

## 432 AND ABOVE EME NEWS APRIL 2011 VOL 39 #4

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**CONDITIONS:** I want to begin by expressing the concern and sorry of the worldwide EME community for the damage and loss of life caused in Japan by the recent devastating earthquake, tsunami and resulting nuclear power plant failures. Fortunately it appears that not many JA EME operators were severely affected by this disaster – see JJ1NNJ's report. The BJ8TA dxpeditions had only marginal success on 70 cm, but PJ4X and PJ2/PEIL did better than anticipated – see their reports. In May DL8YHR is promising EME activity from somewhere in Asia between 9<sup>th</sup> and 13<sup>th</sup> – stay tuned. He will have on 70 cm 300 W and an antenna yet to be determined. 6 cm operation in being planned for later in the summer using the 25.6 m dish at the Onsala Space Observatory - see the SK6OSO report in this NL. Coming up is the DUBUS 6 cm contest on 30 April/1 May, followed on 7/8 May by the 13 cm contest and on 4/5 June 23 cm contest. The next 70 cm ATP is Sunday 29 May from 0500 to 0700 and 1100 to 1300.



### PJ4X yagi in Curacao provide 10 70 cm EME QSOs

**AL7RT:** Dan [dpahunt\(x\)alaska.net](mailto:dpahunt(x)alaska.net) reports on his April 1296 activity — I worked on 8 April PA7JB and PA3FXB using JT65C, and then PA7JB on CW. I also worked on CW on 9 April G4CCH and 10 April K1RQG. I heard on CW, but did not QSO W2DRZ, K2UYH and WA3GFZ (calling K2UYH). I found very little activity in the NA window.

**BJ8TA:** Mike's (BD5RV) [michael.bd5rv\(x\)gmail.com](mailto:michael.bd5rv(x)gmail.com) 70 cm plans did not work out as well as he planned. Operation on 432 from Shangri-la (NL97ut) with a single yagi between 20 and 23 March yielded no QSOs. They had problems with equipment failures. Another problem had to be the far southern declination that eliminated a common window with much of the Earth. The situation was a little better from the Chengjian Observatory (OL14kq) with its big dish, but still the southern provided almost no window for much of NA and SA. There was something wrong (probably with the feed) as they were running 75 W, and an antenna gain of 27 dB, but were only able to work on 432 LZ1DX and HB9Q on JT65B. They were unable to QSO on CW either OZ4MM or HB9Q. The 4 team members (BA4RN, BH4REQ, BH4RLO and BD5RV) traveled more than 6,000 km round trip. I know their effort is appreciated and that we will be hearing more from them in the future. More info on the dxpedition can be found at <http://www.bj8ta.com>.

**DL7APV:** Bernd [dl7apv\(x\)gmx.de](mailto:dl7apv(x)gmx.de) continues to add new stations (and countries) although he was in bed with the flu during the 70 cm SSB Contest and then away on holidays – During March I did add WQ0P easily (Greg has 2 yagis and 400 W) and in April PJ4X and PJ2/PEIL to bring him 2 closer to DXCC. I have also been making very slow progress in building a new vertical array for 432. I just got the gears for the elev drive.

**G3LTF:** Peter [g3lft\(x\)btinternet.com](mailto:g3lft(x)btinternet.com) reports on his recent Moon activity -- Not much to report in Feb as we were away on holiday for the first week, but I did get on 1296 for some nice contacts on the second weekend. On 12 Feb I worked on CW VK2JDS, SM7FWZ for initial #334 - a nice signal from Ronny, P19CAM, VK4CDI, IK5QLO, IW2FZR, F5SE/P and I5MPK. I heard DH2SAV on SSB (a new station?) and SM4IVE. On the 13 Feb I added LA9NEA, SM4IVE, PA3DZL, G4CCH and PE1LWT #335 - another easy to copy QRP station. I also copied G5WQ (549). In the DUBUS Contest on 9-10 April, I was intermittently active due to many conflicting activities. The conditions on 70 cm were very difficult with the Faraday shift around 90 degs and mostly very sharply defined. At times I could not even see my echoes on the SDR until I rotated the feed, which is very unusual. There were also very varied and deep fading patterns. I suspect we may have got too used to the last few years of low solar activity and a stable ionosphere. I worked 21 stations on CW. QSO'd were DF3RU, UA3PTW, DG1KJG, SM6FHZ, OZ6OL, LZ1DX, JA6AHB, DL7APV, SP6JLW, SV1BTR, IK2RTI, P19CAM, K2UYH, DL5FN, SV3AAF, VE6TA, I1NDP, SP7DCS, F6HLC, OK1CA and N4GJV. Heard were JA0TJU, G3LQR and OZ4MM. On 9 cm, I worked 12 stations on CW as follows: DL1YMK, LX1DB, S59DCD, OK1KIR, OK1CA, ES5PC, OZ6OL, G4NNS, OH2DG, HB9JAW, PA0BAT and G3LQR. Unfortunately before I got a chance to work the US window one of my PA units failed. W5LUA was heard. I have continued problems with my 23 cm PA, so activity on that band has been nil. I am working to repair my 6 tube ring PA for 23 cm. It still gives 600 W in the shack (350 at the feed), but is prone to flashovers and I have now found that there are 3 tubes in there that are way down in emission. So I am in the process of replacing them, which is not a 5 minute job with the water cooling. I have now got both HA and declination controls finished for the 3 cm 2.4 m dish. I plan to be active in the DUBUS 6 cm event on 30 April – 1 May, but only on the Saturday.

**GB3CSB:** David (GM6BIG) [wsjtgroup\(x\)yahogroups.com](mailto:wsjtgroup(x)yahogroups.com) reports his group is back on 23 cm, and now also QRV on 13 cm. Their locator is IO75xx. They had planned to be on 9 cm on as well, but had their LO failed. They hope be on 9 cm soon and have 3 cm in the pipeline.

**HB9JAW:** Michel [hb9jaw\(x\)bluewin.ch](mailto:hb9jaw(x)bluewin.ch) was on 9 cm for the DUBUS contest - I setup my 3400 station at the HB9Q dish. This is a very difficult task as the dish is too large for this frequency and at low elevation not usable at all. I measured Sun noise, but was not happy as the noise level was down many dBs from where it should be. I found that the feed was off from the focal point by about 30 cm. Changing the feed's position helped quite a lot. But time was short, so no further adjustments were made. After about 1 hour off the Moon, I worked 6 stations: OK1KIR, DL1YMK, G4NNS, OK1CA, S59DCD and ES5PC. Signals were still down compared to last year, but usable.

**IK5QLO:** Andrea [ik5qlo\(x\)gmail.com](mailto:ik5qlo(x)gmail.com) reports on his March 23 cm EME activity -- The month brought some fine EME moments during the "supermoon" weekend and generally nice activity for the few hours I could be QRV. I worked during the month on CW SM4IVE, SM4DHN for an initial (#), IW2FZR, G3LTF, G4CCH, LA9NEA, F5SE/P - (all on random) and SM7FWZ (#) on sked, and on JT UN6PD#, OK1YK (#), YO8BCF, G5WQ (#) and UT2EG.

**JA6XED:** Hisao [ja6xed\(x\)kumin.ne.jp](mailto:ja6xed(x)kumin.ne.jp) was not directly affected by the earthquake and is now QRV on 1296 with a solid state power amplifier using four PTF141501E and getting an output of about 400 W. He is not satisfied with the power as he was aiming for 500 W, but will be QRV using the new SSPA and is looking for skeds.

**JJ1NNJ:** Kouichi [jj1nnj\(x\)extra.ocn.ne.jp](mailto:jj1nnj(x)extra.ocn.ne.jp) writes about the earthquake -- On 11 March a terrible earthquake hit in eastern Japan. I have not experienced such an intense shake up to now. Happily I and my family are safe. Our house was not seriously damaged and my 70 cm yagi array and HPA are also OK. The HF transceiver that I use for 70 cm was broken, but I have now repaired it. My QTH is in about 10 km from the Pacific Ocean, and there was no damage from the tsunami here. All other JA EMEers appear safe. There was some damage at

JM1GSH (about 60km north of my QTH). He is working on 2 m EME. I hope to be QRV on 70 cm again soon. The electric power and water service had stopped for several days, but is now back in service. The railway is recovering gradually and it still takes me 2 extra hours to commute to work.



**JJ1NNJ's shack after the BIG SHAKE**

**N1KI:** Phil [n1ki\(x\)arrl.net](mailto:n1ki(x)arrl.net) is QRV on 432 EME -- I hope to be more active and successful on 432 EME. I have been kept inactive by strong pulsing noise across the bottom of the band. I have finally located the nearby source and corrective measures are in progress. [This was another case of 433 MHz wireless weather monitors. The problem is in the super regenerative receiver]. I am running approximately 800 W to a pair of 432-9WL yagis. The yagis are nested in my 2 m array. I know that is not an optimum setup, but it fits in my suburban neighborhood. I expect to operate mostly JT65. I am interested in skeds and recently completed with UA3PTW.

**N4GJV:** Ron [qstdeamb\(x\)yahoo.com](mailto:qstdeamb(x)yahoo.com) reports on his recent 70 cm QSOs -- As the result of weather problems, my activity level has been essentially nil, since last Oct. I did attempt to make a few cross mode QSOs during the SSB contest in Feb (I have no SSB transmit capability). The 1 ~ kHz bandwidth of my HB receiver is too narrow for good SSB copy. I was amazed that "CQ" was so easy to copy, but call letters were far from easy! I did manage a CW/SSB exchange with UA3PTW for my only QSO. During the DUBUS CW contest I did better and logged QSOs with KL6M, VE6TA, JA6AHB, VK3UM, OZ4MM, I1NDP, SM6FHZ, UA3PTW, OZ6OL, DF3RU, SP6JLW, SP7DCS, DL7APV, DG1KJG, SV1BTR, K2UYH, OK1CA, SM2CEW, and G3LTF. Many thanks to all for the VY FB QSOs! Got-aways include LZ1DX, DL1YMK, SV3AAF, F6HLC, PI9CAM, OK2POI, PA3DZL and WA6PY. Conditions often seemed to be very good, but Faraday rotation was often uncooperative. Murphy was also about, and brought a series of strong thunderstorms on Saturday. This forced me to QRT in the midst of what had appeared to be the period of the best activity of the weekend.

**OH2DG:** Eino [ejo.metsamaki\(x\)sulo.fi](mailto:ejo.metsamaki(x)sulo.fi) writes about his DUBUS 9 cm Contest operation -- The equipment and WX were cooperative except for strong winds that made holding the dish on the Moon difficult. I was running my 8 m dish with a 40 W TX and a cable loss of 0.5 dB. QSO'd were on 9 April at O928 OK1KIR (559/559), O841 OK1CA (569/569), O858 OZ6OL (549/549), 1028 ES5PC (559/559), 1152 DL1YMK (559/539), 1303 HB9JAW (559/449), 1311 G4NNS (549/539), 1423 S59DCD (549/559) and 1710 SM4DHN (569/559), and 10 April at 1047 PA0BAT (549/549), 1511 G3LTH (569/569), 1636 G3LQR (549/449), 1928 LX1DB (569/569), 1959 W5LUA (569/569), 2956 WA6PY (O/O), 2108 WW2R (O/O) and 2154 VE6TA (449/559) for a total of 23,800 points.

**OK1CA:** Franta [srihavka\(x\)upcmail.cz](mailto:srihavka(x)upcmail.cz) sends news on his 3, 70 and 9 cm DUBUS Contests results -- I was QRV only at 12 March on 3 cm and worked VK3NX, F2TU, F5JWF, ES5PC, ON5TA, PA0EHG, HB9SV, OK1KIR, IQ4DF, WA6PY, R3YA for initial #44, LX1DB and G4NNS. I was QRV again during the second part of the contest on 9 April on 3.4 GHz and I worked OK1KIR, OH2DG, OZ6OL, ES5PC, DL1YMK, G4NNS, HB9JAW, S59DCD, SM4DHN for an initial (#), G3LQR, WA6PY (#), LX1DB and G3LTF, and on 10 April on 432 MHz and worked OZ4MM, SV1BTR, UA3PTW, JA6AHB, KL6M, SM6FHZ, JJ1NNJ, I1NDP, PI9CAM, G3LTF, DF3RU, SP6JLW, DL1YMK (#), SP7DCS, N4GJV, SM2CEW, OK2POI (#), DL7APV, DG1KJG, K2UYH and OZ6OL. Both days I had very strong winds here and had trouble

with 10m dish on 3.4 GHz. I plan to be QRV next for the on 5.7 GHz part of the contest.

**OK1KIR:** Tonda and Vlada [vladimir.masek\(x\)volny.cz](mailto:vladimir.masek(x)volny.cz) report on 3, 9 and 70 cm DUBUS contest operation -- On 10 GHz on 12 March we started with a QSO at 1226 with F2TU (O/O), but found our output power way down. As a result this failure and its repair, we missed VK3NX (hrd) and JA6CZD. After the repair with full power (> 35 W at feed), we worked at 1544 F1PYR (549/559) for initial #54, 1556 ON5TA (549/559), 1606 ES5PC (549/569), 1616 G4NNS (559/569), 1622 HB9SV (559/579), 1648 PA0EHG (569/559) #55, 1716 R3YA (559/559) #56, 1720 F5JWF (559/579), 1803 IQ4DF (579/559), 1833 IZ2DJP (M/O) #57, 1903 OK1CA (549/569), 1945 WA6PY (549/559) and 2202 LX1DB (579/569). The next day we heard our echoes at 1203 at an elevation of only 1.7 degs. When the libration was about zero, (spread less than tens of Hz), we worked at 1238 OK2D (M/O) #58. OK2D was using a tropo rig (only 1.2 m dish with 17 W and H polarization!). This station is the smallest we have worked on 3 cm EME! Close to the contest end we caught at 2154 W7CJO (579/579). In total, we completed 16 QSOs. F2CT and 9A5AA were CWNR and we were heard by DF9QX (539). We measured CS/G noise of 4.8 dB, Sun noise of 18.2 dB (SF 120) and Moon noise of 2.7 dB (at its first quarter). Because the observed Moon noise relates to Moon temperature, adding the Moon's phase to each Moon noise ratio should become a good practice. [Is this true? I thought the surface temperature was relatively constant or are we seeing reflected noise from the Sun?]. We also worked on 14 March at 1920 F2TU (549/569) and 2000 partial 9A5AA (-/529), on 15 March at 1903 LX1DB (55/55) near perfect SSB with Doppler near zero, 1944 finally 9A5AA (O/O) #59 and DXCC 23 and 2209 F2CT (M/O) #60 - Moon noise was 3.0 dB (full Moon). On 24 GHz, 9 March after alignment and noise testing of a totally redesigned TX/RX with an SSPA, we became QRV after 3 years break and worked at 1640 W5LUA (549/O). We were also heard by PA0EHG (M-O) who is not yet QRV. We added on 13 March at 1520 LX1DB (559/559) - very easy fast random QSO even when Moon noise was only 2 dB due to clouds and 1903 F2CT copied us for his first EME 24 GHz signal, and 20 March at 2255 LX1DB (559/569) followed by a delightful SSB QSO (55/54) -- with moisture and the Moon in clouds; Moon noise was 2.4 dB. Later nil in sked with F2CT - Guy found Moon behind trees. Otherwise clear sky, ambient temperature below 0°C, Moon 2.6 dB. We later tried JT4G echo tests and found predicted spread was 88 Hz. Test provided clear evidence that a digi QSO is feasibility, at least at lower spread. We would be happy to test with anyone else on 24 GHz. Our new system provides about 23 W at the feed with an overall NF of about 1.7 dB. The whole compartment is rotatable in the focus of our 4.5 m prime focus dish. In April, we found good activity on 3.4 GHz during the DUBUS contest. We worked on 9 April at 0752 OK1CA (549/559), 0830 OH2DG (559/559), 0845 OZ6OL (549/559), 1019 ES5PC (559/559), 1145 DL1YMK (559/539), 1230 HB9JAW (O/O), 1326 G4NNS (549/549), 1417 S59DCD (549/539), 1524 G3LQR (549/459), 1715 SM4DHN (569/569), 1945 WA6PY (549/559), 2102 G3LTF (569/569) and 2137 LX1DB (569/569), and on 10 April at 1040 PA0BAT (569/559), 1920 VE6TA (559/559), 1956 W5LUA (569/569) and at 2018 WW2R (O/O) for a total of 17 QSOs, but unfortunately no initials. On 10 April we looked for the PJ4X dxpedition on 432, but no trace was found in the man-made noise present on 70 cm. We found it hard to copy even the biggest guns. We did work at 1417 G4FUF (17DB/O), 1426 G4EZP (18DB/O) and 1442 I1PIK (22DB/O) -- this QSO was not confirmed due to a TX failure at I1PIK.



**OK1KIR is back on 24 GHz EME after 3 years break -- new 24 GHz TX/RX (23 W SSPA) box is rotatable at the dish focus.**

**OK1TEH:** Matej's [ok1teh\(x\)seznam.cz](mailto:ok1teh(x)seznam.cz) EME report for the NL -- Since 5 March, I've been QRV 70 cm with new LNA box that works great. I have much better RX and now measure about 5 dB of Sun noise (according to the VK3UM Calc. it should be 6 dB, however the high ambient temperature in Prague is the killer). The LNA box contain a new ATF54143 LNA and TR relay (ATT of relay -0.1 dB) with a total measured NF of 0.6 dB and a 3 m long 1/2" coax to the feed. I can't place the box closer because of possible mechanical problems when wind is present. With the improved RX, I completed some more contacts. I QSO'd LZ1DX on CW -- Ned's new antenna works great, PA3DZL (20DB), NR5M (23DB) #63\*, G4FUF (26DB) #64\*, S51ZO (27DB) #65\*, VA3GMT (23DB) #66\*, K6MYC (21DB) #67\* - nice to work Mike on 70 cm after our JT65/CW QSOs on 2 m. Heard were PE1RDP (27DB), PA0PLY (28DB), YO3DDZ (24DB), VE6TA (24DB), TI2AEB (30DB) and F6APE (28DB). Many contacts weren't completed because of high signal drift. It's not a problem at my end as I can tune the RIT on my FT847 in 1 Hz step while watching on SpecJT. However, this is not reciprocal and I can't help the reception of my signal. The drift problem in FT847/897 can be easily solved, where internal fan is blowing cold air in TX period to the xtal and causes drift. On WSJT it's well identified on SpecJT because the biggest drift begins at the start of the period. The solution is simple; just cover the xtal with a polystyrene (or similar material) cube -- see [http://www.ok2kkw.com/00000104/ft847\\_alc\\_mod/im008193a.jpg](http://www.ok2kkw.com/00000104/ft847_alc_mod/im008193a.jpg).

**ON5TA:** Eric [eric.vanoffelen\(x\)skynet.be](mailto:eric.vanoffelen(x)skynet.be) writes about the 3 cm EME contest -- I enjoyed very much participating to the 3 cm DUBUS EME Contest with my small setup consisting of a 2.3 m offset dish and 35 W on TX. I found good activity and quite stable conditions. R3YA had a strong and very constant signal all weekend with his 2 m dish! I had QSOs with F2TU, OK1CA, F1PYR for an initial (#), OK1KIR, PA0EHG (#), F5JWF, G4NNS, IQ4DF, HB9SV (#), WA6PY, R3YA (#), LX1DB, ES5PC and W7CJO. I had no skeds and all QSOs were made on random. I ended with a total 14 QSOs and 4 initials.

**OZ4MM:** Stig [vestergaard\(x\)os.dk](mailto:vestergaard(x)os.dk) was active in the 70 cm part of the DUBUS EME Contest -- In the 432 EME contest I found good conditions, but during 90% of my operating time the Faraday rotation was at 90 degs. I worked only 40 stations, and observed a lack of activity from CW capable stations. Stations QSO'd were SM6FHZ, UA3PTW, KL6M, SV1BTR, DL1YMK, OK2POI, PI9CAM, DF3RU, DG1KJG, SP6JLW, SM3JQU, N4GJV, SP7DCS, SV3AAF, I1NDP, RK6MC, G4FUF, G4RGK, G4EZP for initial #339, K2UYH, DL7APV, LZ1DX, W7MEM, VE6TA, F6HLC, WA6PY, SM7GVF, SM4IVE, UA4AQL, WB7QBS, DL5FN, RK6MC (dupe), JJ1NNJ, DL9KR, OK1CA, G3LQR, JA6AHB, I1PIK (#340), JA0TJU, IK2RTI and PA3DZL. Back in Feb worked C56EME and in April PJ2/PE1L. Both QSO's were on JT65B, although I tried to also get their attention on CW.

**OZ6OL:** Hans [oz6ol\(x\)mail.dk](mailto:oz6ol(x)mail.dk) writes -- I was QRV for the DUBUS EME Contest in April. I worked 11 stations on 3400 and 12 on 432. Stations QSO'd on 9 cm were OK1KIR, OK1CA, OH2DG, ES5PC, DL1YMK, WA6PY, G3LTF, LX1DB, S59DCD, HB9JAW and W5LUA. Stations worked on 70 cm were UA3PTW, DF3RU, JA6AHB, G3LTF, SM6FHZ, SV1BTR, N4GJV, K2UYH, VE6TA, SM2CEW, OK1CA and SP7DCS. My station is a 5 m dish with horizontal pol and 600 W PA on 432, and the same dish with circular pol and 40W on 3400.



**PA0PLY's refurbished 432 EME array**

**PA0PLY:** Jan [pa0ply\(x\)pa0ply.nl](mailto:pa0ply(x)pa0ply.nl) sends news on his station -- Since 2006 I been using my 432 EME array without changes to the dipoles and coaxial cables. I recently installed new dipoles and a lower loss coaxial harness. During my

checkout (calibration measurements) of the antenna, I caught I1NDP and we QSO'd on JT. The "surprise" was that I was using my barefoot TS2000X during the testing and with some 5 dB of coaxial cable loss. I had about 15 W at the antennas! UA3PTW was also listening and able to copy my signal at (26DB) on JT65B. The PS for my GS35b PA is giving me some problems, which should be solved before the PJ expedition in April. For the higher bands, I'm currently working to completing a station for 3 cm. The RX part is installed and the positioning of my 3 m dish is ready. TX will be about 50 W. I also have plans for 13 cm to be completed during the summer.

**PA7JB:** John [pa7jb\(x\)ziggo.nl](mailto:pa7jb(x)ziggo.nl) is active on 23 cm with 2.4 m offset dish. He would like to try to make a QSO on 70 cm with this small. [It is certainly possible as RW3BP made a 432 with even a smaller offset dish]. John is looking for tips and stations to sked with.



**PA7B's 2.4 m offset dish with 1296 feed.**

**PE1RDP:** Arno [pe1rdp\(x\)amsat.org](mailto:pe1rdp(x)amsat.org) (JO21qk) is now QRV on 70 cm with a much bigger station -- My new setup for 70 cm is up and running. I now have 4 x 5.5 w1 yagis (16 el DK7ZB), 1/2" Cellflex phasing lines, 7/8" Cellflex feedline for both RX and TX, only 30" long to a solid state PA at about 500 W and a 2 stage ATF54143 preamp. I can now measure 8 dB of Sun noise and I did some tests during the weekend. I've already worked I1NDP, EA3XU, DL5FN and OK2POI, and heard more stations including OK1TEH's single yagi signal on JT65B. So everything seems to be working and skeds are welcome.



**PE1RDP's new 4 x DK7ZB yagi array**

**PJ4X & PJ2/PE1L:** Rene's group (PE1L) [renehasper\(x\)gmail.com](mailto:renehasper(x)gmail.com) in April produced double expedition successes from Bonaire (PJ4X in FK52ud) and Curacao (PJ2/PE1L in FK52nc). Although their focus was 144 EME, they provided many 70 cm EMEers with two new countries by again devoting a day to 432 at each location. On this round they had a little more power (100 W) and a preamp, which definitely helped with their single yagi. PJ4X worked on 10 April from Bonaire PI9CAM, DL7APV, OK1DFC, I1NDP, UA3PTW, DK3WG, DL9KR, K2UYH, HB9Q and WA4NJP. And PJ2/PE1L QSO'd on 16/17 April from Curacao PI9CAM, OK1DFC, HB9Q, UA3PTW, DL7APV, OZ4MM, DK3WG, DL9KR on CW, DF3RU, I1NDP, WA4NJP and K2UYH.

When they arrived at Curacao they discovered the 70 cm power supply was damaged during transport, but were lucky to buy a soldering iron and PA3FPQ was able to repair the PSU. They were also able to build up a dedicated 70 cm station, so that they don't feel the 2 m pile up pressure while on 70 cm.



**PJ2/PE1L EME antennas in Curacao**

**SK6OSO:** Ingolf (SM6FHZ) [ingolf.fhz@gmail.com](mailto:ingolf.fhz@gmail.com) sends news that early this summer it is likely that the 25.6 m dish at the Onsala Space Observatory with be QRV on 6 cm EME -- The most probable weekend is 1/3 July. We are at an early planning stage and still need to get full permission to use the dish during one weekend. We will send more details as soon as we have received a full GO for this activity. We look forward to working many stations via the moon on 6 cm! An description of previous activities from SK6OSO can be found here: <http://www.sk6yh.org/activities/sk6oso>.

**SM2CEW:** Peter [sm2cew@telia.com](mailto:sm2cew@telia.com) was on 23 cm briefly on 9 April -- I was on for my moonrise and signals were very good despite the fact that the Moon was still behind the trees due to the low declination. I worked F5SE/P, I5MPK, SM7FWZ for an initial (#) and IW2FZR. I heard OZ4MM very well on SSB in QSO with Franck F5SE/P. Congrats to Ronny, SM7FWZ for a very nice signal via the Moon on 23 cm with his new system.

**SM3JQU:** Per [perolof.sjlander@telia.com](mailto:perolof.sjlander@telia.com) was QRV in April but had major problems -- I made it on 70 cm for the DUBUS Contest, but had problems due to recent storms. I started on Friday by replacing the azimuth rotor, which had a broken center shaft after weeks of high winds. After a late start on Saturday, I had a nice QSO with OZ4MM, who acted as a beacon for the day, but only found a few other stations very deep in the noise. I also realized that I had problems with my elevation, which stopped at 40 degs. Normally I can go to 90 degs. There was obviously something wrong. Also the support for the 23 cm feed in my dish had broken and was hanging down from the center. I confirmed my bad 70 cm RX performance on Sunday by Sun noise measurements. I am thus out of service until I can lower the antenna to the ground to make repairs.

**SM6FHZ:** Ingolf (SM6FHZ) [ingolf.fhz@gmail.com](mailto:ingolf.fhz@gmail.com) sends information on his activity during the DUBUS 432 CW event -- I worked (in time order) SV1BTR, OZ4MM, UA3PTW, DF3RU, DL9KR, G3LTF, JA6AHB, PI9CAM, SP6JLW, OZ6OL#, DG1KJG, I1NDP, N4GJV, VE6TA#, WA6PY, K2UYH for an initial (#), KL6M, DL1YMK (#), JJ1NNJ, OK1CA, DL7APV, JA0TJU (#) and LZ1DX (#). Getaways were SV3AAF, IK2RTI and others that I did not get enough time to positively identify. It all adds up to 24 QSOs with 6 initials. I am quite happy with the results using my new feed (BFR Loop) for the first time. The receive performance seems to have been improved. It is of course very hard to tell a few dBs of change with all other variables present, but as an average I think I can see an improvement. But there is no contest without some unhappiness; I had chain-saw interference for a while during Saturday morning. So even in the deep forest you get QRM from human activities. I also had a spectacular arc with 4 fuses blown (2 HV and 2 in 3 x 400 V main line) that actually lit up the room and a BIG BANG as well. Fortunately, I just had to replace the fuses and continue to run. Faraday had a ball during the full weekend. It was 90 deg most of the time with sudden fast changes. I started up on H-pol and made 21 changes during the weekend. I have fixed my polarization rotation so that I do not need to go to the dish to change position, i.e., climb a ladder, adjust and then get back on the Moon. Thanks to everyone for nice QSO's and a lot of fun!

**SP7DCS:** Chris [sp7dcs@x2.pl](mailto:sp7dcs@x2.pl) sends info on his 70 cm DUBUS Contest EME as well as an update on his 6 m dish project -- As some of you may know during the last 1.5 years my son (SP7MC) and I have been working on a 6 m dish. Finally last weekend, we were able to make our first tests on 70 cm during the contest! We were working hard to complete by the weekend, but there was still much work to do. During half of the Saturday window, we were struggling to mount dual dipole feed in high wind. There was no time to prepare any serious feed mount, optimize focal distance or even center the feed properly. We had to mount feed "just anyway" and pray it would work. We were not ready with a polarization rotor, so we had to mount feed in fixed polarization for now. We chose H pol - but the initial few hours showed this was a wrong decision. The first Sun noise test was 12 dB - not optimal, but quite OK for our temporary quick installation. As the TX and power amplifier were not used for about a year, there were some problems that limited the output power. Another problem was that we had no time to put SSPA near the dish, so we had to deal with about 100 m of coax from shack. I believe we had about 300 W, maybe 350 W at the feed. It was late Saturday afternoon when we were able to work OZ4MM as our initial QSO with the new antenna. We had a lot of fun during the weekend and were able to make 14 QSOs. I believe Mr. Faraday was not cooperative at all and wish we had mounted the feed in V pol. Anyway I found signals stronger than with the old 4 yagi array. The highlight was a QSO with WA6PY using a single yagi. Contacts were OZ4MM, SV1BTR, K2UYH, N4GJV for an initial (#), UA3PTW, KL6M, I1NDP, G3LTF, PI9CAM, OK1CA (#), SM2CEW, WA6PY (#), DF3RU and OZ6OL (#). The station was a 6 m dish with f/d =0.5, 24 ribs and 6 mm mesh, dual dipole feed, ATF54143 LNA, TRV MMT 432/144 + IC746 + SDR and LDMOS PA with about 300 - 350 W at feed after 95-100 m of coax. We plan to be on 23 cm with the new dish before the DUBUS Contest in June. Later we will get back to 70 cm to fully optimize it (polarization rotation, feed adjustment, move SSPA to dish etc).



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

**VE6TA:** Grant [ve6ta@clearwave.ca](mailto:ve6ta@clearwave.ca) reports on activity on 432 and 3400 during the DUBUS Contest -- I found good conditions on 432 the first Moon pass, and fair conditions on 3400 during the second pass with many a QRZs. I worked the following stations on 432: VK4EME for an initial (#) outside the contest period, N4GJV, KL6M, JA6AHB, SV1BTR, SP6JLW, UA3PTW, G3LTF, I1NDP, DF3RU, OZ6OL, SM4IVE, DL7APV, SM6FHZ, IK2RTI, OZ4MM, LZ1DX and DG1KJG. On 3400 I QSO'd S59DCD, OK1KIR, DL1YMK for an initial (#), ES5PC, LX1DB and OH2DG. I CWNR LZ1DX and W5LUA. Both had fantastic signals. I plan to SWL on 5760 during the next EU contest weekend.

**W3HMS:** John [w3hms@jaol.com](mailto:w3hms@jaol.com) sends his input for the NL - I am happy to be back on 1296 EME after coax, then circulator, then LNA and then sequencer problems. My station is still a 3 m dish with 400 W PA and AGO LNA. Many TNX to the following stations for JT QSOs since my return on 17 Feb: PY2BS (10DB/15DB), G4CCH (12DB/14DB), PA7JB (26DB/20DB), OZ6OL (14 DB/15DB), PA3FXB (21DB/21DB), PI9CAM (6DB/3DB), PY2BS (11DB/15DB), PA7JB (19DB/16DB), PA3DZL (19DB/23DB), G4CCH (12DB/17DB), G5WQ (25DB/20DB) and PY2BS (11DB/13DB). Apologies to

those stations not worked. The 3 m dish is just not that big, HI! I am working to have a better signal in the future.

**W5LUA:** Al [w5lua\(x\)sbcglobal.net](mailto:w5lua(x)sbcglobal.net) reports -- I was able to get on 3400 for an hour on Sunday of the DUBUS Contest between 1930 and 2018. I worked DL1YMK, ES5PC, S59DCD, OK1KIR, OH2DG, LX1DB and OZ6OL. DL1YMK takes the prize for the strongest signal. Congrats to Michael! During the contest I ran my 5 m dish and 160 W in the shack.

**WA6PY:** Paul [pchominski\(x\)maxlinear.com](mailto:pchominski(x)maxlinear.com) reports on his March and April contest operation -- Prior to the 12/13 March 3 cm contest, I reinstalled my 10 GHz setup on the feed. I discovered that the transverter RX gain had dropped by 15 dB, and that the TWT tripped when I apply even very low power to the input. There was not much time to do any repair. I quickly and in dirty way extended spare TWT supply wires. The TWT is located in the focal point and power supply on the rear of the dish. The new TWT had lower power compare to the old one. I did not have time to play with magnets. I just put few on outside to lower helix current. My echoes were weaker then in the past. I also added LNAs at the focal point to overcome the low RX gain. TNX to these add LNAs, I was getting 1.6 dB of Moon noise, before it was about 0.2 dB better. QSO'd were OK1KIR, F2TU, HB9SV, OK1CA, ON5TA, W7CJO, ES5PC and G4NNS. On 9/10 April, I was only able to be QRV about 2 hours each day toward my eastern horizon due to conflicting home activities. On 432, I QSO'd on Saturday SM6FHZ -- the Moon was still low and I had 4 dB extra ground noise, followed OZ4MM and I1NDP, and on Sunday UA3PTW and SP7DCS. I1NDP was exactly on QRM, but fortunately the polarization was changing every 15 seconds and QRM on one polarization was much weaker. I did not concentrate on 432 that much because I was testing a new OE5JFL tracking system (DRIACS-G2) for my 3.6 m dish on 3.4 GHz. HB9DRI did a very good job and the system worked very well all the time. I had a little bit of wind and the system corrected the antenna position even though I have some backlash in the AZ drive. I am planning to build the same tracking system for my 3 m dish used on 10 and 24 GHz. On 3.4 GHz, I QSO'd OK1KIR -- strong, OK1CA, DL1YMK -- strongest on the band, OZ6OL, ES5PC, OH2DG and S59DCD. On Saturday I heard G3LTF, but could not find Peter later. Also heard on Sunday were LX1DB and VE6TA. I plan to be on 5.7 GHz for the next part of the contest.

**WA8RJF:** Tony [TEmanuele\(x\)kentdisplays.com](mailto:TEmanuele(x)kentdisplays.com) reports on his activity during the 9 cm part of the DUBUS EME Contest -- I arrived back in the US late on the Friday before the contest and could not be QRV until late on Saturday. On Sunday it was very windy with 50+km/hr winds. The end result was no QSOs. I did CWNR OK1KIR, LX1DB, DL1YMK and W5LUA.

**WW2R:** Dave [eme\\_ww2r\(x\)g4fre.com](mailto:eme_ww2r(x)g4fre.com) was on for the DUBUS 9 cm EME Contest -- I dusted off the dish after its 5 month hibernation and was QRV on 3400. On Saturday, despite gusting winds at my moonrise I heard OK1KIR, ES5PC, K5GW and HB9JAW, but before I could make a QSO I was called to my QRL and did not get back until after EUR moonset. On Sunday while setting up, one of my PA modules went from 15 A quiescent to 4 A, and produced no output. So with the final stage blown, (anyone know a source for a replacement Toshiba UM2683A module?), I tried using just one module (50 W) and worked OK1KIR, ES5PC, DL1YMK (loudest signal of the weekend award) and OH2DG for a new initial (#) and country. CWNR were LX1DB and S59DCD, and heard were VE6TA and W5LUA. My plan is to work on 5760 when I get back from the microwave round table in England.

**K2UYH:** I [a.katz\(x\)ieee.org](mailto:a.katz(x)ieee.org) was on for the 3 cm DUBUS EME contest, but it turned into a disaster. Everything seemed to go wrong. I heard a few weak stations, but never made a contact. My TWTA acted up -- became unstable. I blew up both of my preamps and my transverter. The chain on my dish also broke. This failure probably resulted from stress during my C53EME QSO a few weeks earlier, when it was much windier than during the 10 GHz contest. I did not even try to operate on 3 cm the second day, 13 March, but instead was on 70 and 23 cm. On 70 cm, I QSO'd at 0004 NR5M (20DB/30DB) JT65B for mixed initial #812\* and 0041 DJ5BV (12DB/21DB) JT65B, then on 23 cm CW I worked at 2128 VE6TA (559/569), 2132 W4AF (549/579) for CW initial #316/mixed #386\*, 2141 G4CCH (579/579), 2147 IW2FZR (569/5579) and 2322 AL7RT (559/549). Because of conflicting family activities, I was only able to operate for a only limited time the 70 cm DUBUS EME Contest, and totally missed that the 9 cm contest was also scheduled for the weekend -- the Moon calendar had the wrong (6 cm) band listed. On 9 April, on 432, I contacted at 1718 G3LTF (559/559), 1730 SV1BTR (559/539), 1742 SP6JLW (569/559), 1748 UA3PTW (559/569), 1800 SP7DCS (559/579), 1805 OZ6OL (559/559), 1811 DF3RU (559/559), 1824 OZ4MM (579/569), 1829 I1NDP (569/559), 1842 DG1KJG (559/559), 1851 LZ1DX (559/569), 1905 N4GJV (559/559), 1913 partial WA6PY (559/? -- lost and 1923 SM6FZH (559/559) for initial #723/#813\*. The next day I added only at 2020 OK1CA (569/579) and 2030

KL6M (579/569). I also worked outside of the contest, using JT65B at 2100 PJ4X (23DB/O) for #814\* and DXCC\* 104 and 2213 N1KI (18DB/O) JT65B #815\*. On 1296, I QSO'd 2305 WA3GFZ (13DB/O) on JT65C #387\*. We also tried on CW, but did not complete a QSO. WA3GFZ was (559) copy. The following weekend, I QSO'd on 17 April on 432 at 0223 PJ2/PE1L (24DB/O) JT65B #816\* DXCC\* 105, 0251 I1NDP (11DB/14DB) JT65B and 0307 K5QE (12DB/17DB) JT65B, and on 18 April at 0240 WA0ARM (23DB/O) JT65B #817\*. WA0ARM is a new station running 8 x 15 el yagis and 150 W.

**EDITORIAL BY W3HMS:** K5QE addressed the need increase 70 cm EME activity in NA in the March edition of the NL. I submit that 23 cm is also worthy of the same attention to increasing activity. So how do we do it long-term style. Here are my views: 1. Support and "push" the idea that all NA radio clubs return to the idea of making a monthly tech session the centerpiece of their meeting. Some will say it won't work, but our radio Club has done it every month for several years now. I am the Program Chairman and I am now planning 2012 and beyond. It is so easy to get good tech topics in VHF, UHF and microwaves that EME is a natural follow on. 2. EME needs Elmers so much more than any other facet of ham radio. In some places, like my QTH region, no one but me works EME, so an experienced Elmer is as rare as the dodo bird. I have seen but one EME test by another station and this used WSJT4 in Echo mode. 3. EMEers need to document their activities at the tech detail level o much better and with structure. One notable exception is the newest ARRL Handbook Section by Joe Taylor, K1JT. Let's face it, EME is complex and there are no dBs, nor dollars to waste. So many articles try to minimize the real facts of the difficulties in going from start of the planning activities to making QSOs in order to get people to think they can do it and not scare them away. These articles do great harm to the EME cause as they appeal to the "instant gratification folks". Any EMEer worth his salt knows you don't throw a dipole in a tree and work EME!! The better approach is to tell them that it is not easy and that if they succeed they will join a real fraternity of achievers. Then we can give them substantive tech info and no more "fluff" articles. The same may be true of an EMEer on one band going to another band. 4. One simple example of the need for EME guidance is in 23 cm LNAs and perhaps other bands. The newbie may look to the usual public sources for LNAs and be disappointed. When he sees the "old hand", he will learn that the 2 or 3 LNAs in the world that EMERs REALLY USE are semi-private sources and you need to know who they are, the costs, and how to order. If the potential EMEer has gone down the wrong path and spent good money and time, he will not be a happy camper and may say "nuts" to EME and give-up!! The same may well be true for other EME equipment that he must acquire and integrate into his station. The impacts of first the wrong approach then the right approach may burnout the would be EMEer. [Although the biggest activity problem is in NA, many of these tips are equally valuable for other parts of the world. TNX John].

**FINAL:** More sad news to communicate, Daniel, LU8EDR, passed away this month. He was only in his early fifties, and working on his new dish up on the roof of his house when he apparently had a deadly heart attack. Marc, N2UO writes: "I worked with Daniel for several years. He was the best technician I ever worked with, and also a very honest and respectful person. He was passionate about motorcycles. Together with LU4DHD, we made the first 23 cm EME QSO from LU in 1998. RIP, Daniel".

There has been quit a discussion on moving the 70 cm CW calling frequency higher in the band. Many station are advocating operating higher in to band to attract more JT stations to try CW. Others argue that there is less QRM/noise interference higher in the band. Unfortunately this situation is universally true. Some stations do have less interference above 030, but others have better conditions lower in the band. It does seem that the majority favors operating higher in the band. I would thus expect to find more stations calling CQ near 020 and 030 than in the past and to find CW activity up to around 040.

ARI has announced the results of its 2010 WW EME Marathon at <http://www.eme2008.org/ari-eme/WW%20EME%202010e.pdf>. Congratulations to OK1DFC for 432 1B top score and DL7apv OF 432 1C top score, to JA6AHB for 1296 1C top score, to G4CCH for 1296 2C top score, to PA3FXB for 1296 3C top score, to OK1CA for 2300 1D top score, to OK1KIR for 5760 1E top score and 10368 1E top score. Rules for the ARI 2011 EME Contests are at <http://www.eme2008.org/ari-eme/contest.html>. Unfortunately, we missed announcing the ARI Digital mode EME Contest, which occurred on 16/17 April.

This was another busy month and I have been hard pressed to get out this month's NL. I plan to be QRV for the upcoming 13 and 23 cm contest and hope to work you off the Moon soon. 73, Al -- K2UYH



The lack of 23 cm EME signals from OK and MI has been solved. K8EB and K5JL pictured having their rum aboard the trawler "SOLITUDE" located about 35 miles south of Florida and about 70 miles north of Cuba.