

## 432 AND ABOVE EME NEWS APRIL 2012 VOL 40 #3

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**CONDITIONS:** There seemed to be some weird, if not pretty terrible conditions on 432 during the DUBUS March EME Contest weekend. Aurora was present, and what appeared to be atmospheric absorption [definitely at my QTH]. Polarization alignment was also often sharp and produced non-reciprocal transmission conditions. The bad conditions were not present all the time, and there were reports of surprisingly good copy too. **SM4IVE has the highest reported 70 cm score with a total of 52x48 = 249,600 points.** Activity, if not conditions, on 9 cm were exceptional. I ended with a score of 20x18; my best ever by far. OK1KIR reported the next highest total with 18x18. In the Feb **1296 SSB Contest, F2TU is now the Top Fun Maker** with a score of 976 points! There is no lack of EME events for the coming weeks and months. **4U1ITU will be QRV on 432 on 24 March;** the same weekend J52EME will begin operation from Guinea Bissau on 432, to be following by more dxpedition activity – see below. The **next 70 cm ATP is on 25 March from 0730 to 0930 and 1530 to 1730.** The weekend on 31 March/1 April is to DUBUS 10 GHz and up EME Contest, and not that far after on 28/29 April is 13 cm EME Contest!

**DXPEDITIONS NEWS:** **4U1ITU** (ITU) on 432 24 March, **XV4HP** (Vietnam) on 70 and 23 cm EME between 28 March and 20 April, **J52EME** (Guinea Bissau) on 432 from 24 March to 6 April, **EY8ZF** (Tadjikistan) on 432 between 27 and 29 April, **HB0/DF1SR** (Liechtenstein) on 13, 9 and 6 cm between 28 April and 3 May, and **5X1EME** (Uganda) on 432 from 25 May to 3 June – see details in following reports.



**GD0TEP 1.8 m dish with 200 W used to QSO OK1DFC on 23 cm CW EME – see Zdenek's report**

**4U1ITU:** Rene (PE1L) [hasperrene@gmail.com](mailto:hasperrene@gmail.com) writes that the ITU will be on 432 EME on Saturday March 24<sup>th</sup> between 1200 and 1600. PA2CHR, PA3FPQ, PE1LWT and PE1L will be guest operators of the 4U1ITU Radio Club. As their

station will be only a single 23 el QD yagi, a 100 W brick (at antenna) and an SSB preamp (TNX LZ1DX), activity will concentrate on JT65B, with 4U1ITU always TXing first.

**5X1EME:** Rene (PE1L) [hasperrene@gmail.com](mailto:hasperrene@gmail.com) and Eltje (PA3CEE) plan to operate again from Uganda on 432 (and 2 m) from 25 May to 3 June. The grid will be (KJ60gh). Their primary operation will be on 2 m, but there is a good chance for 432 as well. Their web site is <http://www.emellogger.com/uganda>.

**CT1DMK:** Luis [cupido@mail.ua.pt](mailto:cupido@mail.ua.pt) did well in the 23 cm EME SSB Contest and ended with 24 2-way SSB and 2 SSB-CW QSOs in 13 sectors for a score of 650 points. QSOed were at 0019 UA3PTW (51/53) KO, 0033 OZ6OL (54/54) JO, 0036 I5MPK (54/56) JN, 0042 VE6TA (55/55) DO, 0047 DL3EBJ (55/55) JO, 0054 SM7FWZ (59/59) JO, 0056 F2TU (55/55) JN, 0105 N2UO (55/54) FM, 0110 WA6PY (54/54) DM, 0114 RA3AUB (55/55) KO, 0122 W7JM (55/54) DM, 0127 K2UYH (55/55) FN, 0201 S59DCD (54/53) JN, 0217 PY2BS (55/55) GG, 0233 VE6BGT (55/53) DO, 0255 W5LUA (55/55) EM, 0319 W6YX (55/55) CM, 0331 VA7MM (54/55) CN, 1734 G3LTF (55/55) IO, 1737 SM4IVE (56/55) JO, 1811 SD3F (53/53) JP, 1820 G4CCH (56/56) IO, 1823 DF3RU (55/55) JN, 1900 IW2FZR (51/51) JN, 1904 I1NDP (55/56) JN and 2231 K5GW (57/57).

**DF3RU:** Karl [karl.schmidt@asamnet.de](mailto:karl.schmidt@asamnet.de) is trying to complete WAS on 70 cm. He is looking for a QSL from KD0GT for MO – [Does anyone have any info on Marty? He was active from WA.] Karl also needs the sates of KY, RI and HI.

**DJ3JJ:** Andreas [dj3jj@gmx.net](mailto:dj3jj@gmx.net) reports on his 432 activity during the DUBUS Contest – I was only QRV on Sunday and did work SM4IVE (559/539), UA3PTW (439/559), OK1DFC (439/559) for an initial (#), SV1BTR (439/439), OZ4MM (549/539) (#), G3LTF (439/439), F2TU (449/O) (#), I1NDP (339/O) (#) and SM2CEW (439/549) (#). I missed LZ1DX and K5GW. Gerald went to 9 cm when the Moon was coming down to 50 ° elevation. Unfortunately my elevation is limited to 50°. Thanks to everybody for the nice CW QSOs.

**DL6WU:** Günter [DL6WU@t-online.de](mailto:DL6WU@t-online.de) writes that he is closing down 70 cm EME operation after more than 20 years -- I had a great time working EME and hate to say goodbye, but due to insurmountable manmade QRM I have decided to give up 70 cm completely. The antenna is down anyway. So if anyone cares for a 1.3 kW 8938 final (ex dl9kr) + 2.7 kV power supply, he is invited to come and pick it up for a handshake. [I am hoping that we can convince Gunter to give the higher bands a try where the QRN may not be so bad.]

**EY8ZF:** Rene (PE1L) [hasperrene@gmail.com](mailto:hasperrene@gmail.com) writes that he and DL8YHR will be operating on 432 (and 2 m) from Tadjikistan (grid MM48jn) between 27 and 29 April. On 432 they will use a 38 el m2 yagi. They will concentrate on JT65 and use the NQK logger for last minute information on frequency and operating times. The dxpedition website is <http://www.emellogger.com/ey>.

**F2TU:** Philippe [f2tu.philippe@orange.fr](mailto:f2tu.philippe@orange.fr) has submitted his results for the 23 cm EME SSB. He worked 0000 PI9CAM (57/57) JO, 0007 I5MPK (56/57) JN, 0011 HB9BBD (57/57) JN, 0019 WA6PY (44/44) DM, 0027 N2UO (55/55) FM, 0032 K5GW (56/56) EM, 0038 VE6TA (55/55) DO, 0042 W7JM (55/55) DM, 0056 CT1DMK (55/55) IN, 0101 OZ6OL (55/55) JO, 0115 RA3AUB (55/55) KO, 0116 K2UYH (55/55) FN, 0127 K5AZU (43/55) EM, 0132 DL3EBJ (55/56) JO, 0143 VE4SA (559/44 EO CW-SSB, 0224 W6YX (559/55) CM CW-SSB, 0251 WB2BYP (44/55) FN, 0305 PY2BS (55/55) GG, 0311 W5LUA (55/55) EM, 1501 OK2DL (58/58) JN, 1504 SM4IVE (55/55) JO, 1512 VK3UM (56/56) QF, 1517 UA3PTW (55/57) KO, 1544 SM7FWZ (55/57) JO, 1547 G3LTF (56/56) IO, 1603 DF3RU (55/55) JN, 1616 G4CCH (56/57) IO, 1630 I1NDP (57/57) JN, 1640 JA1WQF (44/55) QM, 1704 S59DCD (54/54) JN, 1954 SV3AAF (54/54) KM and 2134 ON5TA (549/55) JO CW-SSB for a total 61x16 = 976 points and the rank of top fun maker! He was not always at maximum power due to defective welds on his output driver transistor. This problem has now been repaired. Philippe was also on 10 GHz at apogee on 24

Feb and QSO'd at 1540 SV3AAF (O/O) for initial #68, DXCC 24 and the first SV-F 3 cm QSO.

**G3LTF:** Peter [g3lft@btinternet.com](mailto:g3lft@btinternet.com) sends news about lots of activity on 432 plus some very interesting microwave contacts -- In the ATP on 12 Feb, I worked LZ1DX, JA9BOH, SM4IVE, DJ3JJ, K5GW, DL7APV, N4GJV, DG1KJG, NC1I and G4RGK. The WX was then stormy for about 10 days, so no activity until the Moon declination got high again. On 28 Feb, I worked OZ6OL on 3400, and on 29 Feb, I was on 5760 and worked F1PYR and DL7YC for initials #32 and #33. Later that day, I put the 9 cm system back in the dish and worked PA3DZL for initial #36. This QSO was his very first on 3400, and then OZ6OL and S59DCD. On 1 March, I worked PA3DZL again, this time on random and DL7YC, who I had missed from my initials list when we worked last year, so my 9 cm total was then 37. In the first leg of the DUBUS EME Contest on 3 March, I started on 9 cm and worked OK1CA, ES5PC, OK1KIR, OZ6OL, K5GW, VE6TA, WA6PY and K2UYH. Later, after moonrise, I worked on 432 VK3UM, ES5PC, SM4IVE, DL9KR, UA3PTW, JA6AHB, JA9BOH, JA0TJU, SP6JLW, LZ1DX, SM6FHZ, SP7DCS, DL7UDA, F6DRO, DK3WG, I1NDP, OZ4MM, UT2EG, DG1KJG, SM3JQU, SV1BTR, OH2DG, F2TU, OK1DFC, DF3RU, DL7APV, G3LQR, K5GW, N4GJV, SM2CEW and NC1I. I changed the feed over to 9 cm again and worked PA3DZL, DL1YMK, S59DCD, W5LUA and WD5AGO. On 4 March, the WX was too windy to operate much, but I did manage 3 more QSOs on 432 with OK2POI, DJ3JJ and G4RGK. I did not operate on 9 cm on Sunday, so the totals were 34 on 70 cm and 13 on 9 cm. I knew that LA8LF had been active on 9 cm, but windy WX and other engagements meant that the Moon got too low for us to try a QSO; however on 8 March I did work LZ1DX on 9 cm for the first G-LZ on that band and initial #38. I also worked again OZ6OL and S59DCD, both with nice signals. On the first day of the DUBUS contest the 432 propagation was very odd. The polarization rotation angle was 90 degs, but very sharp as there was absolutely no sign of echoes unless I rotated the feed. In addition there was another effect, the "normal" rules for return polarization did not seem to apply in some cases, but did in others. Several other stations reported unusual conditions in respect of polarization on this day. There has been a lot of solar activity recently and I can certainly recall these sorts of anomalies from earlier solar cycles. We may have got too used to conditions at the solar minimum. Thank goodness for my rotatable feed! I am replacing the selsyns on my dish Hour Angle axis with a much better arrangement, which will give me a more accurate readout.

**HB0/DF1SR:** Kasimir(DL2SBY) [dl2sby@arcor.de](mailto:dl2sby@arcor.de) reports that he and Georg (DF1SR) will be QRV via EME from Liechtenstein again -- We will be active on 13 cm during DUBUS EME Contest on 28/29 April, and on 30 April until 3 May on 9 and 6 cm. This would be the first ever EME-activity on both these bands from Liechtenstein! You will find us in the HB9Q-Chatroom. Equipment will be a 3.7 m dish with RA3AQ feeds, and 13 cm 200 W, 9 cm 90 W and 6 cm 50 W (at feeds) SSPAs. We will use the callsign HB0/DF1SR.

**I52EME:** Lucio (I3LDP) team leader of the Verona DX Team announces that his club will be QRV on 432 (and 2 m) from Guinea Bissau between 24 March to 6 April. -- We have the 432 preamp, TX system (700 W SSPA) and yagi antenna. The grid is IK21dt. For more info see our website <http://www.ari.verona.it/veronadxteam/en/>.

**LZ1DX:** Ned [lz1dx@lz1dx.org](mailto:lz1dx@lz1dx.org) sends news of his DUBUS Contest activity on 3/4 March. -- I was on 9 cm and I added 3 new countries thanks to QSOs with ES5PC, SP6JLW and LA8LF. I am now up to DXCC 15. On 3400, I had terrible interference from WiFi, but I have been able to suppress its affects somewhat. In the contest I worked, on 4 March at 1735 DF9QX (449/539) DF, 1750 SP6JLW (449/339) SP9, 1809 ES5PC (449/539) ES5, 1819 OH2DG (559/549) OH, 1832 S59DCD (0/439) S59, 2020 LX1DB (449/539) LX, 2028 PA0BAT (559/539) PA0, 2047 LA8LF (449/439) LA8, 2124 G3LTF (579/549) G3 and 2243 K5GW (579/559), on 5 March at 1915 OK1KIR (559/549), 1953 ES5PC (25DB/20DB) JT65C, 2006 PA3DZL (449/449), 2012 OK1KIR (23DB/21DB) JT65C and 2112 PA3DZL (27DB/21DB), and on 8 March at 2107 G3LTF (339/449) CW and 2155 S59DCD (339/539). I was also on 70 cm and QSOed at 1444 SM4IVE (579/559) SM4, 1455 SV1BTR (579/559) SV, 1502 G3LTF (579/569) G, 1510 SP7DCS (559/559) SP7, 1519 UA3PTW (559/559) UA3, 1522 JA6AHB (569/569) JA6, 1542 F2TU (559/549) F, 1559 OZ4MM (579/559) OZ, 1654 DK3WG (559/559) DK, 1727 SM5FHZ (559/559) SM2, 1946 DG1VL (449/549) DG1, 1953 NC1I (579/579) NC1, 2013 SP6JLW (559/0) SP6, 2023 OH2DG (559/559) OH2, 2034 K5GW (579/579) K5, 2058 DF3RU (559/559) DF3, DG1KJG (559/559), UT6UG (559/559) UT6, 2203 SM2CEW (559/569) SM2, 2218 OK1DFC (569/559) OK1, 2226 ES5PC (559/559) ES5 and 2246 DL7APV (579/569) DL7, and on 4 March 0004 DL7UDA (559/529), 0033 PA0PLY (449/339) PA0, and 0100 N4GJV (559/559) N4.

**N4GJV:** Ron [qstdemb@yahoo.com](mailto:qstdemb@yahoo.com) reports on his recent 70 cm EME activity -- I was pleased to note a rather good level of activity during the 26 Feb ATP, despite the news about bad weather in Europe and elsewhere. Conditions were also good, despite the near apogee Moon position. I enjoyed CW QSOs with SM4IVE, K5GW, G3LTF, NC1I - good to hear Frank again after all of his Murphy problems, G4RGK, DG1KJG and DL7APV. Got aways included LZ1DX and UA3PTW. The activity level was also good at times during the 3/4 March DUBUS contest weekend. Conditions seemed to be good at times, and quite poor and erratic at others, causing signals to be severely "chopped up", and/or subject to severe longer term QSB. I assumed that this was a polarization issue, but I later noted that many participants, who have the ability to switch/rotate polarity, also reported having problems. There was some severe WX in my area during the JA/VK window on 3 March, and I remained QRT. I was able to be QRV, for a portion of this window on 4 March, and found conditions to be very disturbed during the time I was on. Many thanks to SM4IVE, OZ4MM, SP7DCS, K5GW, NC1I, UA3PTW, SP6JLW, SV1BTR, OK1DFC, OH2DG, G3LTF, DL7APV, ES5PC, SM2CEW, DG1KJG, K2UYH, JA6AHB, VK3UM, I1NDP, F2TU, and WA4NJP for FB QSOs. I only managed partial QSOs with LZ1DX (he did not copy my call correctly) and F6HZL (I did not copy his complete call, before he gave up). Other got-aways included UT2EG, DF3RU, DL7UDA and DL5FN - all were copied (O) or better. Many thanks to DUBUS for sponsoring this fun event, and to all those who participated.

**NC1I:** Frank [frank@nc1i.com](mailto:frank@nc1i.com) reports on operation during late Feb and early March -- During the 70 cm CW ATP on 26 Feb, we QSO'd at 1749 SM4IVE (579/559), 1755 K5GW (589/599), 1800 N4GJV (559/569), 1811 DG1KJG (579/569), 1816 G3LTF (579/579), 1835 G4RGK (569/579), 1842 DL7APV (589/579). During the EU EME contest on 3 March, the following stations were worked at 0139 SM4IVE (579/569), 0146 N4GJV (559/O), 1930 UA3PTW (579/589), 1935 UT2EG (569/559), 1947 SP7DCS (559/579), 1955 LZ1DX (579/579), 2001 F2TU (579/569), 2157 G3LTF (569/569), 2200 SP6JLW (579/569), 2205 OK1DFC (579/599), 2210 DL7APV (589/579), 2215 SV1BTR (579/589), 2220 OZ4MM (589/579), 2226 DG1KJG (579/579), 2228 K5GW (589/589), 2240 DL7UDA (559/559), 2247 SM2CEW (569/579), 2310 SM3JQU (549/559) and 2334 PA0PLY (O/O), and on 4 March at 0229 K2UYH (579/589) and 2050 I1NDP (579/579). W1QA assisted with the operating. It was interesting to read all of the reports of "strange conditions" during the contest. We found conditions stable and quite good. All stations were worked horizontal/horizontal with the exception of SP7DCS who was worked vertical/vertical. I had called CQ vertical and suspect Chris rotated polarity to compensate. I don't know why we did not experience the strange conditions that so many others have reported. It's also interesting to note that we were only running 650 W during the contest. Two years ago we had a catastrophic tube failure after 24 years of hard EME/contest service on the original tube. That original tube showed no degradation until that complete failure. After this event, we installed a NOS tube with an 86 date code. The amp ran fine for about a year before becoming unstable. Perhaps the tube became gassy. Just before this year's EU contest we installed a new 8938 with a 2006 date code and everything seems to be back to normal. We decided to run the amp VERY conservative over the contest weekend. We will bump the power up a bit next moon pass and after that we should be back to full power. The station is working well and we will continue to be active whenever possible perhaps even during the summer, something we have not done in many, many years.

**OK1CA:** Franta [strikavka@upcmail.cz](mailto:strikavka@upcmail.cz) is back on EME -- I was incapacitated for 8 months, but was able to be QRV in the DUBUS EME Contest on 3400. I worked OZ6OL and DL7YC before Contest at Friday. I was QRV only at Saturday in the contest, and worked ES5PC, G3LTF, K2UYH, K5GW, WA6PY, WA9FWD for initial #33, W5LUA, OZ6OL, VE6TA, OK1KIR, PA3DZL #34, DL1YMK, S57NML #35, S59DCD, DL7YC and PA0BAT. CWNr was LA8LF. I had QRM from tropo stations working a sub regional contest. More information about my EME activity can be found at [www.ok1ca.cz](http://www.ok1ca.cz).

**OK1DFC:** Zdenek sends his activity report for Feb and the beginning of March -- I am again busy at QRL, but did have a chance for some Moon time. On 432, I am using a new PA with a TH293. With it I worked several initials on JT and CW and also 3 new US states to bring me near WAS. I worked K0CIY (OK), F6APE, KI4TZ (TN), ZS2BK, EB3DYS, WA9KRT (IL), VK4EME, DF2VJ, VK1KW and VK3GHZ. I was also QRV in DUBUS 432 EME Contest. I am curious, if anybody had problems similar to what I experienced during the first Moon pass. I did not experiment with the feed or LNA before the contest -- everything was normal. I made many QSOs with (579), even (599) reports to me, but could not copy my own echoes. At other times, I very strong echoes, but could not be heard by other stations. The conditions were very strange during this Moon pass. At first, I thought that something was wrong with my LNA, but stations as VK3UM and SM4IVE were (599). I was running my new

TH293 PA at full power, so I know that I had RF enough goo! I suspect there was some kind of electromagnetic fault in the Ionosphere. I have never seen so strange conditions in my 16 years of EME. I was struggling with KL7HFQ and not able to read him for three or four periods, and suddenly he was (559) - easy copy, and then back to deep fades at the end of our QSO. After the contest I learned that there was a strong Aurora in the north. I worked 30 stations including ES5PC, VK3UM, JA9BOH, JA6AHB, SP7DCS, OH2DG, UA3PTW, SM4IVE, SV1BTR, SM6FHZ, OZ4MM, F2TU, G3LTF, SP6JLW, DL7UDA, UT2EG, K5GW, N4GJV, NC1I, DL7APV, LZ1DX, F6DRO, PA0PLY, DG1KJG, KL7HFQ, G4YTL, DL9KR, SM2CEW, I1NDP and DJ3JJ (439/559) for CW initial #152. I heard PE1RDP (559), but could not get his attention. My Sunday window was much better, but had some problems with PA and was QRV on 432 for only a very short time. Then I exchanged feeds and was QRV on 1296. There I worked 4U1ITU for DXCC 76, G3LTF, UA3TCF, SP7JSG, W3HMS, VK3AXH, PA3FXB, JH0TOG, UA3TCF, OH3KLLJ, PY2BS, W3HMS, YO2LEL, PY1UNU, YO2BCT, YO2LEL, GD0TEP for DXCC 77 and the first OK-GD QSO on 1296. (I exchanged emails with GD0TEP. Andy is QRV on 23 cm tropo with a 1.8 m and 200 W on TX. Our QSO was on the horizon - rising Moon - using CW (O/O). It was his first on EME, and the first EME on 1296 from the Isle of Man. I copied Andy well all the time. He does not have elevation and only a limited horizon, mainly to the east. He cannot operate on setting Moon.) I also ran some interesting tests with I1NDP and UA3TCF. Nando could copy my signal with only 18 dBm at the feed using JT65C. Alex required +45 dBm for decode. I plan to be QRV for the 13 cm DUBUS Contest in April.

**OK1KIR:** Tonda and Vlada's [vladimir.masek@volny.cz](mailto:vladimir.masek@volny.cz) March EME summary -- On 1296 we had the linear rotatable feed in place and worked on 5 March at 1611 UA3TCF (20DB/13DB) on JT65C for digital initial {#108} and (O/539) for CW initial #328 and LO field. On 3400, we worked before the DUBUS Contest, on Friday 2 March at 1500 PA3DZL (O/O) for CW initial #38, 1720 DL7YC (549/549) #39, 2048 W5LUA (569/569) 2201 K5GW (569/559), 2118 PA3DZL (23DB/23DB) on JT65C for digital initial {#2} and 2316 W5LUA (19DB/O) JT65C {#3} and a JT DX record of 8567 km. In the contest we worked on Saturday at 0006 OZ6OL (549/549), 0019 S59DCD (539/539), 0027 G3LTF (559/559), 0036 VE6TA (549/559), 0045 WA6PY (549/559), 0055 K2UYH (O/O), 0101 K5GW (579/579), 0121 ES5PC (559/559), 1214 OK1CA (569/569), 1407 PA3DZL (539/559), 1418 PA0BAT (559/559), 1520 DL1YMK (559/539), 1759 S57NML (O/O), 1822 DL7YC (559/549), 1839 OH2DG (569/569), 2112 WA9FWD (O/O) and 2159 W5LUA (569/569), and on Sunday at 0016 WD5AGO (549/339) for a total of 18 QSOs. Heard were WW2R (O) and LA8LF (559) - unfortunately Anders was receiving on an image at the time. On Monday, 5 March, we added at 1916 LZ1DX (549/559) and 1924 LA8LF (559/559) #41 and 1st LA-OK on 9 cm. With JT65C we QSO'd at 2020 ES5PC (16DB/26DB) and 2027 LZ1DX (21DB/23DB) {#4}. We were also on 5760 on 5 March and worked at 1805 DL7YC (559/559) for initial #54 - great signal from a 2.4 m offset dish. We were on 24 GHz on Tuesday, 6 March and QSO'd on random at 1806 LX1DB (559/569). In a sked with OZ1FF only very weak signals were heard on both sides. Kjeld is using a 1.8 m offset dish, but only has a 10 W DB6NT SSPA. At clear sky and -2°C, we measured "close" Moon noise up to 2.6 dB. We tried again on Thursday, 8 March, and again worked at 2133 LX1DB (559/569) before our sked. Willi asked for SSB, but the mike on our side refused to modulate the TX. We finally worked at 2330 OZ1FF (M/M) for initial #10 and the 1st OZ-OK on 24 GHz. Signals were hard to copy due to big spread (over 200 Hz predicted as the maximum for the day). The QSO was finalized when clouds cleared. The Moon noise in the clouds decreased to 2.2 dB and later with a clear sky returned to 2.5 dB. The whole the time, LX1DB copied OZ1FF's signal at (O) level, while we paid a penalty of at least 1.5 dB for using more than 4 m of our 4.5 m dish (beamwidth about 0.21 degs) compared to the 3 m dish at LX1DB.

**PA3DZL:** Jac [PA3DZL@planet.nl](mailto:PA3DZL@planet.nl) was QRV on 9 cm for the first time at the very end of Feb -- Last year I started to build a rig for 9 cm EME. It took me about 6 months to complete the station. I am very pleased with the results and the nice activity on this band. Activity has increased over the last years, which encouraged me to become QRV. When I first started, I could see my echoes with as little as 10 W at the feed. A few days later, I had my SSPA at the feed, and now I hear my echoes very well. It was a very big improvement. I worked G3LTF for my #1 QSO. My station is 3.7 m dish ( $f/d = 0.4$ ) with a RA3AQ feed, 0.5 dB preamp, and 50 W PA. (The PA was in the shack for the first few QSOs and then at the feed.) I worked on 29 Feb G3LTF (O/O) and S59DCD (O/O), on 3 March ES5PC (O/O), DF9QX (O/O), LX1DB (559/449), G3LTF (O/O), DL7YC (O/M), OZ6OL (O/529) and OK1KIR (O/O), on 2 March W5LUA (559/559) and OK1KIR (O/O) on CW and (23DB/O) on JT65, on 3 March in the DUBUS Contest OK1CA (559/559), OK1KIR (559/539), PA0BAT (559/529), DL1YMK (559/529), OZ6OL (O/O), S59DCD (449/449), OH2DG (559/449), ES5PC (449/549), K2UYH (559/559), K5GW (579/559), W5LUA (559/549) and G3LTF (539/539), and on 5 March LA8LF (559/549),

LZ1DX (449/449), ES5PC (15DB/O) JT65 and LZ1DX (21DEB/O), and 8 March VK3NX (559/O) for initial #18, square 16 and DXCC 13 on 9 cm. Heard were S57NML and WA9FWD. Unfortunately I could not be on 70 cm for the contest because of a SWR problem. I am building a 6 cm EME station. I started on it at the same time as 9 cm. It is almost finished and I hope to run my first tests at the end of March or the beginning of April. It is a lot of work building equipment for the microwave bands, but when it works, it is really GREAT FUN!



PA3DZL's 3.7 m dish with 9 cm feed in place

**SM4IVE:** Lars [sm4ive@telia.com](mailto:sm4ive@telia.com) 70 cm DUBUS Contest report follows -- I found weird conditions with lots of geomagnetic influence. I went QRT early on Sunday with 4 Moon hours left towards NA, but was so tired and had the flue, so I was not in the mood for more operating. I QSO'd on 3 March at 0006 N4GJV (529/569), 0009 UA3PTW (569/599), 0013 PA0PLY (529/569), 0019 OZ4MM (579/589), 0023 SP7DCS (559/599), 0032 DG1KJG (559/569), 0045 KL7HFQ (539/559), 0053 K3MF (539/559), 0129 K5GW (579/589), 0138 NC1I (569/579), 1245 DL7UDA (549/579), 1249 OK1DFC (579/599), 1252 JA0TJU (549/579), 1256 ES5PC (559/589), 1300 F6DRO (549/569), 1304 I1NDP (559/579), 1309 IK2RTI (559/569), 1316 JA9BOH (539/569), 1322 JA6AHB (559/579), 1327 VK3UM (579/579), 1350 SP6JLW (559/579), 1355 DL9KR (599/599), 1400 OH2DG (569/589), 1408 SV1BTR (569/589), 1416 G3LTF (569/579), 1429 F2TU (569/579), 1435 F6FHP (529/539), 1439 SM3JQU (529/599), 1445 LZ1DX (559/579), 1449 UT2EG (549/579), 1504 SM6FHZ (559/589), 1519 DK3WG (569/579), 1528 F6HZL (539/549), 1557 UY2QQ (O/O), 1600 DL5FN (529/579), 1823 G3LQR (529/579), 2018 DL7APV (569/579), 2038 DF3RU (559/559), 2120 SM7GVF (529/O), 2127 K4EME (549/579), 2146 SM2CEW (559/589) and 2246 WA6PY (529/569), and on 4 March at 0026 K0CIY (O/O), 0044 S51ZO (O/O), 0052 DJ3JJ (539/559), 0109 WQ0P (O/O), 0113 WA4NJP (559/599), 0143 K2UYH (559/589), 1551 JE1TNL (O/O), 1657 OK2POI (O/O), 1801 G4RGK (529/579) 2013 WA9KRT (O/O) for a total of  $52 \times 48 = 249,600$  points. Initials added were F6HZL, K0CIY, WQ0P (using 2 yagis and 400 W) and JE1TNL to bring me to initial #630. The station was a 13 m dish with about 30 dB gain, 75 m coax (~1.5 dB loss), 2 kW PA. I would like to see more of the JT ops get down and listen on the CW part of the band. I believe, K0CIY and WQ0P are JT op's. I hope we will see them more often on CW in the future.

**SP7DCS:** Chris' [sp7dcs@o2.pl](mailto:sp7dcs@o2.pl) 70 cm DUBUS Contest report -- It was real fun on 70 cm EME during the contest weekend after few months of inactivity. I was QRV on CW with the help of my son, SP7MC. Conditions were indeed difficult and strange. Sometimes signals were very difficult to read. I spent most of the contest using V pol. I could not hear my echo for very long periods. So, my rotatable feed was very helpful. There were times when I could find very sharp polarization peaks on signals, but at other times, I could find no polarization peak. There were strange situations when I needed to use TX polarization differently than logical predicted. We were running about 500 W at feed (still have 100 m of TX coax). Some stations could not detect my signal, and my CQs did not seem very effective. We contacted UA3PTW, OZ4MM, SM4IVE, N4GJV, K5GW, VK3UM, ES5PC for an initial (#), OK1DFC, SM6FHZ,

OH2DG (#), F2TU, JA6AHB, DL9KR, SV1BTR, LZ1DX, G3LTF, DK3WG (#), SP6JLW, NC1I, DL7APV, DG1KJG, DF3RU, SM2CEW, WA6PY and I1NDP. Heard were PA0PLY, DJ3JJ, DL7UDA, JA0TJU, UT2EG, IK2RTI, JA9BOH, G4RGK and DL5FN. My final score of 25 QSOs is the best I have done so far. I am very satisfied. Surprisingly only 1 QSO of the total score was added during Sunday. My station consisted of a 6 m dish, dual-dipole feed (fully rotatable) with a max of 500 W at feed (SSPA is still in the shack at the end of 100 m of TX coax.



**SP7DCS's 6 m dish with 70 cm feed in place**

**UA3TCF:** Alex [ua3tcf@mail.ru](mailto:ua3tcf@mail.ru) (LO26iu) is QRV on the Moon again, but now on 23 cm -- I have simple setup consisting of 1.8 m dish,  $f/d = 0.4$ , with 100 W at a VE4MA linear pol feed and 0.5 dB NF LNA. My Sun noise is 6.6 dB at a flux of 113, and my ground noise 3.7 dB. Since 10 Feb, I have worked on JT65C RD3DA, G4CCH, UA3PTW, JA6AHB, PY2BS, I1NDP, ES5PC and HB9Q, and on CW SM4IVE and I1NDP. I have a limited window from AZ 140 to 235 deg at positive declination.



**UA3TCF's 1.8 m dish used on 1296 with linear feed**

**VK3ATN:** Ray an EME pioneer, who I am sure many of us remember is not doing too well. Ray made some of the first EME QSOs from Australia using four huge (50 wavelength/leg) stacked Rhombics. Ray has had a stroke and is bed ridden. I am sure Ray would be cheered by hearing from his old friends. You can write to Ray Naughton, VK3ATN, 56 Campbell St, Birchip, Victoria 3483 Australia. [TNX to Ben, K4QF [LoWeb@esp-inc.net](mailto:LoWeb@esp-inc.net) for passing on this info].



**VK3ATN at First International EME Conference in 1968**

**VK3NX:** Charlie [ibnkarim@bigpond.net.au](mailto:ibnkarim@bigpond.net.au) is at a new QTH and now again QRV on EME on the microwave bands – I moved from Lara less than 6 months ago, and am now at CERES (QF21ct) and slowly getting the station back together. I should be QRV for all the DUBUS EME Contest weekends and hope to become very active again! Concrete for the dish mounting pole was poured in the middle of Feb and I only finished bolting the dish to the mount on the Saturday of the 9 cm DUBUS contest, which gave me less than 24 hours to get the initial testing and calibrating completed. Nonetheless I managed to get on for the 2nd Moon pass and listen to a few signals. During the 2nd pass and over the following week I worked ES5PC, PA3DZL, K2UYH, LZ1DX and S59DCD. Everyone had great signals and 4 were new on 9 cm. It was a very NICE way to get back into EME! I am looking forward to getting on the other bands again soon. I will certainly be QRV for the 3 cm weekend. All station equipment, receivers, amplifiers, etc. are the same as before. I am pleased with the new QTH and the takeoff to the Moon is a little better in the easterly window than at my previous QTH. My window to the West is again clear to the horizon.



**VK3NX is back in operation from new QF21 QTH**

**WA6PY:** Paul [pchominski@maxlinear.com](mailto:pchominski@maxlinear.com) was QRV in EU EME Contest in March -- On 432, I QSO'd SV1BTR, OZ4MM, SM4IVE, and on my CQ UA3PTW, F2TU, SP7DCS and K2UYH. During my SM4IVE QSO, Lars was 10 Hz away from a strong bird, and I was only able to copy because he was extremely strong. The birdie was coming in on with horizontal polarization and SM4IVE was also sharp on horizontal. On vertical, the birdie was very weak, but Lars was completely gone. During my operating time, all signals came through with horizontal pol, while my echoes were 90 degs rotated. I heard LZ1DX, SM2CEW and K5GW, but could not find them calling CQ. On 3400, I QSO'd OK1CA, K5GW, OK1KIR, G3LTF, K2UYH, DL1YMK, OZ6OL, K2UYH (DUP) and W5LUA. Heard were S59DCD, ES5PC and WA9FWD. In a sked after the contest with WA9FWD, I could not find John although I heard my own echoes. VE6TA monitored this sked and heard WA9FWD, but not me. I suspect that I had a frequency calibration problem. I did not check all my emails and missed the opportunity for a sked with LA8LF on Tuesday. My echoes are quite weak, and I plan to increase my TX power. Currently I am using two Ionica 15 W SSPA's combined. One PA delivers 13.5 W and the second 14.1 W. I'm getting 25 W at the combiner's output, and at the feed port 20 W. These PAs work in class A. I wonder if it is possible to squeeze more power in class B or AB without destroying the final transistors. The bias circuitry probably has to be modified. Any suggestions will be appreciated.

**WA9FWD:** John [Jstefl@wi.rr.com](mailto:Jstefl@wi.rr.com) reports on his 9 cm operation -- I operated on 3400 during the last activity weekend. Weather provided a challenge for me. On Saturday, it started snowing just before the contest started. I was able to work OK1CA and K5GW before I got too much snow on the dish. The next afternoon, I was able to work OK1KIR, W5LUA, K2UYH, DL1YMK and S59DCD. I ran a sked with WA6PY, but heard nothing. It was clear during the contest that I wasn't hearing as well as I should. After the contest, I started checking and found that my transverter wasn't working as well as I thought. I measured an NF over 4 dB, and just 4 dB of gain. I have made some improvements, and reduced the NF to 2.08 dB and increased the gain to 22 dB. After this experience, I started checking my other transverters, and got some surprises. On 2304, I measured a 7.68 dB NF and a negative 1.12 dB gain. On 5760, I measured 12.2 dB NF and negative 10.1 dB gain! This was a factory assembled unit, though it is quite old. I have to admit that I have paid a lot more attention to my preamps than my transverters up to now. I have begun a review of all my equipment with an eye toward improving my performance.

**WW2R:** Dave [ww2r@g4fre.com](mailto:ww2r@g4fre.com) was active on 3400 for the contest -- After spending the winter on 500 kHz, I decided to return to 9 cm EME. Friday night, late home from work, I hooked up my 50 W PA and heard good signals. I CWNR G3LTF and OK1KIR, and also heard OZ6OL, K5GW, W5LUA and OH2DG. Saturday morning, I hooked up a 100 W PA to give an extra 3 dB, but condx were terrible. I struggled to work K5GW, W5LUA and DL1YMK. I heard no one else! On Sunday afternoon, I turned the gear on, immediately got echoes with the 100 W, and worked K2UYH, ES5PC and S59DCD for initial #21 and DXCC13. I found very little other activity. Signals were very spread all weekend, making it even harder to read those calling CQ at 28 wpm! K5GW's signal off the Moon was loud, but doing a very good impersonation of 2 m aurora!

**XV4HP:** Hermann (DL2NUD) and Peter DJ4TC plan to put Vietnam on 70 and 23 cm EME between 28 March and 20 April. On 432 they will use a 38 el yagi, DB6NT preamp and 50 W. Operating frequency is expected to be 432.090. On 1296 they will use a 62 el yagi, DB6NT preamp and 400 W SSPA. They will try to be QRV from 28 March to 10 April from grid OK10 and from 12 April to 20 April from OK20.

**K2UYH:** I [a.katz@ieee.org](mailto:a.katz@ieee.org) had a good month. During the DUBUS Contest, I concentrated on 9 cm and QSO'd on 3 March at 0013 OK1CA (559/559), 0045 K5GW (579/559), 0056 OK1KIR (559/O), 0115 G3LTF (559/559), 0200 VE6TA (559/559), 2134 PA3DZL (559/559) for initial #20, 2145 OZ6OL (559/559), 2204 S59DCD (559/539) #21 and DXCC11, 2234 W5LUA (559/569) #22, 2251 WA9FWD (559/549) #23, 2311 DL1YMK (569/549) #24, 2323 DL7YC (559/569) #25 and 2337 WA5AGO (559/559), and on 4 March at 0010 WA6PY (559/559), 2138 LZ1DX (559/559), 2144 OH2DG (559/559), 2149 LX1DB (579/569), 2155 ES5PC (559/559), 2205 LA8LF (559/559) #26 and DXCC 12 -- very windy at this time and 2233 WW2R (559/O) for a total of 20x19 or 38,000 points. We were on 432 on 4 March and worked at 0139 WA6PY (559/559), 0140 SM4IVE (589/559), 0158 OK1DFC (O/O) -- not complete, 0225 K5GW (579/559), 0227 NC11 (589/559), 0550 N4GJV (559/559), 0608 N4GJV (O/O) dup, 0614 JA6AHB (559/559), 0620 JA9BOH (O/-) -- lost, 0650 VK3UM (O/559), 2253 UA3PTE (589/589), 2255 DF3RU (569/559), 2310 F2TU (559/559) and 2326 WA4NJP (559/559). 432 conditions during the contest seemed very disturbed. Copy was at times very difficult, and signals that should have been easy copy were very weak. Polarization often did not peak, while at other times showed a sharp peak. After the contest, we

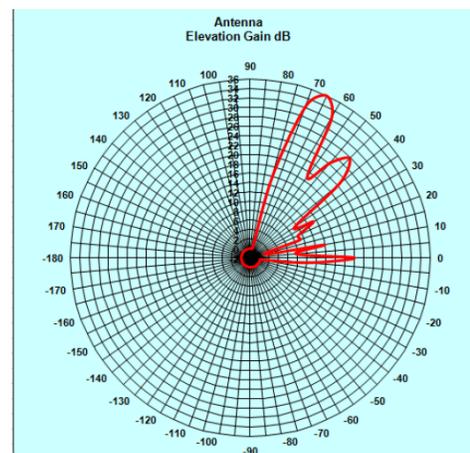
worked on 9 cm, on 6 March at 0903 VK3NX (559/O) #27 and DXCC 12. We also added on 18 March on 1296 at 1520 PY1UNU (12DB/22DB) JT65C for mixed initial #409\*.

**FOR SALE:** SM4IVE has for sale a 23 cm cavity with a TH294 capable of 400 to 600 W output power. It needs some modification, which can be done up on request. Lars is asking 300 Euro or \$US430 plus shipping. DL6WU has available a 70 cm 1.3 kW 8938 final + 2.7 kV power supply for pick it up and a handshake. Contact Günter at [DL6WU@t-online.de](mailto:DL6WU@t-online.de).

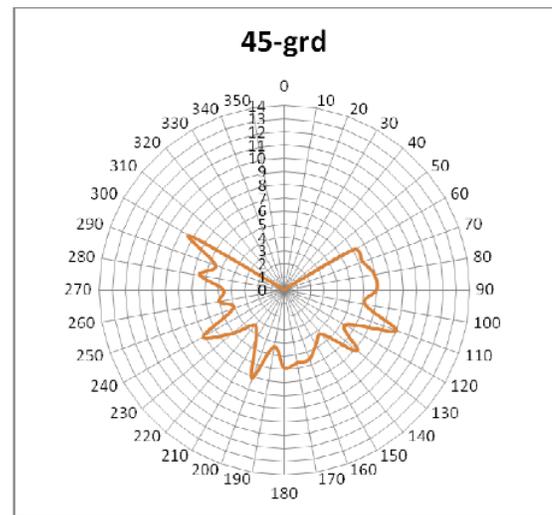
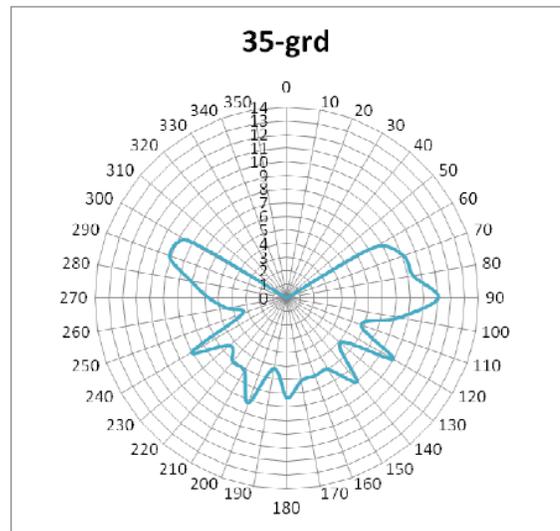
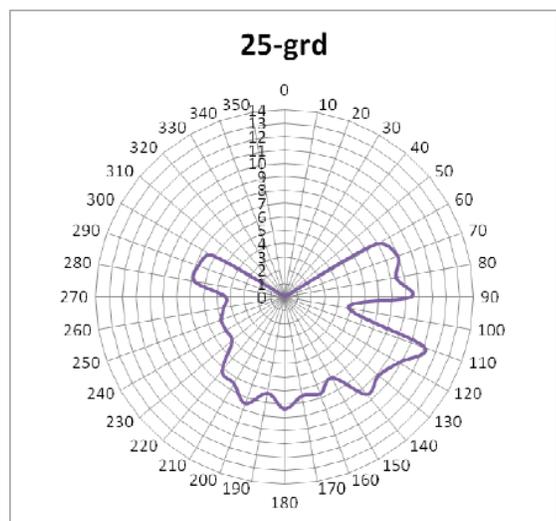
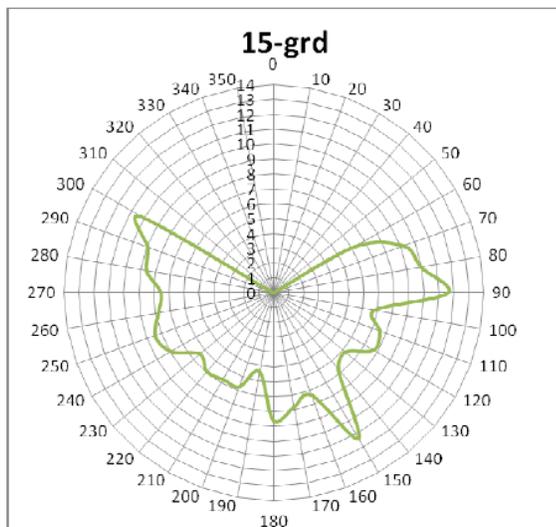
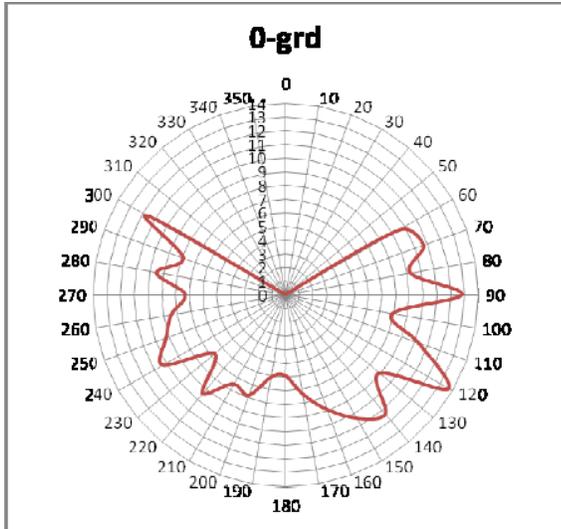
**TECHNICAL: Environmental Noise on 432 by PA0PLY** - A problem most EMEers are suffering from and a growing concern is the amount of environmental signals, which may adversely influence our receiver's capabilities on 432. I got so frustrated being not able to work UY2QQ, although his station's performance was more than sufficient for a QSO. Since, Alex was suffering from a poor preamplifier, while I have a DB6NT masthead unit, it was strange I could not copy Alex, while he could copy me. Initially I conclude my RX preamp was bad, but test with terrestrial beacons and Sun noise confirmed it was OK. While running Sun noise tests, I concluded that it was not difficult to find the maximum noise, but finding a cold area turned out to be a problem. This led me to realize that environmental noise might be the cause of my RX performance problem. In order to better understand this phenomena, I ran noise tests from 60-300degrees in AZ, while the antenna was at 0 degs EL. The set-up consists of my Kenwood TS2000X, with in-active AGC (function-8) and the audio connected to Spectrum Laboratory V2.7 software. All the data was collected in an Excel sheet, and a radar type of graph was produced. My next step was to download my environmental location from Google earth. Combining those two sets of information resulted in the first figure below.



From it, I concluded that my noise floor does vary depending on the direction of the antenna. The difference in noise was found to be in excess of 8 dB; thus, there is a good reason why a station cannot be detected in certain directions! I also realized that EMEers very rarely position their antennas at 0 degs EL. At higher elevations the main lobe of the antenna may not pick up as much environmental noise, but the sidelobes may still contribute significant noise, depending on their position. Using a local beacon, I ran tests to measure signal strengths at intervals of 5 deg EL. The result is shown in the second figure.



As one can see, the 1st sidelobe is about 20 degs from the mainlobe. This means that at 20 degs EL, there might be a substantial amount of environmental noise entering the receiver and degrading the receive performance. (The 1st Sidelobe is -10 dB from the main lobe -- 8 x 3m yagis.) Finally I run some noise measurements from 60 degs to 300 degs AZ, with different settings for EL in order to have some reference information during actual operation of the station. These tests were run over various days and different times. It turned out that there was no serious difference in field strengths at each point related to the time of the measurements. All results were averaged and used to compile the graphs for a total overview.



**Conclusions:** It was an interesting experiment. It provided some understanding on what happens in the close environment of the antenna. Those houses that are situated less than 100 m away from the antenna, do generate more noise. Pointing the antenna straight over a block of houses (in 180 degree direction), tend to block incoming noise a bit - see also the Google-map. Elevating the antenna in general shows degrading of the average noise, however at all EL settings there is a different pattern for the AZ settings. In the case of close to noise level communications, it is worth waiting for a better environmental conditions, either in the AZ or EL directions. Generally at higher elevation settings, less environmental noise reaches the antenna. Measurements as described here can contribute to a better understanding of environmental noise conditions and can help to find the best position for successful weak signal contacts. (Remark: I did not run tests between 300 to 60 degs for three reasons: 1) The front to back ratio of my antenna is good (>30 dB), and consequently I do not expect signals from the back to contribute much to the total. 2) This area is not populated with houses and large excess noise is not expected. 3) The Moon will not pass in this area; thus the antenna will never be pointed there.)

**FINAL:** I am not sure what happened to the Net News this month, but no contributions were received. I hope all is well with the 20 m net.

Time is getting short to get your reservations in for EME 2012 Cambridge (the 15th International EME Conference). Go to [www.emc2012.com](http://www.emc2012.com) and complete the form. You don't want to miss the conference.

Correction – please note that RA3AUB's call under photo of his dish in the last NL was in error.

G3LTF is working on dates for summer microwave activity weekends. Please send suggests to Peter.

Please keep the reports, tech material and news coming. I hope to catch all of you off the Moon during the coming 29 days. 73, Al – K2UYH