432 AND ABOVE EME NEWS
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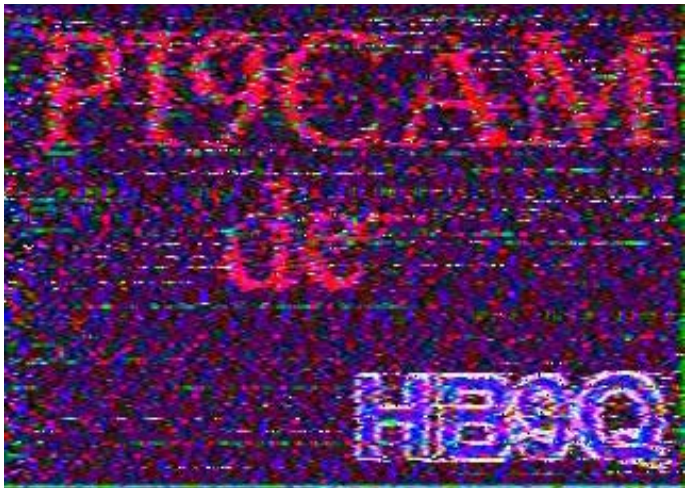
CONDITIONS: It was bound to happen with a Feb contest, but the weather (WX) this year was down right unfriendly in many places during the SSB Contest weekend. Europe (EU) was particularly hard hit. The east coast of the US was not much better. The end result was that many regulars were absent or had only limited operating time as in my case. Despite the WX a lot of fun was had. Based on preliminary returns, it appears that SP6JLW will be the chief *fun maker* with 848 points. This is considerably down from the peak score by K1RQG two years ago of 1,404 and I suspect a consequence of the WX. A major EME milestone was achieved during the past month. What is believed the first EME SSTV QSO was completed between PI9CAM and HB9Q during the Feb activity weekend (AW) – see PI9CAM's report. The FY/DL2NUD dxpedition was a success on 70 cm and produced many JT QSOs. The only negative was that despite a good signal, they did not respond to calls on CW. A possible solution to this problem is being worked. For present, it is urged that stations on JT who can copy CW be sensitive to calls by CW stations and switch to the CW mode built into JT.



First SSTV EME QSO - signals from HB9Q at PI9CAM

The next few months will be hard to top. Coming up for the EME microwave operators are the DUBUS 9 cm EME Contest on 20/21 March and the 3 cm EME Contest (also 2 m) on the following weekend, 27/28 March, which is also the official March EME AW. There is also the regular 70 cm CW Activity Time Period (ATP) on 20 March 1900-2100 and 21 March 0900-1100, and a major dxpedition to the Maldives Islands including 70 and 23 cm operation starting on 23 March by the HB9Q crew – see the 8Q7OQA announcement. DL1YMK has also announced May dxpedition plans and there is also a chance of 70 cm EME from 3B8EME from Mauritius in May. In April will be the DUBUS 13 cm EME Contest and the 70 and 5 cm EME contest. The weekend of the 13 cm contest will also be the Echoes of Apollo (EOA) weekend announced in the last newsletter (NL), and will see the return of the giant Arecibo dish to 432 EME! Operation will be on 3 days: Friday 16 April 1640 to 1925, Saturday 17 April 1750 to 2020 and Sunday 18 April 1845 to 2130. Signals should be more than 10 dB stronger than past tests (which were huge) with a 600 W SSPA at the feed. This is the time to encourage hams friend to listen for EME signals and to set up demonstrations of EME.

HIGH SSB CONTEST SCORES: The top scores reported thus far were SP6JLW 848 points**,** OZ4MM 770 points, RW3BP 492, PI9CAM 440 points, SV3AAF 403 points and N2UO 310 points. TNX to all the fun makers!

4L1PF: Alex 4l1fp@mail.ru has put Georgia on 432 EME -- On 2 March at 2144 I made my first 70 EME QSO and the first from Georgia on 70 cm with HB9Q using JT65b. My station consisted of a single 18 el yagi and a TS2000 (50 W) from grid LN21lq. Since this QSO, I have added a second yagi and now have 2 x 18 el. I am interested in EME skeds. More details can be found on my Web site http://qrz.ge/4l1fp.

8J1AXA: Mike (JH1KRC) jh1krc@syd.odn.ne.jp on JAXA group's activity during the 1296 SSB contest. They worked on 27 Feb at 0907 VK5MC (55/55) QF, 0913 K1RQG (55/57), 0940 JR4ZZS PM, 1047 JA8ERE (56/54) QN, 1537 RW3BP (55/55) KO, 1606 UA3PTW (53/55) KO, 1659 SP6JLW (55/44) JO, 1707 ES5PC (539/53) CW/SSB KO, 1723 OE5JFL (55/56) JN, 1732 OK1DFC (57/57) JN, 1736 OZ6OL (55/54) JO, 1739 LZ2US (55/55) KN, 1747 OZ4MM (57/55), 1754 OK2DL (55/55) JN, 1831 SV3AAF (56/559) KM on CW/SSB, 1843 DF3RU (53/56) JN and 1858 SP7DCS (54/579) JO on CW/SSB) for a score of (14x2 + 3)x9 = 279 points. Operators were JH1KRC, JE1PMT, JF6DEA, 7N1KAE and 7K4OWM. The sation consisted of the JAXA 18 m dish with OK1DFC Septum feed, 200 W PA, HB9BBD LNA and TS2000. The TS200 and PA were installed behind the dish and remotely controlled from the shack about 60 m away.

8Q7QOA: Dan (HB9Q) reports that he along with HB9QQ, HB9EHJ/DL3OCH and DL2NUD will be putting the Maldives Islands on EME. Bands will include 50, 144, 432 and 1296. They will operate from the Island of Velidhu, Ari Atoll (MJ64je) with a planned arrival on 21 March and activity from moon-rise on 23 March to moonset on 4 April. On 432 they will have a 38 el yagi and 400 W and on 1296 a 59 el yagi and 90 W. For more details see **http://www.mmmonvhf.de/ latest.php?id=2896**

AL7RT: Dan dpahunt@alaska.net was QRV for the SSB contest -- I worked K1RQG and VE6TA on SSB and VA7MM on CW. I called PY2BS many times, but no response. It was a nice night at -10 degs F and clear.

DK3WG: Jurgen dk3wg@online.de was very glad to worked UN7GK for 432 DXCC #87 in Feb. He also added initials with FY/DL2NUD and OK1YK to bring him to mixed #494*.

SP6JLW 2010 SSB Funtest top funmaker!

DL1YMK: Michael and Monika DL1YMK@aol.com announce plans for their next dxpedition from another surprise location – The M & M-team will be out for another magical mystery tour from 13 May to 24 May, also covering the 23 cm DUBUS EME Contest. As for the OH0-trip, we will not disclose the destination nor set up schedules beforehand in order to accomplish true random contacts. Since being back from the MI-trip, Monika and I have been working intensely to get permission for moonbounce at 4 different destinations – the stack of papers and forms is > 5 cm in height. We now have in our hands license

documents for 2 destinations. We have given preference to one (XX/DL1YMK), leaving the second location available for a future dxpedition. The callsign assigned initially caused some concern, but we investigated and it is in fact a valid callsign assignment within the IARU regulations - so listen carefully. We plan to start with 23 cm on 13 May, change to 70 cm on 14 May, 13 cm on Saturday 15 May and then back to 23 cm on Sunday 16 May. Unfortunately, at the destination there is no allocation for 9 cm - so no other bands this time. This will leave more time for relaxed sightseeing, hi! During the week we will be flexible in our band planning; it takes us only a few minutes to change bands; to meet the needs of stations that missed us in the first round of operation. We will open for skeds after the first weekend for weaker stations that did not manage to get through and for those who could not make it in time during the weekend.

DL6SH: Slawek dl6sh-eme@online.de was not happy with the SSB EME Funtest format – I worked on 26 Feb SP6JLW (54/54) JO and PI9CAM (55/55) JO and 27 Feb OK1DFC (55/55) JN, DF3RU (54/55) JN for a score (4x2)x2 for 16 points. For me the contest time was extremely unsuitable. It required me to be QRV late into the night after a hard and long working day. The contest finished at 2000 which is early evening in Europe. There was plenty of Moon time left when I might have worked some of the stations I missed in the huge pileups on Friday evening. I heard a lot of stations that could easily have been worked if there would have been enough time. For example, I worked after the contest OZ4MM and G4CCH without any problem. For a small station as me (a 3.8 m dish and 250 W at feed), it was frustrating to call and call bigger stations and seldom get an answer due to other stronger signals and some making long QSOs. A two day as in the DUBUS contests is much preferred. Two days give better chances for all. And if the time must be limited to 24 hours, the contest should start on Saturday. Otherwise it seems to be more a contest for retired operators only! [I apologize; I started the contest on Friday because I thought the timing would be better for the JA/VK gang who normally must operate late before work on Monday when the contest is Saturday/Sunday Z. I still believe in a one day funtest. For the stations that keep going to the end of the EU window, there was plenty of Moon time for QSOs without the intensity of the first few hours].

F6KHM: Xavier (F5TTU) f5ttu@club-internet.fr writes that his group has not been very active off the Moon. Their last EME QSO was about 2 years ago on 23 cm. The big dish is still in the air and in good shape, but there has been no time to play. They have improved their 432 system.

FY/DL2NUD: Hermann (no e-mail available) had a very successful dxpedition to French Guiana in GJ35sa. He was active during last two weekends of Feb on 70 cm with a 38 el yagi, 400 W at the dipol from Beko SSPA and a DJ9BV LNA. Although his operation was limited to JT65b, he transmitted near 432.092 and made many random QSOs.

G3LTF: Ppeter g3ltf@btinternet.com writes that he has little to report EME wise - I was away for both the February weekends. WX permitting I will be on in March, starting on the 15th or 16th and happy to take CW skeds on any band 432 - 3400. I will also be looking on the HB9Q logger for anyone who wants to work CW. I will be on 3400 for the DUBUS 9 cm contest weekend with 25 W at the feed of my 6 m dish. My repackaging work on my 6 cm system is progressing and should speed up now that the WX is at last improving.

G4RGK: Dave g4rgk@btinternet.com had severe damage to his EME antennas on both 70 and 23 cm during the recent winter storms and is presently not QRV on 70 cm EME. He was active on 432 back on 23 Jan and worked DL2NUD, EB3DYS and OH4LA on JT65b and K0RZ, LZ1DX, VE6TA, DG1KJG and K1RQG on CW. Dave hopes to be back in operation soon now that the WX is improving.

I5QLO: Andrea owghil@tin.it reports on his Feb activity -- Feb brought some new initials and some nice CW traffic, but the highlight was my first SSB/CW cross mode QSO during the SSB contest. I am running a 2.4 m solid dish with 150 W on CW and 100 W on JT. I QSO'd on 20 Feb on JT65c RD3DA, G4CCH, K8EB for an initial (#), UT2EG (#), HB9HAL (#) and PY2BS, on 21 Feb on CW G4CCH, K2UYH for an initial on CW (#) and LX1DB, on 26 Feb on CW LA9NEA (#), 27 Feb on CW 8J1AXA (#), OK1DFC and OZ4MM (SSB/CW cross mode) and 28 Feb on CW LZ1DX (#).

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp sends 3 cm EME news – I modified my 3 cm local oscillator to lock with a GPS 10 MHz reference to improve my frequency stability. TNX to N5AC for providing 1 GHz synthesizers. I worked on 24 Feb on 3 cm EME G3WDG (O/O) for initial #2 and G4KGC partial (O/T), on 25 Feb G4KGC partial (O/T) again due to high winds, and on 27 Feb G4KGC (O/M) and ON5TA (O/O) #3. JA6CZD also worked on 20 Feb G3WDG for the first ever G-JA 3 cm QSO and G4KGC and ON5TA on 27 Feb for first ON-JA 3 cm QSO. The EU stations were on 10368.1 and JAs on 10450.1. If anyone like a sked with us, please contact me. I need very light wind to be QRV.

K1RQG: Joe K1rqg@aol.com active in SSB contest despite bad WX in Main -- On Friday afternoon local time we were having high winds and heavy rain. I could not get on the Moon until about 2130, but the wind was too high to operate. It let up a bit around 2200 and I took a chance and was on for a while. I guess that Europe had some bad WX too as I never heard an OK, HB, OE, OH, I, DL, G, CT, LA, EA, ES, LX or ON. I had to stop tracking due to high winds a few times, and it looks like I have some damage to my azimuth drive. I won't know until the WX gets better. My dish was covered in wet snow and ice as well, especially later in the night, and I lost a preamp, but do not know why. I replaced it around 1 AM local time and had to use a heat gun to melt all the ice on the terminal strip. I worked about 27 stations and 3 new ones (9A5AA, VE6BGT and VK5MC). I think out of the 27 QSOs, I had 4 on SSB/CW and the rest on SSB/SSB.

K6JEY: Doug dougnhelen@moonlink.net says his group is determined to take maximum advantage of the spring conditions and will be on 432 and 1296 on the AWs. We are looking for skeds on 432 at any time and 1296 on weekends. We are running 4x25el, 1 kW and 0.4 dB NF on 432 and a 10' dish, 300 W and 0.2 dB NF on 1296.

K7XQ: Jeff k7xq@secure.elite.net was active on EME on multiple bands in Feb – I worked on 432 OZ4MM on CW, and on 1296 DF3RU for an initial (#), PA3FXB and K8EB all on JT65c. I worked a little 23 cm SSB during the contest and QSO'd K1RQG and PI9CAM on SSB with my 10' dish and 350 W. I also had a nice CW QSO with N2UO. I had some storm damage to the 432 array and related problems tracking the Moon on Saturday during the ATP. I now have my SDR-IQ working quite nicely and can monitor the entire 1296 bandscope (1296.005 - 1296.080) while operating on 432, so I can check real-time activity. I find the SDR-IQ and Winrad combo is far superior to the Flex 1000. At least for RX only, which is all I use it for anyway. I am available for JT or CW skeds on any band 50 to 2304.

KL6M: Mike melum@alaska.net has all the parts to get my EL drive fixed and should be QRV again very soon. He expects to be on in time for 13 cm DUBUS Contest. He also has gear for 900 MHz EME.

N2UO: Marc lu6dw@yahoo.com completed his 20' just in time for the 1296 SSB contest -- The new 20' stressed dish is working very nice. My SSB echoes are strong all the time with about 250 W at the feed. During the SSB contest I only worked the European window because the encapsulated high voltage transformer in my PA power supply overheated due to the intense SSB CQ calls, and it spilled black tar all over the supply. I am temporarily off the air until I can repair the damage. Following are the stations I worked during the contest. All QSOs were SSB to SSB except for one, which is marked. I worked on 26 Feb at 2318 SP6JLW JO, 2330 SM2CEW KP SSB/CW, 2328 OZ6OL JO, 2336 RW3BP KO, 2341 F5SE/P JN, 2347 K1RQG FN and 2355 SV3AAF KM, and on 27 Feb at 0010 UA3PTW JO, 0012 PI9CAM JO, 0019 K2UYH FN, 0053 K5JL EM, 0112 VE6TA DO, 0115 W7JM DM, 0119 OZ4MM JO, 0309 PY2BS GG and 0335 VE6BGT DO for a score of (15x2+1)x10 for a total of 310 points. I also worked N4PZ and K7XQ on CW, both initials, plus 4 initials above on SSB, so it was quite a nice weekend.

N4GJV: Ron qstdemb@yahoo.com, sends his Feb activity report -- I found conditions during the Feb 70 cm CW ATP to be markedly better than last month. The activity level was also a bit better. There did, however, seem to be a considerable amount of Faraday rotation, as my own echoes were very weak or absent. I enjoyed QSOs with K2UYH, UA3PTW, OZ4MM, I1NDP and SM2CEW. LZ1DX and G4RGK were called without success. Others heard include OZ6OL, DL7APV, and K3MF.

N4PZ: Steve n4pz@juno.com was active during the 23 cm SSB contest and worked F5SE/P on SSB and N2UO on CW. After calling CQ on CW, he had quite a few replies on SSB, but could not dig them all out. The next night he added OK2DL, K5JL and LZ1DX - all with good signals. He is working on a bigger (16') dish and a QRO PA for 70 cm. Steve is also interested in skeds.

N6RMJ: Pat n6rmj@sbcglobal.net is a new station on 23 cm EME using his tropo system. He is using 4 x 55 el loop yagis feed with 50' of 1¼" feed line and an LMR600 jumper to give 55 W at antenna. His preamp and SSPA are in his shack and feed by IC910h. Pat has QSO'd thus far OK1DFC and K2UYH and is interested in skeds. He is also equipped for 70 cm and interested in trying their as well.

NC1I: Frank frank@nc1i.com updates us on his Feb activity -- I was busy with family activities during the AW, so W1QA activated my station on WSJT on

432. Bob logged on 20 Feb at 1745 DL7APV, 1829 UA3PTW, 1838 K2UYH, 1905 I1NDP, 1947 ZS6WAB, 1957 OK2POI, 2004 UA4AQL, 2015 9H1TX, 2125 K3MF, 2147 DL5FN and 2200 G4RGK, and on 21 Feb at 0000 G4ZFJ, 0218 JA6AHB, 0345 VK4CDI, 1623 DK3WG, 1753 F6APE, 1809 OK1TEH, 1823 YL2OK, 1848 M0EME and 1927 FY/DL2NUD to complete WAC in one weekend! Another 10 to 15 calls were copied over the weekend, so hopefully Bob can get back here in March to reactivate the station on JT65 and add some of these stations to the log. Bob was QRT for a while on Sunday afternoon with an apparent PA problem. Fortunately he was able to resolve the problem without too much difficulty. Heavy wet snow and high winds limited my activity over the following weekend. I did add on CW on 1 March at 0500 WB7QBS (random) for an initial. I still have no interest in the digital modes, so the only JT operation from NC1I will be when W1QA is here. I will try to be more active on CW in March. I don't know if W1QA will be over to operate digital at all (he is currently in ZS6). My time will be limited during the April 70 cm DUBUS Contest weekend, but I will try to be on as much as possible.

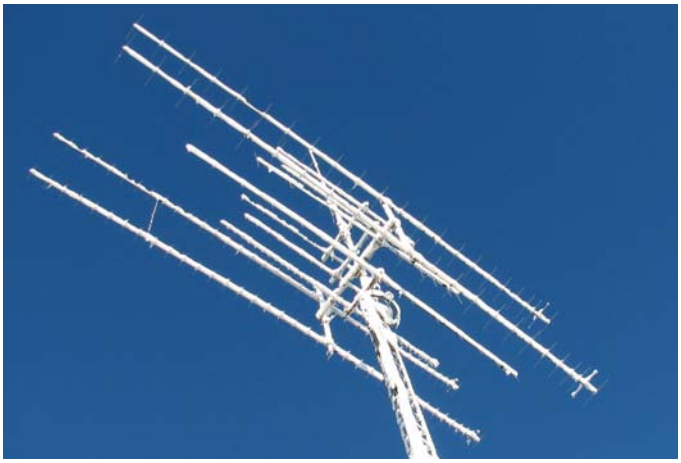
OK1DFC: Zdenek ok1dfc@seznam.cz was active during the SSB Contest weekend -- I was QRV on 23 cm on 27/28 after some absence and observed some very nice activity. I added two initials on CW and 3 on JT65. I worked on OK2DL for initial #268, RW3BP, UA3PTW, SP6JLW, LZ2US, 8J1AXA, SP7DCS, DL6SH, VK5MC, SV3AAF, OZ4MM, G4CCH, OK2DL (579 on CW), SM4DHN, DF3RU, OZ6OL, ES5PC, PA3FXB, G4RGK, OK3RM and UT2EG #269 all on SSB except for one as noted on CW. All these QSOs were during my second Moon pass but before the SSB contest ended. I had problems on Friday with strong wind and was not able operate my dish. Later I had contacts with SP7DCS, UT2EG, LZ1DX, G4CCH, IK5QLO, PY2BS, VE3KRP and K8EB with all on CW, and UT2EG {#85}, DF3RL {#86}, W3HMS, N6RMJ {#87} - 24DB speaker copy signal, K8EB, VE7BBG, LU1CGB, OK3RM and K7XQ on JT65c. I am now testing a new transverter for 2302 - 2424 GHz. First results look very promising. It covers all 2.3 GHz bands and can provide crossband between all frequencies. I am also working on a 500 W PA for use in the DUBUS 13 cm EME contest. For video recording of a 1296 EME QSO between OK2DL and G4CCH, see http://www.youtube.com/user/ok1dfc#p/u/0/CjVl1kUNnVg.

OK1TEH: Matej ok1teh@seznam.cz remains very active on 70 cm with his single yagi -- On 25 Jan I worked using JT65b W7MEM for mixed initial #43*. This QSO was made possible by a new cavity filter. In Feb I added initials on JT65b with W7AMI (27DB/28DB) #44*, NC1I (21DB/16DB), SM2CEW on CW (M/O) #45*. I also saw on JT65b SV3AAF (31DB) and I1NDP (18DB). I have updated my 70 cm EME antenna gallery; see http://ok1teh.nagano.cz/eme_log432.htm#gal. Skeds are welcome.

ON5TA: Eric eric.vanoffelen@skynet.be send news on his recent 10 GHz activity -- On 27 Feb I completed my first 3 cm QSOs with Japan. I worked JA6CZD for initial #19 and JA4BLC #20 on crossband 10.450/10.368. Both stations were good copy on my 2.3 m offset dish. These are also the first 3 cm QSOs between JA and ON.

OZ4MM: Stig vestergaard@os.dk has repaired his dish elevation and was quite active in Feb -- I am back and worked on 1296 on 20 Feb LA9NEA, PA3DZL, DF3RU and RD3DA all on CW. I tried to get UN7GK attention on CW, as he was loud on JT. But he was not able to change to CW. Later I was QRV on 432 for the CW ATP and worked LZ1DX, K3MF, W8TXT, K7XQ, DG1KJG, G4RGK, I1NDP, SM2CEW, N4GJV, WB7QBS for initial #325, K2UYH, OK2POI, I1NDP, F6APS #326, OZ6OL and 9H1TX. I was glad to see the activity. I didn't expect many stations to be QRV because the weather problems here in EU. I tried to get FY/DL2NUD, 8J1AXA and UN7GK's attention who was working JT by calling them on CW. All had fine signals. The FY dxpedition had a really great signal even with cross pol. The following weekend, I changed to 1296 for the SSB contest. I found extremely good activity, and with limited Moon time worked 28 stations during contest period and 5 stations afterwards. I QSO'd on 27 Feb on SSB SP6JLW, SV3AAF, RW3BP, F5SE/p for initial #346, N2UO, W7JM, K2UYH, N4PZ #347, K1RQG, VE6TA, PY2BS, PI9CAM, 9A5AA (CW/SSB), VE6BGT #348, 8J1AXA, VK5MC, OK1DFC, OK3RM, OK2DL #350, PA3FXB, LZ2US, OE5JFL, G4CCH, OZ6OL, DF3RU, SP7DCS, IK3COJ, DL6SH #351, G4RGK, IK5QLO (CW/SSB), IZ2DJP, UT2EG and LZ1DX. My contest score was 27 SSB + 1 CW/SSB = 55 x 14 grids = 770 points.

PA3DZL: Jac PA3DZL@planet.nl reports on his recent 23 cm activity -- Since the beginning of the year I am QRV with some *real* power! I finished my new PA. It is a Plisch cavity with a TH328 tube. I run the PA at about 500 W on CW and 300 W on JT. My dish is still 2.5 m with a VE4MA feed and a G4DDK preamp at the feed. I can now always hear my echoes; so power does help a lot! I QSO'd on 24 Jan PA3FXB, UN7GK for initial #91, LA8LF #92, IK5QLO #93, JA6AHB and SV3AAF #94, on 30 Jan 8J1AXA #95, LA9NEA, PE1HNG #96 and HB9HAL, on 31 Jan G4CCH, JA6AHB and PA3FXB, on 20 Feb OZ4MM K8EB, PY2BS and VE6TA #97, and on 21 Feb RW3BP, HB9IZ, LA9NEA and IW2FZR #98.



N6RMJ's EME arrays

PI9CAM: Jan (PA3FXB) jvmmap@bart.nl reports on the first EME SSTV QSO other recent activity – We, (PE1ITR, PA1TGI, PA0WTA and myself) had great fun on SSB during the 23 cm SSB Funtest. The activity was a bit less than last year, I think because of the bad weather in some parts of the world. We were only on during one night, so we missed moonrise on Saturday, and consequently no VK or JAs for us this time. We used for the first time our new 23 cm SSPA (4 X RF286) modules made by PE1RKI and combined by PA0PLY, PA7JB and PA3CEG. It worked great. We plan to mount it in the focus box as soon as the weather improves. This will improve our signal by 6 dB. Even with the reduced power we were able to complete what we believe to be the first SSTV EME QSO with HB9Q on 23 cm. [Back in the 80's, K5JL and I tried to work K3NSS with its 85' dish on SSTV on 432. We came close, but never succeeded]. We were also able to receive images from RD3DA with his 3.7 m dish. We tried the SSTV because an artist was interested in bouncing images off the Moon. Her first idea was bouncing movies off the Moon, but that requires a lot more than a 25 m dish. So we shifted to pictures and tried SSTV. QSO'd during the contest were on 26 Feb at 2136 F5SE/P (56/57) JN, 2140 OZ6OL (55/57) JO, 2141 SV3AAF (56/57) KM, 2144 DL6SH (55/55), 2147 SP6JLW (57/57), 2152 9A5AA (57/52), 2156 RW3BP (58/57) KO, 2158 PY2BS (59/57) GG, 2202 SP7DCS (55/55), K1RQG (59/59) FN, 2326 UA3PTW (59/57), 2343 K2UYH (56/57), 2347 SM2CEW (59/599) CW/SSB KP and 2349 W7JM (57/59) DM, and on 27 Feb at 0006 W3HMS (56/529) CW/SSB, 0012 N2UO (57/55) FM, 0015 K5JL (59/59) EM, 0032 VE6TA (58/57) DO, 0200 OZ4MM (58/58), 0226 VE6BGT (55/55) and 0240 K7XQ (53/52) for (19x2+2)x11 = 440 points. We also did some 70 cm JT and we worked TK5JJ for the first PA - TK on 70 cm for a nice bonus.

PY2BS: Bruce bruce@zirok.com send his SSB contest log -- All QSOs were unscheduled, on random. My station is a 4.6 m dish, RA3AQ feed and 800 W SSPA (550 W at the feed). Worked were on 23 cm were on 26 Feb at 2200 PI9CAM JO, and on 27 Feb at 0157 OZ4MM JO, 0317 N2UO FM, 0320 K1RQG FN, 0325 SP6JLW JO and 0335 F5SE JN for 5x2x4 = 40 points.

RW3BP: Sergei rw3bp@vhfdx.ru 2010 SSB Contest report -- In the SSB Contest I worked 20 two way SSB QSOs and one mixed in 12 grid sectors for 492 points). QSO'd were SP6JLW, SV3AAF, OZ4MM, F5SE/P, OZ6OL, PI9CAM, K1RQG, UA3PTW, SM2CEW (SSB/CW), N2UO, 8J1AXA, OK2DL, ES5PC, OK1DFC, LZ2US, OE5JFL, VK5MC, G4CCH, SM4DHN, SP7DCS and DF3RU. Heard were DL6SH, W4OP, K2UYH, K5JL, PY2BS, PA3FXB and UT2EG. In this Contest I was single op. Dmitry RA3AQ was busy at QRL. The setup was the same as in the last ARRL EME Contest, offset 3.4 m dish and 800 W into the feed. Unfortunately my numerous CQs cannot attract the attention of QRP stations. ERP is too low for this. I tried to test the RX ability of my station. My best thus far is a JT QSO with JH0TOG (1.8 m dish and 10 W) and a one way SSB QSO with UN7GK (4 yagis and 500 W). Recordings of my QSOs/heard in MP3 format can be found at http://www.vhfdx.ru/eme/rw3bp_eme_ssb_contest_2010.

SM2CEW: Peter sm2cew@telia.com was QRV in Feb -- I was QRV on 20/21 Feb for the 432 CW ATP and found conditions quite OK. I worked G4RGK, K2UYH, DL7APV, N4GJV, I1NDP, W8TXT, DG1KJG, OZ6OL, OK2POI and JA6AHB. I still have a problem with trees blocking my moonrise window at lower declinations. Signals are down on TX and I see a significant amount of

extra noise on RX. On 26 Feb I worked SM4IVE (super sigs) and OK1TEH for initial #432 (single yagi). All 432 is CW of course. No sign of a signal difference between my dual dipoles (H/V) this time, so I am pretty certain that the problem I had in Jan was due to snow and ice on the feed. On 26 Feb I was also QRV for the 23 cm SSB Fun Event, but I only transmitted CW to the SSB stations. Signals were excellent from all stations. I worked F5SE/P for initial #208, UA3PTW, RW3BP, SV3AAF, N2UO, SP6JLW, K2UYH, K1RQG, PI9CAM and K5JL. All with amazing SSB signals - thanks for the fun. I will be on 23 cm again as soon as the Moon comes north looking for more initials. Earlier in month I worked UT2EG on CW for another initial on 23 cm.

SP6JLW: Andy (SP6JLW) and Jerzy (SP6OPN) sp6jlw@wp.pl report on their 23 cm SSB Contest results. They used a 6.5 m dish with a 1 kW SSPA consisting 16xBLV958s and VLNA by SP9WY. QSO'd were on 26 Feb at 2006, SV3AAF (54/54 KM, 2010 RW3BP (55/54) KO, 2012 OZ4MM (57J/57) JO, 2017 OZ6OL (44/54) JO, 2031 DL6SH (53/54) JN, 2047 SP7DCS (53/54) JO, 2059 F5SE/P (55/55) JN, 2149 PI9CAM (57/57) JO, 2236 K1RQG (57/57) FN, 2319 N2UO (54/55) FM, 2329 SM2CEW (559/58) CW/SSB KP and 2358 K2UYH (44/56) FN, and on 27 Feb at 0017 W4OP (55/57) EM, 0046 UA3PTW (559/57) CW/SSB KO, 0053, VE6TA (54/57) DO, 0101 W7JM (55/55) DM, 0326 PY2BS (53/54) GG, 0352 VE6BGT (549/55) CW/SSB DM, 1632, OK2DL (559/57) CW/SSB JN DUPE, 1702 8J1AXA (44/55) QM, 1708 OK1DFC (57/57) JN, 1730 OK2DL (55/57) JN, 1734 G4CCH (56/56) IO, 1741 HB9MOON (589/58) CW/SSB JN, 1810 LZ2US (55/57) KN, 1831 SM4DHN (57/56) JP, 1834 VK5MC (55/56) QF, 1838 DF3RU (54/57) JN, 1907 ES5PC (54/56) KO and 1915 G4RGK (549/55) CW/SSB IO for total of (24x2+5)x16 = 848 points.

SV3AAF: Petros' sv3aaf@yahoo.com 1296 MHz EME SSB Contest log follows: He worked on 26 Feb at 2008 SP6JLW (54/54) JO, 2014 OZ4MM (55/55) JO, 2019 RW3BP (53/55) KO, 2124 F5SE/P (43/52) JN, 2144 PI9CAM (56/57) JO, 2218 K1RQG (57/56) FN, 2311 W4OP (559/57) CW/SSB EM, 2316 SM2CEW (569/57) CW/SSB KP and 2359 N2UO (44/55) FM, and on 27 Feb at 0017 K2UYH (55/53) FN, 0042 K5JL (55/57) EM, 0049 W7JM (44/55) DM, 0058 UA3PTW (549/56) CW/SSB KO, 1758 G4CCH (55/55) IO, 1804 OK1DFC (55/55) JN, 1819 OK2DL (439/54) CW/SSB JN, 1823 LZ2US (54/44) KN, 1833 8J1AXA (559/56) CW/SSB QM for a total of (13x2+5)x13 = 403 points.

UA3PTW: Dmitrij ua3ptw@inbox.ru was very active on 432 and 1296 during Feb – He worked on 70 cm using JT65B FY/DL2NUD, N3LL, WD4JHD, W5UWB, EA7AJ, DL7FF and TK5JJ. On 1296 SSB he QSO'd RW3BP and F5SE/p and a new station on CW IZ2DJP. He also added G4DZU on JT65c.

UA4AQL: Al ua4aql@krts.pp.ru reports working in Feb on 432 only NC1I and OK1KIR with JT65b. Al is using 2 x 26 el RA3LE yagis and 700 W.

UN7GK: Vladimir UN7GK@mail.ru continued to add EME QSOs in Feb – He worked on 70 cm with JT65b K2UYH, DK3WG, G4RGK, DL5FN and I1NDP. On 1296 he contact with JT65c 8J1AXA, PA3FXB, DF3RU, RD3DA, HB9Q and PA0BAT.

VE3KRP: Eddie eddie@tbaytel.net continues to be active on 23 cm -- I worked on 21 Feb VE6TA and 8J1AXA for initial #61, and on 28 Feb LZ1DX, W4OP, OK1DFC and K5JL. I tried with OK2DL but missed and heard PY2BS with a nice signal.

VE6BGT: Skip macaulay@red-deer.oilfield.slb.com had quite a bit of fun in his very first real attempt at EME SSB -- Up to now its been just experimenting and testing with the occasional contact. This time as soon as the Moon came around the trees I was called by a lot of strong stations. Most were easy to contact, while others were marginal. All in all it was a very good time and an exciting experience. My amp ran flawlessly and the 14' dish wasn't too bad - I seem to have finally tweaked it as good as its going to be. The stations worked were OZ4MM JO, K1RQG FN, PI9CAM JO, F5SE/P JN, N2UO FM and SP6JLW JO. Later I heard VA7MM very weak, PY2BS quite well and AL7RT, but had to go to bed as I had to work the next morning.

VE6TA: Grant ve6ta@clearwave.ca was active on 1296 in Feb. On 20 Feb he was on looking for 8J1AXA with nil results, but did work W7JM (formally W7BBM) on SSB random. The next day he added initials with UT2EG and PA3DZL. Grant had fun in SSB contest, but missed a lot of the guys and found no big guns out of EU.

VK4CDI: Phil vk4cdi@gmail.com reports on his Jan/Feb operation -- All my QSOs were on JT65 except as noted. I QSO'd in Jan on 70 cm UT6UG for an initial (#), DF3RU (#) and DL7APV, and on 23 cm VK7MO for an initial (#), ES6RQ (#), YO8BCF (#), PA3FXB (#), RW3BP (#), PA3CSG (#), 8J1AXA (#), K7XQ (#), UN7GK (#), K8EB (#), UE3FWC, VE7BBG, JA6AHB, VK2JDS and G4CCH, and in Feb on 70 cm NC1I (#), and on 23 cm K2UYH (#), UT2EG (#), LA9NEA (#), VA7MM (#) and K2UYH on CW. I should have a new PS for my 23 cm SSPA that should increase my power to 150 W. I also hopefully will have my 70 cm PA back in service.

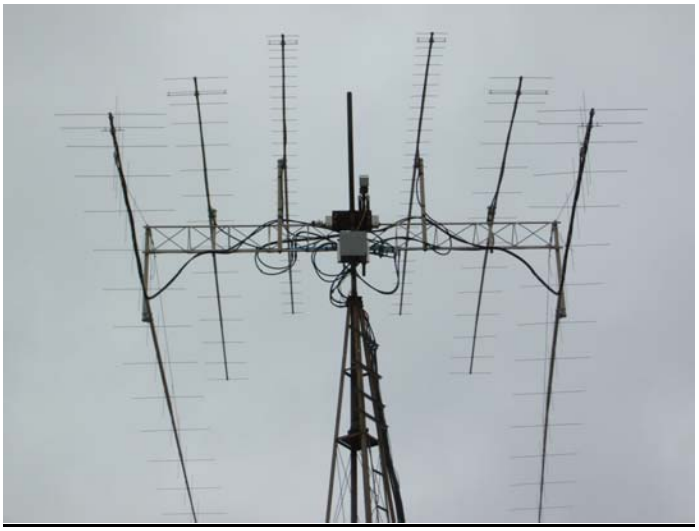
VK4EME: Alan vk4eme@westnet.com.au is QRV again on 70 cm EME after many years of absence - (last QRV in 1999). He is now located in a new grid square (QG63kq) so he will count as an initial for those who worked him from his old QTH. He now has plenty of space for antennas in a quiet location. Presently he is running with 16 x 15 el WU yagis and ~50 W on both CW and JT, and is available for skeds.

VK5MC: Chris' cskeer@seol.net.au EME report for 27 Feb – During the SSB Contest I was pleased to work the following: 0834 K1RQG (57/57) FN, 0843 VE6TA (55/55) DO, 0912 8J1AXA (55/55) QM, 1005 VA7MM (579/559) on CW, 1755 OZ4MM (56/56) JO, 1757 OK1DFC (55/56) JO, 1804 LZ2US (57/45) KN, 1810 RW3BP (56/56) KO, 1834 SP6JLW (55/56) JO, 1844 G4CCH (56/55) IO, 1847 SM4DHN (55/55) JP, 1853 OK2DL (55/5) JN, 1847 OZ6OL (55/5) JO and 1901 DF3RU (56/55) JN for (13x2+1)x9 = 243 points. Heard but got aways were ES5PC and JA3PCW. All the stations on from EU made operation at the 4 am local moonset time worthwhile. Back on 30 Jan I came on 1296 for the full Moon just to see who might be around. I was not expecting a lot. I heard some JT signals and tuned down the band and was surprised to hear a strong SSB signal. 8J1AXA was on for there moonrise and in contact with VK2JDS. I waited until there contact was over and exchanged (56/55) reports. My station is currently running 100 W from a GS15 water cooled PA, 10 m dish (f/d=0.42) with W2IMU feed and a G4DDK LNA. I continue to be amazed by the simple operation of my VK5DJ tracking system, which has been upgraded with a built in time clock. I don't have to start from scratch each time I get a power glitch, which happen frequently at my bush QTH. The tracking system has many user defined variables in it depending on how its set up and is suitable for both Moon and satellite tracking. It has a wide range of encoder inputs, depending on your demand including a simple potentiometer. It is also compatible with the VK3UM tracking software. In my system I am using home made AS5040 absolute encoders on AZ/EL. It tracks my 10 m dish with ease on 1296. VK5DJ does still have some boards available - see his web site for info. I have also been playing with an SDR Softrock receiver and now have it going. It certainly looks promising for those wishing to see a segment of a band. Currently I am able to see 90 KHz of 1296, and can see at a glance any JT, SSB or CW stations that may be on without turning a dial.

WA6PY: Paul pchominski@maxlinear.com writes on his preparations for the DUBUS Microwave Contests -- My 3.4 GHz system is still RX only without a PA and isolation relay. All except the feed horn was built in 2002, but I never had the time to test. The transverter is home made with a 13 dBm LO mixer. Recently I replaced the XTAL in the LO chain to shift the RF frequency from 3456 to 3400. For the 9 cm band I am using 3.6 m, f/d 0.36, dish with 5 mm aluminum mesh. A 5-step Septum feed scaled from N2UO's 1296 Dual Mode, but with the radiation section replaced by a Chaparral design. Both ports use SMA connectors. The return Loss on the RX port is -32 dB, TX port is -28 dB, Isolation is 22 dB and the circularity of the polarization within 0.5 dB. The poor isolation is probably related to the total length of the feed, especially the distance between the probe and mouth of the feed. Currently I do not have access to HFSS and I cannot optimize this feed by simulations, but I can always place narrow band compensation as proposed by RW3BP in the aperture of the feed. The LNA is a modified 4 stages C-band TVRO RX, gain is 46 dB and NF about 0.7 dB. The cable between the feed and the LNA is 6 cm of flex semi rigid EZ86 with a loss including connectors of 0.15 dB. I measured on 14 Feb at 1640 a Sun noise of 11.2 dB and a CS/G noise of 4.7 dB. On 5.76 GHz I cannot measure any noise performance parameters due to a very high level of QRM from digital communications links. I QSO'd OE9ERC a few months ago, but I was then using a linear polarized feed. I am building a new CP Septum feed and should be QRV in DUBUS contest and AW with slightly stronger signals, although with only my QRP 7 W at the feed.

WB7QBS: Glenn <not available> now has his repaired LNA back in service and all is working well. He worked on 20 Feb on 432 at 2111 OZ4MM and 2154 heard I1NDP, and on 28 Feb at 0500 NC1I during a *divine* enhancement – only copied bits and pieces earlier.

WD4JHD: Russ wd4jhd@bigriver.net is now QRV on 70 cm EME using JT65 from EM55 in TN –- I have been active on 2 m EME since Aug, and decided to listen on 432 one day to see if I could copy anyone. I found NC1I on and easily made my first 432 EME QSO. I am using 2 x 9 wl yagis and a 1.3 kW PA. I also have a pair of 5 wl m2 yagis for 220 all on the same boom.



WD4JHD's 2 yagi array (incenter) used on 70 cm EME.

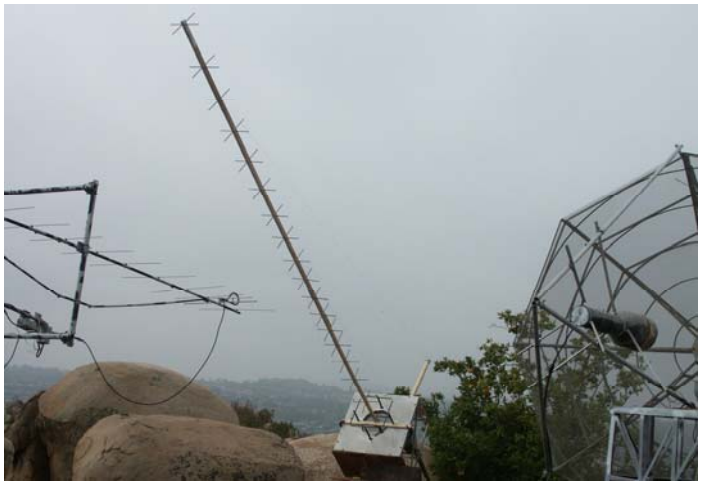
WD5AGO: Tommy wd5ago@hotmail.com I am setting up for the 9 cm DUBUS Contest in March and switch back for the 13 cm contest in April from my home QTH. I we will also be operational on 16/17 April on 70 cm from another location. We will only be on near moon rise on 17 April but will be on the whole pass on 16 April and 1400 through 0200 the 17th. I am interested in skeds for my western window up to almost moonset on 70 cm.

K2UYH: I a.katz@ieee.org did not think I was going to be able to operate during the SSB contest. More than 50% of my dish was covered with snow and I was concerned about the extra weight. As it was not that thick (I estimate about an inch), I decided to give it a try after adding extra counter weight to the back of the dish. I could definitely see the effect of the extra load on the way the elevation control reacted, but nothing broke! The snow also seemed to degrade signal level. I suspect signals were degraded by several dB due to the snow's presence, but I was still able to copy many SSB signals; some were excellent copy. My operation was cut short when I lost my preamp. My 5 year old grandchildren were visiting and I was showing then how echoes sounded from the Moon. We were a little over enthusiastic and had the mic activated before the TR switch. This should get me to improve my T-R sequencer. Because of the extra snow weight, I did not feel comfortable bring the dish all the way to the horizon and thus was QRT for the remainder of the Funtest. QSO'd were on 26 Feb at 2331 SM2CEW (559/56) KP, 2341 PI9CAM (56/57) JO, 2350 K5JL (56/58) EM and 2356 SP6JLW (44/56) JO, and on 27 Feb at 0009 SV3AAF (53/54) KM, 0020 N2UO (55/55) FM, 0020 K1RQG (57/57) FN, 0029 W7JM (56/56) DM, 0036 F5SE (55/55) JN, 0106 VE6TA (56/57) DO, and 0135 OZ4MM (58/56) JO. I was disappointed not to be QRV for the VK/JA window. Earlier in the month I QSO'd on 432 on 20 Feb at 1638 UN7GK (28DB/18DB) on JT65b for DXCC 96* and mixed initial #783*, 1712 FY/DL2NUD (19DB/O) on JT65b #784*, 1732 OK1YK (25DB/19DB) on JT65b #785*, 1748 partial F6HTJ (-/27DB) JT65b, 1826 9H1TX (O/20DB) JT65b, 1838 NC1I (8DB/7DB) JT65b and 1907 9H1TX (O/O) CW initial #718, and during the CW ATP at 2014 OZ6OZ (559/559), 2021 G4RGK (559/569), 2025 N4GJV (559/569), 2030 K3MF (559/559), 2057 SM2CEW (559/569), 2114 OZ4MM (569/569), 2124 I1NDP (579/579) and 2134 W8TXT (569/559), and on 21 Feb ON 1296 at 1848 partial F6HTJ (-/26DB) on JT65b, 1926 G4ZFJ (27DB/18DB) on JT65B and 2000 IK5QLO (449/449) on CW for #305, 2023 K8EB (559/559) CW, 2035 N4PZ (559/559) CW, 2046 PA3FXB (11DB/10DB) JT65c, 2050 PY2BS (12DB/10DB) JT65c, 2110 QRZ – [I'm interested in who was calling? If they continued I am sure I could have figured it out.], 2115 VE4SA (559/558) CW and 2137 W4OP (559/559) CW, and on 4 March also on 1296 at 0655 N6RMJ (24DB/25DB) on JT65c #366*.

NETNEWS BY G4RGK: **OK2DL** is new OK EME station. Marek has a 6 m dish and 300 W SSPA. His web is http://ok2dl.blogspot.com/. **OK2UZL** should be QRV on 70 cm EME with 2 x 23 el yagis and a 500 W PA. **W7MEM** is putting up a 12' dish for 1296. **VE4SA** is making slow progress on 13 cm. Shawn has the feedhorn done, and the LNA and transverter, but the power amp is not converted yet. **SM4IVE** had very bad weather and was not on 70 cm EME. He did get his gearbox repaired, but needs to do some more work with the drive motor. **K8EB** is looking for 23 cm skeds. **W4OP** was on 23 cm briefly during the SSB Contest. **K5JL** worked during the Feb AW on 23 cm OK2DL for a new one. **KL7UW** is getting on 23 cm EME. **W7CS** is also working to return to EME on 1296 and 2300 with his 5 m dish. **WW2R** will be QRV in the DUBUS 9 cm contest.

FOR SALE: **IK5QLO** has for sale a 48-55 V 1 kW switching power supply; details can be found at http://www.isaacasimov.it/ik5qlo/forsale.htm. Contact Andrea at owghil@tin.it. **W7MEM** is looking for a 1296 feed and LNA. Contact Mark at w7mem@msn.com. **K8EB** is looking for hybrid combiners for 3400 MHz with at least a 100 W rating. Contact Irv at mrdxcc@sbcglobal.net.

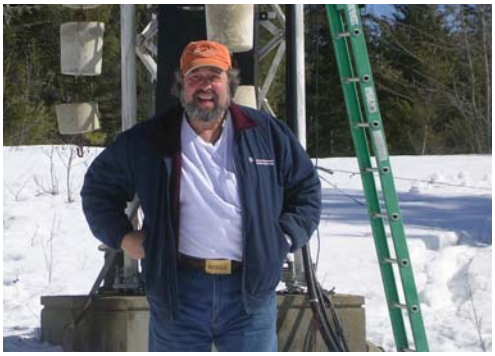
TECHNICAL: Dish-Feed Cross Yagi Antenna for 432 MHz by WA6PY -- Motivation to write this short description came from many people asking about details of my single cross yagi on 432. I decided to answer most of the questions to the wider forum by showing this design. The history of this antenna is complicated. Back in Stockholm as SM0PYP, I used a 7.6 m dish. When I moved to San Diego, I could not erect my old dish due to the local antenna restrictions. I was forced to play with small antennas. From the beginning I did not consider it possible to be QRV again on 432. But, years ago during ARRL EME contest, I put my old Dual-Dipole Feed (DDF) on the rock about 1 me above the ground aiming to the horizon. I setup my old 432 MHz system using a modified IC202, an old transverter built in 1982, SSPA driver and YL1050 PA without any hope to hear anybody. Right after half of the Moon rose from behind the mountain on the horizon, I heard relatively strong DL9KR calling CQ. I called him and he responded right away with an RST report. I called few other stations, but got only QRZ. During next year I QSO'd a few more stations with only my DDF antenna. I decided to mount the DDF on my 2.4 m dish. I QSO'd few more stations, but results were not very encouraging. Then I decided to extend the DDF with directors. I use cross elements in order to have both polarizations horizontal and vertical. First setup was on wooden boom 4.2 m long. I had a hard time matching the director structure to the DDF, which is designed to illuminate a wide lobe angle. This mismatch results in high side lobe levels and noise temperature. With this antenna, I QSO'd another 20 initials. When I got a bigger 3.6 m dish for 23 and 13 cm, once again I mount DDF on the dish. But the results were not better, compare to the extension with directors. After some time the wooden boom holding the directors started to warp. Finally I simulated a new longer extension using an aluminum square boom. The noise temperature was still higher then for well designed long yagi due the mismatch between DDF structure and directors. Please note that length of the first four directors is non monotonic. I found that I could improve the sidelobes by using dual first directors with an offset from the boom. However, this requires a simulation of the entire cross yagi structure. Otherwise capacitive coupling between ends of elements could ruin the design. Unfortunately my NEC-2 version had number of segments limitation and I could not run the needed simulations. Such a dual D1 makes also mechanical complications. For lowering noise temperature of this antenna, I simply extended the mesh from my old dish on the ground below antenna. With this antenna I was able to hear my echoes for the first time in San Diego. The director's diameter is 4.76 mm. Elements positions are offset from the spacing given in the table, vertical elements by -3.5 mm and horizontal elements by +3.5 mm. Elements are insulated from the boom by means of shrink tubing and glued to the boom. The simulated Gain = 17.2 dBd and F/B = 22 dB. Return Loss for both polarizations of DDF was tuned to less then -30 dB. The measured Cross Polarization < -20 dB, but this factor is difficult to measure accurately below this level due to multipath/reflection in the test environment. This is not an antenna that I recommend if you want to build as a yagi. But I will recommend it if you want to use a cross yagi. If I were to build a new cross yagi for 432, I would start with a good and proven design and place cross polarization elements as I did on my DDF extension. The best would be to simulate the entire yagi structure. 85% of my contacts were made with the help of vertical polarization and the ability to switch between polarizations.



WA6PY's Feed Yagi

Dir	Spacing from DE	Spacing between elements	Element Length	Square Boom side
1	4.3		36.4	**31.7**
2	17	12.7	34.5	**31.7**
3	33.2	16.2	37.7	**31.7**
4	45.8	12.6	36.9	**31.7**
5	62.8	17	37.5	**31.7**
6	83	20.2	37.4	**31.7**
7	103	20	37.4	**31.7**
8	124.7	21.7	37.5	**31.7**
9	148.2	23.5	34.8	**25.6**
10	172.6	24.4	34.6	**25.6**
11	197.2	24.6	34.6	**25.6**
12	223.3	26.1	34.8	**25.6**
13	250.1	26.8	34.4	**25.6**
14	277.6	27.5	34.4	**25.6**
15	305.3	27.7	34.4	**25.6**
16	333.3	28	34.2	**25.6**
17	361.3	28	34.2	**25.6**
18	389.4	28.1	34.1	**25.6**
19	417.6	28.2	33.9	**25.6**
20	445.3	27.7	33.9	**25.6**
21	473.2	27.9	34.2	**25.6**
22	501.4	28.2	34.4	**25.6**
23	529.8	28.4	34.2	**25.6**
24	557.8	28	34	**25.6**
25	584.9	27.1	33.6	**25.6**
26	614	29.1	33.4	**25.6**

FINAL: Hats off and a hardy congratulations to K1RQG for surviving 25 years as net control of the 20 m 432 and Above EME NET. Joe took over in July 1985!



Joe K1RQG

F2TU asks why the multi-band class was eliminated from the microwave (13 cm up) part of the ARRL EME Contest. He feels this change discourages multi-band activity at microwave. I asked K1JT what he knew about this change. Joe said the change was based on inputs that the EME contest had too many award categories. The change was recommended by the VUAC (and also by the ARRL contest branch). He said consideration is being given to recognizing "band winners" on each band, with multi-band as well as single-band logs being eligible. Band winners would be bold-faced in the line scores, and certificates with appropriate endorsements provided to recognize these winners. In the mean time for the Microwave EME Contest, if someone as Phillippe for example is willing to keep track of the scores, the winners can be announced in the EME NL (and possibly also the DUBUS EME column). It can also be arranged for certificates to be made up for the band winners that can be presented at the International EME Conference along with the SSB Fun maker certificates.

It seems appropriate to note the passing William Gordon the electrical engineer who conceived, designed, built and operated the world's largest radio telescope. He died on 16 Feb a age 92. Arecibo was the first instrument to accurately measure the rotation of Mercury, where it also detected ice. It furnished detailed maps of the Moon, Venus and Mars. It provided the first solid evidence that neutron stars exist. It discovered the first planets outside the solar system. It created the first three-dimensional images of the universe. It can also track asteroids veering near the Earth much more accurately than other instruments and is used to listen for signals from distant space that might suggest intelligent life.

EME2010 preparation is moving a long. This will be one EME conference not to miss. Make your plans now! Expect to see the web page in full operation this month.
This year's Microwave Update will be in Cerritos, Ca on 21-24 Oct and is sponsored by the San Bernardino Microwave Society. The website is http://www.microwaveupdate.org/. They are looking for speakers, papers and attendees! The last MUD in Cerritos was great and they are hoping to have all the same things again plus some special activities. Contact K6JEY at dmillar@moonlink.net for more information.

I think that covers the news for this 29 days. I must admit I am having difficulty keeping up with the growth of activities and events. I had planned to get this NL completed last weekend. But please keep the operating and technical information coming. TNX especially to WA6PY for his two tech contributions this month (one in his report and the in the Technical section). I plan to be on for the two microwave contests (9 and 3 cm), the CW ATP, and EOA/Arecibo back on 70 cm – who would want to miss this! CU off the Moon & 73, Al – K2UYH

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Echoes of Apollo Moon Bounce EME

Event time: Friday, April 16, 16:00Z through Sunday 01:00Z
(Fri 08:00 – Sun 17:00; West Coast time)
World Moon Bounce Day, Saturday, Apr 17

Event Activities: Not a Contest; a fun event; to maximize fun factor, science education, media presentation of Ham Radio Moon Bounce. All EME Bands, All EME modes encouraged.

For on-line updates: http://www.echoesofapollo.com and: Facebook:

http://www.facebook.com/#!/event.php?eid=303638865655= Subscribe to Moon Reflector; For access to the world EME community: http://www.nlsa.com/nets/moon-net-help.html

Worldwide access to Moon Bounce QSO streams, Voice, CW, Digital via WebSDR at CAMRAS in Dwingeloo, Netherlands: See: http://www.camras.nl and: http://websdr.camras.nl:8901/ for the SDR Radio Information/monitoring

ANTENNA WIKI: HOMEBREW 432 ANTENNAS; QUAGIS; YAGIS: Easy, how to construction, simple materials, Dimensions

http://commfaculty.fullerton.edu/woverbeck/quagi.htm
http://www.qsl.net/dk7zb/70cm-longyagi/details.htm
http://www.fredspinner.com/W0FMS/CheapYagi/vjbcy.html

Arecibo Station Building; QRO Enhancements by Lionel, F1JRD; Freescale Semiconductor
http://www.freescale.com/webapp/sps/site/homepage.jsp?nodeId=0106B9&tid=FSH

We, at Echoes of Apollo, would like to recognize and thank Lionel Mongin, F1JRD and Freescale Semiconductor for their generous assistance, and expertise in supplying an HPA system for the Arecibo Observatory Amateur Radio Club-Supplied, Arecibo 432 EME station, THANKS VERY MUCH Lionel, and Freescale!

OPERATIONAL: EOA 432 Participants: Please record Audio Streams. Take Pictures of your event..

MOON TRACKING SOFTWARE: Download VK3UM Planner Software from: http://www.ve1alq.com/vk3um/

For further information: email: Pat, AA6EG apolloeme@live.com

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