 cm, on 7 Feb, I worked K2UYH on CW (O/O) for initial #43 after many trials. After, I worked JA6XED (559/539) and JF3HUC (569/559). On 3 March I worked JA6AHB (O/O) #44, JA8IAD (559/559) and JF3HUC (569/559). JA6AHB is using a 3 m TVRO dish and Kuhne 100 W SSPA. On 21 March, I worked JA6XED (559/559) after he finished covering his dish with finer mesh (2.5 mm). Hisao is now much stronger. On 1296 I worked on 1 March OH2DG (569/579), and on 4 March tried a test transmission with JA3SGR. I heard him (M) on every transmission, but he could not hear me. JA3SGR has a 2 m dish and a 450 W SSPA.

K8ZR: Tony (ex WA8RJJ) temanuele@ebulent.com was QRV for both Moon passes **during the Dubus 13 cm contest** -- My results were a bit disappointing compared to previous years, but it was fun to be on the Moon in any event. I worked OK1KIR, OK1CA and ES5PC **for a total of only 3**. It seems my new call has cost me a few dBs, hi! Heard in no particular order were SP6OPN, OK1DFC, F1PYR, WA9FWD, VE6TA, VE6BGT, K2UYH briefly, OH2DG, WA6PY and PY2BS. I called SP6OPN, WA9FWD, VE6TA and VE6BGT only to receive multiple QRZs. In the past I have used an FT100D reception of 2320 (at 160 MHz). This time I kluged together a down converter for use with an RF Space SDR IQ. I was encouraged when the Moon cleared the house as I started to see signals on the panadapter, but as the Moon continued to rise, I could see the noise floor rising. I thought the problem might be with the hardware. I put the FT100D back in line, but could tell the noise floor had risen considerably. Guess either WiFi or Sirius was the problem. I heard G3LTF once and only once after the noise floor rose -- sorry Peter. WX permitting I should be QRV for the Dubus 23 cm weekend.

N4PZ: Steve [n4pz\(x\)live.com](mailto:n4pz(x)live.com) writes about **the 13 cm contest** -- I spent a good part of the weekend trying to tame my preamp, which decided to oscillate. Despite my stability problems, I managed to work a few, but primarily big signals. I QSO'd SP6OPN, OK1CA, WA9FWD, OK1KIR and K5GW for **a score of only 5x5**. I am sending my preamp back to WD5AGO to see what he can do to calm it down. The Sun will be back north of the equator shortly. This enabling me to tweak the feed on the Sun. My polar mount works only at northern declination. They make it extremely easy to track the Moon, but they do have their weaknesses. I will be at the Swedish EME Conference and will be looking for a 300 W 13 cm SSPA. This spring I intend to do some work to make my 2.3 GHz system much better.

N5BF: Courtney [courtney.duncan\(x\)ieee.org](mailto:courtney.duncan(x)ieee.org) continues to improve his 1296 signal -- I had the tower down last weekend to repair and upgrade my TX cable and to change the relay in front of my preamp from a ToTsu CX-520D to a much higher quality, lower loss, and higher isolation Relcom relay. This meant adding a 24 V switched line up to the new relay. I also re-wiring my switching control box to activate the relay on RX rather than TX. Unfortunately, I didn't the mod right the first time and blow out my G4DDK preamp! I knew immediately what had happened, but it took a couple of hours to reverse engineer to fix the problem. The tower is now back up with my "backup" DB6NT preamp inline. The NF of the DB6NT is not as good as the G4DDK, but the relay in front of it is so much better that overall performance on my first "apogee echoes" test was 2.5 dB better. I plan a Sun noise test this weekend. TX power to the feed is about the same, 300 W, but the water-in-coax and related mechanical problems should be solved. I replaced the connector on the end of a run of 7/8 inch Andrews Heliac using their special tool. This was an adventure but seems to have been quite successful. A new G4DDK preamp is on order and a re-build of the switching box, followed by careful testing, is planned. I plan to be on for the Dubus 23 cm event. My windows to EU starts about 1900 both days. I have noticed that I'm so far west that it's near the end of the EU pass when I have MR and many

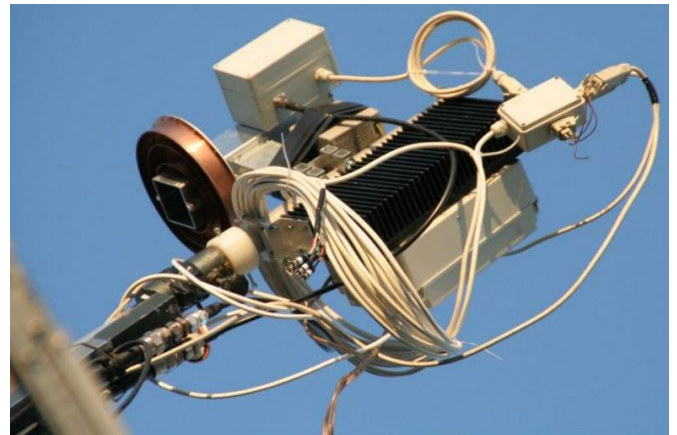
stations go QRT before I can see them. I am making some schedules in advance and also plan some non-contest digital activity during the weekend. I'll also be available during my own westward window, particularly around 0400-0500 Saturday. I'm in DM04 and open for skeds.

NC1I: Frank frank@NC1I.COM wrote in his report -- I am still not back on 432; all my March activity was on 1296. [I incorrectly reported last month that Frank was back in operation on 432]. It will take a couple of long days on the tower to get the 432 array back in service. Regarding the failure, the only conclusion I can come to, is that when we reinstalled the polarity prop-pitch on my tower, we failed to sock down the hardware. Hopefully the spline on the mast is OK. I can see some wear on the spline from rubbing on the dangling prop-pitch, but not as much as there is on the mating output gear of the prop-pitch. My goal is to have everything repaired for the end of April. I also expect to be back to full power by then. I've only been running about 650 W since getting back on 432 in Nov. On 1296, all QSOs were using JT65C with the exception of IZ1AEM on CW. We worked on 3 March at 1731 DK0SF (24DB/8DB) – Slawek was running 35 W, 1749 OE9GLV (16DB/O), 1916 IZ1AEM (559/559), 1938 ON4AOI (20DB/19DB), 1955 LA3EQ (19DB/12DB) and 2125 N5BF (14DB/9DB), on 4 March at 0027 K4EME (13DB/12DB), 1743 EA5DOM (28DB/20DB), 1812 HB9Q (2DB/4DB) and 2152 PA3FXB (12DB/5DB), on 5 March at 1723 II0IAAR/5 (18DB/O), 1737 EA3HMJ (16DB/11DB), 1828 SP5GDM (11DB/5DB) and 2256 LU1CGB (21DB/11DB), on 7 March at 1918 FR/DL1NUD (O/O), and on 11 March at 0300 N5BF (15DB/10DB). The highlight of the month was working Herman in FR! I managed to snag him on 1296 on the last day of his expedition. I snuck home from work for about a half-hour and was able to work him just before I had to leave to get back to the office. Signals were way down from his past operations. I was shooting through trees and 10-minutes after our QSO, Hermann posted that his feedline and amp were full of water and that he was QRT - (I believe for the entire expedition). He peaked at (28DB). In past expeditions I have copied him anywhere from (18DB to 26DB). I believe I was his only NA QSO. I am planning on being active on CW for the 1296 Dubus EME contest. This will not be a major effort, but I will try and be on for at least a couple of hours each day. If the WX is good, we will be working on the 432 array so that will affect the amount of time spent in the contest. My priority will be to get the repairs to the 432 array completed. If we don't run into unexpected problems up on the tower, we may be able to complete those repairs in one day. W1QA and I are still considering a late spring expedition for 432 and/or 1296. Right now we are leaning towards NH. I need to focus on getting my 432 array repaired first, but once it is done, we will start trying to pull things together to activate another State.

OK1CA: Franta strijavka@upcmil.cz writes on his **13 cm contest operation** -- I was QRV in the Dubus EME Contest for only 8 hours for the second Saturday/Sunday moonpass. The conditions were not good with wide spreading of the signals. I ended with a total score of 41x35. Initials were JA6AHB, ZS6EME, K8RZ and SP2HMR to bring me to initial #143. I was also QRV during the activity by DL2NUD from Reunion Island. I worked FR/DL2NUD on 3 March on 23 cm, on 4 March on 13 cm, and 9 March on 3,4 GHz. The QSO on 3,4 GHz gave me me WAC on 3,4 GHz! Very much thanks to Hermann for the good work..

OK1DFC: Zdenek ok1dfc@seznam.cz sent the following report about his recent activity including completing 13 cm WAC -- I was traveling a long time for QRL and return back just for the Reunion Island EME expedition. I tested my system, and all worked OK. But, on 2 March, we had a wind storm with gusts peaking to 95 km/h. I was not able operate my dish and decide wait until 3 March. The WX was then much friendly and I was able to work FR/DL2NUD (20DB/O) using JT65C for digital initial {#276} and DXCC 108* on 23 cm. Later I QSO'd F6ETI (559/589) on CW, II0IAAR/5 (12DB/O) JT65C {#277}. On 13 cm I worked on 4 March FR/DL2NUD (20DB/O) on JT65C for digital initial {#30} and DXCC 47*, ZS6EME (559/549) CW for initial #98, DXCC 48* and WAC CW, PA0BAT (12dB/O) JT65C {#31}, ZS6EME (13DB/O) JT65C {#32}, PA7JB (15DB/O) JT65C {#33}, OK1CA (15DB/O) JT65C {#34}, G4BAO (22DB/O) JT65C, IK5QLO (24DB/O) JT65C {#35} and KD3UY (27DB/O) JT65C. In prep for the Dubus contest, I measured sunnoise again and found it was only 8 dB now. I checked all connections and did not find any fault. During my first contest moonpass, I worked only 4 stations and missed the US window. Signals were very weak and I had problems copying stations. On Saturday I checked my feed, LNA relay and all the parts together. The N/F with the input relay and LNA was 0.45 dB; so no problem there. I then measured the SWR of the feed, -10 dB; so not so

OK. I found inside the N connector a small metal part, very tiny, like human hair, but connecting the inner contact with ground.



OK1DFC's feed with SSPA for 13 cm EME

After cleaning with propyl alcohol, I measured again the SWR and it was -30 dB. I reassembled and install feed horn back in the dish. Measured sunnoise was then 17.8 dB. I was ready to follow up in the second moonpass. I worked many stations and all the activity brought me some initials on 13 cm CW. Out of the contest, I worked on JT JA6AHB. QSO'd during the contest on 2320, on 11 March were SP6OPN (559/569), ES5PC (579/569), UA3PTW (559/579), HB9Q (559/549), OK1CA (579/579), G4CCH (569/569), OF2DG (569/569), G3LTF (569/569), ON5RR (559/559) #99, OK2ULQ (559/569), OK1KKD (559/559), DF3RU (559/579), LZ1DX (559/559), IK3COJ (559/569), HB9BCD (539/559) #100, PY2BS (569/569), SP3XBO (559/559), G4RGK (O/O) #101, F5HRY (559/449) #102 and IK2RTI (579/579), and on 12 March OZ4MM (579/579), OK1KIR (579/569), OK1YK (539/559) #103, JA6AHB (20DB/O) on JT65C {#37} – not contest QSO, PA3DZL (559/559), LX1DB (579/559), S59DCD (559/559) and SM3BYA (559/549) for a total of 27x23.



OK1DFC dish with 13 cm feed in place

OK1IL: Ivan ivaknn@gmail.com fills us in on his recent EME activity -- I wasn't QRV on 23 cm during Jan and Feb because of continuous frost. After the WX improved in March, I found that my sunnoise had degraded. I checked after an initial CW QSO with SM2CEW. It took a longer time than expected to copy both callsigns. Peter also had frozen rotors for several months and wasn't QRV earlier in the year. He was also not anxious to run his PA to full power. I spent several days trying to find the reasons for my low sunnoise. I didn't find anything wrong. In the end, I discovered that Murphy was active again. I had without knowing activated my AGC. Upon correction, my sunnoise immediately jumped up to the nearly theoretical value corresponding to the SFI. My big signal with 800 W PA behind the dish is not well matched to my RX capabilities with 3 m dish and most stations running lower power. I plan to distribute points in the coming Dubus 23 cm contest, but with decreased TX power, to better balance my TX/RX capabilities.



OK1IL's 3m EME mesh dish from Rfhamdesign

OK1KIR: Vlada (OK1DAK) vlada.masek@volny.cz reports on his club's (www.ok1kir.cz) activity in March – In addition to QSOs report in the last NL, we worked on 3400, on 6 March at 1246 FR/DL2NUD (24DB/26DB) for digital initial {#24} and first FR-OK QSO, completing QSOs with Hermann on all three bands. In the 13 cm part of CW DUBUS EME Contest we made on Saturday, 11 March at 0001 OZ4MM (569/569), 0008 WA9FWD (559/569), 0025 SP6OPN (569/569), 0029 PY2BS (569/569), 0038 SM3BYA (559/579), 0047 OK1KKD (559/569), 0110 K8ZR (O/O) #154, 0121 VE4MA/K7 (O/O) for initial #155, 0134 N4PZ (569/579), 0140 ES5PC (579/579), 0146 OF2DG (579/589), 0151 G3LTF (579/579), 0158 LZ1DX (569/579), 0206 DF3RU (569/579), 0209 UA3PTW (579/589), 0244 WA6PY (569/579), 0304 VE6BGT (569/579) and 0326 F1PYR (569/569) before MS. Unfortunately later on Saturday at MR our TX power had dropped by about 10 dB. Searching for the cause took almost 7 hours. We finally discovered a bad contact in a TX mixer diode. We missed a JT sked with VA3ELE. After the repair, we experienced a "pile up" and made 7 QSOs in 40 minutes. We QSO'd at 2308 F5HRY (559/549) #156, 2313 OH1RLY (559/559), 2320 ZS6EME (579/559), 2325 IW2FZR (569/559), 2334 SP2HMR (549/559) #157, 2341 OK2ULQ (559/589) and 2349 SP3XBO (559/569). On Sunday 12 Oct we added at 0005 OK1YK (O/569), 0018 OK1CA (579/579), 0025 OK1DFC (569/579), 0050 G4CCH (589/589), 0059 S59DCD (559/579), 0124 K2UYH (559/559), 0247 WD5AGO (559/559), 0303 N4PZ (559/569) DUP, 0328 VE6TA (579/589), 1827 JA6AHB (559/589) #158 on 2400.1 (RX/TX), 1852 YO2BCT (569/579), 1957 PA3DZL (569/569), 2002 IK3COJ (569/569), 2012 G4RGK (559/559), 2020 F5JWF (569/599), 2028 HB9BCD (569/579), 2105 IK5QLO (O/O) and 2123 LX1DB (589/589) - QRT at 2135 to catch the last city train - Hi. **Our total score was 42x36.** Potentially there appeared at least 49 stations according to reports on Moon-net. Unfortunately some only appeared to make a new initial. Off of the contest using JT65C we worked on 10 March at 2309 G4BAO (22DB/14DB) and on 12 March at 1818 JA6AHB (15DB/12DB) {#47} on 2400.1 (RX/TX) for our 1st JA with JT on 13 cm.

OK1TEH: Matej ok1teh@seznam writes that I'm currently not as active as I would like – I have less time because of QRL. I am trying to gather info on active stations in Japan on 432 for possible skeds with my small station. JH1KRC told me the currently the only "big gun" active on 432 is JA6AHB, but JJ1NJL should be back before end of the year and it's still possible to try 70 cm EME with JE1TNL. [Also JS3CTQ]. A few more stations are going to try 70 cm EME but only with 50 W due to JA's license class, so they are reachable just by big guns stations such as DL7APV, UA3PTW or OK1DFC. Anyway if you have 4 x 15 el yagis and 400 W or similar, don't be shy to ask me for a JT65 EME sked. I'm available for CW with BIG Guns too.

OK1YK: Mira ok1yk@VOLNY.cz posts at <http://ok1yk.blogspot.com> info about his recent activity -- The FR dxpedition "heated" up 23 and 13 cm after the long cold winter. I decided to see how my EME equipment survived the winter. Hermann announced his activity for Thursday and Friday on 23 cm, so I decided to try Friday. On Thursday I checked my LNA and septum feed and everything worked well. On Friday, after lunch, I tuned 1296.100 and Hermann was there! I did not have to wait too long write the QSO in my log. Signal were not booming with my 4.5 m dish, but the QSO was basically a piece of cake. I add 4 more QSOs

and 2 initials before I went QRT. On Saturday, I moved to 13 cm. I wasn't sure a QSO was possible as I had some problems with LNA. There was plenty of activity on HB9Q, but there were only very few stations on the moon. Unluckily Hermann had problems with the weather, so no QSOs were completed. I was happy that local interference was gone, so my RX is 100% again. Finally I worked 4 QSOs and 3 initials using JT65C with PY2BS (16DB) and OK1CA (12DB). I am currently active with my 4.5 m dish on 70, 23 and 13 cm. [Translation by OK1TEH - TNX].



OK1YK 4.5 m dish & 13 cm feed [source ok1yk.blogspot.com]

OK2ULQ: Peter ok2ulq@seznam.cz reported on his blog <http://ok2ulq.blogspot.com> -- I have a new 13 cm transverter with G4 module from DB6NT that I wanted to evaluate during the 13 cm Dubus EME Contest. I was QRV during second window from Saturday to Sunday and I had 14 CW QSOs in the contest and a JT65C QSO with OK1YK. I'm happy to report that I worked 4 OK1 stations. Unfortunately I haven't heard anybody from JA, maybe it's because of my LNA. I haven't tested if it's working in the JA subband. In US subband, I had QSO only with K2UYH as nobody else was heard. A highlight was a QSO with PY2BS. I did not make so many QSOs but I'm happy anyway! I'm looking forward to finishing my 13 cm PA. [Translation by OK1TEH - TNX].

OZ4MM: Stig gsvestergaard@gmail.com has a new email address [PSE note] and reports on the Dubus 13 cm EME contest -- Prior the contest, I worked using JT65C FR/DL2NUD for a digital initial {#} and DXCC, ZS6EME {#} and OK1YK {#}. DF3RU is testing my 13 cm transverter after rebuilding it. Its quite old from SK OZ9CR and consists of 35 year old SSB Electronic modules. I has rebuild it several times, trying to keep the modules running, despite heavy oscillator drift from the 3 different old oscillators. Now I am thinking of adding a preprogrammed PLL-VCO with 4 outputs to satisfy the need for 4 EME activity frequencies, and still keep the RX and TX modules running. Another solution is a new DB6NT 4 band 13 cm transverter. During the Dubus 13 cm contest the transverter worked fine. I QSO'd OK1KIR, SP6OPN, OF2DG, WA9FWD, LZ1DX, G3LTF, ES5PC, UA3PTW, PY2BS, F5HRY, SP2HMR for an initial {#}, IW2FZR, S59DCD, OK2ULQ, OH1LRY, G4CCH, G4RGK, S59DCD DUP, OK1YK, OK1CA, OK1DFC, HB9BCD {#}, SP3XBO, YO2BCT, OK1KKD and SM3BYA for a score of 26x21, all worked on CW. I heard HB9Q and PA3DZL. During daytime, I had family commitments that limited my activity time to less than I had planned.

PA0SSB: Jan [janottens\(x\)zeelandnet.nl](mailto:janottens(x)zeelandnet.nl) EME pioneer writes to lets us know that his dish is still there -- I may be QRV again this summer. I will do some tests to see if it still works. My best wishes to the EME community. [Can we get Jan to speak at EME2018?]

PA3DZL: Jac [pa3dzl\(x\)ziggo.nl](mailto:pa3dzl(x)ziggo.nl) reports on the 13 cm Dubus Contest -- Prior to the contest I worked on 13 cm on 8 March F1PYR (559/559) and 10 March LZ1DX (559/559). I was QRV for some hours during the contest and scored 19x16. There were many strong signals and had a great time. QSO'd on Saturday were ES5PC (569/579), IK3COJ (559/559), UA3PTW (579/559), SP6OPN (579/579), PY2BS (569/569), G4CCH (579/569), LZ1DX (579/559), SP3XBO (559/559) and IW2FZR (559/559). I also heard OZ4MM. During my CQs I was called by 2 stations but I never copied their callsign; their signals were very weak! I

added on Sunday OK1CA (569/569), OK1KIR (569/569), OK1KKD (559/559), G3LTF (579/569), OF2DG (579/579), S59DCD (579/559), F5JWF (579/569), LX1DB (579/579), ZS6EME (549/559) and OK1DFC (559/559). On Sunday, I listened on 2400 during the last 45 min of the JA window, but no signals were heard. I could not be QRV during the NA window. My 13 cm Rig is a 3.7 m Solid Andrew dish of f/d 0.34, VE4MA feed, G4DDK preamp and 6 x MRF21120 water cooled SSPA. I can TX on 2320 only; I can RX on 2301/2304/2320/2400.

PY2BS: Bruce py2bs@me.com was **QRV for the Dubus 13 cm CW contest** – I did not use HB9Q's logger and made all QSOs fully on random. I worked 20x18 and one initial. On Saturday, I QSO'd OK1KIR, G3LTF, SP6OPN, DF3RU, ES5PC, WA9FWD, WA6PY, VE6BGT for an initial (#), OF2DG, HB9Q, UA3PTW, OK1DFC, OZ4MM, PA3DZL, S59DCD, LZ1DX, OK1CA, OK2ULQ, G4CCH and K2UYH. I called ZS6EME several times, but the best I could do was a QRZ. Alex later explained he had strong interference from a nearby transmitter. I heard IW2FZR in QSO with PA3DZL, but could not find Dario afterwards. I also heard a station in QSO with N4PZ, but could not copy Steve. I made no QSOs on Sunday. Most of the EU stations were gone by MR here, and the contest has ended before MR in NA.

SP2HMR: Marcel m@e.pl wrote at <http://mikrofalet.net> -- After the EME SSB Funtest Contest I was looking for new challenges. 13 cm EME with my 3 m dish was my solution; and the Dubus 2.3 GHz CW Contest seemed the place to make my debut and first contacts. A year ago, I was only listening using a DJ6EP's transverter and 0.6 dB NF – 19 dB gain LNA made by OK1CA. The number of stations I heard pushed me to action. I had been preparing for the contest since Jan. I constructed a new SP9WY's transverter, and prepared the feed, preamps and PA for test. A week before the contest all the components were ready. On Thursday after work, I decided to spend the night getting the 13 cm in place on my dish. The work lasted until late. I worked under halogen lighting. By Friday around 0900 all was tested and ready for the contest. My first QSO was at 0130 with UA3PTW, followed by ES5PC, SP6OPN, HB9Q, OZ4MM, OK1KIR and OK1CA. During the competition, I copied my echoes three times! The power output from my PA did not exceed 90 W. I used an external signal generator for 2304 operation, with my main rig at 2320, for some added excitement! It was great fun. Starting up on 13 cm EME would not have been possible without the great help of SP6GWN, SP9AF and DF1SR – TNX! [Translation by OK1TEH – TNX].



SP2HMR's new 13 cm feed & PA used for Dubus Contest [from mikrofalet.net]

SP6OPN: Andrzej (SP6JLW) sp6jlw@wp.pl reports his group was active in the **Dubus 13 cm Contest** at <http://emejo80jk.cba.pl> -- We took part as SP6OPN with our 6.5 m dish and QRO. **We scored 39x32**, making contacts with OZ4MM, OK1DFC, OK1KIR, OK1KKD, OK1CA, OK2ULQ, OK1YK, ES5PC, ZS6EME, SP3XBO, SP2HMR, PY2BS, LZ1DX, UA3PTW, OF2DG, OH1LRY, WA9FWD, WA6PY, K2UYH, N4PZ, VE6BGT, VE6TA, F1PYR, F5JWF, G3LTF, G4CCH, IK3COJ, IW2FZR, IK2RTI, HB9Q, HB9BCD, YO2BCT, DF3RU, SM3BYA, ON5RR, S59DCD, LX1DB and PA3DZL. Thank to all for the great contacts.

SP7DCS: Chris sp7dcs@wp.pl writes that during **13 cm EME Contest** he was QRV for only 20 minutes – **I completed 2 CW QSOs** with

ES5PC and UA3PTW with good reports. Then sadly I lost my SSPA and was out of business. I hope to see you during the 23 cm contest.

UA3PTW: Dmitry ua3ptw@inbox.ru reports QSOs in March on 432 using JT65B with CT1XC and 4Z5CP, on 1296 using JT65C with FR/DL2NUD, and on 2320 using JT65C with FR/DL2NUD. [TNX DK3WG for forwarding this report].

UR3EE: Arthur ur3ee@i.ua is relatively new on 432 EME. In March he QSO'd using JT65B with YL2GD, UX4IJ, DD0NM, W7MEM, N7NW, FR5DN and I5CTE. [TNX DK3WG for forwarding this report].

VE3KRP: Fast Eddie eddie@tbaytel.net sent following report -- I finally dusted off the snow and ice on the dish and fired up the 1296 system to see if anything had malfunctioned over the strange winter weather we have had here in EN58. All seemed to do what it was supposed to and I managed to work DF2VJ on JT65C for a digital initial {#JT} and get a nice welcome back from Jan PA3FXB also on JT65C. I plan to be on more and pick up the new ones that have shown up in my absence. As time permits, I hope to get something going on 2304 this year.

VE4MAW7: Barry ve4ma@shaw.ca wrote following report for the **13 cm Dubus contest** -- I started operating with the Moon only at 5 degs; just over a mountain and in between buildings, but signals were there! However, Murphy stopped in for a visit, and something intermittent in my PA input SMA connector caused my output to drop to only ~70 W. **I did make 2 QSOs** with OK1KIR (559/0) and ES5PC (559/0). I called SP6OPN (569) but only QRZs, also heard VE6BGT (559), OK1CS (449) and N4PZ (339). I did not see any 2320 signals, but later put on a test signal to find my frequency calibration was off by 1 MHz – oops! I used my 1.5 m offset dish and 150 W.

VE6BGT: Skip macaulay.skip@gmail.com almost missed the **13 cm Dubus contest** -- A few days leading up to the weekend, I was testing and making a few contacts when one of the RF boards in my water cooled Spectrian Amp failed. I noticed that the output was about 50 or 60 W less than the normal 300 W. After looking into the situation, I found one of the three amplifier boards had a big burnt hole in the board itself. I went looking on line for the fellow who sold all these Spectrain amps and parts and was surprised to see that his listing now had nothing to sell. So I managed to swap the bad board with one of the boards in a driver chassis I had built. This fixed the main PA circuit. I cleaned and cut away all the burnt parts from the bad board, and it still had plenty of drive to use as a predriver in the driver chassis. So I was back in action and made a few contacts during the contest weekend. Contacted were SP6OPN, WA9FYD, WA6PY, F1PYR, OK1KIR, OF2DG, PY2BS, ES5PC, G3LTF (XB), K2UYH, G4CCH (XB), WD5AGO on both CW and SSB and VE6TA. So it turned into a good fun weekend.

W7MEM: Mark w7mem@juno.com is looking for 222 EME skeds using JT65B. He has 4 x 7 wl yagis on 222 that can tilt. He can try with horizon only stations.

WA6PY: Paul pchominski@maxlinear.com sent his report for 432 in Feb and 2300 in March – **I was QRV for the 70 cm Dubus Contest** on 11/12 Feb and QSO'd G3LTF, K2UYH, OK1CA, UA3PTW, VE6TA and W5LUA; and heard N8CQ. **I ended with a score of 6x6**. On Sunday, I experienced fast polarization shifts. Most of the time I am hearing good echoes and I should be able to QSO any good 4 yagi station. On 11/12 March I was **QRV for the 13 cm Dubus Contest**, and QSO'd ES5PC, G3LTF, G4CCH, LZ1DX, OF2DG, OK1CA, OK1KIR, PY2BS, SP6OPN, VE6BGT, VE6TA and WA9FWD; and heard N4PZ. **I ended with a score of 12x12**. During the first JA window, I didn't find any stations. I called CQ for 1.5 hours and gave up. On Sunday, I experienced bad libration. At the beginning of my window at 0225, I was called by someone, but at that time I had still had 30% dish blocked and signals were too weak to copy. I plan to be QRV in the next 1296 part of the contest, but probably only during the first day.

K2UYH: I alkatz@tcnj.edu did not have a great month. No matter how hard I tried, I could not make it with FR/DL2NUD on any band. I was on for Hermann's moonset every day except the last day when I had to be away on business and it was not clear which band he would be on. Our windows just missed. **The Dubus 13 cm contest** was a great frustration. Just be for the start of the contest the mother board of my main station computer died. No tracking, CW, control, etc. After several hours of frantic effort, I had a back up computer in operation (only one monitor). By then the EU window was effectively over, but worse my echoes and

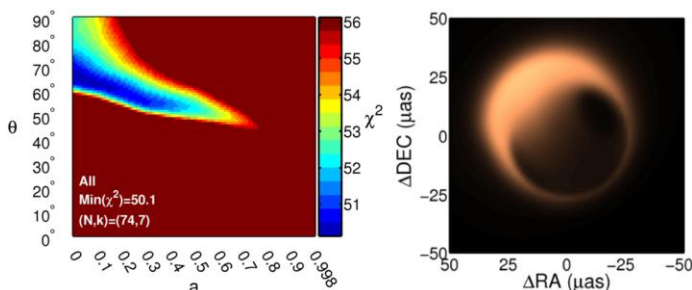
moonnoise were terrible. We gave up for the night. The next day I found that my calibration was off by almost 2 degs. I started on 12 March with the Moon still in the trees and QSO'd at 0125 OK1KIR (559/559), 0133 OK1CA, 0140 SP6OPN (589/579), 0146 WA9FWD (569/569), 0201 G3LTF (579/579) XB, 0208 ES5PC (589/579), 0223 SP2MHR (O/559), 0234 VE6BGT (569/559), 0246 G4CCH (559/569) XB, 0252 PY2BS (559/569), 0301 LX1DB (559/579), 0307 OK2ULQ (559/559) and 0511 VE6TA (569/579) for a total of 13x12. NE2U joined me about the time the Moon started to clear the trees. As the Moon rose, signals improved, but after around 0300 the noise became bad again. It was so bad that we gave up again. I am not sure if the problem was due to WiFi or the Sirius satellite. I checked the Moon again at 0500 and found the noise was gone. I worked Grant at this time, but no one else was around. I started up again at 0830 and listened on both 2304 and 2400 until almost moonset, but never identified another station. My only other QSO was on 4 March on 432 at 1814 FR5DN (20DB/25DB) using JT65B. I plan to be QRV for the 23 cm Dubus contest.

TECHNICAL ISSUES: 70 cm LNA by K4EME is now doing some tests about inserting a pin diode on the input for extra protection. OK1TEH send his notes regarding the K4EME LNA's input robustness to static as K4EME's LNA is similar to ATF LNA from OZ1PIF. Matej suggested checking out article at http://www.ok2kkw.com/00003016/lina_oz1pif/lina_oz1pif_en.htm where is published info about a 70 cm HB ATF LNA made by OK1VPZ and used by him for 70 cm EME for last 5 years with single yagi EME. Another interesting article related to this topic is at http://www.ok2kkw.com/00003016/lina/lina_ochrana_en.htm. More articles written by OK1VPZ can be seen at http://www.ok2kkw.com/gro_en.htm. **Encoder:** An interesting and cheap Rotary Angle Encoder and Remote Display, with a 6 mm diameter shaft can be found at <http://www.machine-dro.co.uk/rotary-angle-encoder-and-remote-display-with-a-6mm-diameter-shaft.html> and <http://www.machine-dro.co.uk/angle-tilt-sensor-inclinometer-with-remote-display-pendulum-type.html>.

RADIO ASTRONOMY SECTION: How to make a cheap 23 cm SSPA?

Get some inspiration at: http://www.df9ic.de/doc/doc_chrono.htm, http://www.df9ic.de/doc/2015/mmrt_2015/mmrt_2015_1296MHz_PAs.pdf, http://www.df9ic.de/doc/2015/weinheim_2015/weinheim_2015_1296MHz_PAs.pdf, http://www.df9ic.de/doc/2015/weinheim_2015/weinheim_2015_ppt_1296MHz_PAs.pdf, http://www.df9ic.de/doc/2015/cj_2015/MRFE6S9160_PCB.zip and http://www.ik3ghy.it/23cm_pa_1kw.html.

The first pictures of Sagittarius A* on 220 GHz: OK1TEH forwards info regarding to an interesting radio astronomy project using Event Horizon Telescope (VLBI - Very Long Baseline Interferometer) working close to 230 GHz for taking first ever picture of our Milky way's super massive black hole Sagittarius A*. The Sgr A* observation will begin between the 5 and 15 April. All nine telescopes are going to simultaneously produce data from the black hole at the center of the Milky Way. The goal is to directly image the black hole's event horizon for the first time. Given all the data researchers will need to process, we should not expect the first images of a black hole until the end of the year, or even the start of 2018.



Best fit models for Sgr A*: Theoretical calculations predict that the Milky Way's central black hole, called Sagittarius A*, will look like this when imaged by the Event Horizon Telescope on $\lambda = 1.3$ mm. (Left) Chi-squared map of RIAF models fit to 2007 and 2009 1.3 mm VLBI data as a function of black hole spin and accretion disk inclination. (Right) Image of the best fit RIAF model for Sgr A*. Source: eventhorizontelescope.org

More can be read or watched at:

<http://www.sciencealert.com/scientists-are-about-to-switch-on-the-first-telescope-that-could-photograph-a-black-hole-s-event-horizon>
<https://www.youtube.com/watch?v=Xr86Y5CyKNo>
<http://www.eventhorizontelescope.org>

http://www.blackholecentral.com/ehl_project_page.html
<http://vlbiimaging.csail.mit.edu/imagingchallenge>
<http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/pspdf/RusenLu.thesis.pdf>
http://www.eventhorizontelescope.org/docs/apjl_727_2_36.pdf

Sagittarius A* on 220 GHz? Matej, OK1TEH would like to forward info regarding to interesting radioastronomy project using Event Horizon Telescope working close to 230 GHz for taking picture of our Milky way's supermassive black hole Sagittarius A*. The Sgr A* observation will begin between 5th and 15th April. More can be read or watched at: <http://www.sciencealert.com/scientists-are-about-to-switch-on-the-first-telescope-that-could-photograph-a-black-hole-s-event-horizon>
<https://www.youtube.com/watch?v=Xr86Y5CyKNo>
<http://www.eventhorizontelescope.org>
<http://vlbiimaging.csail.mit.edu/imagingchallenge>
Some links: An another interesting radio astronomy presentations at <http://www.dmradas.co.uk/Downloads.html>
http://www.qsl.net/ct1dmk/eme_ra2.pdf

PULSAR HUNTING: IONAA, Mario writes that thanks to a software conversion routine, we now are able to analyze Pulsars data with PRESTO and attached you will find my detection @ 409 and 1297 MHz. The detection was accepted from NSG and now I am proudly on the list of hams that were able to detect Pulsars! See <http://neutronstar.joataman.net/sites/ionaa/index.html>. PRESTO is a pretty difficult package to master. I feel that I am now on the right track! Pulsar hunting is a very exciting activity as you are obliged to squeeze the maximum from your equipment!

EME 35 & 25 YEARS AGO BY PETER, G3LTF: 35 years back on Jan-March 1982, the 432 expedition to HB0, HB0QQ, in early Jany struggled with the WX, but they managed to work 8 stations despite deep snow and ice storms. K2UYH was planning an expedition to Kentucky, KA0Y was QRV with a 42' dish, OZ9CR had shipped his 40th ring amplifier using 6 x 7289s for 1296 and ZE5JJ had visited the UK (G3LTF & G3WDG). Lots of states were active on 432 that we don't hear now (GA, TN, RI, NM, NV) and the pre-contest station list had over 100 active calls. There was a technical report from W2IMU on the basics of offset dishes and a description of the Clavin feed for very deep dishes, 1 lambda dia. 25 years back on Jan-March 1992, 20 Years of the NL was noted. The top stations in the standings list were on 432 K2UYH 478/54 DXCC, 1296 OE9XXI 99/27 and 2304 OE9XXI 19x10. It is interesting to note that in the 1296 list 44 stations were running >200 W, 20 > 400 W and 4 > 700 W, which was a big change in 10 years. Powers on 2304 were 30-300 W. Reports on the Nov ARRL Contest had top scores on 432 - SM4IVE 136x43 and 1296 - SM6CKU 50x22. The top US score was WD5AGO 41x21. W4HHK made the first SSB QSO on 2304 with OE9ERC. The first indications of the demands for large chunks, hundreds of MHz of microwave spectrum by Apple and Motorola were reported by K1FO. In the annual ARRL January VHF contest, Steve made 34 random CW contacts with full 4 character grid exchanges -.. (with no side channel)!

FOR SALE: KL6M is making and selling 23 cm feeds, details are at <http://ptt-ak.com/SeptumFeed/septum.html>. **DB6NT** has introduced a MKU LO 8-13 PLL, Oscillator, 8400- 13600 MHz - Output frequency fully programmable via interface. See <https://shop.kuhne-electronic.de/kuhne/en/shop/new/MKU+LO+813+PLL++Oscillator/?card=1714>.

FINAL: You should start to see the impact of OK1TEH joining the NL staff with new material and a different look. I am sure Matej will help rejuvenate and enliven the NL.

What is happening the 70 cm CW Activity Time Period (ATP)? With all the contesting the ATP is suffering. The conflict this month with the 13 cm contest did not help. In April the 70 cm ATPs are on 2 April 1000-1200 and 1900-2100 (conflicting with 1296 contest) and again on 30 April 0800-1000 and 1800-2000 (conflicting with the 9 cm contest).

Pat, AA6EG [apolloeme\(x\)gmail.com](mailto:apolloeme(x)gmail.com) invites EMEers to Yuri's EME night on 8 April (1296 MHz band) in remembrance of the 56th anniversary of the first man in space. Operation will be dedicated to SSB and the 1296 band. This event will be a great opportunity for demonstration of our hobby to public. Patrick claimed "The sun is in good position with high declination, and I want to test before the event, Facebook LIVE, which can provide live internet audio and video on both ends of an EME circuit."

I will post EME planning charts that show exactly when the moon is intervisible between two specified points. Questions? Call me (530) 878 7056 Pacific Time... ". Patrick reminds participants of the operation of automatic EME beacon, ON0EME, <http://www.on0eme.org/> with 400 W into a 4 m dish, which can be great help for locating the exact frequency and for RX check.

EME/SHF MEETINGS/CONFERENCE CALENDAR 2017:



The EME/SHF meeting at Tri Studne was held on 25/26 March. This year the conference attracted more than 80 hams with their XYs from OK/OM/SP/DL/SM/OE/H. The technical program included presentations on a Modular spectrum analyzer by OK1DXD, a 50 W SSPA for 10 GHz (with a single transistor) by OK2AQ, a 1 kW SSPA for 1296 by OK1DFC, Construction of large diameter parabolic antenna by SM4IVE, QRO LPF by OK1VUM, and Cooling system for SSPA by OK1DCI/OK1KIR (with pictures of SSPA's hot parts taken by IR camera), and a 3 cm transverter by OK1AIY. Some of the presentations can be downloaded at <http://www.vhf.cz/seminar-2017-eng/>

The SM EME Conference in April is getting close. There is only 1 month to deadline for payment and registration (19 April). The web has a misprint - it says 27 April. Check <http://sm4ive.com/participants.html> and <http://sm4ive.com/agenda.html>. In the conference fee are included the hotel and all meals. You don't need to reserve a room at the hotel. All rooms for participants are 2 nights (Friday and Saturday) and already booked. (Single rooms are 850 sek and double 950 sek/night).

The 4th Microwave & EME Conference, GAJOW 2017, organized by SP6GWB & SP6MLK, see http://ukf-te.iq24.pl/podglad_posta.asp?id_komentarza=2320005.

Friedrichshafen www.hamradio-friedrichshafen.de/ham-en, the biggest EU Ham Radio meeting with a local meeting of EME/VHF hams will be on 14-16 July.

19th SHF/EME PK UKF Conference organized by SP6GWB and SP6JLW is on 18-20 Aug. For more info see <http://pk-ukf.org.pl>. Both SP6 meetings are very popular in Central EU with over 80 hams and visitors from nearby countries, nice technical presentations and live EME installations. http://ok1teh.raice.idnes.cz/17th_Technical_VHF_Meeting_Zieleniec_15-16.08.2015/.

The Mid-Atlantic States VHF Conference in US is on 6-8 Oct. See more <http://www.arrl.org/hamfests/mid-atlantic-states-vhf-conference-3>.

The RSGB Convention <http://rs.gb.org/main/about-us/rs.gb-convention/> is on 13-15 Oct with VHF presentations.

I am sorry, but I am out of time for this issue. Please keep the info coming. I will be looking for you during the VK3UM Memorial Contest on 23 cm and the other EME bands. 73, AI – K2UYH