432 AND ABOVE EME NEWS
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CONDITIONs: You have probably heard the sad news that Ivo, ZS6AXT became a silent key on 28 Sept.

ZS6AXT - Ivo at 12th EME Conference, Wurzburg 2006

Ivo was one of the the most active African EME stations on 70 – 6 cm. While Ivo was a true pioneer of VHF/UHF DXing not only in ZS6 but even in the former Czechoslovakia as OK2WCG – see Ivo's biography at http://www.ok2kkw.com/vcg1959/ok2vcg_zs6axt_eng.htm by OK1TEH.

The main event in Sept – the ARRL Microwave (MW) EME Contest (13 cm and up) was on 9/10 Sept. Scores are down this year mainly because of the low declination (dec), and the weather (WX) that was not good in many parts of western Europe (EU). The top reported score is 36x31 by the K2UYH team – this was surprise. I am sure there are many with much higher totals that we have missed. There also some reports on the ARI's Fall Trophy EME Contest in this newsletter (NL). **The VHF/UHF parts of the ARRL EME Contest are on 7/8 Oct and 4/5 Nov.** One problem is that these dates conflict with major EU tropo contests. Hopefully there will still be a good turnout for the contest. OK1DFC's EME dxpedition to Moracco, CN2R, will be on 432 the first day and on 1296 the second day of the Oct contest weekend – see Zdenek's report later this NL. This dxpedition will be followed by 3DA0MB to Swaziland and South Africa; also in this NL. DX7EME will put the Philippines back on 70 cm at the beginning of Nov. N1H will put NH on 1296 from 30 Nov to 3 Dec; and there is more to come!

Reports: 3B8: Giulio (IW3HVB) iw3hvb@gmail.com sends early news of plans for a new trip -- I will be active from Mauritius from 20 to 28 April. I will be joined by I3VFJ, IK3YBX and IZ3IBL and plan to operate on both 144 and 1296. Construction is under way of a 2.3 m mesh dish for use of 23 cm. We will work mostly digital, but we will accommodate CW skeds and reserve some time slots for random calling too. See my website ww.iw3hvb.it for updates.

3DA0MB and ZS6EME: Dan (HB9Q) dan@hb9q.ch says all is on schedule for the big Swaziland (KG53mn) and ZS dxpedition **[see the Sept NL for additional details]** -- We plan to be QRV MR to MS on 14 Oct 23 cm, on 15 Oct 13 cm, on 16 Oct 9 cm, on 17 Oct 6 cm, on 18 Oct 3 cm, and on 19 through 21 Oct QRV on the bands where there is the most need. We expect to have Internet. We will use on 23, 13 and 9 cm JT65C; on 6 and 3 cm QRA64D. If the signals are strong enough we will try CW. ZS6EME will be QRV on 22 Oct on 6 cm for a few hours before MS, and MR to MS on 23 Oct 6 cm, and on 24 Oct 3 cm. Modes and procedure will be the same as at 3DA0MB.

CN2R: Zdenek (OK1DFC) ok1dfc@seznam.cz is on his way to Morocco -- Due to some problems with border crossing, I am driving by car to Barcelona and then will take a ferry to Tangier. There has been a one day delay in the ferry, but am hopeful that I will be able to maintain the planned schedule. I will put more details on Moon Net and MMVHF. So monitor e-mails and HB9Q EME chat, and keep your fingers crossed. Also see http://www.ok1dfc.com/peditions/morocco/cn_2017.htm. [More details appeared in the last NL. Zdenek's plan is for operation to begin on 2320 5/6 Oct from1800 to 0700, followed on 432 6/7 Oct from 1900 to 0800 (ARRL EME Contest), on 1296 7/8 Oct 1900 to 1000 (ARRL EME Contest), 3400 8/9 Oct 2000 to 1100, 10368 on 9/10 Oct 2100 to 1200, and finally 5760 will be 10/11 Oct 2200 to 1300]. Zdenek will be joined by OK1VVT, who will operate 2 m EME].

D4: Peter (DL1RPL) peter@dl1rpl.de send news of 70 cm and higher band activity from Cape Verde Island -- From 2 Nov to 7 Nov, DL2NUD and I will be QRV from D4 on 2 m, 70 cm and as many as possible of the GHz-bands (possibly from 23 to 3 cm). For more information see www.dl1rpl.de later.

DK3WG: Jürgen dk3wg@web.de was QRV during Sept and added initials on 70 cm using JT65B IK0IXO, and on 23 cm with CW IK1FJI and using JT65C LZ4OC and F1RJ.

F6ETV: Jean-Paul f6evt@orange.fr writes to tell everyone how helpful the 23 cm beacon has been in setting up his new EME station in JN18gr – The beacon was very helpful and enabled me to optimize my dish system. I started testing my system and was delight to immediately to hear ON0EME on 23 cm. I am using a 2.4 m dish with a septum feed and 0.7 dB LNA. I plan to be soon QRV off the Moon. [TNX ON4BCB from the ON0EME group for forwarding this email].

F6ETV's 2.4 m dish with 23 cm septum feed

G3LTF: Peter g3ltf@btinternet.com EME report for Sept -- I was operational in the ARRL MW EME Contest with all my contacts on CW - (XB means cross band). Starting on 13 cm on 9 Sept, I worked OH1LRY, DF3RU, UA3PTW, K2UYH (XB), OK1CA, IK5QLO, VE4MA, WA6PY (XB), WD5AGO (XB), S53MM, VE6TA and HB9Q for a total of 12x12. Heard were OT7K, VE6BGT (XB) and OZ4MM. There was very poor activity compared to previous years. My 13 cm Sun noise measured 19 dB with an SF 115. On the next pass, still on 9 Sept, I started on 6 cm and worked UA4HTS, UA3PTW, SQ6OPG, OZ1LPR, DL7YC, UA3TCF for initial #73, DF3RU and SP6GWN; continuing on 9 Sept, I added K2UYH, VE4MA, OZ1LPR and HB9Q for a total of 12x7. Finally I changed the feed to 9 cm and worked LZ1DX, G4CCH and K2UYH for a total of 3x3 and overall 27x22. The next weekend I was on for the ARI contest on 23 cm and worked on 16 Sept I1NDP with a nice SSB chat, and then on CW with I5MPK, IK3COJ, IW2FZR, LA3EQ, IK1FJI for initial #440, IK5VLS, LZ2US, K5DOG, N5BF, N8CQ, and XE1XA for a total of 12, and on 17 Sept on 70 cm worked YL2GD, SP1JNY for initial #468, SM7GVF, DL8FBD #469 and OZ6OL for a total of 5. Conditions were pretty good with little Faraday rotation. Finally I went on 13 cm and worked SP6OPN and SP3XBO. On 70 cm someone called me with ultra slow CW and the QSB at the time made it impossible to copy the callsign. He tried several times but did not respond to my YYY (send only your call). I would have loved to work him. If he sends an email (PSE) for a sked and speeds up a bit (about 15 WPM with extended spaces between characters is good), I feel certain we can QSO. I will be QRV in on 7/8 Oct for the ARRL EME Contest to give out points on CW, on 23 and 70 cm.

G4RGK: Dave zen70432@zen.co.uk was active on 13 cm in Sept -- I have been very busy at QRL, but I did find time to finish a new 13 cm SSPA, which is now running well at 340 W out on cw. I have six fans on it, and it is comfortable running 270 W on the JT modes. The ARRL contest MW weekend was poorly chosen from my point of view because of the low Moon. It is difficult for me to get a clean shot through the trees at this declination (dec). The low dec and the multi-band format made for low activity on 13 cm. I was able to work [on CW?] on 9 Sept UA3PTW, OK1CA, UA4HTS, SP6OPN, DF3RU, OF2DG, OT7K, WA3RGQ and K2UYH. I called WA6PY for a while on the corresponding 2320 freq, but had no luck. On 10 Sept I added IK5QLO, OZ4MM and DJ5AR for a total of 12x11. I also copied KN0WS for a long time on JT65C, but by then the Moon was in the trees, and it was hopeless. The following weekend I worked on 13 cm SP6OPN and SP3XBO on CW, both came back to my CQ, and IK5QLO on JT65C. I will take the feed out now and go back to 23 cm for the ARRL Contest. I am still using the 4.6 m homemade stressed dish, but it is in very poor shape these days and really needs replacing.

IK1FJI: Valter valter_dls@yahoo.it has now made his first 1296 EME QSO -- After many years on 2 m EME (started in 1988), I decided to try 23 cm EME. My setup is 3.2 m dish, septum feed, Kunhe 1 kW SSPA and 0.22 dB G4DDK LNA with EA4TX for tracking and TS2000X IF. For now I'm QRV only on CW, and have QSO'd on 4 Sept at 2100 I1NDP (559/ 549) – only 100 W here, on 12 Sept at 0700 I1NDP (579/579), 0800 YL2GD (559/559) and 0835 OK1YK (549/539), on 13 Sept at 0750 SM2CEW (569/579) and 0850 UA3PTW (569/579), on 15 Sept at 1020 IK3COJ (549/559), on 16 Sept [ARI Trophy Contest] at 0845 DW3WG (539/559), 0905 PA3FXB (529/529) and 1026 G3LTF (559/579) for a total of 3 and on 25 Sept at 1715 G4CCH (519/559). EME is like *new* on this band! I hope all will work well for the ARRL EME Contest and will hoping to everyone on!

IK1FJI's 3.2 m dish with 1296 septum feed

IK5QLO: Andrea ik5qlo@gmail.com writes -- Its one year since I started activity on 13 cm. I can say It's a very interesting band with some known problems due to 1) different band allocations - (operating XB adds some thrill to the QSOs), the possibility of WIFI interference showing up - (the latter is getting less important at my place since here WIFI is moving to 5 GHz), and 3) activity is lower and CW sometimes is less readable due to libration than on 23 cm. On the other hand 1) with a small dish as mine (2.4 m), the feed is smaller and gives lower mechanical stress and less obstruction and 2) the SSPAs are cheaper – (available on the UMTS surplus market). With just 100 W at feed, I can always see my echoes on the waterfall and often hear them. So why don't you give it a try? I worked in Aug using CW G3LTF and PA3DZL, and using JT65C G4BAO and WA3RGQ for mixed initial #27*. During the ARRL MW Contest on 2300 in Sept, I QSO'd using CW UA3PTW, OK1CA, SP6OPN, DF3RU, G3LTF, UA4HTS and OZ4MM, and using JT65C KN0WS #28* and G4RGK #29* for a total of 9x8. I am always looking for skeds – PSE email. I can work XB with TX on 2320 and RX on 2304-2302/2400.

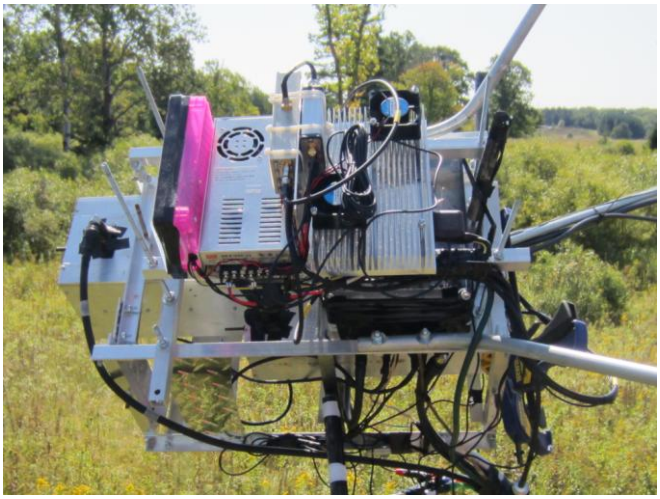
JA4BLC: Yoshiro ja4blc@web-sanin.co.jp had problems on 3 cm during ARRL MW Contest -- Murphy struck again! I had trouble with my 10 GHz LO synthesizer in Aug, and then again in Sept. In Aug the problem was with my 10450 LO. In Sept the problem was with my 10368 LO. It took many days for the repair by the domestic manufacturer. During the repair period, I was QRV on 5760 in ARRL MW and worked on 10 Sept JA8ERE (569/559), JF3HUC (569/569), JA6AHB (O/429) and DL7YC (579/549) for a total of 4x3. I also QSO'd on 14 Sept JF3HUC (569/569). On 3 cm, after the repair of the 10 GHz synthesizer on 18 Sept, I did a test transmission on 10450 with JA6XED. He heard me (549) with his 5 m mesh dish (2.5 mm mesh on the central part). On 10450, I also worked on 19 Sept JA1WQF (559/559) and DB6NT (559/559).

K6PF: Bob moon@moonbounce.info (DM34ss) writes that he will be installing a 4.9 m solid dish for 23 cm EME – I also have a BEKO 350 W PA; and am hoping to work lots of CW stations and some SSB once the dish is in place. I am making some progress and hope to be QRV within a year.

KA1GT: Bob ka1gt@hotmail.com is QRV from Maine (FN54uj) again on 432 – I have 2x 28 el yagis with with full motorized polarization control and motorized AZ and EL. I am running around 500 W at the antenna. Weather permitting I'll be on for as much time as possible for the first leg of the EME contest. I will be monitoring the HB9Q reflector for 432. I am happy to try CW (don't send too fast!) but prefer digital. I am also working towards 1296 EME. I have the dish support and motorized AZ/EL mount installed and a moon tracking program running and working. The septum feed is ready to go. I am now assembling a 2.4m dish, which will be later extended to 10' with the intention of also using it for 432. I hope to be QRV on 1296 by the end of the year (but it will be after the EME contest). I should have a home brew ~20 W SSPA driving a pair of 2C39s in a home brew cavity amp to start with (~100W+). I have a 6-tube cavity amp available, but am considering going solid state so I can locate the PA out at the dish.

KN0WS: Carl carlhasbargen@q.com topped his successful 1296 dxpedition to NE by putting his home State of WI on 13 cm EME for the first time -- I have never participated in the ARRL MW EME contest weekend before because I did not have equipment for over 23 cm. This year I assembled gear and modified a few amplifiers to try 13 cm and 9 cm. I had a lot of frustrations setting up a digital encoder and Arduino control circuit to manage the shaft position of my dish's polar mount. I figured I would need computer control to ensure adequate precision for these higher frequencies with my 4.8 m dish. I made a trip to the property on 2 Sept to test my 13 cm gear and was hit by a brief but unexpected hailstorm. I covered my gear, but when the plastic came off some water had entered my Arduino controller box and it was not working. I figured I would still try the contest pointing the best I could without computer control. The weather during the contest weekend was PERFECT! Very little wind and perfectly clear skies. I had wired some green LEDS to positions near my focal point that would help me align my dish visually at night with the Moon. On 13 cm, on 9 Sept using JT65C, I worked HB9Q (16DB/O), OK1CA (22DB/O), K2UYH (11DB/O), WA3RGQ (22DB/O), IK5QLO (24DB/O), UA3PTW (16DB/O) and KD3UY (28DB/O). Using my JT software in CW mode, I worked HB9Q again and VE6TA. I sent CW and received JT65C with DF3RU (22DB/O) for my first mixed-mode QSO. On 10 Sept, I took down my 13 cm gear and installed my 9 cm equipment at the feed point, but when testing I did not hear any strain on my generator during transmission, which was a bad sign. After moonrise I could see HB9Q, but only at (28 DB). I adjusted my pointing by a bit

over a deg and his signal went up to (10DB). I was amazed by the tremendous signal difference for such a small adjustment! Losing over 98% of signal strength with a pointing error of about 1 deg reinforced the need for better tracking! If I had experienced a cloudy weekend, I might have worked no one. When I tried to TX, nothing came out, so I was done with my 9 cm effort. I suspect a broken solder joint at my PTT line, but did not trouble shoot on a ladder in the middle of the night. Instead, I switched back to 13 cm again and worked UA4HTS (18DB/O) and OT7K (20DB/O) for a total of 11x10. I was sorry to miss JA6AHB this weekend. We both apparently saw each other at (20DB) at different times but could not put together a QSO. I also missed G4RGK. I saw him at (20DB) and he saw me at times, but ultimately we had confusion about frequencies and did not complete before his moonset. I am up to mixed initial #11* on 13 cm. I will hopefully have better tracking for my efforts in 2018. I plan to be on 70 cm for the first Moon pass of the Oct ARRL EME Contest and on 23 cm for the second pass and the Nov ARRL weekend.



KN0WS's 9 cm system and feed

N1H: Frank (NC1I) frank@NC1I.COM reports that W1QA and I have finally secured an excellent location for an EME dxpedition to NH. Operation will be on 23 cm and we will be using the call N1H. Our grid square will be FN33sa. We will have a clear shot at the Moon at 1 deg elevation for both moonrise and moonset. The planned dates of operation are 30 Nov through 3 Dec, but we will not be operational from moonrise to moonset for all three passes. We will provide a planned operating schedule as we get closer to the dates of operation. I should point out that this operation is scheduled to take place at a time of year when weather in central New England can be very challenging. We can deal with the cold and some snow but a major snow or ice storm on or just before the dates noted would prevent this operation from happening. Our location is also prone to high winds. We will obviously provide updates as the dates get close. We plan on using the exact same equipment we used for our 23 cm dxpedition to CT and VT. This includes a 2.4 m dish, KL6M septum feed, G4DDK preamp and Kuhne 1 kW LDMOS PA providing about 500 W at the feed. In addition to W1QA, and KA1QFE who have been key members to our past dxpeditions, this time we will be welcoming W1VE. Gerry is a very experienced HF and VHF operator and lives about 45 minutes from the NH site. Hopefully we can convince Gerry to be a part of future dxpeditions.

N5BF: Courtney courtney.duncan.n5bf@gmail.com report on his 23 cm activity in Sept from DM04 – During the Autumn ARI EME Trophy Contest I made more contacts and a much higher score than in the spring. My total was 16 QSOs (14 on JT65C and 2 on CW) with four Italian stations worked (multiplier 8). Initials were ON7FLY for mixed initial #90*, F1RJ #91* and IK2MMB #92*. I plan to be on for the whole ARRL EME Contest in Oct and Nov. PSE look me during my limited EU windows (0300-0700 on 7 Oct and 0400-0800 on 8 Oct).

NC1I: Frank's frank@NC1I.COM activity was somewhat limited in Sept and focused primarily on 432 using JT65B – Starting on 432 I worked on 8 Sept K5DOG and K3GYK (DM79, 15 el & 50 W), on 9 Sept FR5DN, on 10 Sept FR5DN, K3GNC, UB6A (great signal but no info), NT0V (ND), RA9CHL, N4QWZ (1 x 28 el & 200 W), AI1K (1 x 36 el, 100 W, horizon only in AZ), DL7APV, PA0PLY, YL2GD, EW7AW, W7MEM, YO6OBK, UT6UG, K5QE, W4NH (4 x 19 el & 500 W), OE3JPC, I1NDP and ES3RF, on 12 Sept DL8FBD, [in the ARI Contest] on 16 Sept I1NDP, G3LGR, YL2GD, OF2DG, SP1JNY, 4Z5CP, DL8DAU, K3GNC, LZ1OA, IK0IXO (4 x 12 el & 150 W), DL6YBF and YL2GD, and [ARI Contest] on 17 Sept OK2AQ, OZ6OL, N6DLH (4 x 15 el & 100 W), W7MEM, IK3VZO (believe 1 x 21 el & 500 W and horizon only) and BX4BP for a new DXCC and a contest total of 18. On 1296 on 10 Sept I worked OK2DL, on 12 Sept F1RJ, ZS1LS and LZ1OC, and [ARI Contest] on 17 Sept PA3FXB. I plan on being very active for both the Oct and Nov weekends of the ARRL EME contest. Focus will be on 432, but I will also be on 1296. If Bob W1QA is able to make it over, we will operate both bands simultaneously. [See also under N1H, Franks report on plans to put NH back on 1296 EME].

OK1CA: Franta strihavka@upcmail.cz was QRV in the ARRL MW EME Contest – I was only on 13 and 3 cm. In the first pass I worked 22 QSOs on 13 cm. I had a CW initial with WA3RGQ #144 and digital initials with UA4HTS, OT7K, KN0WS and UW1AA to bring me up to {#9}. I was QRV on 3 cm during the second pass and worked 11 QSOs. I had CW initials with SP3XBO, S57RA and OK2AQ to bring me up to #85 and digital initials with OZ1LPR, G3WDG and the dxpedition to DE, N4EME, to bring me up to {#17}. The activity on 3 cm was poor with no stations QRV from VK, JA and bad weather in western EU.

OK1KIR: Vlada vlada.masek@volny.cz and Tonda report on their Sept EME results – On 3 cm we worked on 4 Sept using QRA64D at 1902 VK7MO(12DB/12DB) in OF78 for our digital initial {#144} with a great signal when Rex used a 113 cm dish and at 2215 OK1DFC (17DB/15DB) when Zdenek tested his equipment for the Morocco dxpedition, on 5 Sept at 0041 K2UYH (17DB/17DB) - his first using JT4F and at 0055 (9DB/9DB) with QRA64D, 0135 worked again OK1DFC (15DB/14DB) when Zdenek found failed SMA relay, and on 8 Sept at 2307 OK2AQ (14DB/14DB). In the MW part of ARRL EME Contest on 3 cm using CW, we worked on 9 Sept at 0416 SP3XBO (O/559) for initial #116, 0516 WA6PY (559/569), 0637 VE4MA (549/569), 2016 OK1CA (569/579) and at 2110 UR5LX (O/O), and on 10 Sept at 0133 S57RA (559/579) #117, 0250 OF2DG (569/569), 0520 N9JIM (579/579) [same as W6YX], 0632 OK2AQ (O/O), 2155 YO3DDZ (559/579), 2201 JA1WQF (559/579) and 2239 VK3NX (559/559), using QRA64D on 9 Sept at 0015 OK2AQ (16DB/14DB), 0025 OZ1LPR (7DB/14DB), 0148 WA3LBI (12DB/11DB) for digital initial {#145} and DE for 10th US State on 3 cm, 0458 G3WDG (7DB/9DB), on 10 Sept at 2253 VK7MO (11DB/12DB) {#148} in OF76, using JT4F on 9 Sept at 0336 UR5LX (16DB/14DB) and 0357 LU8ENU (18DB/18DB) - Juan used horiz pol, and on 10 Sept at 0216 N4EME (17DB/17DB) [same WA3LBI], 0414 UN6PD (17DB/13DB), 0733 K6QPV (17DB/O) {#146} , 0811 HB9Q (17DB/16DB), 0839 N9JIM (16DB/16DB), 0847 K2UYH (17DB/17DB) and at 2139 UT2EM (17DB/17DB) {#147} for a total "multimode" contest count 22x17. On 24 GHz at the end of Rex's record breaking grid tour, VK7MO activated the OF field on 14 Sept. Regardless that the mutual Moon window was open, we have had to wait till 19° el when atmospheric attenuation (at PW ≈ 33 mm) finally decreased to allow a QSO at 0010 with VK7MO using QRA64D (20DB/18DB) for digital initial {#38} in OF78. The OF field gave us all 10 VK fields on 24 GHz! On 6 cm in ARI Trophy Contest, we worked using CW on 16 Sept at 0401 DL7YC (569/559). However afterwards terrible WiFi interference came on and covered our own echoes. We heard no one else and were limited to 1 QSO! The rest of contest was spent by trying to find the source of WiFi interference without success as our 4.5 m dish moves too slowly, while the strength of the interference changes rapidly. It will be repeated with a 20 dB gain, easily moveable horn antenna.

OK2AQ: Mirek mirek@kasals.com spent end of the holiday season at his country house on 3 cm EME -- I worked VK7MO from QF78xc for digital initial {#30}. In the ARRL MW Contest, I QSO'd OK1KIR (14DB/16DB), OZ1LPR (8DB/18dB), WA3LBI from DE, FM28lo, (15DB/18DB) {#31}, G3WDG (11DB/14DB), UR5LX (18DB/14DB), OK1CA (17DB/17DB), SP3XBO (18DB/13DB) {#32}, N4EME (16DB/18DB) {#33} [same WA3LBI?], VE4MA (17DB/15DB), N9JIM (17DB/18DB) {#34} [same W6YX?] and HB9Q (12DB/15DB). Besides these digital QSOs made using QRA64 or JT4F, I worked also OK1CA (O/O) and OK1KIR (O/O) on CW. My total score is 11x9 or 9900 points with a 1.2 m offset dish and 40 W at the feed!

OK2PWY: Tom ok2pwy@seznam.cz in JN89KW is now QRV on 70 cm EME with a single 16 el DJ9BV yagi, a 100 W SSPA and a 1.3 dB NF LNA mounted directly on the mast. Although, he doesn't have any elevation, he believes that EME should be possible. Tom has a good

experience with EME using JT65B on 2 m. So if you are QRO or have a big dish, please ask him for a sked. He will monitor HB9Q's chat too.

PA2V: Peter peter@pa2v.com wrote on 18 Sept -- Dear moonbouncers, with deep regret I have to tell you that I have decided to take my antennas down. I had a problem with the match and it turned out that some cables and my coupler contained a lot of water. While trying to make repairs, I also discovered the T/R relay was burned up because of the high SWR. When I took down the faulty parts, I found the main bearing was also badly damaged, probably because of the high winds we have experienced over the last few years. This was the deciding factor for not going any further and to take the whole array down. It became a matter of safety as it was too dangerous to leave it in place and possibly have it fall on the house or someone. It will be major job to get it back up. I am not I inclined to do this now. It seems that where I am located near the sea coast, a large yagi array on a house is not a good idea. I am planning to put a tower in my back yard. It will not be easy to get a permit from the local authorities. I am hopeful that I will be back on EME again. In the meantime I am also working on getting on 10 GHz EME. Last week I finished a transverter and TWTA, and am getting 50 W output. Next is to start building the dish. I hope to see you all off the Moon sometime soon.

PA3DZL: Jac pa3dzl@ziggo.nl was QRV on 2320/2304 in Sept – I worked using JT65C KD3UY for a mixed initial (#*) and WA3RGQ (#*) both XB and SP3XBO. [Jac was not QRV during the ARRL MW Contest weekend, but is now also QRV on 2 m EME. He reports QSOing UA3PTW on EME on 5 bands]!

UA3PTW: Dmitry ua3ptw@inbox.ru during the past month reports working initials on 23 cm using CW with IK1FJI and using JT65C LZ4OC, F1RJ, UN7PDP, W1PV, DL7UDA and PA5Y, on 13 cm using JT65C WA3RGQ and KN0WS, and on 6 cm using JT4F IK3COJ. [TNX DK3WG for forwarding this report].

UN7PDP: Nikolay worked on 23 cm using JT65C in Sept UA3PTW, ON4AOI, HB9Q, UA9YLU, SM7SJR, IK3COJ and IK5VLS. He has 300 W and 3 m dish and does not use the same equipment as UN6PD. [TNX DK3WG for forwarding this report].

UR5LX: Sergey ur5lx@ukr.net is QRV on 3 cm with a 2.4 m, linear feed and a 20 W SSPA. He is looking for higher power, but reports he can hear his echoes M to O copy. He is also working on 6 cm where he has 45 W and is working on a circular feed. He hopes QRV early next year. [We QSO'd this month on 3 cm CW (O/O)].

VE3KRP: Fast Eddie eddie@tbaytel.net sends his Sept report -- I QSO'd on 1296 using JT65C on 16 Sep DF2VJ, N5BF, K5DOG, DL7DUA, PA3FXB, IK5VLS, ON4AOI for a mixed initial (#*), I1NDP, EW1AA, ZS1LS (#*), F1RJ (#*) and IK2MMB, and on 23 Sep LU1CGB, VA6EME, G4CCH and K5DOG. The leaves have turned colors, frost is around the corner and antenna maintenance season will start soon when the snow falls – Hi.

VE4MA: Barry ve4ma@shaw.ca writes -- I was active for the ARRL MW EME Contest on 2.3, 5.7 and 10 GHz. For the next contest weekend I plan to be on 432 on 7 Oct and on 1296 on 8 Oct. I will be in AZ (DM43fk) from Nov to March and plan to be QRV on 23, 13 and 6 cm.

VE6TA: Grant ve6ta@xplornet.com updates us on his recent operation from DO33gs -- I was QRV during the ARRL MW EME weekend on two bands. On 2304 using CW, I worked G3LTF, VE6BGT, K2UYH, WD5AGO, HB9Q, KN0WS for initial #94, VE4MA, KL6M and JA8ERE for a total of 9x9. The Sirrius satellite QRM at low declination really inhibited activity for me and it seems to be the norm now for the 13 cm weekends - not sure why the change. For the second Moon pass, I switched to 5760 and worked HB9Q, K2UYH and JA8ERE for a total of 3x3 and an over multiband score of 12x12. I plan to be on looking for initials during the other two legs of the contest. Most likely I will be on 432 the first weekend. For the second weekend I plan to be on 1296 exclusively.

VK7MO: Rex rmoncur@bigpond.net.au reports on the end of his Roving Grid Dxpedition -- Since last Month's report, previously un-activated grids of OG65, OG74, OG73, OF78 and OF76 were activated on 10 GHz. The dxpedition concluded on 12 Sept with 24 GHz QSOs with OK1KIR and G3WDG from OF78. Overall I met all objectives set for this trip. Made QSOs from the complete OH field on 10 GHz, the complete OH, OG and OF fields on 24 GHz, and reached more than 100 10 GHz grid activations on OK1KIR's grid map. The icing on the cake was extending 10 GHz EME World Record of 18949 km with WA3LBI. This was not part of the original plan, but became a possibility when Jim advised that he would go portable to DE; all we both had to do was find locations with good take-offs at both ends and in my case have a viable system after the tripod collapse. [A report on the World Record is included separately]. Overall 36 previously un-activated grids on 10 GHz were activated and 3 previously un-activated grid fields on 24 GHz were activated.

WA6PY: Paul pchominski@maxlinear.com was QRV during the ARRL EME MW Contest -- I QSO'd on 13 cm OK1CA, HB9Q, G3LTF, S53MM, VE6BGT, K2UYH, VE6BGT and SP6OPN - very strong for a total of 8x8. Heard were OZ4MM and OH1LRY. I had some strong noise on 2320, at least 20 dB+ over the normal noise floor on Saturday (9 Sept) from 0630 and on Sunday from 0700 at the end of the EU window. I suspect it is coming from Sirius XM Radio satellites. On 3 cm I worked OK1KIR, VE4MA, OK1CA, G3WDG and N9JIM for a total of 5x4 and a multiband score of 13x12. I also QSO'd on 17 Sept on 10 GHz OF2DG, IZ2DJP and OZ1LPR. My EU window during the contest was only 2 hours each day. I noticed low activity on 13 and 3 cm. I didn't change feeds for additional bands because of my very short Moon window time. All signals and echoes were very good. I was calling CQ most of the time and switching between 13 and 3 cm. I will be QRV for the ARRL EME Contest in Oct and Nov on 144, 432 ant 1296.

WD5AGO: Tommy wd5ago@hotmail.com sends news on his MW Contest activity – I started the ARRL contest on 13 cm as the feed was already in place, and most 6 cm activity was to happen on the 2nd pass. 13 cm has become a problem here with too much in-band QRM that takes up 20 MHz of S10 signals. I threw together a 5 pole filter and this knocked it down low enough to hear echoes and Sun noise again on Friday! Centered on 2304.1, it is too narrow to operate on the other frequencies, so I made filters for all 4 sub bands to switch in. I worked OZ4MM, OK1CA, G3LTF, VE6BGT, DF3RU, K2UYH and VE6TA for a total of 7x7. I also heard WA6PY, KN0WS and HB9Q. Things looked good for operation on 6 cm during the 2nd pass until it was time to operate. The power dropped over time; signals were very weak, and some of my relays went bad. I did what I could through the night to repair each one, but Murphy won by 4:00 AM local time. Later in the week, I located a partial broken chip cap (in the PA), better aligned the feed and added a isolator after the 2nd stage. The following week, I left the 6 cm system in place (25 W at feed, 3.2 m dish, laminated at 2.9 m) and worked OZ1LPR for initial #25, DL7YC, HB9Q #26 and SQ6OPG #27. The system has 12 dB of Sun and 0.6 dB of Moon noise with M copy echoes. My 6 cm system is open to weather and is now off the dish. I plan to put in place a better station for 6 cm during the Christmas break.

ZS6EME: Alex (HB9DRI) zs6eme@linkrf.ch writes for the NL -- Unfortunate family events did not allow me to be present in the MW contest. I missed the best activity of the year while I was in Switzerland. ZS6EME is still active on 13 cm but there have been "no takers". The station is working well (3.6 m dish and 400 W) but probably I will move to another band, which means if you don't have Africa on 13 cm just ask for a sked; CW, SSB and Digital modes are welcome, even if the Moon is not optimal for the Northern hemisphere QSO's are possible. The main activity is the upcoming 3DA0MB dxpedition. It is a big operation and for sure it will be a pleasure to contact you from 50 MHz to 10 GHz. I'm ready to welcome Dan and Sami to my home; they will arrive on 11 Oct. On 13 Oct we will travel to Swaziland to join 3DA0VV, ZS6JON, ZS6AVH, PA2CHR and PA3CMC. I will return to South Africa on 18 Oct and prepare everything to receive HB9CRQ and HB9COG back in Pretoria where we plan to be active on 6 and 3 cm using my ZS6EME call with the brand new HB9Q portable station. Operation will be from 22 to 24 Oct. It will be the first 10 GHz EME from South Africa - be ready! Time is flying; I have only 24 months remaining in South Africa. The antenna needs to be dismantled in Jan 2019. I will move out in July 2019 to another country. Your chances to have South Africa on 13 cm are limited depending on my upcoming activity. I will probably move to 23 cm. My 5.7 GHz project is stopped as the effort to place the equipment on the dish is too much for just a few QSOs and with the portable operation with the HB9Q portable station for sure you will have the chance to put ZS on your 6 and 3 cm DXCC list. Regarding the interference on 2304, I'm working on this problem and soon will test a new RX setup to see if is possible to reduce by least 10 dB the strong interference in the American band. I will let everyone know when I'm ready to try again; this will be my last effort to allow US stations to work South Africa in 13 cm.

K2UYH: I (Al) alkatz@tcnj.edu was mainly active on the MW bands in Sept. I experimented with the new JT modes on 3 cm on 5 Sept and QSO'd at 0118 OK1KIR (9DB/10DB) using JT4F, 1032 OK1DFC (15DB/10DB) using QRA64D but had a problem with CFOM (constant frequency on the Moon) that I later solved and 0150 OK1DFC (21DB/14DB) QRA64D for mixed initial #28* on 3 cm. In the ARRL MW EME Contest I was joined by NE2U, K2BMI, W2HRO and K2YY. Our contact count was down due to the low Moon declination that limited our Moon time and particularly the opportunity to work EU. We were very busy switching feeds to make optimum use of our limited window. We ended with on 13 cm 19x16, 9 cm 3x3, 6 cm 11x9 and 3 cm 3x3 for a multiband total of 36x31. We had almost no equipment problems despite all the feed switching. Highlights were getting a new state, KN0WS in MN on 13 cm and working JA despite the poor Moon window. We started on 9 Sept on 13 cm using CW unless noted otherwise at 0420 SP6OPN(529/559), 0452 UA3PTW (559/589), 0422 KN0WS (11DB/O) using JT65C for MN and mixed initial #97*, 0429 UA4HTS (559/579), 0434 G4RGK (559/559) XB, 0440 OH1LRY (559/579) #88 and #98* XB, 0449 G3LTF (579/579) XB, 0455 OK1CA (579/579) XB, 0514 VE6BGT (559/569), 0522 HB9Q (599/579), 0545 VE4MA (559/579), 0552 DF3RU (569/579) XB, 0558 S53MM (559/559), 0620 EW1AA (25DB/17DB) JT65C, 0635 WA6PY (559/569), 0644 WD5AGO (559/579) and 0700 VE6TA (559/569), then switch to 3 cm at 0843 N9JIM (19DB/10) on JT4F for mixed initial #29*, back to 13 cm at 1226 KD3UY (17DB/O) JT and 1236 WA3RGQ (15DB/O), and on 10 Sept starting 5760 0503 GLTF (559/559), 0508 SQ6OPG (559/559), 0512 UA4HTS (559/559), 0522 DL7YC (569/569), 0634 SP6GWN (559/559), 0606 VE4MA (559/559), 0618 OZ1LPR (559/559), 0625 UA3PTW (559/559) and 0640 HB9Q (589/569), then switched to 9 cm at 0728 G3LTF (569/579) and 0736 G4CCH (569/579), switched to 3 cm at 0837 HB9Q (17DB/17DB) using QRA10d and 0844 OK1KIR (17DB/17DB) using QRA10d, back to 6 cm at 0953 VE6TA (559/549) and 1230 JA8ERE (559/559), and finally on 9 cm at 1303 KL6M (579/579). After the contest we QSO'd on 3 cm UR5LX (O/O). I was also QRV a bit during the ATI Fall Trophy EME Contest on 432. I will report on the QSOs next month. Our team will be active during the upcoming ARRL Contest in Oct and Nov.

NET/REFLECTOR NEWS: **K5QE** was looking for 432 EME QSOs during the 9/10 Sept ARRL VHF Contest on .080 – unfortunately his request arrived too late for the last NL. [This is primarily a tropo contest, but EME QSOs counts too]. **N1RWY** in NM (DM43) is setting up for 1296 EME with 10' TVRO dish, a septum feed and a pile of actuators to make it all move around. For TX Jay is planning to use a 150 W PE1RKI SSPA. **PA5Y** is coming on 23 cm EME. He has a 3.7 m solid offset fed dish that he needs to mount and is looking for ideas on how to do it. He hopes to be QRV in the spring. **SM7SJR** is temporary QRT as he moves his EME station to a new QTH. **ON4IQ** should be soon QRV on 70 cm EME with 8 x 43 el YU1CF yagis and a GS23 tube PA. For more info see http://users.telenet.be/on4iq/70eme.htm.

TECHNICAL: OK1VPZ wrote an article "Why isn't it a good idea to use impulse mode transistors in a ham radio SSPA?". This article contains a discussion about the proper use of high power transistors for 23 cm EME solid state PAs. An English translation has been done by OK1TEH and found at http://www.ok2kkw.com/more/impulsni_tranzistory_en.htm. Do not miss some interesting presentations from SP6 EME/SHF meeting at http://www.ok2kkw.com/next/morawa2017/morawa_2017prednasky_en.htm.

FOR SALE: **PA0PLY** is runing production batches for both his 24 GHz (~1 dB NF) and 10 GHz (~0,6 dB NF) LNAs in quantities of 25. As soon as the units become available he will send further info. The preliminary spec's are a NF of approx 1 dB, gain > 25 dB, input WR-42 waveguide. See for more info http://www.pa0ply.nl/sspa_amplifiers.htm or http://www.pa0ply.nl/images/10368/SSPA/10Ghz-preamp-dec.pdf. **PA2V** has for sale a 70 cm 1.2 kW SSPA. See http://mailman.pe1itr.com/pipermail/moon-net/2017-September/033410.html. **KL7UW** is selling a 2.4 m Ku dish. See http://mailman.pe1itr.com/pipermail/moon-net/2017-October/033437.html. **KG6RYC** is looking for a manual for Thomson TH3631W TWT and power supply. If you can help contact Patrick at wpats@hotmail.com. **SM4IVE** has for sale a brand new 9 cm DJ6EP transverter with OCXO - asking 2400 SEK, and two brand new 9 cm 30 W SSPAs (DF1SR design) - asking 1000 SEK each, and a 13 cm high power 90 deg hybrid - asking 500 SEK. For more information contact Lars at sm4ive@telia.com.

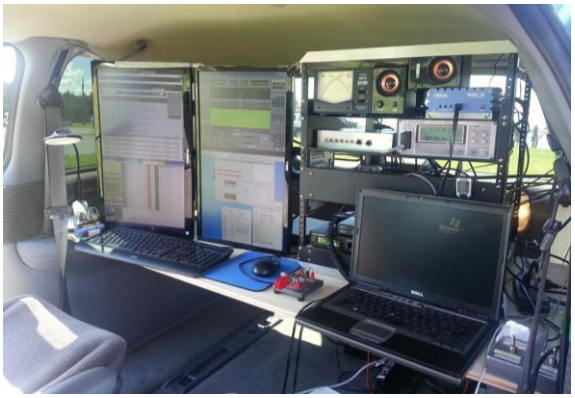
NEW 10 GHZ EME WORLD RECORD: On 9 Sept VK7MO and WA3LBI completed a 18949.4 km QSO with QRA64D to extend the existing World Record held by DL7FJ and ZL1GSG, using CW, of 18337 km by around 600 km. The key to this result was to find locations with almost zero degs take-off, which essentially means across water. VK7MO operated from OF76nk at Meelup Western Australia and WA3LBI operated from FM28lo in DE on the East coast of the USA. Both stations operated portable to maximize the distance at locations with good take-offs over water. It is of interest to note that "Meelup" is a native aboriginal word meaning "Place of the rising Moon" because they could see the Moon rising out of the water; so the native people were well aware of the potential of this location for EME. VK7MO ran 50 W to a 1.13 m dish, linear pol.

VK7MO's 1.13 m dish set up at Meelup

WA3LBI ran anestimated 125 W to a 2.4 m, RKI feed by Bert Moderman, circular pol, mounted on a trailer. [The loss in going from linear to circular is somewhat less than the expected 3 dB due to depolarization at the Moon surface - (probably around 2 dB)].

WA3LBI's portable 2.4 m on location

VK7MO operating position



Operating Position at WA3LBI

The time was chosen to maximize the Moon window when spreading was low at 34 Hz and Lunar degradation low at 0.8 dB.

UTC	dB	DT	Freq	Message	
1317	-23	2.6	998	:* VK7MO WA3LBI -24	3
1319	-21	2.6	997	:* VK7MO WA3LBI RRR	0
1321	-20	2.6	998	:* VK7MO WA3LBI 73	0
1323	-21	2.6	995	:* CONGRATS REX	0

QSO/sample decodes at VK7MO

It is seen that WA3LBI was first decoded at -23 dB at 1317 when the Moon was at zero degs and only partly visible and ground noise would be an issue. He later peaked at -19 dB when the el was around 2 degs. In addition to the basic requirements of a QSO some text messages celebrating the record were also exchanged. After that W5LUA was worked with strong signals up to -14 dB and then a second QSO completed with WA3LBI when signals peaked at -17 dB dropping to -23 dB at 1353 when WA3LBI lost the Moon. It was possible to exchange messages with WA3LBI from 1317 to 1353, which from the Moonsked data above is from zero degrees el at the VK7MO end to zero degs el at the WA3LBI end. After the window to WA3LBI closed, W6YX operating as N9JIM in CA was worked with 125 W to his 4.6 m dish and signal levels up to -10 dB. Critical factors which made this World Record possible were both stations being able to work portable and select locations with zero take-off, the use of the very sensitive QRA64D mode and selecting a time when the common window was maximized and spreading and lunar libration were low.

HISTORICAL PAPERS: It's well known that on 4 Oct we celebrate the 60th anniversary of the flight of first human made satellite in space – Sputnik 1. What isn't so well known is that on 4 Oct we have 90th anniversary of the start of the International Radiotelegraph Convention in Washington, D.C. in 1927. This conference was remarkable by establishing the foundation of the CCIR and ham radio's DXCC prefixes (such as OK for Czechoslovakia). Original documents can be seen at ITU web: http://www.itu.int/en/history/Pages/RadioConferences.aspx?conf=4.39.

THE RADIOASTRONOMICAL CORNER: Have you ever heard about MeerKAT radio telescope center in South Africa? They use an interestingly constructed array of 64 radio telescope-dishes. The main reflector has an effective diameter of 13.5 m and is a Gregorian offset design. The main advantage, especially for the higher bands is easy way to use a rotary mechanism for changing feeds, and also a very low noise temperature. See https://www.skatelescope.org/public/2011-07-13_Dish_Array_CoDR/WP2-020.045.010-TD-002-E_Dishb-ogchina.pdf and http://www.ursi-nederland.nl/Documents/Africon_pres/20130910-07-Theron.pdf and http://skatelescope.org/wp-content/uploads/2011/03/SKA-Brochure_Jan_2013_webspreads.pdf.

EME 25 and 35 YEARS AGO by Peter, G3LTF: 35 Years ago in Sept 1982 there was lots of activity on 432. GU3YGF/P came on from Alderney giving a new country to several ops. OY5NS appeared with 8 yagis and 380 W for the first 432 EME from the Faroes. (35 years on I still need both of those countries!) On 23 cm activity the Editor commented.... "A QSO occurred which should have a marked impact on future 1296 EME activity", DL7YC worked SM6CKU (and later on VE7BBG and W5LUA) using 400 W and a 0.35 dB preamp. These were all random QSOs! Several SSB QSOs are also reported. GW3XYW made his with 100 W. Cor, VE7BBG reported re-surfacing his dish with 0.25" (6 mm) mesh and then did some careful characterization. The results showed 15.3 dBK, 36.6 dB gain and a 67% efficiency. Interestingly the spillover contribution to the 120K Tsys that Cor calculated is much higher than we would expect today because then the preferred f/D was 0.5-0.6 to get maximum gain with the W2IMU dual mode horn feed. 25 Years ago in Sept 1992 the main news was the successful 432 DF6NA/EI5HN dxpedition to EI. 27 stations were worked and 23 initials (I still need EI too!) DL9KR and K2UYH both passed 500 initials on 432. The initials list for 432 was in the NL and contained 60 stations with over 100 initials; 432 was a busy band in those days. Finally OZ4MM reported initials with OE9XXI, OE9ERC and WB5LUA on 13 cm and also that he had permission to put up a 10 m dish.

FINAL: The new rules for using reflectors during the ARRL EME contest are not as open as some think. Station Ops can use Internet logger sites such as HB9Q to announce CQs, their call sign, location, band or frequency, mode and transmitting sequence. Operators may NOT use assistance (loggers) to complete any contact once the contact has commenced. This means such assistance may not be used to convey receipt or non-receipt of any required element of a contact or to request a repeat of any required element of a contact. For example, posting "W1ABC CQ CQ CQ – 065 - JT65B - 2nd Period" is acceptable. Posting "W1ABC - Tnx for QSO - 73 - GL" is not acceptable because it conveys information that the QSO was completed. Any exchange of information during the contact such as "PSE Continue or QRZ" is obviously logger based communication and would invalidate the QSO attempt. [TNX W2HRO for this information].

It is not too early to start making plans for **EME 2018 NETHERLANDS,** the 18th International EME Conference next summer. The website for 2018 is www.eme2018.nl.

G4RGK has a number of updates to his CW initials lists and will update it in the next few weeks.

The 10 GHz EME beacon was switched off because problems during the month, but is now back in operation. TNX to Per, DK7LJ for all his effort to keep the beacon going. It is a very valuable resource for 3 cm EMEers!

Congratulation to Warren, W2WD and his XYL Rose on their 75th wedding anniversary! Warren maintains the NL's email list and emails the NL each month. TNX Warren.

Oct will be another busy month for EMEers with the ARRL EME Contest. Don't forget to send us your reports, comments and tech material. We will be looking for you off the Moon. 73, Al - K2UYH and Matej - OK1TEH

K2UYH changing feeds during the ARRL MW EME Contest. K2BMI is at the back of the platform