432 AND ABOVE EME NEWS
MAY-2 2013 VOL 41 #6

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CONDITIONS: This NL covers the DUBUS/EU 3 cm & Up EME Contest and 2 successful 70 and 23 cm dxpeditions, as well as the ARI's New Modes EME Contest. I cannot honestly talk about good conditions with perigee and high declination being so out of phase this year. But despite the less than optimum Moon conditions, there was plenty of activity. There seemed to be more stations on 3 cm than there were on 70 cm in April. OK1CA reported 21 QSOs. OK1KIR also achieved a new world distance record on 1.25 cm by QSOing VK7MO using JT4F in April. It shall be interesting to see what happens during the 6 cm contest on 18/19 May. 6 cm is the only microwave band (above 23 cm) that offers the same frequency band worldwide. F6CT reports the 13.5 m PB8 dish will be active on 6 cm again on and around the EU 6 cm contest. G100RSGB will also be on 6 cm during this contest – see report in this newsletter (NL). The 2 dxpeditions (full reports in this NL) and the ARI completion somewhat distracted from the April 70 cm CW activity time period (ATP) as all were on (or around) the same weekend. I am afraid the ATP will not fair much better this month with a 19 **May date at 1300-1500 and 2130-2330. The big May event will of course be the 1296 DUBUS EME Contest on 11/12 May. This event has been growing in popularity and with activity exclusively on 23 cm can rival the ARRL EME Contest for turnout. I am planning a visit to KD7YZ in KY on 16 May and hope to generate both 70 and 23 cm EME activity while there – see my and KD7YZ's reports.**

5H1DX: Bodo (DF8DX) df8dx(x)gmx.de has again provided a new DXCC, Tanzania, on 70 and 23 cm EME -- I operated from 3 different locations in Tanzania. I was on first from Dar es Salaam as 5H1DX/3 (KI93og). The first night, 20 April, was not successful because my Moon window there was very limited. I could only copy HB9Q, but the Moon had disappeared already behind the bungalow. The next day, I was QRV earlier and the Moon was visible for about 2 hours. I worked HB9Q, I1NDP, OK1DFC, OK1KIR, OK2DL, PY2BS, DJ9YW, UA3PTW and G4CCH. On 22 April, I took an early ferry to Zanzibar and I was QRV the same evening as 5H1DX from KI94qe. I worked PA3CSG and UA3PTW. JA6AHB was copied for quite some time, but a QSO was not completed. Unfortunately there was no electrical power in the night. This limited my operating time. On 23 April, I was finally QRV on 70 cm. I worked HB9Q, DL7APV, JA6AHB and OK1DFC. I had serious trouble with my RX on 70 cm. Working those stations was not easy. On 24 April, I went to Pemba Island (KI94tn). I worked from there on 23 cm OK1KIR and K2UYH. DF3RU was copied for almost an hour, but I copied no response.

5H1DX one man "Bodo" dxpedition in Tanzania

9G5EME: Rene's (PE1L) hasperrene(x)gmail.com and team (PA3CEE and PE9DX) delivered Ghana on both 23 and 70 cm -- We were very happy considering our limited operating schedule to QSO on 70 cm DF3RU, DK3WG, DL7APV, DL9KR (CW), ES5PC, G4FUF, G4RGK, HB9Q, I1NDP, JA6AHB, K2UYH, K4EME, LZ1DX, N4QH, NC1I, OK1DFC, OK1KIR, OZ4MM, S51ZO, UA3PTW, UX0FF, W7IUV and WA4NKP with our single 23 el DK7ZB yagi and 100 W. On 23 cm we worked DF3RU, DJ9YW, G4CCH, HB9Q, I1NDP, JA6AHB, K2UYH, OH2DG, OK1DFC, OK1KIR, OK2DL, PA3CSG, PA3FXB, PY2BS and UA3PTW again using only a single yagi (59 el SHF yagi) and 100 W.

9G5EME used a 23 el yagi and 100 W on 432 to make 23 QSOs

DJ3JJ: Andreas dj3jj@gmx.net is adding 9 cm EME to his station's 70 cm capabilities. Hopefully he will be QRV in time for the DUBUS contest on 27/28 July.

DJ5AR: Andreas andreas@imse.de is now QRV on 1296 using a 3 m dish with a linear feed and 100 W at the feed. He can operate both CW and JT and has already made several QSOs. He is interested in skeds and should be QRV during the DUBUS contest.

DL7APV: Bernd dl7apv@gmx.de had some stressful days on 70 cm – I believed I had my EL rotor repaired [see last month's NL], but that was an error. On 21 April in preparation for 9G5EME's only 70 cm EME activity, I tried some sun noise measurements. There was a wind gust, the new EL motor failed and the array moved to 140° el. This was 1 hour before operation from Ghana. I nearly had a heart attack, but luckily nothing was damaged. With the help of DL2NUD, who was visiting and a neighbor, we were able move the array back to its normal position. I then used a rope to fix the array's EL. But this was not all! When I got to the shack, I called one time and my PA gave up. I then connected my tropo PA (500 W SSPA) and was able to work them. Pugh, got them! I lost at least 2 kg, running to array, moving elevation and back to shack... I am getting old! [Oh, have I been there!] It was the same procedure on Tuesday (23 April) for 5H1DX. Bodo was 1 KHz lower than expected. but LOUD (20DB!). My PA was not damaged, only an alarm from power supply had to be reset. So, I could run full legal power, which was needed as Bodo had many birdies and could not hear very well. After HB9Q, it took me some time to work him. Bodo worked JA6AHB after me and then had to QRT. I hope to have the elevation repaired soon, instead of running 200 m every time I need to change my elevation!

G3LTF: Peter's g3ltf@btinternet.com April EME report – I was active this month on 70,23 and 13 cm, but only managed two initials despite there being several folk on the loggers with enough capability to work. On 13 April, I was on 2320 and worked YO2BCT, PA3DZL and ON5TA. Later that day on 1296, I worked OZ6OL, TI2AEB, G4CCH and OK1CS. I worked on 1296, on 14 April UA4HTS for initial #369, VK2JDS, I5MPK, VK4CDI, PA2DW who was using a 2 m dish and 250 W (random CW), SM7FWZ and IK5VLS, and on 15 April OZ6OL again. On 432, on 19 April, I ran a sked with VK4EME on 432. Alan only runs 100 W and I copied everything from him, but he did not get my final Rs so we will try again next month; on 21 April I came on for the 70 cm CW ATP, but as it coincided with the Italian digital contest I didn't expect to work much even though there were a lot of stations on. I did work OK1DFC, WA4NJP, K2UYH and LZ1DX and had a near miss with F6HZL. [Peter is kind. I thought Peter had completed and called F6HZL before Peter had finished. F6HZL disappeared.] On 22 April, I came up on the HB9Q logger and announced that I would call CQ on SSB. I was called by PE1LWT for initial #370 with a nice signal for 3 m dish and 150 W. This was his first EME SSB QSO, and was followed by PY2BS. I repeated the same idea the next night and was called by IK5EHI, but he could not get my final Rs. I plan to be QRV for the 23 and 6 cm DUBUS contests, and as soon as the Moon is again above about –10 degs declination, I will be QRV again.

G100RSGB: Brian, G4NNS brian-coleman@tiscali.co.uk reminds us that the RSGB's Centenary EME Operation -- Over the weekend of 18/19 May the special call sign G100RSGB, which celebrates the centenary of the Radio Society of Great Britain (formed in 1913) is to be used by the UK Microwave Group to operate EME. As this coincides with the DUBUS 9 cm EME contest, we will commence operation on that band. We may change to 3 cm for the second day of operation. On 5.7, it is against the rules for anyone entering the contest to use the loggers, see rules at <http://www.marsport.org.uk/dubus/eme.htm>. As a special event station, we do not intend to enter the contest, but it would be good, if others can benefit in points by working us on random. We will be on the HB9Q logger and any non entrants, who wish to make arrangements via the logger can of course do so. It is within the rules for others to "spot" our activity and I would be grateful for that. Our activity windows are 1530 - 2230 on 18 May and 1700 to 2300 on 19 May.

K4EME: Cowles candrus@mgwnet.com was active on 70 cm in the ARI's New Modes EME Contest – In April, I was able to get on the moon a little during the ARI Digital EME Contest and worked 16 stations including WA4NJP, K5DOG, K2UYH, DL7APV, LZ1DX, PE1RDP, DG1VL, PA0PLY, DL1SUZ, NC1I, W7AMI, OK1TEH, 9G5EME, OK1DFC, YL2GD and W2CNS. I was very excited to finally get to work 9G5EME. My time was limited, but I really enjoyed all the activity on 432. I heard DL9KR on CW. He sure had a great signal and sounded like a local!

KD7YZ: Bob KD7YZ@ARRL.NET is now QRV on 70 cm EME from KY (EM88ii) with 4 x 18 LFA yagis, fully AZ-EL mounted and rotatable. He worked OK1DFC on 23 April with JT65B using only about 20 W at his array's feed point and no preamp. I will be visiting Bob on the way to Dayton, on 16 May. I will bring him a preamp and a 4CX250 PA that should be capable of 500 W. I also plan to have a small 1296 system with me that we may be able to set up to make some EME contacts. I hope to get Bob on 23 cm EME as well as 432 EME.

EME array for 2 m (right) and 70 cm (left) - 4 x18 el 432 LFA yagis with 'Splitter Bar" attached to the horizontal H-Frame bar and mounted between the vertical mast and the respective vertical H-Frame leg, and thus allowing mounting the phasing harness coax as close to the LFA feed-point as possible - closer to the driven elements than with other methods.

NC1I: Frank frank@nc1i.com reports on his April activity -- All operation in April was on WSJT by W1QA. On 13 April, Bob worked at 2110 K5DOG (11DB/10DB), on 20 April at 2052 LZ1DX (4DB/2DB), 2118 OH6KTL (24DB/18DB), 2130 PA0PLY (8DB/34DB), 2140 DL1SUZ (17DB/21DB), 2148 OK1TEH (13DB/17DB), 2151 DL7APV (4DB/2DB), 2210 PE1RDP (11DB/12DB), 2222 ZS6OB (13DB/24DB), 2238 K4EME (6DB/O), 2314 K2UYH (4DB/5DB), and 2320 KD3UY (15DB/14DB), and on 21 April at 1940 9G5EME (26DB/O), 1956 LZ1DX (4DB/O), and 2140 ES5PC (6DB/O). The QSO with 9G5EME was just a few minutes after our moonrise. They had a phenomenal signal for a single yagi and 100 W, peaking at (18DB)! We are unlikely to be active in May, but expect to return in June.

OK1CA: Franta strihavka@upcmail.cz reports on his DUBUS 3 cm up contest activity – There was very good activity during the 10GHz part of DUBUS EME Contest. I worked OK1KIR, UR7D, ES5PC, F5JWF, DL0EF, PA0BAT, IW2FZR for initial #56, F1PYR, OH2DG, G4NNS, IK2RTI, HB9SV, UA5Y, K5GW, SV1BTR #57, SP6JLW #58, JA6CZD, SP7JSG, K2UYH, WA6PY and 9A5AA. CWNR were JA1WQF and W6YFK. I heard on 24 GHz at Sunday and recorded OK1KIR, LX1DB and the big signal (559) from W5LUA. My Moon noise was 1.9 dB. My rig is a 4.2 m dish and DB6NT LNA.

OK1KIR: Tonda and Vlada vladimir.masek@volny.cz send the latest news from his club, which includes a new 24 GHz EME world distance record – The end of April brought another world EME record success to OK1KIR. On 24.048 GHz, after several unsuccessful JT4F tests with VK7MO (Rex decoded us every time, but no decodes on our side), we finally on 21 April decoded (19DB), but a sudden TX failure prevented a complete QSO. After the TX was repaired, on 23 April we finally succeeded and worked at 1652 VK7MO (17DB/18DB) for digital {#2} and a new world distance record of 16383 km using JT4 and QE field. The QSO was repeated at 1702 (17DB/14DB). Rex used a larger (1.14 m) solid prime focus dish instead of 77 cm dish used before. His rig was the same, a DB6NT WG LNA and single SSPA delivering about 8.5 W at the feed. OK1KIR used prime focus 4.5 m dish, DB6NT WG LNA and about 20 W at the feed. This success confirmed the possibility of portable EME on 24 GHz with a solid dish larger than 1 m and with power at feed of about 20 W (>10 W). However, when comparing 24 GHz to 10 GHz, it requires a Moon elevation of > 15 degs, very low mutual spread (under 100 Hz) a clear sky without clouds on both sides and low water vapor content along the whole radio EME path. It is really an exciting ham-radio EME challenge. On 432, we QSOed through typical strong interference at our QTH with JT65B on 21 April at 2214 9G5EME (27DB/O) for digital initial {#73}, a new DXCC and IJ field, while waiting on 22 April for 5H1DX to possibly QRV, at 1611 YL2GD (18DB/18DB) {#74}, 1654 ES3RF (21DB/19DB) {#75} and 1658 YO8RHI (21DB/24DB) {#76}, and on 23 April returned too late from 24 GHz to catch 5H1DX. On 1296, we worked with JT65C on 19 April at 1456 9G5EME (22DB/19DB) for digital initial {#137}, new DXCC and the 1st 9G-OK 23 cm QSO, on 20 April while waiting for 5H1DX/3 to QRV at 1930 IK5EHI (20DB/7DB) {#138}, 2002 PE1LWT (13DB/11DB) {#139}, 2150 RA3LE (21DB/14DB) {#140}, 2213 PA3FXB (14DB/10DB) and 2315 VE3KRP (12DB/12DB) {#141}, on 21 April at 1706 YO2LEL (10DB/O), 1714 IK5VLS (13DB/13DB), 1718 IK3COJ (12DB/9DB) and 2004 5H1DX/3 (20DB/O) {#142} new DXCC and KI field, and on 26 April at 0020 5H1DX (22DB/O) – repeated at 0040 to be sure. [I think this last QSO may be considered another initial even though both are in the same grid, because of the significant geographical difference between islands.]

ON0EME: Walter (ON4BCB) ON4BCB@gmail.com sends two intereesting 23 cm beacon receptions. The first is from Jan (no call given) lustru@online.no who copied ONØEME at about +7 dB above the noise in a 3 kHz bandwidth,

using only a HB horn antenna with a 0.78 m x 0.98 m aperture, a G4DDK VLNA and a TS-2000X transceiver.

The second is from Dave (G4IDR) davidredmang4idr@gmail.com, who used a 1.7m dish (0.35 f/d) fitted with VE4MA feed and 3 dB hybrid, and G4DDK preamp. He copied the beacon +2 dB above noise in a 2.5 kHz BW. He also received 2 to 3 dB Sun noise. Dave needs to optimize his dish and add motor control. He plans to be QRV with 500 W on 23 cm in the next few months.

PY2BS: Bruce py2bs@me.com has a new 5.1 m dish in operation -- My new 5.1 m dish is finally ready. This dish is a significant improvement over the previous 4.6 m one; not only due to the increase in size, which accounts for nearly a dB, but mainly, due to the much better surface accuracy than its predecessor. Despite some last minute delays, I was very fortunate to get it ready in time to work on 19 April the Atleticoteam dxpedition's 9G5EME (26DB) on 23 cm. During the ensuing weekend, I worked 32 stations in ARI New Modes EME Contest, despite a family commitment on Saturday. On Sunday, I worked 5H1DX/3 (25DB). I also worked TI2AEB for a total of 2 dxpeditions, 3 new DXCCs and 5 initials on the first three days of operation with the new dish! Sun noise on 23 cm is now 17 dB @ SF 99; a 2.5 dB improvement when compared with the previous 4.6 m dish. I'm now finishing a new feeder for 13 cm, and expect to try it soon.

PY2BS's new 5.1 m dish with 1296 feed

SM4IVE: Lars sm4ive@telia.com had a near disaster -- Last Saturday (13 April) my dish was almost destroyed. The elevation gear box gave out after 30 years of use, allowing the dish to tilt freely. A 15 m/sec wind blew the dish from 90 degs elevation to -15 degs, where it hit the tower. As a result, 2 ribs were bent and the poles holding the feed were broken and went to ground with a big bang. Lucky the dish itself did not fell down. Repairs are under way with help from SM4DHN and his milling machine. And with help from other hams, the rotator is back in place today. Left to do are the repair of the feed structure, and when I find the time and energy, the straightening of the 2 parabolic ribs. Ham radio is constant work; and after a hard day's work climbing the tower several times, my body tells me I'm not 25 years old anymore! I am looking forward to the Swedish EME meeting and seeing lots of friends. [Most of the repairs are now done. Lars still needs to rebuild his feed mounting. The 1296 feed only had minor damage, but the 432 feed is pretty badly bent up.]

VE3KRP: Eddie eddie(x)tbaytel.net decided to give JT65C a try during the ARI New Modes EME Contest despite some poor weather -- Luckily some breaks in between snowstorms have allowed EME activity here. I was on 23 cm during the ARI contest and worked UA3PTW for my first digital initial and a mixed initial (#*), DF3RU, I1NDP, IK5VLS, OK1KIR and IK5QLO (#*). The following night, I added YO2BCT and PY2BS via JT65C.

W4AF: Gary gpatterson53@hotmail.com reports that he has improved his 23 cm station -- I have replaced my 10' dish with a 16' dish. The new dish is a 12' Paraclipse with new extensions applied. I am also working on combining four W6QPL 1296 SSPAs to drive the dish with some decent power.

W4AF's expanded Paraclipse dish – now 16'

W5LUA: Al's w5lua@sbcglobal.net May report for the next newsletter -- I have been making progress toward 77 GHz. I have been making Sun and Moon noise checks on 77.184 GHz using both a 1 m and my 2.4 m offset fed dishes. I am getting similar Sun noise on both and based on some coaching from RW3BP and some results from the VK3UM software, it appears that a larger dish with a narrower beamwidth will improve my chances of hearing Sergei. This is based on Sergei being able to keep his less than .2 deg 3 dB beamwidth antenna centered on the Moon. We have run 2 one way tests with no real success so far. I am using Sergei's MMCW program that averages repeating information over several minutes. Work continues to improve systems and find the optimum time and conditions to minimize atmospheric absorption. Not an easy task. On 24 GHz, since my last report, I was able to work OZ1FF in March on 24 GHz using both CW and JT4F. Kjeld is running a 1.8 m offset fed dish and 10 W. I also had a repeat QSO with LX1DB on 24 GHz. During the DUBUS contest, I was able to work OK1KIR and LX1DB on 24 GHz. VK7MO recently upgraded his 24 GHz EME system to a 1.12 m prime focus dish and 9 W. I was able to work Rex on 24 GHz on 3 occasions on 25 and 30 April using JT4F. Rex's signal was (19DB) at best and my best report from Rex was (12DB). All of my recent JT4F QSOs were made possible by using K5GW's mutual Doppler program, which controls both the RX and TX frequencies of my Flex-5000. The scheduled station just sets both receive and transmit frequency on the schedule frequency and Gerald's software does all the work. On 10 GHz, I was able to operate a few hours during the 3 cm and above DUBUS contest. On 3 cm, I worked K5GW, WA6PY, OK1KIR, UR7D and UA5Y. On 5760, I worked SM6PGP and VE4MA/7 in DM43 for 2 initials. Barry was running a quarter of a standard 3 m TVRO dish as an offset fed dish and 120 W. On 1296, I was able to work the DUBUS Digital EME Contest and made 9 QSOs. I was also able to work VE4MA/7 on CW back in March using his small offset fed dish. I discovered that my TH-327 1296 PA generates noise on RX. While running JT65C during the contest, I realized that my TH-327 was generating noise during RX. Since, I am always watching my receive level with a GR-1236 IF amplifier to continuously see my Moon noise, I was able to see my background noise level increase 0.5 dB to 1 dB when the HV was on the TH-327. I decided to see what effect this had on my being able to decode a JT65C signal. When I turned my HV off, I am able to see a 2 dB improvement in received signal level. I had done the usual things when I built the PA some 14 years ago. I do keep the HV on

during receive, which is 3300 V. My screen voltage is decrease from 480 volts to zero, but there is still a 33 K ohm resistor from the screen to cathode to keep the screen from climbing to plate potential. My grid bias is about -63 V on TX, and I increase it to -120 V on RX. I tried increasing the grid voltage to -200 V with only a very small reduction in noise. I also inserted a 5 K ohm resistor between the B- and cathode during RX. I found out that the series resistor seems to have no effect on noise. I concluded that the only way to completely turn off my tube is to remove the HV during receive, which I am going to do with a sequencer. When I ran a simple test by paralleling a HV relay control coil with the rest of the relays in the amplifier, the HV comes on quick enough, but it turns off too quick, and I get a screen current over current fault. Hence the reason for a real sequencer to turn the HV on first, and off last. When one considers that the transmitter is always connected to the TX port of the feedhorn, and if at best there is 20 dB of port to port isolation in the feedhorn, this means that the noise level out of the PA must be somewhere in the -120 dBm level or lower... With +61 dBm of output power, that means that the noise is only down –180 dBc! What can one expect! I guess one option is to put in a high power RF switch in my transmit line, but I chose the less expensive sequencer approach. Another observation, I made that may still support putting a RF relay right at the feedhorn TX port is that even with the PA completely off, I can see a couple tenths of a dB change in receive level when I remove the coax from the transmitter... Always something new to learn. How does your system check out?

W6YX: John (K2YY) johnhill5000@gmail.com sends his group's latest news – Our team was active during the ARI Digital EME Contest on 1296. It was an excellent opportunity to give beginners a chance to practice JT65 contacts and for us to try out our new AD6IW MMIC LNA, which proved to be a good performer. Moon times were not favorable between EU and CA, as it was quite late in the evening in EU by the time we could see the Moon. We did manage to work 18 stations and 14 prefixes. Running Linrad +
MAP65 was extremely helpful as MAP65 "skimmed" the band for JT65 contacts and instantly let us know who was calling CQ and where. Linrad + MAP65 demonstrated once again that chat rooms only slow down our QSO rates and are unnecessary for stations utilizing software defined radios. This is not surprising as careful analysis of the ARRL 2012 contest line scores shows many single yagi or two yagi stations using SDRs significantly outperformed 4 yagi and larger stations, which were restricted by classic 3 kHz bandwidth receivers. All of our 2012 and 2013 logs have been uploaded to LOTW. The next time we will be QRV is during the DUBUS 1296 CW contest.

WA6PY: Paul pchominski@maxlinear.com was QRV on 10 GHz for EU EME Contest on 13/14 March — I QSO'd in the contest OK1KIR, UR7D, K2UYH, UA5Y, W5LUA, K5GW, PA0BAT, G4NNS, ES5PC, F5JWF, HB9SV, OK1CA, UZ5DZ, DL0EF, W6YFK and LX1DB. Heard were R3YA IZ2DJP and IK2RTI. The combination of apogee and high frequency spread didn't help my QSO count. The last few months I worked on my RW1127 TWTA in preparation for 10 and 24 GHz operation. With great help from DL7YC, SV3AAF and G4NNS, I can now get 40+ W on 10 GHz. I'm looking for pieces of WR42 in order to modify my TWT's ports. Encouraged by my work on the RW1127, I came back to my RW85 TWTA, which I used on 5.76 GHz. This TWTA was made for 6.7 GHz. Factory set working conditions for the TWTA were: Vh=3250, Vk-c=1750, Vk-g2=2950. Measured in my lab, its Pout at 6.7GHz was 22 W and on 5.76 GHz 15 W. On 5.76 GHz, even small overdrive of the tube created a large power foldback without tripping power supply. I could not find a schematic. I've got a Siemens' schematic of a similar unit, but my TWTA is much older and made by ANT. It is not even close to the Siemens schematic. My unit does not contain any ICs, except for one very early version of an opto-coupler. Everything is done with bipolar transistors. I drew few sections of the circuit and figured out how to modify the circuit controlling G2 and the helix voltages. Increasing Ik by forcing higher Vg2, increases power only to 16 W and then the power supply tripped out. I knew that I need to increase Vh to tune tube to the lower frequency. So the next step was to increase Vh and tweak between Vg2 and Vh. Higher Ik did not increase the RF out, but did increase the power dissipated at the collector. I could get more power, but helix current was too high and started to trip the protection circuitry. By adding additional magnets, I was able to lower the helix current and get a steady 25 W out on 5.76 GHz with some margin before the power supply tripped off. Now the voltage settings are: Vh=3585, Vk-c=1793, Vk-g2=3063. I tested the modified TWTA by running it for 3 hours with full Pout. My results may be interesting to others who own RW85 TWTAs. I hope this effort will improve my signals on 5.76 GHz a little bit. Unfortunately the EU EME Contest on 6 cm will be near apogee again.

K2UYH: I a.katz(x)ieee.org was very happy this month. Besides having some success during the 3 cm DUBUS Contest, I added 2 new DXCCs on 23 cm and 1 on 432. Such months do not happen that often. My thanks to fellows making the dxpeditions possible! For the 10 GHz EU contest, I was joined by K2TXB and NU2E. We worked on 13 April at 1650 OK1KIR (559/569), 1700 LX1DB (569/569) for 3 cm initial #5, 1710 UR7D (O/O) #6, 1722 IK2RTI (559/559) #7, 1744 WA6PY (O/O) #8, 1750 K5GW (569/559) #9 and 1758 ES5PC (549/559) #10 – after 1900 the band became quite, and on 14 April at 1640 OK1CA (559/559) and 1726 F5JWF (O/559) #11. There were many more stations on, but I could not pull out their calls from the spreading. I had the same problem with SSB. I was repeatedly called by at least 2 different stations on SSB, but never could be sure of their calls. I need to work on my brain's decoding (or maybe my passband filter) of *aurora like* signals. Around the weekend of 20/21 April, I was primarily interested in working the 2 dxpedition stations in Africa, but I did give some contacts out in the ARI's digi contest and also a few QSOs during the 70 cm CW ATP. I had my linear feed in place on 1296 during the whole time as both dxpeditions stations were using single yagis on 1296. I worked on 19 April, on 1296 at 2046 9G5EME (22DB/O) JT65C for mixed initial #432* and (mixed) DXCC 86*, and on 20 April on 432 at 0051 K4EME (16DB/O) JT65B, 0104 K1DOG (22DB/O) JT65B and 0110 partial PY2BS (10DB/-) JT65B – my feedline broke during this near contact. (It is nearly 40 years old and is dragged around the tower!) I repaired it the next day, and QSO'd on 20 April, on 1296 at 2040 OK2DL (8DB/20DB) JT65C, 2050 I1NDP (10DB/8DB) JT65C, ~2100 nil 5H1DX – Bodo was unable to QRV for my window, 2202 PA2FXB (10DB/12DB) JT65C, 2206 IK5VLS (11DB/O) JT65C and 2224 SM6PGP (13DB/12DB) JT56C and 2238 IK5QLO (14DB/15DB) JT65C, and on 432 at 2318 NC1I (5DB/4DB) JT65B, 2327 LZ1DX (7DB/O) JT65B and 2352 DL8GP (16DB/O) JT65B, and on 21 April 21, on 1296 0403 PY2BS (4DB/6DB) JT65C, 0411 W6XY (21DB/9DB) JT65C, 0455 VK2DVZ (15DB/21DB) JT65C #433*, 0503 VK4CDI (17DB/16DB) JT65C and 0526 VK2CBD (14DB/7DB) JT65C, on 432 at 0548 VK4CDI (16DB/20DB) JT65B, 0604 JA6AHB (4DB/7DB) JT65B, back on 1296 at 0640 JA6AHB (7DB/8DB) JT65C, and 2130 heard 5H1DX/3 (28DB/-) JT65C but Bodo had to QRT before he was out of my trees, and back on 432 at 2232 9G5EME (21DB/O) JT65B mixed initial #851* and (mixed) DXCC* 111, 2258 YL2GD (O/O) JT65B #852*, 2302 OK1TEH (18DB/18DB) JT65B, 2315 partial F6HZL (559/-) – was in sked, 2342 LZ1DX (559/559) and 2356 G3LTF (569/559), and finally on 26 April at 0142 5H1DX (22DB/23DB) JT65C #434* and DXCC 87* and 0204 TI2AEB (14DB/9DB) JT65C. I plan to be QRV for the 1296 EU CW Contest, then the following week I will be going to KD7YZ's QTH in KY to get Bob better set up for 432 EME, and possibly get some 1296 EME in on 16 April, before heading on to Dayton on 17 April. If all goes as planned, I hope to be back in NJ in time to be QRV for the 6 cm EU contest on Sunday.

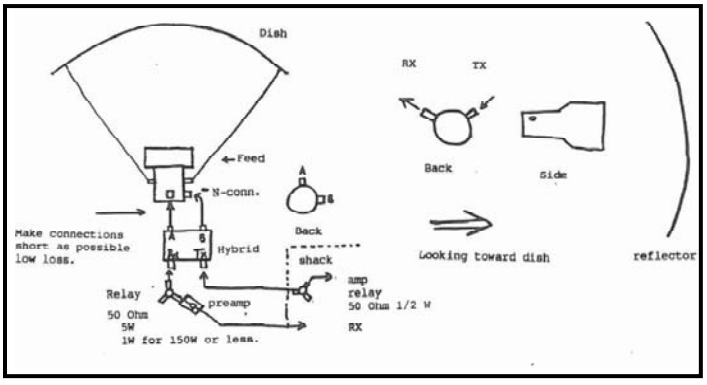
NETNEWS – TNX WB2BYP: **PA0PLY** was sorry not to be QRV during the DUBUS 3 cm contest. His dish flipped over due to a very strong wind gust and he lost the EL motor section and all calibration. **UR7D** was active on 10 GHz EME during DUBUS Contest using 3.66 m dish and 50 W. They report 1.5 dB of Moon noise. **UX0FF** has recently upgraded his 432 array to 4x19 el yagis. **VE4MA** is back in Winnipeg, but still has about 2.5' of snow on the ground there! His main station is back in full operation, and Barry plans to be listening for RW3BP on 77 GHz in the future. **W2CNS** is now QRV on 70 cm with 6 X 24 el yagis on both JT and CW. Bob has already made several QSOs and is working on a GS35B PA to increase his power. He is also planning on 23 and 13 cm EME with a 3 m dish to be installed this spring. **WB2BYP** was only QRV briefly in April because of high winds and bad WX, but appreciates hearing the beacon when he was able to point to the Moon!

PA0PLY's 3 cm dish after wind storm

FOR SALE: **W2TQ** has most of the original Eimac EME Technical Bulletins that he would like to give to a good home, rather than throw out. He has AS-49, which appears to be an overview, and then AS-49-1 through AS-49-12. They are in pristine condition! If you are interested contact Joel at jm@JoelMillerLaw.com. **K4EME** reports some very positive responses on his preamps performance from some of those who have purchases them! He finally has PayPal set up to make it easier for EMEers in other countries to purchase his 432 preamps! **NR6CA** has a 40 W Toshiba SSPA for 9 cm complete with a nice big heatsink mounted on it. It also has the power connections already made up with about a foot of wire left on the DC power connector. He is asking $US325. Contact Randy at nr6ca@sbcglobal.net.

UX0FF's EME shack – quite an impressive collection of awards

TECHNICAL: A frequently asked question on the reflectors is how to know which port is which on circularly polarized feeds for EME. G3LTF sends the following answer: 1) Feeds with post polarizers, such as W2IMU, if you look into the front of the waveguide with the polarizer posts vertical and the feed probes at the top then the Left-hand port is the transmit port and the right-hand port is the receive port. 2) Feeds with Septum polarizers. If you look into the front of the waveguide with the long septum to waveguide joint at the bottom, then the transmit probe is on the left and the receive probe is on the right. **Caution, never look into a waveguide when transmitting!** Finally if you hear nice echoes, but can only just make QSOs then quite probably you are cross polarized.



There are two additional interesting technical reports embedded in the regular reports. I have highlighted these in yellow along with the above report so that you can easily find them. The first is by W5LUA and deals with the problem of noise generated by his 23 cm tube PA. The second is by WA6PY and deals with his experience with moving TWTs in frequency and getting additional power from them. Both are well worth reading.

FINAL: I am afraid the news on **F2TU** is not good. Philippe will be back home soon, probably by the time you read this. But, he will not be able to leave his bed and will require continuous monitoring and special nursing care. Philippe can now be fed without tubes, but feeding still needs the help of a third party because he has a lot of difficulty controlling his hands. Likewise, he has problems speaking and using his legs - no improvement had been observed since last Jan. It is thought that he may never walk again, and will probably have to use a wheelchair. TNX to F5SE for sending this information. I know Philippe has the prayers of all his EME friends for his recovery.

Based on some recent comments on the reflectors on **what constitutes an EME QSO**, Peter (G3LTF) though this might be a good to time to remind everyone that the procedure (documented by GM3SEK) can be found at www.nitehawk.com/rasmit/g3sek_op_proc.pdf.

As discussed in past NLs, our **13 cm allocations,** no matter where we are located, will be difficult to maintain and are subject to attack by commercial interests. Mike (JH1KRC) writes that the JARL frequency board would like to renew their band plan (the JARL plan for the legal frequency allocation), and has requested public opinion on a frequency change. Specifically it is the JA 13 cm EME band that is being considered for relocation. It appears that the present JA 2424 EME band may be totally covered in the near future by WiFi/wireless LAN services worldwide. Thus, JA EMEers are considering having their EME 13 cm frequency allocation moved to 2400. They would like to hear from you on the interference present at your location on the present (2424) band and the new (2400) proposed band. Are these bands clean or jammed? Please send this and any other related information to Mike jh1krc@syd.odn.ne.jp by the last week of May, 2013.

Have a great time at the Third Swedish EME meeting on 24-26 May in Orebro. It is sure to be the EME meeting of the year! I wish, I could be there. I do plan to be QRV for the 23 and 6 cm EU EME Contests, to be at Dayton and hopefully get KY on both 432 and 1296 EME – see my and KD7YZ's reports. Keep the info and reports coming. I'll be looking for you off the Moon! 73, Al – K2UYH

9G5EME's 23 cm 59 el yagi and 100 W made 15 QSOs

9G5EME's 23 cm rig

View from PY2BS's new dish while under construction