432 AND ABOVE EME NEWS
MAY 2014 VOL 42 #4

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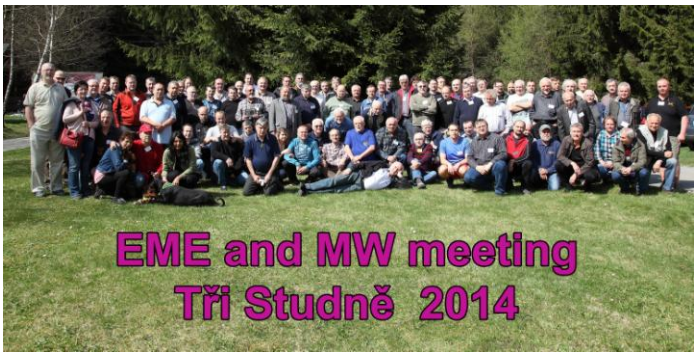
CONDITIONS: The 6 cm contest attracted a great turnout. The top reported score was by DL7C with 36x34. Manfred was followed closely by OK1CA with 34x33 and OK1KIR with 35x31. The ARI's new modes contest also generated considerable activity, but thus far only a few reports have been received. There is also a new 24 GHz distance record set by VK3MO and G3WDC – see Rex's report in this newsletter (NL). The 9Y4BGT and T88QX dxpeditions kept interests high in April. 6W/PE1L and GS3PYE/p will be on the air to do the same in May – see details in this NL. The 9 cm leg of the DUBUS EME Contest is on 3/4 May, the 3 cm leg is on 24/25 May and the big 23 cm weekend is on 31 May/1June. May will be a very busy month for EMEers! There will also be a 70 cm CW activity time period (ATP) on the 3 cm weekend from 0230 to 0430 and 1100 to 1300 on 25 May.

EME MEETING IN OK: Zdenek (OK1DFC) reports – In April we held an EME and MW Conference in OK with technical and operational presentations. The main presentations were OK1KIR on the History of EME, OK1KIR on 24 GHz traffic, HB9BBD on the Building of an EME station, ON7UN on the ON0EME beacon, OK2AQ on EME LNAs for 10 GHz, OK1DFC on a Broadband low noise amplifier with high dynamic range, and DF1SR on their EME dxpedition to HB0. Among the list of active EMEers in attendance were HB6BBD, ON7UN, DL6SH, DF1SR, DF6NA, SP6GWN, SP7JSG, OK1CA, OK1CS, OK1CU, OK1DFC, OK1UGA, OK1DIX, OK1KIR club (OK1DAK, OK1DAI, OK1DCI and OK1VAO), OK1KKD club (OK7FA), OK2AQ, OK2DL, OK2ULQ, OK3RM and OK4MT. In total, we had 142 in attendance.



4K/DL8YHR: Frank dl8yhrfrank@aol.com and Carsten (DM1CG) had to cancel their trip to Azerbaijan because of logistics problems. There were actual concerns for their safety, which on my list is one of the most compelling reasons to cancel a dxpedition. Knowing these guys, I am sure we will be hearing plans for activity from some other interesting place.

6W/PE1L: Rene hasperrene@gmail.com sends updated news on his, PA3CEE and DL2NUD's plans for operations from Senegal -- We have the license, booked the house and have visas approved. Operation on 23 cm is planned to be from Friday 9 May until Saturday 10 May on 1296.090, on 13 cm from Saturday 10 May until Sunday 11 May on 2320.090 (with RX for US on 2304.090), and on 70 cm Saturday 24 May on 432.090. We will TX the first period and RX on our (calculated) echoes. We try to be on the HB9Q logger for last minute information. The equipment on 432 will be a 23 el yagi with a small SSPA (TBD), on 1296 a 67 el yagi and 100 W, and on 2320 a 67 el yagi and some power (TBD). Supporting youth sport (football) and education in Senegal is one of our goals during our visit. We want to contribute and sponsor as much as we can. As you may already know the Atleticoteam (Rene and Eltje) always share with the locals and we're sure Hermann has the same opinion. Doing EME in Africa is not cheap. There are big costs; without support it's not possible for us to do this trip. See our web page to see how you can help http://www.emelogger.com/6w/sponsor.asp.

9A5AA: Dragan dragan9a5aa@gmail.com was QRV in the DUBUS 6 cm EME Contest – I had contacts with TM8PB (589/559) for an initial (#), G3LTF (569/559) (#), OK1KIR (559/549), ES5PC (559/549) (#), OK1CA (559/549), G4NNS (539/519), LA8LF (539/O), PA0BAT (559/529), G4CCH (O/O), DL7YC (559/O) (#), SM6CKU (O/O) (#), OH2DG (559/449) (#) and W5LUA (559/O) (#) for 13 QSOs. Heard were SM6FHZ, IK2RTI, JA6CZD, JA8ERE, DL6SH, SV3AAF, LX1DB, G3WDG and SQ6OPG. I need more power! For now I am running a 35 W SSPA with a 2.4 m offset dish. Before the contest, I worked on 2 April PA3DZL (#), on 4 April G4NNS (#), PA0BAT (#), G4CCH (#) and LX1DB. After the contest I added on 11 April JA1WQF (#) and JA6CZD (#), and 12 April VK3NX (#).

9A5AA's 2.4 m offset dish (with extension for lower bands)

9Y4BGT: Dithmar (DF7KF), Joe (DL9MS) and Angelo DM1AC put on a good show from Trinidad and Tobago. They were QRV on 70 cm on 10 April with a 15 el XP yagi using circular pol on TX and RX. They worked OZ4MM, HB9Q, UA3PTW, LZ1DX, DL7APV, NI1I, DK3WG, DF3RU and W1AW/1. They were on 23 cm the next day, 11 April with a 34 el M² yagi on (linear pol) with good power. They QSO'd HB9Q, I1NDP, UA3PTW, OZ4MM and OK1KIR. Those wishing to donate go to their PayPal account at gaby@dm1cg.de.

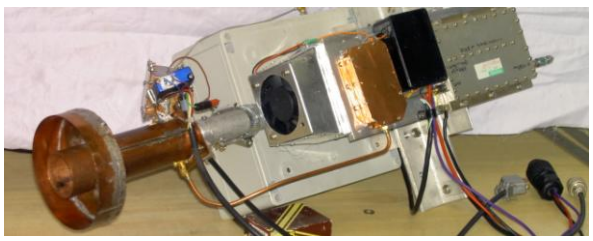
DL7YC: Manfred dl7yc@snafu.de had a very successful weekend at 6 cm EME during the DUBUS contest -- I made 36 contacts plus 4 DUPs. On Saturday with limited time due to a family event (from 1000 until 1315 and 2040 until my moonset), I worked OK1CA, G3WDG for initial #44, OK1KIR, JA1WQF #45, SP7JSG #46, G4CCH, JA6CZD, TM8PB, VK3NX, JA4BLC, PA3DZL, OH2DG, JA8ERE #47, SM6FHZ, SP6OPN #48, PA0BAT, G3LTF, K2UYH, SV3AAF, ES5PC and WA6PY. On Sunday (from 1100 until 2200) I QSO'd VK3NX (again), SQ6OPG, IK2RTI, F1PYR, G4CCH (again), JA6CZD, LA8LF #49, TM8PB (SSB), S57NML, 9A5AA #50, G4NNS, SM6CKU #51, SM6PGP, S59DCD #52,

DL6SH #53, K2UYH (again), W5LUA, SP6GWN #54 and IZ2DJP #55. I heard but missed LX1DB (sorry Willi and never heard K5GW. I gave a QRZ to VE6TA, but was not sure about the call. So no QSO. I do not think there where any more stations QRV. Before the contest I worked IK3COJ #42 and VK3NX #43. My 6 cm station is now a 4.9 m mesh dish (up to 10 GHz), OE5JFL autotracking, RA3AQ feed, DB6NT preamp with 0.55 dB NF, SSPA at feed with 115 ~ 120 W saturated output power. I am open for skeds. Please write dl7yc@snafu.de. I will send QSL cards to all initials!

DL7YC's 4.9 m dish used through 6 cm

EI2FG: John johnhearne@eircom.net is now set up for 1296 EME from Ireland – I am delighted to report that I have made 2 EME QSOs this morning on 23 cm with HB9Q and UA3PTW. I was making a burst to get on the air to help HB9Q (now he has 97 DXCC) and made two contacts on JT65c running 150 W into 4 x 35 el Tonna yagis. Now that I've broken the ice, I hope to be on the air fairly frequently from IO61AX.

G3LTF: Peter's g3ltf@btinternet.com March/April EME report follows -- All my time in the moon window before the 6 cm DUBUS contest was spent integrating a 40 W PA into the system in place of the 22 W unit I had previously used. I also wanted the two units to be interchangeable in case of failures. There was, as usual, more work in the PSUs and interlocks area than the RF side, which only needed a screening case and weather proofing. I got it all working the day before and it worked perfectly. The increased power and the improved dish profile meant I can now just copy my SSB echoes. We were lucky with the weather; Saturday 5 April was calm, but Sunday strong winds were gusting to 35 mph (56kph) and limited operation. On Saturday I worked 29 stations. QSO'd were VK3NX, JA6CZD, ES5PC, OK1KIR, OK1CA, SQ6OPG for initial #45, OH2DG, SM6FHZ, SP6OPN, G4CCH, PA3DZL, G3WDG, F1PYR, JA1WQF, SM6CKU #46, TM8PB, LA8LF #47, G4NNS, IK2RTI, 9A5AA #48, SV3AAF, PA0BAT, LX1DB, DL7YC, K2UYH, WA6PY, VE6TA, W5LUA and K5GW. CWNR were DL6SH and heard was JA8ERE. On Sunday I worked TM8PB on SSB and called many times S59DCD on his CQ, but the wind was just too strong to keep the dish pointed. So not surprisingly, I got only QRZ. On 7 April I tried again with Silvo, but had a preamp failure (poor joint on the LNA input). We finally made an easy QSO on the 8th for #49, followed by IZ2DJP #50, who was running only 10 W. On 6 cm, my Moon noise was 1.4 dB and Sun noise was 16 dB with an SF of 158. My next step is to improve the NF from the present 0.65 dB. I was on for the first part of the 70 cm ATP, but had a few PSU problems (now fixed) and worked only SM2CEW. My echoes were amazingly loud; there must have been perfect Faraday alignment. I plan to be on for the 9 cm DUBUS contest on 3/4 May. Hopefully with 6 dB more power than previously. **The underside of G3LTF's 6 cm feed assembly with the PA and driver on a fan cooled heatsink follows:**



The transverter is in the grey box. The feed is a SM6FHZ septum fed Kumar design. The whole thing is secured by 3 wing nuts and supplied through four plug connected leads for easy switching.

GS3PYE/p: John (G4BAO) john@g4bao.com confirms plans for EME operation from the Isle of Lewis (IO68) on 26 April to 3 May on 23 cm EME using a 55 el yagi and 150 W, and coordinate operation on HB9Q -- I checked out the system on 13 April. The exercise was very worthwhile, as I shook out a number of bugs. It was my first use of my TS2000X direct on 1296. I found it was 890 Hz off frequency, so I've reset the TCXO against a Rubidium locked sig gen and I should now stay within 100 Hz or so. I also observed the "dreaded TS2KX fan drift". It was very obvious, so I've done the K0BT mods to run the fan slowly on receive, and that seems to have done the trick - http://www.mods.dk. I worked HB9Q and UA3PTW on JT65C. Both were "CW copy" level. I also worked I1NDP who would probably also have also been workable on CW with some effort. If you have that size of station, I'll be happy to try a CW sked from IO68. See the Sked request page for details on http://dx.camb-hams.com/dx-peditions/gs3pyep-sked-request/. After about 2145, the Moon was behind some trees, so that explains my failure to hear people after that time. The Isle of Lewis is far enough north not to have many trees, so that will not be an issue from GS3PYE/P.

G4CCH: Howard howard@g4cch.com sends news on his 6 cm contest activity -- I was QRV on 6 cm during the contest and managed to make 22 QSOs. I also added 3 initials since the middle of last week; 2 of which were yesterday. I have some backlash in my azimuth drive, which causes some quite severe QSB when the wind starts playing with the dish. Currently, I'm using a prop pitch gearbox for azimuth drive, which appears to have ± 0.5 deg backlash on the output shaft. I'm thinking about what I can do to improve this, as it is almost intolerable and will only get worse. I have been thinking about brakes, anti backlash springs, etc, but it seems like I need to find a better solution. One thought was to use a hydraulic motor - but I don't have a clue where to start or if this would give me the result that I need. I would appreciate some advice on the selection and application of hydraulic motors in this application. During Saturday, the wind was light but occasional gusts made things difficult at times. Echoes were going from loud to nonexistent in seconds. On Sunday the wind increased significantly and limited my operation. My system is a 5.4 m mesh dish, scaled N2UO septum feed with 35 W at the feed and a 0.4 dB NF LNA.

KD5CHG: Matt m4187@yahoo.com in FN31gm is QRV on 432 EME -- I feel that I have made enough progress to start thanking folks that have helped me along the way and say hello to the other 432 and above EMEers out there. My station consists of 4 x 16 el K1FO yagis (built by N1DL for me), GS35B kW amplifier, 0.26 dB NF K4EME preamp and ICOM 910. Over the last few months I have worked HB9Q, I1NDP, WA4NJP, UA3PTW, DF3RU, DL5FN, JA6AHB, NC1I, DK3WG, G4RGK, YL2GD, W1AW/1, PY2BS and K4EME. I was not able to make it on for the ARI contest due to a work conflict, but I certainly enjoyed the Friday before as there was quite a bit of activity. My plan is to complete WAC. I am particularly looking for skeds with African and VK.

KD5CHG's 4 x 16 el K1FO yagis

LA8LF: Anders anders@la8lf.com made his debut on 6 cm EME during the DUBUS contest -- I was QRV for first time on 6 cm EME in the contest. I worked on Saturday TM8PB, OK1CA, SQ6OPG, G3LTF, G4CCH, SM6FHZ, OH2DG, OK1KIR, ES5PC, IK2RTI, 9A5AA, SV3AAF,

W5LUA and K2UYH, and on Sunday PA0BAT, G3WDG, DL7YC, JA4BLC, G4NNS, F1PYR, SM6CKU, SP6GWN and DL6SH for a total of 24 QSOs. CWNR were LX1DB, SM6PGP, JA6CZD, JA8ERE, JA1WQF and SP7JSG. I need 25 degs el at moonrise due to trees; so lost VK3NX. I had to QRT early on both days and lost K5GW, WA6PY and VE6TA. My equipment was a 4.5 m solid dish with an RA3AQ septum feed, 40 W SSPA at feed and Kuhne 0.44 dB NF LNA. I am seeing 1.05 dB of Moon noise. I have now worked G3LTF and PA3DZL on 6 bands on CW EME.

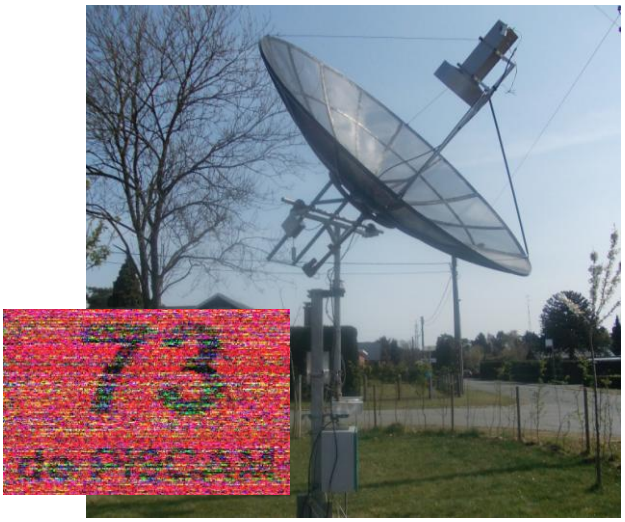
N2UO: Marc n2uo@arrl.net sends some bad news -- My 20' dish was destroyed by an ice/snow storm. I put a couple of tarps suspended by steel cables on top of the dish to prevent snow accumulation, but that night we had so much ice that one tarp collapsed and crushed the dish. It was beyond repair. The mount and the feedhorn were fine, though. My son Eric was more upset than me and helped me pull the antenna apart. I am very busy at home, mostly with finishing the basement, so I have no time or space to rebuild the dish. It will have to wait until I finish the basement so I can get back to it. At least the dish did a good job during the last ARRL contest as a farewell."

OK1CA: Franta strihavka@upcmail.cz did very well in the 6 cm contest -- I was QRV in the 5.7 GHz part of the DUBUS EME Contest and worked ES5PC, SQ6OPG, OK1KIR, VK3NX, DL7YX, SM6FHZ for initial #46, SP6GWN, PA3DZL, G3LTF, JA6CZD, G4CCH, TM8PB, JA1WQF, JA4BLC, HB9SV #47, SM6CKU #48, OH2DG, LA8LF #49, G4NNS, F1PYR, SP7JSG, 9A5AA #50, DL6SH #51, PA0BAT, IK2RTI, W5LUA, SV3AAF, K2UYH, LX1DB, WA6PY, VE6TA #52, JA8ERE, IZ2DJP #53, TM8PB on SSB (58/56) and S59DCD #54. My score was 34X33 with 9 new stations. CWNR several times were G3WDG and I missed K5GW at Saturday. Over all it was a very good weekend on 6 cm EME.

OK1KIR: Vlada and Tonda vladimir.masek@volny.cz thir club's
EME activity in April – On 432 we were only able decoded the 9Y4TBG dxpedition (22DB), but no QSO because they lost their LNA after a few QSOs. We only easily worked at 2232 W1AW/1 (6DB/7DB) on JT65B. On 1296 with our rotatable linear feed, we worked on 9 April at 1458 T88QX (22DB/23DB) on JT65C for digital initial {#171} and the 1st T8-OK QSO, on 11 April at 1953 HB9Q (2DB/8DB) on JT65C {#172}, 2005 DG5CST (549/579) for CW initial #364, 2210 W1AW/1 (549/559) #365 [same as NC1I] and 2356 9Y4TBG (29DB/26DB) {#173} on JT65C and 1st 9Y–OK QSO. On 5760 in DUBUS EME contest, we worked on CW, on 5 April at 0913 SQ6OPG (559/569), 0921 OK1CA (559/569), 0945 VK3NX (569/569), 0956 SM6FHZ (569/559), 1020 DL7YC (569/569), 1042 G3LTF (559/559), 1120 ES5PC (569/569), 1128 G4NNS (559/559), 1140 TM8PB (589/579), 1151 JA1WQF (559/559), 1210 JA8ERE (569/569), 1220 G4CCH (569/569), 1240 SM6CKU (559/559) for initial #72, 1248 G3WDG (569/569), 1255 SP7JSG (559/579), 1303 OH2DG (569/569), 1319 F1PYR (559/559), 1324 HB9SV (559/579), 1331 JA6CZD (569/569), 1444 LA8LF (559/559) #73, 1457 SM6PGP (559/579), 1507 PA3DZL (559/559), 1533 SV3AAF (559/559), 1556 IK2RTI (579/579), 1630 9A5AA (549/559), 1728 PA0BAT (569/569), 1806 DL6SH (559/539) #74, 1822 K2UYH (559/569), 1842 W5LUA (579/569), 1853 LX1DB (589/569), 1931 WA6PY (549/559), 1944 VE6TA (O/-) lost and 2209 K5GW (579/579), and on 6 April at 1330 JA4BLC (O/O), 1829 SP6GWN (549/559) and 2125 S59DCD (O/449). In total we ended with a score of 35x31. Because of QRM (probably a new 5.7 GHz WiFi), we repeatedly were not able to copy IZ2DJP's callsign. On JT65C we also worked at 2053 W5LUA (19DB/23DB) for digital initial {#6} and 2105 F1PYR (21DB/25DB) {#7}. Many TNX should go to the at least 43 stations active on 6 cm during the contest for producing exceptional EME activity! [The OK1KIR club is looking for QSL cards including some of the 1st ever 3.4 GHz OK QSOs. They have sent multiple QSL cards and SASEs without any response and ask your help.]

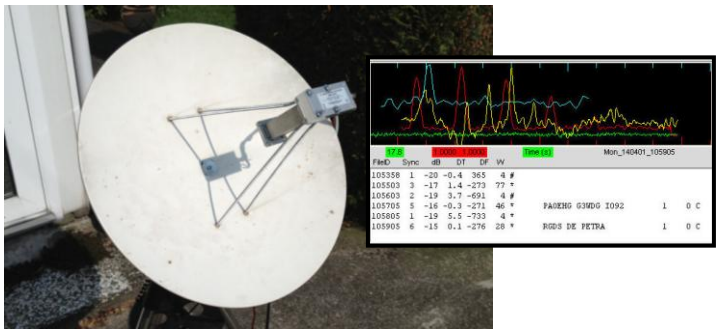
ON0EME: Walter (ON4BCB) on4bcb@gmail.com in response to a question on the 23 cm Beacon's EIRP reports that it has 400 W at the feed in a 3.7 m dish. [This should correspond to an EIRP of about 630,000 or 58 dBw.]

ON5GTS: Dirk dirk.reyners@telenet.be reports on his 23 cm EME SWL results -- On my first attempt to copy EME on 1296 using a 3 m Chinese made dish with a septum feed, a preamp from a G4DDK and an old 80s transverter to an RTL dongle USB stick, I received the ON0EME beacon. After that while watching the band, I copied PI9CAM (Dwingeloo dish) making an SSTV QSO with I1NDP. I quickly installed an SSTV program and was able to watch a few images. This was my first day of reception on 23 cm EME, Hi. My TX is not completely ready yet, but be will soon and I hope to be on the air from north east Belgium (JO21sc).



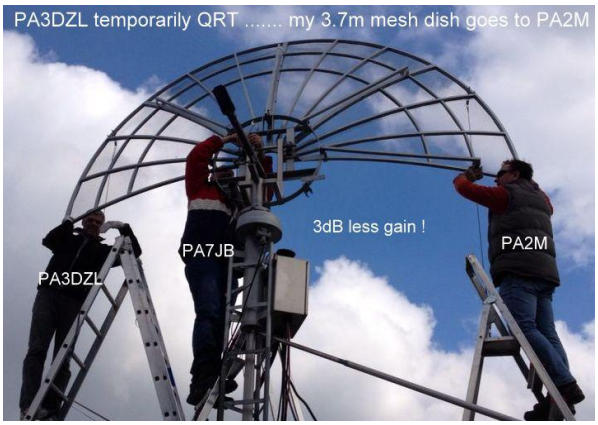
ON5GTS' 3 m dish for 23 cm

PA0EHG: Hans h.v.alphen@planet.nl reports on his experiments with the 10 GHz EME beacon using a 48 cm dish -- Last month did some RX tests with DL0SHF's 10 GHz EME beacon. I built a new RX setup with a 48 cm Procom dish, a DB6NT preamp with 0.7 dB NF and a DB6NT 10 GHz transverter. The dish and RX are mounted on a small gearbox, which was originally built for use with a small astronomical telescope. This gearbox is not too expensive and its main advantage is that it can automatically track the position of the Moon and Sun. After first setting the alignment, it's just a matter of telling it to follow the object. The gearbox is very small and therefore it needs some counterweight to balance the elevation of the dish. I found this gearbox to be very useful because even with my small antenna, it is difficult to find the Moon when it's cloudy. After everything was mounted and tested in the shack, I tried some tests with sunnoise and cold sky to hot Earth and the results looked very good. I received 3.3 dB of solar noise. On 30 March DL0SHF was TXing on high power and this seemed a good time to test my new setup. After calibrating with the Sun, I turned to the Moon and instantly saw the signal from the DL0SHF beacon in high power. The CW signal was easy copy and the JT transmissions were also very audible. I did not try to decode the JT because I never worked with this mode. I received the signal with 14 dB S/N in a 12 Hz bandwidth. Calculations with the VK3UM calculator gave 17 dB S/N as result. I don't know how much signal I lose from the libration spread. The signal proved good enough to be able to hear the DL0SHF beacon in low power mode as well. I also tried to copy G3WDG. Charlie is using a 3 m dish and 50 W output. I immediately found his carrier on my SDR with a S/N of about 3 to 4 dB. The signal was also audible as a CW tone, but tests with real CW failed. 1 or 2 dB more probably would be enough for copy, so a new test during perigee could help. Charlie then transmitted me some JT signals, which I could easily decode. Offline tests with the recording proved that we had at least 2 dB to spare before JT decode stopped. After the test with Charlie, I measured moonnoise. The VK3UM calculator showed that I should be able to receive 0.1 dB moonnoise and with help of Spectravue in continuum mode. With my gearbox, it was easy to measure this small level. On my website www.pa0ehg.com is further information on my tests and some audio recordings of the DL0SHF high power signal and the JT decodes from DL0SHF and G3WDG.



PA0EHG's 48 cm dish aimed to the sun and the signal from DL0SHF WSJT in high power (vertical scale 2 dB/div) and the carrier from G3WDG (vert scale 1dB/div) and decodes from G3WDG.

PA3DZL: Jac sends news on his new email address pa3dzl@ziggo.nl, his recent contest results and that he is temporarily QRT – I was active on 6 cm and QSO'd on 2 April 9A5AA. This was a first QSO ever between PA and 9A5 on 5760! The following weekend I QSO during the DUBUS 6 cm Contest on 5 April OK1CA, ES5PC, TM8PB, G3LTF, DL7YC, SQ6OPG, OH2DG, G4NNS, OK1KIR, SM6FHZ, LA8LF for initial #38, square 36 and DXCC 22, G4CCH, IK2RTI, PA0BAT and LX1DB, and on 6 April G3WDG #39 and square 37, JA6CZD, VK3NX, W5LUA, F1PYR, WA6PY #40 and square 38 and TM8PB (55/55) on SSB (DUP) for a total of 21 QSOs. Also heard were JA1WQF and K2UYH. During the contest I had problems with my power output and have still not found the cause. The power fluctuates +/- 1 to 4 dB. Despite the problem, I made 2 new DXCCs and 5 initials. On Monday after the contest I added SM6CKU #39 with a very nice signal. My 3.7 m mesh dish is now down. It is going to PA2M, who is planning to be active with it on 23 and 13 cm. I will be back on with a better dish for 6 and 3 cm (Andrew 3.7 m solid dish).



3 dB less gain – PA3DZL's dish coming down to make way for a new better one.

SM6CKU: Ben ben@sm6cku.se is now on 5760 EME – I made my 6 cm début during the during the DUBUS contest with the help of SM6PGP. I measured more than 16 dB of Sun noise with my 4 m dish. My output on TX was measured to be 48 W at the feed. My first QSO was with OK1CA, then TM8PB, JA6CZD, OK1KIR, SM6FHZ, LX1DB, G3LTF, G4NNS, G4CCH (pile up of G's), OH2DG, SQ6OPG, F1PYR and ES5PC. Later on Saturday I didn't hear my own echoes or any signals on the band. The WX was bad, so I didn't climb to the feed to find out what was wrong. I thought that was the end of operation, but on Sunday I decided to listen and when hearing the strong signal of DL7YC I called him without knowing if there was any output. After my call, I heard my own echoes again and Manfred replied. It turned out to be a tracking problem. My antenna is placed upon a 20' container, and is not really parallel with the ground. On 13 cm it wasn't a problem, but on 6 cm it is. Knowing this I continued to work LA8LF, SM6PGP (5.7 km away), SV3AAF, SP6GWN, PA0BAT, DL6SH, K2UYH, 9A5AA and finally W5LUA for a total of 21x22. All were initials! I have things to work on like leveling the container, improve the NF (0.8 dB now) and getting rid of some of the local noise of unknown origin. Anyway, I am QRV and ready to accept skeds.

SM6CKU - a happy Ben with his new RF-head/feedbox for 6 cm, Friday afternoon before the contest.

SM6FHZ: Ingolf ingolf.fhz@gmail.com sends news on his operation during the 6 cm leg of the DUBUS Contest -- Thanks for all the nice 6 cm EME activity and plenty of good signals. Signals were good in spite of apogee, and the libration was never a problem. I think the band is really moving now. I apologize for being the crocodile of the weekend on 6 cm. My Rx was clearly not matching my TX capability. I found that both the Moon noise and cold sky to ground was lower than before. I have yet to find an explanation for the change. Even before getting worse, my Rx performance needed some improvement and I am working on it. I did manage to work 21 stations, and among them 7 initials. Because of my RX problems, I refrained from calling CQ too much. When I did, I had some callers that I just could not resolve the call sign of. I am truly sorry for that. I would be happy to hear from anyone that called me without making a QSO.

SM6PGP: Hannes sm6pgp@illipe.se sends some info for the NL – I was QRV on and off during the 6 cm DUBUS Contest with my 1.8 m dish. On Saturday was terrible weather with rain and very strong winds, but I worked TM8PB for a initial (#), OK1KIR, ES5PC (#), DL7YC, SM6CKU (#) and PA0BAT. Fortunately the weather was good on Friday afternoon when we tried out SM6CKU's new 6 cm RF-head for the first time in the dish. Now there are 3 SM6 EME stations QRV on 6 cm in a radius of 7.5 km. I plan to be QRV in the 9 cm contest; on Saturday most likely close to my moonset for 1 to 2 hours, and on Sunday on and off during my Moon window. On 3400, I am running an LDMOS power amp with about 200 W at the feed, which means I am a "Crocodile" on 9 cm. I will do my best to copy stations calling me, but I know it might be difficult.

SQ7DQX: Hans sq7dqx@poczta.onet.pl reports he is making progress toward EME on 10 GHz -- My work to QRV on 3 cm EME is slow, but I now have all the gear except for the PA (I hope to have soon). I am going to use the open end of a waveguide as my feed for my 0.36 f/d dish.

SV1CAL: Michael michael_margaras@yahoo.gr participated on 1296 in the ARI Contest -- I managed to work in the 9th ARI new modes EME contest the following 18 stations: I1NDP, YO2BCT, UA4HTS, IK3COJ, IK5VLS, YL2GD, JA6AHB, I5YDI, DF3RU, PA3FXB, PA3CQE, YO8RHI, UA4AAV, HB9Q, DG5CST, IW5BHY, VK4CDI andYO2LEL. My setup consists of a 2.5 m mesh dish and 90 W. This time I also had my USRP SDR streaming to MAP65, and this helped me quickly find stations calling CQ. I had to power down the station at about 2300 and missed all NA stations.

T88QX: Bodo (DF8DX) df8dx@gmx.de had some problems with WX but still made 10 QSOs on 23 cm from Palau – I operated from the balcony of my hotel. It was not too bad a spot, but the WX changed almost every minute. It was sunny with blue sky, then black clouds, then heavy rain, then a storm, then again fine. It was very difficult to keep the antenna pointed to the Moon. Additionally nothing was grounded. When it was raining, my feet were wet and I would get a shock by touching the antenna. I was not lucky on 9 April and could not see the Moon during my short NA window, but later I worked JA6AHB, and was lucky to get HB9Q, DJ9YW, PA3CSG, OK1KIR, UA3PTW, I1NDP, UA4HTS and DF3RU in the log. Finally on 10 April I caught K2UYH just before his moonset.

TM8PB: Guy (F2CT) F2CT@wanadoo.fr writes that TM8PB was QRV during the REF-DUBUS Contest on 6 cm using the Pleumeur-Bodou 1350 m cassegrain dish and 80 W at the feed. Operating times were to be 5 April 1030 to 2400, and 6 April 1130 to 2400. [I have not yet received a report on their results.]

VE3KRP: Eddie eddie@tbaytel.net reports all is well except that winter does not want to let go -- High winds, sleet and snow have limited my EME activity on 23 cm. I QSO'd on 5 April UA4LCF, SV1CAL for an initial (#), GM4PMK, I1NDP, IK5VLS and SM6FHZ (#), on 6 April PA3FXB, 7 April PA2DW and I5YDI, on 12 April PA3FXB, UA4HTS, IK5QLO and YL2GD, and on 13 April PA2DW and I5YDI. All QSO were on JT, but I am still interested in CW QSOs. My surgical recovery process is moving along well and very happy about that.

VE6TA: Grant ve6ta@xplornet.com writes on his 5760 DUBUS results -- I was able to get the station up and running on 5760 once again for the DUBUS 6 cm segment. This is a particularly challenging band when using a home brew mesh dish, but if it were easy... I was QRV Friday before the contest to check the station out and worked PA0BAT and

LX1DB, both with great signals. I also heard 9A5AA, G4CCH and G4NNS. During the contest stations worked were OK1CA for an initial (#), G3LTF, PA0BAT, ES5PC, K5GW, W5LUA and TM8PB for a total of 7 QSOs. Stations heard and called were IK2RTI, K2UYH, OK1KIR, G3WDG, WA6PY, LX1DB and DL7YC. I received many QRZs this weekend so it shows I still have much work to do to get the next level of performance out of my station. Still, I enjoyed the weekend and heard many more stations than I have ever heard before on the band - once I got enough elevation to remove the terrestrial QRM. I was running my 5.5 m dish under-illuminated with a 35 W SSPA at feed. I see 10.8 dB of Sun noise at a SF of 143.

VK7MO: Rex rmoncur@bigpond.net.au reports a new 24 GHz EME world record -- On 5 March I and G3WDG extended the 24 GHz EME record to 17405 km using JT4f. The difficulty with long distance 24 GHz EME, as opposed to the lower frequencies is atmospheric absorption due mainly to water vapor. Long distance necessarily means that the Moon's elevation is low at both ends and atmospheric absorption much higher. Both stations ran 10 W. I used a 1.14 m dish in a portable operation from Mt Wellington near Hobart Tasmania, while Charlie operated from home with a 3 m dish. We had made some four unsuccessful attempts on earlier occasions when the degradation and spreading were at a minimum. For the successful attempt we adopted a different strategy and looked for a time when the lunar declination gave higher elevations at each end to reduce atmospheric losses and also a longer common window to give more time for averaging the very weak signals. By operating from Mt Wellington at 1270 m, this further reduced the amount of atmosphere at my end giving an estimated improvement of 2 dB over operating at sea level. Even so signals were marginal and with cloud cover much of the time, it took over an hour to complete the QSO. A video of a talk I gave on how this QSO was achieved can be found at https://www.youtube.com/watch?v=XfReoQOWqUo.

WA6PY: Paul pchominski@maxlinear.com was QRV in the 6 cm EU-DUBUS Contest -- I QSO DL7YC, ES5PC, G3LTF, G4CCH, IK2RTI, K2UYH, OK1CA, OK1KIR, PA0BAT, PA3DZL, SQ6OPG, TM8PB and W5LUA for a total of 13 QSOs. Heard were VK3NX, JA6CZD, JA8ERE, JA4BLC, JA1WQF and LX1DB. TM8PB was very good copy on SSB. Improvements to my RX system particularly adding 5.76 GHz narrow band filters in the LNA chain paid off. I still have to replace the mixer with a high dynamic range type. My signals are quite weak due to my low power, approximately 16 W at the feed from an old fashion RW85 TWTA. Secondly the surface of my 3.6 m dish is not good for 6 cm due to the dings caused by birds and too large a mesh size - have about 6 mm octagonal holes. Unfortunately I can't be QRV in the 9 cm part of the contest due to other activities.

XE1XA: Massimo general.manager@corix.us is coming back on 432 EME after nearly 20 year absence -- I have been QRT for several years from radio, basically because of business that requires a lot of attention. Starting two months ago, I decided to set up again my station and by now I'm on the way to refurbish my 5 m dish. It is basically in a very good shape. After reading newsletters about the topic, I have the impression that technology at 432 has not changed too much, so I can continue to use the same 0.34 dB preamp that I was using in the past. My TX is ok, delivering about 800 W out; so I estimate that in two months or so I could be active again from time to time. I know the digital modes have made a significant improvement in the past 20 years. I'm not too much interested in operating on JT65 since it seems to me quite impersonal, especially considering that I was hearing well my own echoes on CW. So at this point I hope to CU all again soon off the Moon!

K2UYH: I a.katz@ieee.org had fun operating the 6 cm leg of the DUBUS contest, but see that I have lot of work to do on my system. I tried automatic tracking for the first time on this band. It worked well, but when the wind rose, I had a problem with over shoot and keeping the dish on the Moon. I worked on 5 April at 0259 WA6PY (O/O), 0308 VK3NX (539/549) for initial #22 and DXCC 12, 1759 TM8PB (579/559), 1821 OK1KIR (569/559), 1834 G4CCH (559/559), 1848 PA0BAT (569/559), 1912 OK1CA (579/559), 1918 1918 LA8LF (559/549) #23 and DXCC 13, 1928 IK2RTI (559/559) #24 and DXCC 14, 1934 G4NNS (559/559), 1942 ES5PC (559/559), 2006 G4NNS (559/529) again, 2019 SQ6OPG (559/559), 2027 DL7YC (559/539), 2042 PA3DZL lost, 2052 G3LTF (559/579), 2130 LX1DB (559/569), 2230 W5LUA (569/569), 2235 G3WDG (569/539) #25 and 2241 K5GW (569/569), and on 6 April at 1907 SM6CKU (539/559) #26, 1938 OH2DG (559/559) #27 and DXCC 15, 1945 DL7YC (579/549) DUP, 1958 SP6GWN (549/549) #28 and 2207 F1PYR (549/449) for a total of 22x20. I worked on 1296 using my linear feed, on 9 April at 0536 VK4CDI (15DB/10DB) on JT65C and 0552 JA6AHB (10DB/5DB) JT65C, and on 10 April 0532 T88QX (22DB/O) JT65C for mixed initial #464* and mixed DXCC 92*. On 432 we tried to work on 11 April at 0100 9Y4TBG (17DB/O) without success. They responded at first with (O) but then went back to calls and apparently never decoded us. The following day, on 12 April, was a repeat of the previous day. I copied at 0200 9Y4TBG (26DB/-), but they never found me. Later I learned that there was something wrong with their RIT and that they could not tune. I now feel certain the problem was that I was TXing on the wrong frequency due to mis information. I spent a little time operating the ARI Digi Contest on 13 April. I QSO'd on 1296, I still had my linear feed in place, at 0106 YL2DG (15DB/O), 0111 WA1AW/1 (8DB/11DB) and 0122 K5DOG (20DB/10DB), and on 432 at 0153 K4EME (15DB/12DB), 0203 K5DOG (14DB/O) JT65B, 0220 W1AW/1 (5DB/8DB) and 0516 KE6ILX (24DB/20DB) for mixed initial #864. During this last QSO, I switched from JT65B to JT65C because of drift. All the other ARI QSOs were JT. I am planning to be QRV in the 9 cm contest in May and have the opportunity to operate as W1AW/2 over the weekend of 26/27 April.

NETNEWS: **HB9BBD** attended the Czech EME meeting with ON7UN. They were very pleased and plan to return again next year. **JH1KRC** was unable to be QRV for the 6 cm contest. **N8DJB** is not set up for EME at 33 cm (902 MHz). **SM2CEW** was active in the April 70 cm ATP.

FOR SALE: **JH1KRC** is looking for a wave-guide switch for WR-137. **SM4IVE** has for sale an HP 8970A noise figure meter and a noise head built by SM4DHN, calibrated by HB9BBD and confirmed at the EME meeting in Örebro; and a Gigatronics 8541 power meter with no sensor. Contact Lars at sm4ive@telia.com if interested.

TECHNICAL: Andreas (DJ3JJ) suggests that if you are looking for an inexpensive digital rotary indicator that you checkout the MAB25 12 bit Sensor from Megatron. The version with seriel µC interface perfectly fits the OE5JFL controller – see http://www.megatron.de/en/products/hall-effect-singleturn-rotary-encoder/hall-effect-absolute-encoder-series-mab25.html and http://www.megatron.de/en/service-contact/distributors. html.

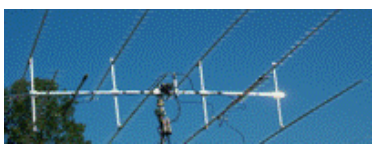
FINAL: I5WBE asks me to remind everyone who participated in the ARI New Modes EME Contest to get your logs in to him at i5wbe@i5wbe.it. Everyone one who submits a log has a chance to win a door prize.

DJ3JJ reports that the branch line coupler app discussed in the April NL is still available but that you must activate Java Platform SE7 U.

VK3UM Software updates are now available for: EME Calculator Ver 9.09 (The user variable SFU calculations have been further improved and now use true polynomial routines and are now fully integrated with user specific frequency input. EMR Calculator Ver 7.12 (Electro Magnetic Radiation - Safe distance from tower calculation updated. Doug recommends users of this program to update as it may require changes to previous VHF/UHF/SHF calculations. No there have been no further updates from the ACMA. Note their 'Sunsetting' review at http://www.acma.gov.au/theACMA/Consultations/Consultations/Sunsetting/remaking-the-radiocommunications-human-exposure-standard#li=qqXC3fyZwms%3D&cs=C%2BJC0XjsT96fZKZYluAACQ%3D%3D.

Don't miss the16th International EME conference, web site http://www.eme2014.fr on 25/26 Aug in Brittany, France. The deadline for registration and accommodations is 15 May! The date for paper submission is also getting close. Before the conference, on Sunday 24 Aug is an optional tour including visits to the Museum of Telecommunications, the Planetarium de Bretagne, the Granit Rose coast as well as other gorgeous tourist spots. I hope to see you all there.

We have another more than full month of EME ahead. Don't miss the fun! I shall be looking for you during 9 cm contest and as W1AW/2 this weekend (26/27 April). I also plan to be at Dayton on Friday 16 May and hope to see some of you there. PSE keep the reports and technical material coming. 73, Al – K2UYH



WA3QXP's 8 yagis on 70 cm