

432 AND ABOVE EME NEWS SEPTEMBER 2008 VOL 36 #10

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CONDITIONS: The big news this month is the 2008 EME Conference. It was a great conference with 168 EMEers attending and 85 guests. Everyone I talked with had a great time and thought the conference was excellent: location, facilities, technical sessions, refreshments, banquet, tours - (I especially enjoyed the tour of the Marconi home)... all were wonderful. The organizing committee deserves our TNX. There was some active in July/early Aug and a reasonable turnout for the 70 cm CW Activity Time Period (ATP) and Activity Weekend, which both coincided with the weekend of 26/27 July. Activity on 70, 23, 13 and 9 cm is reported on in this newsletter (NL); although the conditions were not reported to be especially good. The next AW is coming right up on 23/24 Aug with the 70 cm ATP on 23 Aug from 2300 to

0100 and on 24 Aug from 0600 to 0800. The first ARRL Microwave EME Contest (bands 13 cm and up) is scheduled for the weekend of 20/21 Sept. This weekend is also the ARI CW/SSB EME Contest and the Sept AW.

1296 EME SSB CONTEST RESULTS: At the 2008 EME Conference the awards for the past two SSB contests are presented. This year's winner as reported in the March NL was K1RQG. Joe actually ended with a score of 1440 as he had left a contact with RD3DA off his original log. Joe unfortunately could not make this year's conference and received his framed certificate in the mail. OK1CA, Franta, the 2007 "Chief Fun Maker" was at the conference and received his certificate at the banquet.



There were more than 168 EME Operators at EME2008 in Florence – see end of this NL for more details

CT1HZE: Joe DUBUS@web.de was active on 432 EME from Portugal (IM57nh) during July and the beginning of Aug PA using 4 yagis and 1 kW. Unfortunately he will be QRT by the time you read this report. While there he was QRV on both CW and JT. He was on for the 70 cm CW ATP on 26/27 July. He worked ZS6OB on JT65B on random also had partials with ZS6WAB (15DB/-) and LZ1DX (-/O). I called repeatedly ZS6WAB. On my last day I finally worked LZ1DX (O/O).

DF9QX: Matthais matthias.df9qx@t-online.de is setting up for 13 cm EME -- I have just put a new rig on 13 cm and my looking for signals on 2320 for RX tests. My TX is not ready. My dish is 3 m with a septum feed and choke ring. I measured 10.5 dB of sun noise on my first test.

DL4MEA: Gunter guenter.koellner@nsn.com writes -- I worked during the July AW on 9 cm RW1AW (559/569) for an initial. Alex has a nice signal. I also tried without success with VE6TA twice. We missed on the first try due to pointing problems and high noise here and on the second try due to scheduling problems.

K2DH: Dave k2dh@frontiernet.net reports slow progress on his dish mount repairs, but is almost there -- I have the elevation drive running under computer control again. The azimuth drive is another story. It appears that over the winter something broke or corroded in the CAT5 cable that brings the AZ signals back to the controller. I'm running a W2DRZ control system with RS-485 signals coming back with the Az and El pulses from the encoders. The El is perfect, and in the shack, on a short cable, the AZ works fine too, but not when connected to the 120' run. I'll get it troubleshot and I should be pointing at the Moon right by the time this report is read. The rebuild of the Elevation drive is great. The hydraulics really cure the problem of robustness of the drive and I suspect next winter's winds won't damage my system as they did this year. I'm planning on being on for the Aug AW, and hopefully be quite active after that including 2304, 3456 and 5760. W5LUA and WA8RJF are picking up some known good TH-328's for me from Dominique HB9BBD at Florence, so I should be QRO this Fall!

K5PJR: Tony trbickel@centurytel.net sends news of a new link to Solar Flux info -- The DRAO web site has now been integrated into http://www.nrc-cnrc.gc.ca/hia/drao/index_e.html and solar flux measurements are now available at http://www.spaceweather.ca/latestflux_e.php.

K7XQ: Jeff k7xq@secure.elite.net was QRV both evenings on moonrise on 432 and 2304 during the 26/27 July AW -- I was on for about 5 hours each night. I called CQ for most of the 432 ATP on 432.020 with no replies. So activity was not very high. I did work on CW SM3AKW for an initial (#) and W8TXT, and on JT GW3XYW (#) and HB9Q. Heard was DL9KR and KL6M reported copying me. On 2304 I worked ES5PC, G4CCH for an initial (#) and WW2R (#). I heard G3LTF, and SM2CEW with an excellent signal, and CWNR SM3AKW and SP6GWN. I called CQ frequently on 2304.090 and 2304.100.

KL6M: Mike melum@alaska.net put on a demonstration of EME as part of the celebration of the 50th Anniversary of Alaskan statehood. The demonstration was associated with a celebratory hamfest in Anchorage -- I had a total of maybe 20 people here. The shack was filled up! The demonstration was on 1296 because the moon and sun were very close at the available time. K1RQG, K2UYH and VK3UM provided impressive signals. QSOs were made with K1RQG (589) on CW, VK3UM (58) on SSB and K2UYH (559) was copied with tree blockage. Received signals were much louder than my echoes due to uncooperative Faraday. The proximity of the sun made the demo even more impressive. When I swung the dish only a few degrees and there was EL SOL roaring away! I also had lots of display items: 3 computers with slide shows including an antenna gallery, just about every TX tube including a GS35B, 3CX800, 4CX250, G17B, 2C39, etc. I opened up my rigs for viewing, showed the preamps under a microscope, and showed off my lathe/mill. Everyone was raving about the demo. Tnx to all who helped it possible!

N4GJV: Ron qstdemb@yahoo.com was active for the end of July 70 cm CW ATP -- I was QRV on 27 July and QSO'd OZ4MM, SM2CEW, UA3PTW and W8TXT. I had a partial QSO with SM3AKW and also called CT1HZE without success. I had a problem with my elevation readout and dense cloud cover

prevented me from visually confirming the aiming of my array and caused me to spend a great deal of time using some of the "beacon stations" to confirm the array pointing. Thus I heard but did not have an opportunity to call OH2DG, DL9KR, SM3JQU, K2UYH, and KL6M. Unfortunately, most of these stations did not seem to remain active for long and disappeared before I could give them a call. On 30 July I had a sked with CT1HZE, which yielded only a (O/-) partial QSO. During the post AW, I QSO'd UA3PTW on 2 Aug. On 3 Aug I worked K1RQG and OZ4MM and had a partial QSO with DF3RU. On 4 Aug I had another sked with CT1HZE with partial tree blockage problems, but heard nil. I have thoroughly enjoyed my return to EME activities and will be looking forward to the next AW!

N8CQ: Gary gabercr@nc.rr.com reports on his EME plans and progress for his new dish -- I'd like to thank K9SLQ for his fine hospitality during my recent visits to Indiana. His superbly built 30' dish has now completed it's journey to sunny North Carolina (FM05). My goal is to have it operational by next year's ARRL EME Contest on 432 and 1296. I'd like to thank all the folks that volunteered their assistance with this effort. It seemed way too easy, but I know it's all the great help that I received.

OK1TEH: Matej ok1tehlst@seznam.cz reports working on 70 cm CW UA3PTW for his 20th initial -- I was Kozlov's third single yagi initial. I did not complete with LZ1DX (24DB) on JT65b - no final Rs - he was speaker copy. I am QRV for skeds on CW and JT (I prefer CW if it's possible due to my QRP). I may have to QRT soon as the local QRM level is getting worse and cannot be fixed even with my cavity filter. My station is 750 W PEP on CW and 400 W on JT65 with a single 5.7 m long 23 el DK7ZB yagi. You can find more about my 70 cm activities at http://ok1teh.nagano.cz/eme_log432.htm.



PE1RDP's 2 yagi array for 70 cm EME

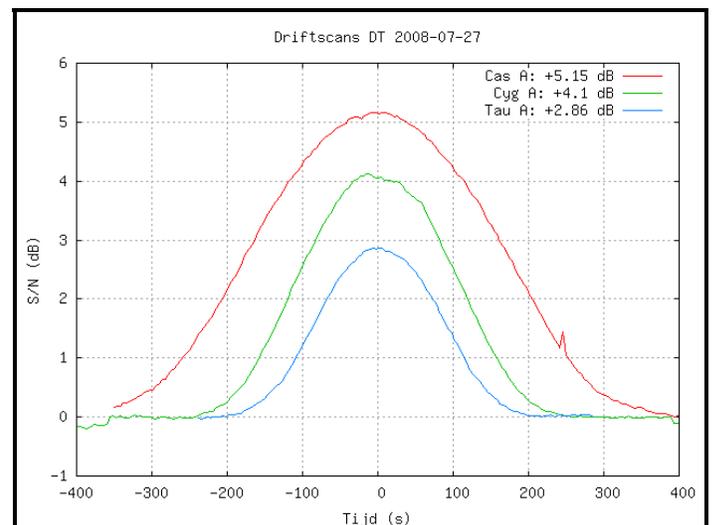


OK1TEH's antennas including dish used on 23 cm EME

OZ4MM: Stig vestergaard@os.dk was QRV for the 70 cm ATP and writes -- I hope all had a very good EME conference in Italy. I am sorry, but I can't join the EME meeting this year, but am looking forward to the coming conferences. During the summer I had the chance to visit OE5JFL. It was very impressive to see his "EME beacon" project. Also did visited IK2DDR who is active on 144 EME, but is planning to be on 23 cm EME in the future. I am always very busy during the summer and can only spend a very limited amount of time on the moon. I was QRV on 23 cm and QSO'd on 23 July SM5LE, on 27 July SV3AAF and again SM5LE. On 70 cm I worked on 26 July LZ1DX for initial #306 and DXCC 56 and UA3PTW, and on 27 July KL6M, DJ7GK, W8TXT, DL9KR, SV3AAF and N4GJV (welcome back Ron). I added the following weekend (3 Aug) on 1296 SV3AAF and W7UPF, and on 432 N4GJV, CT1HZE #307, DG1KJG and LZ1DX.

PE1RDP: Arno arno.bollen@chello.nl is a new station on 70 cm EME in JO21qk -- I am running 2x16 el DK7ZB yagis, an SSB preamp (~1 dB NF), 120 W Beko HLV120 brick PA with 12 m of 1/2" LCF1250 Cellflex feedline and an FT487. My antennas are vertically polarized because of very high noise (S9+) when mounted horizontally. I am not sure of the source of this noise. Possibly it is from a military airport less than 1 mile away. Thus far I have QSO'd HB9Q on JT65B (8DB) and DL7APV with a very strong signal. I also tried with K2UYH, but copied nil. I am interested in skeds.

PI9CAM: Jan (PA0PLY) jan.kappert@comtestnl.com and Jan (PA3FXB) jvmmmap@bart.nl brings us up to date on the happenings at the Dwingeloo dish in JO32ET -- After the first testing during the DUBUS contest in May we had insufficient time to become familiar with this new toy! In the meanwhile we have done extensive testing of individual parts of the system to ensure all is ok. A user interface was built to command the preamp's as well as the attenuators in the receiver chain. The computer control system is now in an almost normal operation mode and is very speedy for such a large dish. Further improvements were made on the tracking system. While testing we found a deviation between the pointing from the computer and the actual maximum through the RF system. It turned out to be a calculation problem in the algorithm for moon position. The formula used the earth center. Correcting for our location showed a difference of approx. 0.5 degs. Since the beamwidth is also about 0.5 deg, this error explains the our less than stellar initial results. After installation of the feed system, we were able to locate Cas-A, Cyg-A as well as Tau-A easily. No moon noise was found due to this miscalculation. During the weekend of 26/27 July we tested with manual correction for moon tracking on receive only, on 70 and 23 cm. SM5LE was hardly readable in May, but in July could be copied on SSB with no problem! (Sven put our recording on his website: <http://web.telia.com/~u14901544/>). We also did some scans of radio sources in the sky and everything was very satisfying. Here is of what we copied: on 432 HB9Q on JT (1DB), OK1TEH (519), UA3PTW (579), W8TXT (559), KL6M (589), LZ1DX on JT (4DB), RA6DA on JT (11DB) and YO5TP on JT (22DB), and on 1296 OZ6OL (569), F2TU (599+), UT5JCW on JT (3DB), PE1HNG on JT (10DB), W7UPF on JT (2DB), GW3XYW on JT (4DB), SM5LE on JT (7DB), SM5LE on SSB (52), OK1TEH (419), VE7BBG on JT (7DB), N2UO (579), WB2BYP (559) and K2UYH JT (3DB).



PI9CAM reception of radio sources



PA3FXB will be QRV again soon. Jan's 3m dish is disassembled in the summer and reassembled in Sept

RW1AW: Alex rw1aw@appello.de reports on his activity on the 13 cm and 9 cm bands during the 25/26 July AW – All my QSOs were on random. I worked on 25 Jul on 2304/2424 split QSOs at 2346 JA8ERE (559/569) for an initial (#) and 2358 JA8IAD (569/579) (#), and on 26 July at 0015 JA6CZD (569/579) (#), 0034 HB9SV (599/599), 0610 DK7LJ (57/59) on SSB and 0642 G4CCH (589/599). At 0740 I QSY'd to 9 cm and called CQ on 3400.100. I worked at 0751 GM4ISM (539/549) for an initial (#), 0801 VE6TA (569/579) (#) and 0957 G3LTF (589/579) (#).



RW1AW's 13 cm dish – one of many EME antennas!

SM2CEW: Peter sm2cew@telia.com was active during the 26/27 July AW -- I started Sunday morning with some activity on 23 cm and worked SV3AAF and SM5LE – both with very nice signals. Later in the morning I was on 70 cm for an hour during the ATP. Conditions started out very good, with strong echoes and no Faraday, only to shift after about 20 minutes so that most European's were mixed pol and echoes were down quite a bit. I worked SM3AKW, UA3PTW, OH2DG, G4RGK, G4YTL, N4GJV and DL9KR. I heard more stations, but I stopped as I had to park the dish to change feeds for 13 cm. I wanted to catch some of the boys who announced activity on 13 cm. I worked G3LTF, SM3AKW for initial #7 and ES5PC #8. Heard were SP6GWN with a very good signal on 2304. I CWNR him x-band on 2320. My echoes were down quite a bit from the previous session on 13 cm. It was nice to hear N4GJV back on 70 cm CW EME with a good signal after a long period of absence! Well done Ron! I need to weatherproof my 13 cm feed system. I am available for skeds.

SM3AKW: Carl sm3akw@spray.se was active on 13 cm during the July AW. He reports QSOs with G4CCH for initial #60, IW2FZR and HB9SV. He also heard ES5PC, RW1AW and pieces of K7XQ.

SV3AAF: Petros sv3aaf@yahoo.com reports on his recent activity -- Although the traffic was lower than the last few months, quite a few stations did show up on 70 and 23 cm during late July and early Aug. On 70 cm during the July ATP conditions were variable with signals peaking at very good levels. Faraday rotation would have been quite destructive during western window if I did not have two polarities. I had one way propagation to Europe and had to transmit on Vpol and receive on Hpol. My eastern window conditions were more stable with no Faraday issues, but signals were weaker. I worked UA3PTW, OH2DG, OZ4MM, DL9KR and G4RGK. Outside of the ATP I worked G4YTL on sked. On 23 cm I was very happy to work the excellent station of SM5LE on sked; Sven has really pushed the performance of his small EME setup to its maximum. Also on random CW, I QSO'd HB9BBD, SP6JLW, OZ4MM, SM2CEW, OK1KIR, DF3RU, OZ6OL and G4CCH. I did not manage to complete with VE3KRP due to choppy libration. I received e-mail RX reports of my CQ calls from VK4TL, who will be on 23 cm EME again after improvements to his power amplifier.

W2WD: Warren wbutler6@verizon.net plans to be on 432 again for the ARRL EME Contest – I was checking out my EME antennas and found that yellow-jackets have a nest in my 432 relay box. Two applications of hornet spray has done little. Being bee-sting allergic I have to be careful. I hope to be reasonably functional for the ARRL EME test.

WD5AGO: Tommy wd5ago@hotmail.com reports on his plans for the ARRL EME Microwave Contest – I will move the dish a few feet away from the house in hopes to have a better Asian window. It is really just a couple of degrees, but a safer RF exposure. An additional foot is also getting added to the dish's rim. My plan is to be on 13 cm the first day and maybe switch to 9 cm the second day. But with conflicting activities already existing for that weekend, the dish may stay on 13 cm. (I am also cycling the MS150 the weekend before).



WD5AGO's 9 cm feed

K2UYH: I a.katz@ieee.org had the worst lightning strike(s) ever experienced, a few days before the AW. My TS2000X, all the computers in the house including my vintage IMSAI 8080, preamps, dish readout system and much more were smoked. I was able to be back on for the 70 cm ATP with backup equipment/systems. I QSO'd on 27 July on 432 at 0834 K0RZ (559/O?) – Bill became real weak at the end, 0846 DL9KR (579/579), 0906 UA3PTW (569/579), 0916 KL6M (569/569), 0941 W8TXT (559/569) and 0950 QRZs – several stations calling on top of each other. I CWNR CT1HZE on CW and after the ATP in a prearranged sked worked him at 1010 CT1HZE (18DB/16DB) on JT65B for mixed initial #748*. After the JT contact I called Joe on CW but never heard a reply. The following Friday (31 July) I was on for an EME demonstration scheduled by KL6M. The moon was quite close to the sun and my dish was well into my trees to the west. I heard K1RQG and KL6M, but was not able to complete a QSO. I still do not have my station back to near normal. My power is down to about 300 W on 1296 due to my driver amp's failure. I am using a TV camera and setting circle for AZ indication and a coarse (1 deg resolution) Sat TV trailer readout for EL. I hope to have things close to normal for the ARRL EME Contest. I will be again teaming with K1JT and operating under his call. We hope to be on both 13 and 3 cm for the microwave part of the contest.

NETNEWS BY G4RGK: W0DR1 is looking for skeds on 70 cm. **SM4IVE** is making good progress building his new 13 m dish - see

<http://sm4ive.com/dish.htm>. **GM4ISM** reports an easy QSO with RW1AW (549/539) for an initial, new DXCC and GM first on 3400. **PA0BAT** is now QRV on 3400 EME with a 3 m dish and 100 W at the feed. Gerard is looking for skeds. **LZ1DX** continues to be very active on 432. Look for him calling CQ on 432.075 on both JT and CW any time the moon is up. **DJ3JJ** is currently QRT, but will be back on 432 EME in 2009 with a new system. **DL7APV** is working hard to rebuild his storm damaged array and will return to 432 EME soon. **RA6DA** is QRV on 432 EME with 4 x YU7EF yagis and 50 W.

FOR SALE: GM4TXX has for sale in UK a 5 m dish with mount (a small but very heavy tower with the pieces to rotate and elevate). He is only looking to recoup some of his expenses. If you are interested, contact Jim at Jatkinsonjames@aol.com or UK tel 07976981726. **WD5AGO** has LNAs for sell: 23 cm (35 dBg, 0.3 dB NF), 13 cm (30 dBg, 0.5 dB NF) and 9 cm (26 dBg, 0.6 dB NF). E-mail Tommy at wd5ago@hotmail.com for details. **W6TE**, w6te@sbcglobal.net is selling his 70 cm array. It consists of eight M2 432-13WL antennas plus 3 power dividers (2-4 port and 1-2port). He is asking \$US2,000 + shipping. He does not have phasing lines to go with the yagis.

NF MEASUREMENT RESULTS FROM EME2008 – TNX HB9BBD:

432:

OWNER	MADE BY	DEVICE 1st STAGE	STAGES	NF dB	GAIN dB
DL4MEA	KA0RYT	ATF10136	1	0.47	18.70
DJ3FI	DJ3FI	1		0.50	22.05
G3LTF	HM	FHX35	2	0.58	42.99
DL4MEA	ULNA 3014	ULNA 3015		0.60	21.60
PA3DZL	PA3DZL HM	MGF1302	1	0.61	20.16
DL4MEA	TGNULNA3013		1	0.64	22.07
DF4UE	HM	FAX95	1	0.67	19.26
COPPER BODY UNKNOWN	HM	2SK571	1	0.76	17.90

1296:

OWNER	MADE BY	DEVICE 1st STAGE	STAGES	NF dB	GAIN dB
K6JEY	HB9BBD	NEC32484	2	0.16	40.63
RW3BP	sim.to G4DDK	NEC32584	2	0.22	38.60
G3LTF	HM	NE324+	1	0.33	30.50
DL4MEA	G4DDK	NE32584C	2	0.36	35.26
G4HUP	G4DDK	NE32584C	2	0.37	33.17
K1DS	WD5AGO			0.39	37.33
PA3DZL	G4DDK	NE32584	2	0.41	35.14
F2TU	OE9XXI	NE750	2	0.53	33.00
F2TU	HM	ATF535076	2	0.58	31.80
PA3DZL	PA3DZL	FHX35LG	1	0.58	16.45
DJ3QD 1.4GIG	HM	1.4GIG	1	2.57	4.87

2300:

OWNER	MADE BY	DEVICE 1st STAGE	STAGES	NF dB	GAIN dB
K1DS	WD5AGO		2	0.38	33.10
DL4MEA 2	G4DDK	ATF36077	2	0.43	26.16
DL4MEA 1	G4DDK	ATF36077	2	0.51	23.45
DJ3QD	G4DDK	ATF36077	2	0.52	23.90
IK3COJ	DJ9BV	K	1	0.56	18.90
DL3IAE	ULNA3013		1	0.60	13.98
DL4MEA	TGN ULNA3013	?	1	0.67	14.70
G3LTF	W5LUA	FHX33LG	2	0.79	40.53
PE1KXH	HM	MGF1302	1	0.97	14.40
IK3COJ	DJ9BV	?	1	n.a.	n.a.

FINAL: I know that there was concern about controversy between the CW and JT EME camps at EME2008. There were several EME operators there who have very strong feelings about these modes. I am very pleased to report that everyone who attended the conference was very well behaved.

There was a discussion about the EME contests. The majority felt the ARRL should eliminate the assisted class from the contest. An alternative suggestion proposed was to allow the use of the assisted class only once (for first contest entries by new comers). Generally people seemed to feel that less contest classes were better, and that too many classes dilute the value of the contest awards. There were mixed feelings on separate digital and CW EME contests. A significant number (but not an obvious majority) favored separate digital and CW contests as is done in the DUBUS EME Contest. There seemed to be a *softening* of feeling with regard to JT. Attendees seemed to realize that JT operators should not be shunned, but need instead to be encouraged to try CW. [This observation may be just my personal bias showing].

Get your boots and spurs shined up as EME2010 will take place in cowboy territory – Dallas, TX. W5LUA with the help of the *North Texas Microwave Society* will be hosting the next conference. Regarding the 2010 Conference, G3LTF suggested we have an "EME School" for new comers. This could run before or in parallel with the regular technical sessions. I think this is an excellent idea. There was also discussion about scheduling the conference in Sept rather than Aug when airfares are less.

Long time EMEer, DJ9YW is very sick. I am sure Heinrich would appreciate hearing from you, especially QSLs and pictures of your station.

The ARRL's DXCC rules were designed for HF long before international communication was possible at 50 MHz and above and causing problems. The ARRL offers DXCC awards for single band achievements as DL9KR's first 70 cm DXCC. They also offer DXCC awards recognizing single mode achievements as DXCC completed using exclusively CW. What they do not offer are combination achievement awards. For example DXCC achieved exclusively on 20 m with CW. I suggest the solution is that we possibly through DUBUS or another recognized organization offer our own special DXCC awards for EME using CW, SSB and JT.

Now that the EME2008 is over, lets all make some noise off the moon! Please keep the reports and technical info arriving. CU off the moon & 73, AI – K2UYH

SOME EME2008 PICTURES:



OK1DFC and IK6E1W discussing EME contest rules



Some of the spouses on tour



F5SE checking the latest EME gear at the Marconi Museum