432 AND ABOVE EME NEWS
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CONDITIONS: There can be no question that there is more EME activity on the 70 cm up bands than ever before. There are also more bands, so operation is more divided and this may make a band seem less populated at times. With two major contests and 5 rare DX locations active on 70 cm and up this past month, it seems hard to complain. The least successful of this month's dxpeditions, 3B9EME to Rodriguez Island still supplied three 70 cm QSOs (HB9Q, DL7APV and UA3PTW). The others were spectacularly successful – see their reports in this newsletter (NL). DL1YMK's (M&M) dxpedition to the Isle of Jersey provided EME QSOs for the first time on 6 different bands, including 3 cm. The TA and FP dxpeditions made many 70 and 23 cm operator very happy. OK1DFC also got into the act by putting Cypress on 70 cm EME, and still had time to get home to finish the 6th 70 cm DXCC – congratulations to Zdenek! Most of the attention was on the bands, 13 cm and up, because of the ARRL Microwave EME Contest. I compare it to a triathlon with its need to quickly switch feeds between bands (or have a lot of dishes). Ten years ago, it would have been hard to conceive of the level of microwave activity we have today… And the fun is not over! Coming up on 26/27 Oct is the second leg of the ARRL EME Contest for 70 and 23 cm (and some other lower bands too!). And we have more dxpeditions going: H44HP (QI90) operated by DL2NUD (who was a major part of this month's FP dxpedition) is reported to be on 70, 23 and 13 cm starting 22 Oct. And the BJ9TM dxpedition to NM79 in China is to start operation on 17 Oct – see their announcement in the last NL. What a great time to be on EME!

5B/OK5EME: Zdenek ok1dfc@seznam.cz besides completing the 6th 70 cm DXCC also provided a new 70 cm DXCC QSO to many 432 EME stations while on business trip to Cyprus –- I brought a 27 el M2 yagi for 432 MHz and a brick PA with me. During a short test I worked DL7APV, I1NDP and UA3PTW with great signals (20DB). At the time I had now a very limited time slot and used only 19 elements from my yagi on balcony. I was able to QRV from a better location with the full yagi on Saturday and Sunday and made more QSOs. In the future I should be able to have a semi permanent setup here for EME as I plan to be returning regularly to Cyprus (KM74) on business.

DL7YC: Manfred ploetz@snafu.de sends news on his recent microwave activity -- I worked the M&M Jersey dxpedition with the MJ/DL1YMK callsign, first on 9 cm and the next day at 6 cm. TNX to Michael for the contacts and Monika for your excellent dish tracking by brain and hand! The following Saturday and Sunday, I was on for the ARRL Microwave EME Contest. The first day, I started on 6 cm, because I lazy and the 6 cm feedbox was already installed. But I was not as successful as last year and found much less activity. I only worked F1PYR and IK2RTI. I decided at 0500 to change to 13 cm. I used a brand new feedbox (OK1DFC feed/250 W SSPA/G4DDK .027 dB preamp) for the first time. As I know my dish's focus very well from 24 GHz, no Sun noise measurements were made before hand, and the Moon noise is just detectable with my 2.4 m dish. I just started with echo testing and heard them bingo! My first contact was with HB9Q followed by G3LTF, SV1BTR, PY2BS, PA3CSG and HB9SV. I had a call from someone at 0950, but couldn't ID. I also heard F1PYR, but no contact. The main highlight was working MJ/DL1YMK. The next day, I changed to 3 cm and made 13 contacts with OK1KIR, PA7JB, DL0EF, F5JWF for an initial (#), F1PYR, UA5Y (#), UR7D, OZ1LPR, DL0SHF, 0808 QRZ?, IZ2DJP, SQ6OPG, LX1DB, and finally MJ/DL1YMK (O/O)(#). Heard but not worked where PA0SSB and SP6JLW. Thanks to everybody for the new and "old" contacts. See you next time on any band from 2304 to 24048 MHz.

F2CT: Guy F2CT@wanadoo.fr reports on his 5.7 GHz activity during the ARRL Microwave Contest -- My results on 6 cm using the PB8 13.50 m Cassegrain dish at the Pleumeur Bodou, Space Telecom Center were IK2RTI (559/579), OH2DG (559/569), SQ6OPG (559/589), SM6FHZ (559/569), SV3AAF (559/579), W5LUA (589/589), SV1BTR (559/599), PA0BAT (579/589) and (56/56) on SSB, LX1DB (58/58) on SSB, partial EA3XU (519/519), G3LTF (559/589), VE6TA (559/569), G4CBW (559/569), IZ2DJP (559/589), K5GW (599/599) and (59/59) on SSB, and K1JT (559/569).

FP6/DL2NUD AND FP6/DJ4TC: Peter DJ4TC DJ4TC@t-online.de and Herman DL2NUD did an excellent job putting St. Pierre and Miquelon Islands (GN17tc) on 70, 23 and 13 cm. On 432 they (FP6/DL2NUD) were QRV on 17 Sept with a single 38 el yagi and 300 W and QSO'd DF3RU, DK3WG, DL7APV, DL9KR (CW), G4RGK, HB9Q, I1NDP, K2UYH, K5QE, LZ1DX, OK1DFC, OK1KIR, PY2BS, SM2A, UA3PTW and WA4NJP (432). On 1296 they (FP6/DJ4TC) were QRV on 15 Sept with a 67 el yagi and 250 W and worked HB9Q, I1NDP, K2UYH, OK1KIR, OK2DL and PY2BS. They were also active on 2320 on 18 Sept with a 67 el SHF yagi and 300 W. They made it on all 3 bands with HB9Q, OK1KIR and PY2BS, but no others on 13 cm.

If you didn't QSO FP6/DJ4TC on 23 cm, this may be the cause

G3LTF: Peter g3ltf@btinternet.com sends his microwave contest weekend report -- I was on 13 cm the first day, but I spent about 90% of my available moon time on 9 and 6 cm the second day. The round trip from my shack to the dish and back is 100 m and I must have walked that at least 20 times on Sunday. I think I changed feeds about 6 times. But it was all very worthwhile. I found activity a bit up on last year and I also had the added advantage of my dish surface improvements. I hope everyone enjoyed the weekend activity as much as I did. I worked on 13 cm OK1CA, HB9Q, UA5Y, ON5TA, SD3F, JA4BLC, SP6OPN, OH2DG, SM3JQU for an initial (#), SV1BTR, YO2BCT, OK1KKD, MJ/DL1YMK, SM6CKU, SV3AAF, PA3CSG, OZ5G, IK3COJ, PA0BAT, OZ4MM, S50C, DL7YC, CT1DMK, LZ1DX, HB9SV, K1JT, OH1LRY, NA4N, K5GW, WD5AGO, VE6TA, DF3RU, F5JWF, PA3CQE (#), G4RGK, PY2BS, KL6M and LA8LF for a total of 38x28. Gotaways were WA6PY, WA9FWD (CWNR) and ES5PC. On 9 cm, I QSO'd MJ/DL1YMK, PY2BS, OK1CA, SP6OPN, ES5PC, W5LUA, HB9Q, K1JT and WA6PY for 9x9 and on 6 cm K5GW, SM6FHZ, SV1BTR, SV3AAF, F2CT, W5LUA, K1JT and VE6TA for 7x6. [Peter made on a total of 54 QSOs on the MW bands.]

G4NNS: Brian brian-coleman@tiscali.co.uk was not able to QRV for the microwave EME contest, but has been getting into some back yard radio astronomy, which he says is absorbing all his available time -- I have set up my 3.7 m dish for the Hydrogen line and with a dual mode feed horn the Tsys according to the VK3UM EMECalc is about 58 K. Taking some observations along the galactic equator and a little above and below it has helped me to appreciate that shape of our galaxy in a way that amateur optical astronomers cannot.

JA4BLC: Yoshiro ja4blc@web-sanin.co.jp sends info on his ARRL Microwave Contest results -- I operated 13 and 3 cm this weekend; not easy as both bands

are separate segments from Japan. On 13 cm I worked SV1BTR, SP6OPN, G3LTF, ON5TA, MJ/DL1YMK, K1JT, WD5AGO, OK1CA and DF3RU for an initial (#). I heard many stations on 2320 and JA8ERE on 2424. On 3 cm I worked OK1KIR on 10450 and heard UA5Y on 10368. Thanks to all for the cross segments QSOs.

JH1KRC: Mike jh1krc@syd.odn.ne.jp writes that after 20 months QRX, he is now QRV again on 1296 -- My 23 cm antenna system was rebuilt and now is working successfully. During the ARI CW EME Contest 28/29 Sept, I worked 19 stations, including 7 initials, 2 JA's, but no NA stations. QSO'd were JA4LJB for initial #78, JA4BLC, OK1CS #79, I5MPK #80, IK3COJ, G4CCH, DF3RU, IK5VLS #81, ON5TA #82, SV3AAF #83, OE5JFL, I1NDP, VK3UM, F5SE/P #84, HB9BBD (from his new QTH but not another initial), OH2DG, OZ4MM, SP7DCS and IK2MMB. Unfortunately I missed the M&M dxpedition because of the tree blockage. I went QRT about 30 min before their operation. I am now using a 4.4 m TVRO dish, OM6AA septum feed, HB9BBD LNA, NL(TH)327 in DL9EBL cavity for 500 W at feed, and OE5JFL/HB9DRI controller. For possible 70 cm operation, I have a single loop feed with a reflector plate, FHX35 LNA, and 7213 PA for 500 W at the feed. Look for me during the ARRL EME Contest in Oct and Nov.

K1JT: Joe k1jt@arrl.net operated the microwave contest with K2UYH, K2BMI and NE2U at K2UYH's QTH – We started on 28 Sept on 13 cm at about 0730 with the dish still pointing into the trees and stayed on 13 cm until after the end of the EU window. We during this period QSO'd HB9Q (579/559), SV1BTR (579/579), G3LTF (559/569) XB, SM6CKU (569/579) XB, CT1DMK (569/569), K5GW (569/569), SP6OPN (579/559), UA5Y (569/579), WA9FWD (559/549), ON5TA (559/559), VE6TA (559/569), DF3RU (O/O) XB, OZ4MM (559/559), OH1LRY (449/539), PA3DZL (559/559) XB, MJ/DL1YMK (559/559) XB, ES5PC (569/559), WA6PY (569/569) and WD5AGO (559/559). We then switched to 6 cm, but found the band dead except for working W5LUA (559/559), so we went back to 13 cm to QSO PY2BS (559/559), KL6M (559/559) and JA4BLC (559/559) XB. The next day we began on 3 cm, but could not hear our own echoes and after about an hour of hearing nil decided to switch to 9 cm where we QSO'd HB9Q (549/579), WA6PY (559/559), PY2BS (569/569), SP6OPN (559/559), G3LTF (549/559), OK1CA (579/579) and W5LUA (569/569). We then changed to 6 cm to work K5GW (569/559), F2CT (569/569) and G3LTF (559/559), and then back to 9 cm for KL6M (559/559). We also thought that we worked VE6TA (549/559) but apparently Grant never received our Rs. Finally we went back to 3 cm, and after some adjustment of the feed position were able to copy echoes and ended with one QSO with W5LUA (O/O). Our totals were on 13 cm 22x22, on 9 cm 8x8, on 6 cm 4x3 and on 3 cm 1x1, which would have tied our best year if our 9 cm VE6TA QSO had been good. We will be looking for you again during the regular EME contest weekends.

KD7YZ: Bob kd7yz@denstarfarm.us remains active on 70 cm EME – I just finished CW QSO with DL9KR. He was so loud that my XYL was standing here listening to him before she went to work. I also was copying I1NDP on CW later. I was seeing him on my SDR/IQ, but later on could find him. I am still looking for a dish to use on 1296. I have located a 12 m dish, but it may be too big for me to handle.

LA8LF: Anders anders@la8lf.com reports on his microwave contest activity -- I was QRV only on Sunday on 13 cm during the contest. The RX both in my old 2320 SSB transverter (served me for 22 years) and my new 2304 Kuhne transverter was dead on start up. They had worked excellently during the week for Sun noise measurements, which gave 17.3 dB on 2320 and 17.1 dB on 2304 with a flux of 104. These were measured with my SDR-IQ. Fortunately, I have an old Drake converter modified for both segments, which I was able to use. It was a bit tricky to find my own echoes, but by using a direct reading frequency counter and signal generator, it worked out fairly well. For some strange reason, 2304 had very little activity and weak signals. The converter measured OK though with a 0.92 dB NF and 20.3 dB gain on my HP8970A NF meter. It also checked OK on Sun noise. I worked 21 stations as follows: DF3RU, OK1KKD, SP6OPN, ON5TA, UA5Y #63, OK1CA, SV3AAF, G3LTF, SV1BTR, IK3COJ for an initial #64, OZ5G #65, SM6CKU #66, PA3CSG #67, SM3BYA, PA0BAT, OZ4MM, OH1LRY #68, PA3CQE #69, WA9FWD #70, WD5AGO and CT1DMK. I need 24 degs elevation at both sunrise and sunset as trees have grown and cannot be removed by government rules (listed/protected).

MJ/DL1YMK: Michael and Monica dl1ymk@aol.com report on their highly successful 10th CW EME dxpedition in 9 years – We were on 6 different bands, 70, 23, 13, 9, 6 and 3 cm, and for the first time we had a really luxurious holiday house with all the comforts we could wish for – and no bedbugs, no mice competing with us for bread, no huge spiders in the beds... Furthermore we were able to operate from the house, not from a well ventilated barn, HI. Between 22 Sept and 4 October (including a few days without activity) we made in total 147 QSOs and 124 initials - many of them as country firsts, because Jersey has never been activated on 13 cm and higher.

MJ/DL1YMK: stress dish used on 70 – 6 cm & 1.8 m solid on 3 cm

We started out on 22 Sept, on 23 cm using MJ/SA6BUN, with QSOs to OK1KIR, VK3UM, OZ4MM, G4CCH, F5SE/p, JA4BLC, G3LTF; DJ9YW, I1NDP, LX1DB, HB9BBD, HB9Q, OK1CS, PA3CSG, G4RGK, IK2MMB, ON5TA, PA3FXB, PA0BAT, UA3PTW, W5LUA, SP7DCS, K2UYH, WA6PY, VE6TA, PA3DZL and G3LTF again at the end. I hope the 'alphabet soup' call (MJ/SA6BUN, as nicely put by VK3UM) created a little fun. The next day (23rd) we were on 13 cm and were pleased to give "country firsts" to JA4BLC, PA3DZL, OZ4MM, OK1KIR, G3LTF, OK1KKD, ON5TA, CT1DMK, F1PYR, SM6CKU, SV3AAF, W5LUA, WD5AGO, PA3CSG, WA6PY, LX1DB, LX1DB (with a great signal on SSB!) and PA2DW. Despite the fact, that the dish was partly obstructed at moonrise, we heard our own echoes from the beginning at 17 deg until moonset, which is slightly obstructed by a tree. On the 24th we provided the first 9 cm activity from Jersey and surprisingly enough heard our echoes from the beginning on. We spent some time optimizing the feed position with Sun noise and obviously we did it right. Our last 9 cm experiences during an EME dxpedition were from the Aland Isles with much weaker signals; this time most QSOs were quick and easy. We worked OK1CA, OK1KIR, DL7YC, PY2BS, G3LTF, PA3DZL, PA0BAT, W5LUA, K2UYH, OH2DG, LX1DB on CW and SSB, G3WDG and G4KGC. For each new band, we enjoyed a good Single Malt. On 25 Oct we had our 4th for 5760! 6 cm performed much better than last year, when we tried it for the first time on a dxpedition. We again used our old stressed dish, which is far from ideal on the higher frequencies, but optimized carefully the feed position with sun noise. Furthermore, we exchanged a lossy cable in the RX chain, obviously both changes contributed to our success. We started at 0400 and want to thank all the other crazy guys, who rose with us so early! LX1DB's beacon again helped us to be confident in our dish heading and to optimize the tracking, which is manual (and named Monika). Due to heavy rain in the night, we protected the open 6 cm feed and LNA with waste bin liners, while the SMPS was hidden under a sun chair in the garden – relative dry, at least the RCI did not trip. We worked LX1DB, OK1KIR, PA0BAT, PA7JB, G3LTF, SV3AAF, DL7YC, W5LUA, K2UYH, OK1CA, PA3DZL and a partial with G3WDG. On 26 Oct we went back to 23 cm to give stations we missed the first time another chance and even took skeds with smaller stations. We always used the MJ/SA6BUN call on 1296 except during a sked with KL6M. We added on CW JA6AHB, PA7JB, PY2BS, LZ1DX, OH2DG, OE5JFL, OK1DFC and HB9BBD, and 6 SSB QSOs with I1NDP, OZ4MM, UA3PTW, HB9BBD, OK1DFC and OE5JFL. From all we received a (54) or better report! A major contributor to these QSOs has to be our new SSPA. Over the weekend, we operated the ARRL's Microwave EME Contest. On Saturday we were only able to be active on 13 cm because of high wind gusts (up to force 7) and heavy rain that make it impossibility to change the feed. We worked 30 stations; 18 of these were new on 13 cm: SV1BTR, OK1CA, UA5Y, IK3COJ, SP6OPN, OH2DG, YO2BCT, PA7JB, HB9Q, PY2BS, PA0BAT, HB9SV, SD3F, OH1LRY, DF3RU, DL7YC, V6TA, K5GW and K1JT. On Sunday we were able to get on 9 cm again and added initials with SP6OPN and ES5PC, and some others. We also activated our 5th band from Jersey, 3 cm, despite the fact that it was a questionable decision to become QRV with a weak station as part of a dxpedition setup during a contest. We knew from the beginning that our signal would be marginal, because we used only a small 1.8 m solid dish with around 35 W to the feed. But with a little patience, QSOs were made with OK1KIR

without the logger and other help, and DL7YC. On Monday, 30 Sept, we reached our goal of EME operation on 6 bands from Jersey. To our knowledge this is the first time ever that a portable EME station been has accomplished contacts on 6 different bands. The final band was 70 cm. While Faraday played tricks on us and rotated the polarization by up to 90 deg, we still worked OZ4MM, I1NDP, OK1CA, JA6AHB, DL7APV, G3LTF, OH2DG, OK1KIR (our first station on all 6 bands!), SP7DCS, LZ1DX, OK1DFC, DL9KR and LX1DB. Only stations with a rotary antenna system had nice signal strengths, while others were extremely hard to copy. We had a 2nd session on 3 cm on 1 Oct and worked OK1KIR (dupe), F1PYR, PA7JB, LX1DB, DL0SHF, W5LUA, OZ1LPR. This success was only possible because OK1KIR gave us a beacon that we could optimize the position of the dish according to the strength of their outstanding signal as displayed on our SDR-IQ. TNX to Tonda, Vlada and crew for their time and effort. Also thanks for the help of W5LUA, G3WDG, PA3DZL and LX1DB with special components enabling more power to the feed. We also worked on 9 cm VE6TA. On 2 Oct we QSO'd on 9 cm HB9Q and on 13 cm ES5PC. Overall we worked on 70 cm 13 QSOs, on 23 cm 44 QSOs/37 initials, on 13 cm 48 QSOs/36 initials (30 of them in ARRL contest), on 9 cm 21 QSOs/16 initials, on 6 cm 13 QSOs (same as initials) and on 3 cm 10 QSOs. For more details see OK1DFC's dxpedition website at http://www.ok1dfc.com/Peditions/ymk2013/dl1ymk2013.htm (TNX Zdenek).

OK1DFC: Zdenek ok1dfc@seznam.cz had quite a month; he joined the 432 DXCC club (DL9KR (CW), HB9Q, K2UYH, DK1WG and DL7APV) -- My dream is complete. I am very happy to announce that after 18 years on 432 EME, that I have worked XE2AT for DXCC 100. Only a few days earlier, I worked TA/PE1L (speaker copy 18DB) for my DXCC 99. I would like to thank all of the many hams that helped me to reach this milestone. PE1L and his team have been the source of many very exotic DXCCs, also DL1YMK (and his XYL Monika), and DL8YHR and his team, and many and many others over the past 18 years. Thank you all. I am now looking forward to other challenges such as 432 WAS. [Zdenek also this month provided a new 70 cm DXCC to many EMEers while on a business trip to Cyprus! See his 5B/OK5EME report in this NL.]

OK2AQ: Mirek mirek@kasals.com attempted his first 3 cm EME from his holiday house QTH in JN89eu between 26 and 29 Sept. His overall setup is on the smaller side with a 1.8 m dish and 20 W. During the first two days despite bad weather, he was busy measuring Sun and Moon and CS/G noise ratios as well as position calibration. On 27 Sept he had a sked with OK1CA. They were able to hear each other but failed to manage a QSO. During the ARRL EME Microwave Contest, Mirek was able to copy several big CW stations: DL0EF, DL0SHF, OK1KIR and LX1DB and fragments of few others. On 28 Sept, he tried calling strong stations many times without success, just QRZs from a few. Many attempts later he finally received a reply from DL0EF with his callsign at a Moon elevation 15 degs when spreading was a bit lower - about 100 Hz. The next day, he arranged a sked with OK1KIR. Tonda (OK1DAI) suggested they use the JT4F mode, and after several minutes a QSO (O/O) was completed. He thanks Tonda and the OK1KIR group for his first 3 cm QSO.

OK2AQ's 3 cm setup consisting of a 1.8 m and 20 W SSPA

ON0EME: Eddy (ON7UN) ejespers@telenet.be reports that the ON0EME 1296 EME beacon had some problems with its telemetry in Sept and that they had to switch off the beacon remotely. They were able to quickly find the problem and were QRV again within a few days.

PA2V: Peter peter@pa2v.com continues to add stations to his 70 cm initials list – I QSO'd ZS6OB and OH6UW this month. Both were initials. OH6UW is the smallest station (300 W) I have QSO'd with my single yagi so far. ZS6OB was on 16 Sept and OH6UW was on 22 Sept. Now I only need VK for WAC on 70 cm.

PA2V's single long yagi used on 70 cm EME

PA3DZL: Jac pa3dzl@planet.nl report on his microwave activity during the contest -- Prior to the contest, I worked the very UFB M&M dxpedition on 4 different bands, all new DXCCs and 2 first QSOs between PA and Jersey on 2320 and 3400. I QSO'd on 23 Sept on 1296 MJ/SA6BUN and on
2320 OK1KKD and MJ/DL1YMK, on 24 Sept on 3400 PY2BS for an initial from his home QTH and MJ/DL1YMK, and on 25 Sept on 5760 MJ/DL1YMK. During the contest I could not be QRV all the time, but had great fun QSOing stations on 2320 and XB on 2304. Worked were 28 Sept HB9Q, MJ/DL1YMK, PAØBAT, OZ4MM, WA6PY, K5GW, K1JT, HB9SV and OH1LRY, and on 29 Sept SV1BTR, SM6CKU, DF3RU, ON5TA, PA3CQE for an initial (#), IK3COJ, UA5Y (same as RK3WWF), F5JWF, CT1DMK, OZ5G (#) and WD5AGO. Heard were PA3CSG, G3LTF, SV3AAF, OH2DG, WA9FWD, VE6TA, ES5PC, LZ1DX and OK1CA. Signals on 13 cm were very nice this weekend! Unfortunately I could not be active on other bands due to family commitments.

PA7JB: John pa7jb@ziggo.nl was active on the microwaves in Sept/Oct – I worked on 20 Sept on 10 GHz with a bit more power than last time OK1KIR, UR7D, DL7YC, DL0EF, F5JWF, F1PYR, OZ1LPR for an initial (#), DL0SHF (#), PA0BAT (#), IZ2DJP (#) and UA5Y (#). I now have on 3 cm 50 W from a RW1127, compared with only 15 W back in April. I am also pleased to report that on 1 Oct I made the first PA - MJ QSO with the M&M team on 10 GHz. I also worked them on 23 cm, 13 cm, and 6 cm. Thank you Michael and Monika. I use 2.4 m offset dish and on 3 cm see 14.8 dB Sun noise and 1.5 dB Moon noise.

New (renovated) PI9CAM 25 m dish

PI9CAM: Jan (PA0PLY) pa0ply@pa0ply.nl updates us on the current status of the big dish -- Last year we disabled the station for a complete overhaul. The

dish was taken off its pedestal and really made nice and shiny. It has now been remounted, and the real work begun. To date volunteers are working to return the dish to full operation before the year ends. The aim to be operational on the same bands are before the shutdown (144, 432 and 1296). For 144, new thicker coaxial cables are being installed. On 432, the SSPA will be housed in the focus box and the dipoles refurbished as well. On 1296, the SSPA will also be housed in the focus box and a modified G4DDK preamp will be installed. Both the 432 and 1296 feeds will be housed in a RF transparent box for weather protection. A 2320 station is now close to being finished and will be installed soon. We are looking forward to the 2nd maiden run of the station!

S50C: Matija matija@hamradio.si sends info on his group's activity in the microwave contest – We were QRV (JN76jg) on 28 Sept on 13 cm and worked HB9Q, G3LTF, SP6OPN, SV1BTR, OZ4MM, SM6CKU for an initial #21, PA0BAT #22 and W5LUA #23. We also heard K1JT, K5GW and PA3CSG (weak). The station is a 2.5 m dish with 150 W at feed.

SM4IVE: Lars sm4ive@telia.com updates us on his dish repairs -- I finally started doing something on the dish repair. The tubes holding the feeds are fixed and I will try to get them on the dish ASAP. I need a crane to do this job. The damaged ribs will not be fixed now. I need about 3 m of flexible cable for AZ, (best would be 7/8)[?]. The damage has damped my enthusiasm for EME, but I need to fix the dish before winter in case any good Aurora shows up.

SM6CKU: Ben ben@sm6cku.se summarizes his microwave contest results -- 29 different stations were worked and 13 initials added. Only 2 QSOs were on crossband K1JT and WD5AGO. I also heard K5GW, WA9FWD, NA4N and WA6PY, all with good copy. The spreading was bad early Sunday morning, but got better later on. I had one caller Sunday that I just couldn't identify. I wonder who it was?

SM6FHZ: Ingolf's ingolf.fhz@gmail.com ARRL Microwave leg report follows -- I spent both Saturday and Sunday morning of the contest on 6 cm and QSO'd F2CT for an initial (#), IK2RTI (#), SV1BTR, PA0BAT, K5GW and G3LTF. I heard W5LUA, LX1DB (SSB), OH2DG, SV3AAF, SQ6OPG, IZ2DJP and VE6TA. Some of them were called with no response and some of them I never heard calling CQ nor answering my faint CQ's. I never heard K1JT (K2YUH) on the band, pity. It is very hard to be on all bands at the right time. Some loss is to be expected with this form of contesting. I do admire the stations who are running many bands in the contest. My window ended 1140 on Saturday and 1150 on Sunday when the moon hit the trees to the west. F2CT acted as a great beacon all during the Moon passes with a very nice signal. I am now using the OE5JFL auto-tracking. It is a great relief on 6 cm compared to manual tracking with a beam width of 0.66 deg. I now get time to actually work stations, not only tracking the Moon – Hi. 6 cm was kind of slow at times during Sunday, so I could just leave the antenna tracking the Moon, the radio scanning the band and do other things in between. (I picked a cup of ripe blackberries just outside the shack; they are now submerged in vodka and will be this year's Xmas snaps). I made some SDR recordings that can be down-loaded from my web page. They play in the SDR-Radio or HDSDR SDR software.

SV1BTR: Jimmy jimmyv@hol.gr reports on his ARI CW EME Contest and the ARRL Microwave Contest results – The ARI contest was a very nice EME weekend! I was only briefly on but greatly enjoyed the activity, working good old friends and several initials! On 70 cm, I was QRV for 1.5 hours and worked 6 stations, K2UYH, LZ1DX, DF3RU, I2FHW, NC1I and SV3AAF. (I also spent 4.5 hours on 144 and worked 20 stations.) My equipment worked flawlessly. On 70 cm there was some deep fades but not as bad as on 144. Echoes on 432 were close to 45 degrees both days. During the microwave weekend, I operated on 13 and 6 cm (with no logger active or passive). I worked on 13 cm 40 stations vs. 39 last year. I missed 6 stations. On 6 cm, I QSO'd 9 vs. 19 in 2012 and 14 in 2011. My 6 cm signal was 5 dB weaker, which did not stop me from calling CQ or working all who called me. I have no SDR and the like, even though intense libration and apogee were not helping. It was a nice weekend with the downside of much less activity on 6 cm this year, at least the super plenty of time I was on. It is a pity this happens probably because 2.3 and up seem to have had non-stop logger liaison coordination (allowed). This is something I am personally against in a contest, regardless of number of bands possible on a single weekend. It can be a max of 5 bands, while in the Oct-Nov legs it is 4 bands - where liaison is correctly not permitted. What's the big deal? I believe the use of loggers has resulted in a lowering of the overall CW random activity and CQs without prior notice in last few years. On Sunday's moonset, I was so tired that for 30 mins I could not hear echoes on 13 cm. I was checking station to see what was wrong, until I noticed I had the Doppler 6 kHz off! I was thinking I was on 5.7 – Hi. This brought back memories from the time I became QRV on 13 cm, and during my first echo tests, I was copying nothing for 15 mins untill I discover that I had forgotten to connect the TX feedline! I hope to see everyone during the Oct/Nov legs.

TA/PE1L: Rene (PE1L) hasperrene@gmail.com, PA3FPQ and PE1LWT were incredibly successful putting Turkey (KM39) on 70 and 23 cm EME. On 432 using only a 23 el DK7ZB yagi and 100 W, they worked on the moonpass of 22/23 Sept DF3RU, DK3WG, DL7APV, DL9KR (CW), G4FUF, G4RGK, HB9Q, JA6AHB, K2UYH, LZ1DX, OK1DFC, OK1KIR, OZ4MM, UA3PTW and WA4NJP. They were even more successful on 1296 using only a single 67 el yagi (horz pol) and 100 W. They QSO'd on the next moonpass of 23/24 Sept DF3RU, DJ9YW, G4CCH, HB9Q, IK3CQJ, JA6AHB, K2UYH, LZ1DX, OE5JFL, OK1CS, OK1DFC, OK1KIR, OK2DL, OZ4MM, PA3CSG, PA3FXB, PY2BS, RN3A, UA3PTW, W5LUA and YO3DDZ.

1296 EME from Turkey: TA/PE1L 67 el yagi used on 23 cm

VE3KRP: Eddie eddie@tbaytel.net briefs us on his recent activity on 1296 EME – On 23 cm, I added on 7 Sept VK4CDI for a JT digital initial {#}, on 22 Sept JA6AHB {#}, on 28 Sept PA3FXB on JT, HB9Q {#}, WB7ABP JT and ZL2IP {#}, on 29 Sept PA2DW JT and I1NDP JT, and on 6 Oct IK5VLS JT and ON5TA JT. It is getting cool here temperature wise; hopefully I won't be brushing snow off the dish too soon!

VE6TA: Grant ve6ta@clearwave.ca sends his update from all his end of Sept/beginning Oct Moon activity – On 23 Sept I managed to work MJ/SA6BUN on 23 cm for a new initial and DXCC. Then on 28 Sept during the first pass of the ARRL MW weekend I worked on 13 cm G3LTF, HB9Q, K5GW, WA6PY, K1JT, SV1BTR, WD5AGO, ON5TA, MJ/DL1YMK for an initial (#) and DXCC, SP6OPN, OZ4MM, CT1DMK, WA9FWD and ES5PC. For the next pass, 29 Sept, I installed my 5.7 GHz gear at the dish feed. Not holding out much hope for QSOs as my homebrew dish isn't very good at this frequency. It is performing much like a 3 m dish rather than a 5.5 me dish. However as the moon rose over the trees, I did happily manage to work the following stations on random; F2CT for an initial (#) with a huge signal, K5GW and G3LTF with a lot of persistence from Peter. About this time the Sun was rising, so my 3.4 GHz feed was quickly installed. The European window had just set unfortunately, but I was still was glad to hear several stations on and the following were worked; W5LUA, PY2BS and KL6M (#) with a lot of persistence from Mike as well. I almost worked K1JT, but unfortunately lost him at the end. This activity was capped off by working the M&M team once again on 1 Oct on 3400 after an early morning call from Jersey. Thank you Michael and Monika! I plan to be on for the next leg of the contest on either 432 or 1296. I hope to see many more of you then.

VK3UM: Doug tikaluna@bigpond.com reports a FB QSO with M&M on 23 cm during their very short window –- My QSO with DL1YMK's Jersey alphabet soup call sign at 1.5 degs was fun. Michael delights in making it difficult down here! I worked the following on 22 Sept starting at 2000: OK1CH, OK1CS, F5SE/P, DF3RU, JR1CRC, JA4BLC, G4CCH, HB9BBQ, ON5TA, IK3COJ and VK2JDS followed at 2129 by MJ/SA6BUN.

WA8RJF: Tony temanuele@ebulent.com writes -- It has been awhile since I have had any on the air EME activity to report. Though, I have been making a few station improvements over the past few months. With W5LUA's help I now have 65 W on 24 GHz. While visiting Al, we also tested a 2.4 GHz Klystron that loafed along at 500+ watts output, but unfortunately it will not tune below 2400 MHz. Maybe I should hang out at 2424.100 MHz? During the Microwave EME Contest weekend I worked 6 stations with 2 initials on 13 cm. Activity seemed down a bit, but my guess it is a bad news/good news situation as many stations are now QRV on bands above 13 cm thus reducing activity on 13 cm to a certain extent. Clearly two weekends are necessary to support all the microwave EME activity. Some interest seems to be building for region 2 activity on 902 EME and I can be QRV with 500 W on this band. Weather permitting I should be QRV on 1296 at the end of the month.

K2UYH: I a.katz@ieee.org had a very good month dxpedition wise. Besides operating the Microwave EME Contest with K1JT, I was also active in the ARI CW for a limited time because of family activities and worked on 21 Sept on 1296 at 0242 I1NDP (579/579), 0248 OK1CS (569/579), 0257 DF3RU (559/559), 0313 N4PZ (569/579) and 0323 I5MPK (559/569), on 432 at 0333 I2FHW (559/559), 0341 DF3RU (559/559), 0346 OK1DFC (579/579), 0353 SV1BTR (579/579), 0406 NC1I (599/589) and 0418 LZ1DX (559/559). I worked on 15 Sept on 432 Cyprus at 2248 5B/OK5EME (23DB/O) JT65B for mixed initial #859 and mixed DXCC 113 – TNX Zdenek, and on 1296 Miquelon Island at 2358 FP/DJ4TC (23DB/24DB) JT65C for mixed initial #453* and mixed DXCC 89*, on 17 Sept on 432 FP/DL2NUD (16DB/22DB) JT65B #860* and DXCC* 114, on 19 Sept I was on 13 cm looking for the FP but they did not make it on and QSO at 0400 W5LUA (569/559)- [Al reported that I had a strange stability problem, my echoes were ~ 3 kHz off from where they should be and not stable! I went over the system but never found the cause and fortunately everything seemed to work in the contest.], on 23 Sept on 70 cm Turkey at 0420 TA/PE1L (21DB/21DB) JT65B for #861* and DXCC* 115 and on 23 cm at 0539 MJ4/SA6BUN (559/569) M&M in Jesey #454*, on 24 Sept on 23 cm at 0410 TA/PE1L (24DB/21DB) JT65C #455* and DXCC* 90 and 0436 EA3EMG (29DB/21DB) JT65C #456*, on 25 Sept on 9 cm at 0559 MJ/DL1YMK (559/559) M&M again for initial #33 and DXCC 17 and 0609 PY2BS (569/569), on 26 Sept on 6 cm at 0715 MJ/DL1YMK (559/559) initial #21 and DXCC 12, and on 29 Sept on 9 cm at 1428 KL6M (O/O) for #34 and DXCC 18. 7 new DXCCs in less than half a month is not bad!

NETNEWS: **VK3NX** was unable to be QRV during the microwave contest because of high winds. **K5QE** was active on 432 EME for the ARRL's September VHF Contest on 14/15 Sept, but has sent no report on his success this year. **K6PF** is setting up 23 cm EME from AZ. **WQ5S** is QRV on 432 EME for horizon only operation with a HYGAIN 7031 (31 el, 10 wl) yagi and 50 W. He has already made a few QSOs and is available for skeds - southpaw1959@gmail.com. **WD5AGO** was active on 13 cm during the microwave contest. **VE2XX** is busy building a tilt over tower for his system and has no EME activity to report. **DL8FR** is still working on his new dish. **W5LUA** continues work on 77 GHz EME. **N4PZ** is fixing all his antennas before winter descends, and is also working on a basket case cavity he acquired from K1RQG's stuff.

FOR SALE: **SM7FWZ** is looking for replacement for lightning damaged elevation control board. Does anyone have a spare VE1ALQ encoder board for sale? Contact Ronny at sm7fwz@arlembke.se. **G0RUZ** has available high power 50 V LDMOS devices and reference PCBs. He has 1 x BLF613L250 and Taconic RF35 PCB with PTH. The cost is £160 plus shipping. These same devices are used in the Kuhne MKU-PA-23CM-250W-CU PAs. He also has 2 x BLL6H1214-500 500 W devices at £80 each, a single set of PCBs which are gold flashed Taconic RF35TC with PTH for £60. I will have some more PCBs in 4-6 weeks and I have the design data for those wishing to role their own. Two of these devices would make a really nice EME amp. Conrad conrad@g0ruz.com besides sale, will consider trades for LNA's, relays, heatsinks and enclosures. **N4PZ** reports that www.mpja.com Marlin P.Jones (1-800-652-6733) offers the best camera for an array. It is immune to being pointed at the Sun and is "NOT" sensitive to IR light. They also sell cables cheap up to 150 feet long for the cameras. The camera has an adjustable lens, not a pinhole. It is the only one that will work. The camera is model number 14248 ST for $49.95 and cables 15460-WI 25 ft $6.95, 15461-WI 50 ft $9.95, 15462-WI 100 ft. $17.95, 15463-WI 150 ft $$22.95. (BTW, the camera must be isolated completely from the cable when shut off by means of a 12 volt relay which disconnects the camera from the down lead and grounds it back to itself. If you don't do that I promise lightening will blow it during the first thunder storm.)

TECHNICAL: Leif, SM5BZS sends the following suggestions to help with the copy of signals with spectral spreading and Doppler smear on the higher EME bands – The signal smearing on 10 GHz and other microwave EME bands is very similar to aurora on 144. Setting the bandwidth lower than the width of the signal causes loss of S/N. If the spectrum of the signal is roughly Gaussian, you should select a filter that is Gaussian and has a frequency response that matches the signal. Today we can get the signal shape accurately enough from averaged spectra even if the signal is too weak for copy. When listening to normal CW it is advantageous to use a low pitch because the ear/brain selectivity is narrower than the RX selectivity and the ear/brain selectivity is best around 300 Hz or so. With a matched filter on smeared signals it is different. The sound has the same characteristics during key up and key down. The ear/brain selectivity does not provide any improvement at all. When using a matched filter one should set a very high pitch, maybe 2 kHz. The human hearing system is better at distinguishing small differences in the amplitude of narrowband noise if the frequency is fairly high. For microwave EME (and VHF aurora) it would probably be good to add some signal processing. 1) Compute RMS power; 2) filter to a bandwidth that matches the keying speed, 25 Hz or so; 3) Use the signal from 2) to control the gain of the signal sent to the loudspeaker to expand the dynamic range. A 1 dB increase of (S+N)/N may be hard to hear, but if the bandwidth ratio is 10 times the low pass filtered RMS power is likely to be better than the performance of the ear/brain system. Expanding the signal by e.g. 3 dB for a 1 dB level change would make it easy to copy a signal that would otherwise have been impossible. (This idea about processing is just theory.) The usage of a matched filter and a high pitch is not theory, it is based on solid practical experience from 144 aurora, which was always my favorite mode.

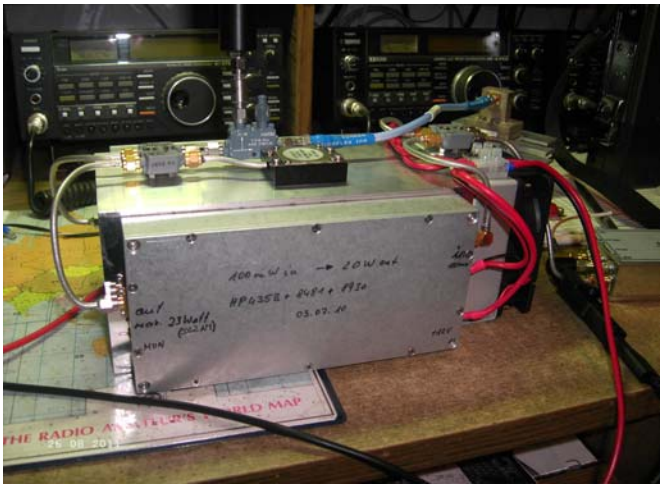
FINAL: It is time to start making your plans to attend EME 2014 in France. The schedule for this year's conference will be a little different. Pre-conference activities will be on the weekend prior to the actual conference. Arrivals are expected to start on Saturday 23 Aug, with a visit to the Telecom Museum and city scheduled on Sunday 24 Aug. The formal conference activities are on Monday 25 Aug and Tuesday 26 Aug and end with a Gala Dinner on Tuesday night. Departures are expected on Wednesday morning 27 Aug, but your stay can be extended through Saturday for those wanting to see more of Brittanny. The official conference hotel is the Belambra Hôtel Club at Tregastel city. It is just 5 km from Pleumeur Bodou Phoenix Pole where all the conference and EME activities will take place. The EME 2014 web site will be "on line" by the beginning of Dec with full details and conference registration/hotel information. If you have any questions that need an immediate answer, contact Guy, F2CT at F2CT@wanadoo.fr.

N4PZ has been trying to get the 20 m net going again on Sat/Sun at 1600 on 14.345. If you have the capability, please support Steve and check into the net.

Rick, K1DS will documenting the ARRL EME Contest (including the microwave weekend) for QST. He is interested in directly receiving comments and information on stations including pictures – especially for the microwave bands. His email is rick1ds@hotmail.com. Rick will also be reviewing your NL reports. He plans to be QRV for the second weekend on 1296.

Congratulations go to Phil, VK4CDI who won the 7th ARI "New Modes" EME Contest grand prize, a 1296 MHz LNA offered by Sam G4DDK. Logs for the recent ARI CW/SSB EME Contest can be found at http://www.eme2008.org/ari-eme/log%20emecw.xls.

Please keep the news and tech stuff coming. I will be looking for all of you off the Moon as K1JT on 70 and 23 cm in the contest. Good luck in the contest and 73, Al – K2UYH



DL1YMK's 40 W 3 cm SSPA during test