

## 432 AND ABOVE EME NEWS NOVEMBER 2004 VOL 32 #11

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**CONDITIONS:** The first leg of the 2004 ARRL EME Contest is now history. One of the big changes this year is the closeness of the activity levels on 432 and 1296. The QSO counts are still larger on 432, (and I do not have the tallies of some of the 70 cm *biggest guns* OH2PO and N2IQ), but not that far off. 70 cm was affected by poor conditions. Faraday was definitely not cooperative and 70 cm copy due to the libration fading poor. The moving of microwave EME activity to a separate weekend helped 1296. Microwave EME affects 23 more than 70 cm. Activity on the microwave band will of course be most affected by the separate contest weekend. Everyone seems to be gearing up for the microwave contest on 30/31 Oct. I think we will see a tremendous boost in activity on 13 cm and above this year. But don't forget about the regular Nov activity weekend (AW) on 6/7 Nov, a month in advance of the final part of the VHF/UHF EME contest on 4/5 Dec.

**HIGH CONTEST SCORES:** On 432 HB9Q appears to have stolen the show with a score of 72x33. The next closes report is from DL9R who was not able to participate fully with 44x36. On 1296 W2DRZ appears to have the lead with 43x30 followed closely by SK0UX with 41 QSOs, K4QI and OZ4MM with 40 and G3LTF and DL0SHF with 39.



HB9BHU mobile EME – See report

**9H1ES:** Fortunato [fbonnici@hotmail.com](mailto:fbonnici@hotmail.com) is ready to go on 3 cm – I have constructed a 10 GHz EME system, which I can be put in operation on my roof with in one hour. During the Italian EME Contest I heard two stations, but as usually had difficulty copying their CW. I am eager to make a QSO and am interested in skeds. My station consists of 2 m solid dish with selectable V/H pol feed, 20 W TWTA and 0.65 dB NF preamp. Moon tracking is manual with the aid of the F1EHN program, but I have a very strong tripod with Az/El calibration marks.

**DK3UC:** Ulli and DC4OD, Hinko [Hinko.Ptak@t-online.de](mailto:Hinko.Ptak@t-online.de) in JO52AJ have set up for RX on 24 GHz EME with 6' dish. They are receiving about 0.8 dB of moon noise and 8.5 dB from the sun. I believe they listen for the DB6NT tests reported in the last NL, but reference the call DK0SB and report hearing nil. [VE4MA who forwarded this report also knew nothing of DK0SB 24 GHz EME tests. I have not received any reports of copy of the DB6NT signals].

**DL0GER:** Daniel [dl3iae@gmx.de](mailto:dl3iae@gmx.de) reports on the his clubs results during Oct part of the contest – We worked on 9 Oct 0116 VK3UM, 0126 OH2PO, 0139

HB9Q, 0145 SM3AKW, 0206 OZ4MM, 0251 DL7APV, 0257 SK0UX, 0349 F6HKM, 0356 G3LTF, 0836 N2IQ, 0900 N9AB, 0953 SM2CEW, 1026 K1FO, 1157 DL9KR, 1202 KORZ and 1327 KL6M, and 10 Oct 0151 SV1BTR, 0207 JJ1NNJ - what a call on weak signal CW, 0225 EA3DXU - superb 2 yagi signal with ground gain, 0306 JA6AHB, 0330 DF3RU, 0645 PA3CSG and 1152 OE5JFL. Heard but not worked were G4ERG, K4EME, YO4FRJ, JL1ZCG, OH2DG and K2UYH. We were on for the whole pass the first night, where conditions were fine. We had SSB echoes at moonrise. The second night started with even better signals. VK3UM was really loud and we worked 2 JA stations. EA3DXU was an easy QSO with his 2 yagis. The night before JL1ZCG was really loud for hours, but he could not copy us. In the morning after sunrise signals got worse (vertical I suppose) and we just managed to work only PA3CSG (on sked) and OE5JFL. Went QRT right after the QSO to dismantle the station. The loudest station heard was N2IQ on Saturday afternoon, peaking S5 on the meter – I don't want to see his electric bills, hi! I found the activity extremely poor, especially for the US boys. I used to work EME on 144 about 10 years ago, where the ARRL contest was "the" event of the year and everybody showed up. We will not be on for the second leg due to time limitations. DL0GER is our club call and EME operation is portable. I will try to post some pictures of the operation on our website soon. We would also like to exchange some sound files to hear what we sounded like on the other end. Have recorded most of the QSOs. The setup is 4 x 26 el Bvopt2 yagis fed with 8 mm Al open wire line, GS35 amp @ 1,5 kW, MGF 1302 + BFP196 preamp (NF 0.8 @ 30 dB gain) - all homemade. The ATF54143 preamp (NF 0.3 dB) does not like this cold weather for some reason and starts to oscillate. The crew was DH0SP and DL3IAE. QSLs are via DL3IAE.

**DL0EF:** Manfred [Manfred.Lugert@inter.nl.net](mailto:Manfred.Lugert@inter.nl.net) will be again on 10 GHz in EME Contests and also for initial 24 GHz tests – On the weekend of 25/26 Sept the Föderverein Astropeiler Stockert radio club, DL0EF, met to re-activate after a 1 year break their 10 m dish for the up-coming EME contests on 10 GHz. The transverter system, which has been refurbished and up-graded was re-installed and the 200 W TWT was re-activated. Moon noise was observed with 4.5 dB with a cloudy and rainy sky and sun noise was around 18-19 dB. Our echoes were great and readable even in FM. A random QSO with DL0SB, the group in Bochum using a 20 m dish with 200 W confirmed that everything was working fine. We are looking forward to contacts during the ARRL EME weekends. Further more, initial receive tests on 24 GHz have been done with the 10 m dish using a small circular horn inserted into the 10 GHz circular waveguide. Results were encouraging with sun noise of 4 dB on a simple receiver with around a 5 dB NF. The antenna appears to perform well and further activities are now planned. More details can be found on our webpage [www.astropeiler.de](http://www.astropeiler.de).

**DL3OCH:** Bodo [DL3OCH@t-online.de](mailto:DL3OCH@t-online.de) operated the 1<sup>st</sup> leg of the EME contest with his 23 cm portable EME system from his family home in JO61ax. Unfortunately he had some WX problems, but he believes that it was an inversion thwarted his EME efforts. Signals were just not there even though the system seemed to be functioning properly. Bodo has had to change his plans for operation from 3A. He now expects to be in Monaco on 19 to 21 Nov. Bodo's moon time will be limited as the moon will be at a low southern declination. If you are interested in a sked, e-mail Bodo and he will try to accommodate your request. Besides JT44/65, he notes an interest in trying K1JT's latest digital format, JT1 discussed at EME2004.

**DL0SHF:** Chris (DF9CY) [eme@df9cy.de](mailto:eme@df9cy.de) operated and reports for the contest – I drove to DL0SHF early in the morning after a minimum of sleep due to our baby. This time I provided some of the equipment including my notebook and headphones. This worked well. I used Spectran as a visual aid and the built-in filter when signals were marginal like OH3MCK. I am very pleased to work OH3MCK. Signal was very weak, but I could copy. Funny enough 23 cm EME signals can look VERY different from the ONE birdie on 1296.025, which was a

clean signal. EME signals ALL looked spread over at least 20 Hz. Very easy to see. Some stations I had to chase along the band as they had a bad drift. If I could not have seen them with Spectran when weak, I would probably have lost them. Except for a few stations, all others responded to my calling CQ around 1296.027. Altogether I worked 37 stations. The station worked without any problems with about 1 kW at the feed of a 9.5 m solid dish. I know that we had some terrible clicks on the signal making it somewhat unique... It was big fun to work so many old friends again. Hopefully I can be active again on 23 cm on 4/5 Dec, when I do have some other events I have to go to also. Unclear is the situation for the 13 cm and up weekend, which is almost full with other commitments. Perhaps I can make it on for a few hours. Stations QSO'd were on 9 Oct at 0449 OK1CA (559/589), 0455 OZ4MM (579/589), 0503 F1ANH (549/579), 0508 HB9SV (579/589), 0512 IK2MMB (569/589), 0518 IK3COJ (449/559), 0526 OH2DG (569/579), 0539 OH2AXH (579/579), 0622 SM6CKU (439/579), 0643 G3LTF (569/589), 0729 F5VHX (559/579), 0738 IK2RTI (559/579), 0745 K9SLQ (579/579), 0750 HB9BBD (589/589), 0800 G4CCH (569/599), 0810 SK0UX (569/589), 0822 GW3XYW (559/569), 0838 WA4OFS (339/449), 0847 PA3CSG (569/569), 0855 K9BCT (339/559), 0855 OZ6OL (569/579), 0911 W2DRZ (559/559), 0920 SM3AKW (569/579), 0932 K2UYH (569/589), 0940 PY5ZBU (579/579), 0942 N2UO (569/569), 0948 NA4N (449/569), 0953 W7BBM (559/559), 0958 K0YW (579/599), 1019 OH3MCK (M/O), 1024 DL1YMK (569/559), 1036 K5JL (559/579) 1039 VE9DW (569/579), 1047 HB9FX (549/559), 1059 HB9Q (579/559), 1108 K5GW (589/559) and 1126 OM6AA (439/579).



**DLOCH (L) and DJ9YW (R) working on Heinrich's dish**

**DL7APV:** Bernd [DL7APV@t-online.de](mailto:DL7APV@t-online.de) reports on his activity during the first part of the contest on 432 – I scored 35x24 so far with QSOs to DL0GER, VK4AFL, F6KHM, JA6AHB, DL9KR, G3LTF, S52CW, OH2PO, OZ4MM, G4ERG, JJ1NNJ, DL1YMK, SM3AKW, OH2PO dupe, UT3LL, OH2DG, VK3UM, SK0UX, DF3RU, JA9BOH, I5CTE, DJ6MB, SP6JLW, EA3DXU, HB9Q, K1FO, PA3CSG, DL7UDA, K0RZ, VE6TA, N9AB, K4EME, N2IQ, SM2CEW, K2UYH, SV1BTR and YO4FRJ. CWNR were JL1ZCG and KE2N (3 times!). Getaways were KL6M, YU1EV, UA3DJG?, SK0CC, YO2IS, SM2ILF, RZ3BA/1 and G4RGK. Condx Saturday night were ok, but after sunrise the Faraday went to 90 degs and activity dropped off. Sunday followed the same pattern except activity was really poor during the NA window. I hope to work a lot more in the next part.

**DL80BU:** Juergen [Juergen.Kaufer@t-online.de](mailto:Juergen.Kaufer@t-online.de) is unfortunately going QRT – Because I am giving up amateur radio after 32 years as an enthusiast, I will no longer be found on the moon. I'm still a live and feel fine, but have become involved in a new hobby, which needs as much time as the old one. I wish the whole EME-community much fun on EME.

**DL9KR:** Jan's [Bruinier@t-online.de](mailto:Bruinier@t-online.de) report on 432 during the first part of the ARRL EME Contest -- Having to depart for a family reunion (christening of grandson) during the western window on Saturday plus a 4 hour nap, left only 7 hours of operating time. I worked 44x26. Despite the apogee, signals were excellent. Taking their equipment into account, SV1BTR, WA6PY and N2IQ

certainly stood out. Two "weakies" couldn't be identified though they patiently continued to call - tx! The YYY-approach is still not in everyone's mind. My brief participation was definitely worthwhile because it produced initials #809 with UA3DJG and #810 with LA9DL. I'm looking forward to spending more time on the contest in Dec.

**EA3DXU:** Jose' was QRV on 432 in the contest and says the situation was better than usual with conditions about normal and free of QRM – I spent most of Sunday operating and QSO'd on 9 Oct VK3UM, OH2PO, OZ4MM, N2IQ, N9AB, SM2CEW and F6KHM and on 10 Oct HB9Q, DL7APV, DL0GER for initial #168, DF3RU, JA6AHB, G3LTF, SK0UX #169, G4ERG, OE5JFL and KORZ.

**F2TU:** Philippe [f2tu.om@guido.fr](mailto:f2tu.om@guido.fr) was not QRV during the first part of the EME Contest, but will be active for the microwave session. He will be QRV on 2304.1 (RX 2304, 2320 and 2424), 10368.1 and 5760.1. He plans to be on 5760 on 31 Oct between 0530 and 0730.

**G3LOR:** Simon's [G3LOR@aol.com](mailto:G3LOR@aol.com) contest activity -- I listened on Saturday on 23 cm for short while and found high activity, but didn't TX. On Sunday I had some problems with my readout system and was unable to use camera to track because of the daylight and clouds. So I only worked 7 – HB9BBD, G4CCH, K9SLQ for initial #93, HB9SV, G3LTF, K5GW and SM6CKU who replied to my CQ. I was sorry to have missed VE9DW who called after G3LTF. There were lots of other big signals on that seemed busy working each other. I did not hear any smaller stations this time, and guess that my tracking was off at times. I will try harder in Dec, if the WX is ok. I had to shut down early on Sunday due to high winds. I will be on 13 cm for the next leg of the contest.

**G3LTF:** Peter [g3lft@btinternet.com](mailto:g3lft@btinternet.com) Oct contest report – I was pleased with the results of the contest. I haven't yet worked out a score as I don't know all the states yet. 432 activity was down a bit, but there were several new stations on. I think the pol problems make it now a more difficult band than 2 m aided with JT65; for example on Sunday afternoon the Faraday was so sharp and 90 degrees there were just no echoes unless I rotated the feed and this is with 1 KW and a 6 m dish. On 1296 on 9 Oct I worked JA4BLC, HB9BBD, JA8IAD, OK1CA, JA6CZD, OH2AXH, OH2DG, IK2MMB, DL0SHF, K9SLQ, PA3CSG, GW3XYW, SM3AKW, G4CCH, F5VHX, K2UYH, VE9DW, N2UO, OM6AA, K5JL, SK0UX, K5GW, HB9Q, OZ6OL, K0YW, W2DRZ, W9IIX, F6CGJ, WA6PY, K4QI and VA7MM, and on 10 Oct HB9SV, SM6CKU, HA5SHF, NA4N, IK3COJ, OE5JFL, K9BCT and G3LOR for a total of 39 QSOs. Heard were PY5ZBU, IK2RTI and WA4OFS, but never heard them call CQ. I worked on 432 on 9 Oct SV1BTR for initial #382 - a nice signal, OZ4MM, OH2PO, DL9KR, JA6AHB, UT3LL, S52CW, DL0GER, JJ1NNJ, DL7APV, F6KHM, HB9Q, G4ERG, I5CTE, DL1YMK, YO2IS, SK0UX #383, VE6TA, K0CCS #384 [?], DF3RU, KL6M, K1FO, SP6JLW, N9AB, SM2CEW and N2IQ, and on 10 Oct VK3UM, SM3AKW, EA3DXU, DJ6MB, OE5EYM, JA9BOH, OH2DG, DL7UDA #385, OE5JFL, G4RGK and K0RZ for a total of 37 QSOs. CWNR were ZS6JON, YO4FRJ and G4ALH. Heard was JA6DZI, but never heard him call CQ. I plan to be on 13 cm in the next session and urge everyone to try and cover as many of the allocations as possible. I will have about 50-60 W at the feed of my 6 m dish.

**G4ERG:** Peter [peter@g4erg.demon.co.uk](mailto:peter@g4erg.demon.co.uk) found conditions quite good at times, but activity level down on previous contests – Occasionally there was no polarity peak on a few of the bigger signals from the states. I received a T7 report from JL1ZCG, wonder if anyone else detected anything less than T9 on my signal? Finished the weekend with 25x21. The station is still 16 x 10 el with polarity rotation, 2 x 3CX800a7. I am hoping for a little more activity for the next leg.

**HA5SHF:** Chaba (HA5BGL) [ha5bgl@axelero.hu](mailto:ha5bgl@axelero.hu) reports on his club's 23 cm EME activity during the contest – We were very busy this year and only had a short time to prepare for the contest. We were only QRV on Sunday and called CQ on 1296.030 using our QRP station consisting of a 3 m dish with 180 W at the feed. We worked G4CCH, HB9BBD, OE5EYM, OZ6OL, HB9Q, OH2DG, F6CGJ, HB9SV, GW3XYW, OE5JFL, K9SLQ, LX1DB, K5GW, K2UYH, PA3CSG, SK0XS and OZ4MM for a score of 18x13. Since last year we have added FIENH's tracking system, which worked fine. We are also have nearly completed a new Septum feed that we plan to use during the 2nd leg of the contest. See our webpage for more details at <http://web.axelero.hu/ha5shf01/>.

**HB9BHU:** Fred [fred.schuetz@freesurf.ch](mailto:fred.schuetz@freesurf.ch) is QRV on 3 cm again – After damage from two storms last year, I have managed to get back in operation on 3 cm EME. First I took a new surplus Andrew 3.7 m dish to replace my damaged one. Second I found my 23 cm feed and placed the 3 cm horn with LNA/PA alone at the focus. The first time I checked echoes on 12 Sept, I QSO'd IQ4DF randomly. Unfortunately my azimuth drive failed recently so I could not



be on the air during Oct. I placed parts of my 23 cm EME system in our radio club's contest vehicle and build up a 23 cm EME mobile station. It consists of a 1.8 m Az-El mounted dish with VE4MA feed and 400 W PA. The first trial using the club callsign, HB9FX, on 9 Oct with HB9SV produced (549/559) QSO. Enrico's signal seriously moved the Smeter of my FT-857 by three S points! Later I QSO'd randomly HB9BBD, HB9Q, K5GW, DL0SHF in less than an hour. The next day (Sunday) while replacing cables and making further improvements on the rig, I worked OZ4MM. On Sunday, 31 Oct between 0600-0800, I plan to operate this EME mobile rig during the 75th anniversary of the Swiss Radio Amateur Union (USKA) in front of the Ibis Hotel in Rothrist, Switzerland. I will use the unique callsign HB75A. The aim is to show other hams how EME experiments can be carried out even with a very small antenna! For skeds with HB75A send e-mail to [HB9BHU@uska.ch](mailto:HB9BHU@uska.ch).



**HB9BHU mobile EME shack**

**HB9Q:** Dan [dan@hb9q.ch](mailto:dan@hb9q.ch) reports HB9Q results for the first part of the ARRL EME Contest – We have worked on 432 a total of 72x33. There was much less activity on 70 cm than last year. (The JW -DXpedition did help to boost the activity). We were only QRV on CW. In Dec we will be QRV on JT also. We plan to operate on 020 + QRM (moving up) for CW and on .060 + QRM for JT44. On 1296 our score was 27x20. We spent only a couple hours on 1296 using CW only. In Dec look for us around 016 + QRM (moving up) on CW. On 2 m we made 76 QSOs and ended with a total of 175 stations and 85 multipliers on 3 bands. For more details see our webpage at [www.hb9q.ch](http://www.hb9q.ch). Also look for HB9Q during the regular AW on 6/7 Nov.

**IK2RTI:** Gianfranco [ik2rti@tin.it](mailto:ik2rti@tin.it) was QRV on 1296 during the contest -- I made a only short appearance on Saturday 9 Oct on 23 cm because of some conflicting business. I heard several stations, but I only worked 5 of them - all with very good signals. I used two concentric helixes feed and the result was good, especially considering that this feed was placed between 3 other W2IMU feeds for 2.3, 5.7, 10 GHz on a homemade 4.8 m dish with f/D 0.52. I'd like to know if there are other stations with this kind of feed in 23 cm. [I experimented with a similar feed many years ago, but was never satisfied with the isolation between the 2 feeds. One would suck power from the other. A crossed dual dipole feed with a high hybrid appears a better solution for a small effective circular feed.] I'll be QRV in the second part of the contest.

**JH1KRC:** Mike [jh1krc@syd.odn.ne.jp](mailto:jh1krc@syd.odn.ne.jp) reported that typhoon landed in the JA1 area during the contest weekend causing very bad WX with high winds and heavy rain. Despite the WX problems Mike reports working G4CCH, OH2AXH for an initial (#), JA6CZD (#) and OK1CA. He also reports JA4BLC and JA8AID were also active. [Unfortunately I do not have a report for the full weekend]. Mike is also interested in trying EME on 6 and 3 cm. He has applied for special permission for EME operation on 10.450 GHz and 5.76 GHz and is awaiting approval.

**K0RZ:** Bill [k0rzeme@aol.com](mailto:k0rzeme@aol.com) reports excellent weather and good EME condx for the Oct contest weekend – I QSO'd on 9 and 10 Oct on 70 cm DF3RU, DJ6MB, DK8VS, DL0GER, DL1YMK, DL7APV, DL9KR, EA3DXU, F6KHM, G3LTF, G4ERG, G4RGK, HB9Q, I5CTE, JA6AHB, JA9BOH, JJ1NNJ, K1FO, K2UYH, K4EME, KE2N, KJ7F, KL6M, N2IQ, N9AB, OH2PO, OZ4MM, S52CW, SK0CC, SM2CEW, SM3AKW, SP6JLW, UT3LL, VE6TA, VK3UM, VK4AFL. Initials were SK0CC for #317 and DL0GER #318. My score was 36x22.

**K0YW:** Bruce's [k0yw@frontier.net](mailto:k0yw@frontier.net) contest report – I have been busy with radio site winterization and houseguests, and enjoying our spectacular fall colors. Hence my contest was limited to only 4 hours on Saturday AM. I worked 31 QSOs and 22 mults. Activity was ok, but not many on Stateside. Stalwarts like KA0Y and W7SZ were sorely missed. I had to leave before the ZL/VK/JA window "window - opening". I did worked a new one, WB5AFY for initial #150. I heard OM6AA several times, but he was always working someone that he answered and QSY'd after the contact... I guessed the wrong direction on the QSY! I also heard that Russia was on, but I did not hear him. I guess I need to run a sked with him. Good luck to all on 13 cm up in the microwave part of the contest.

**K1FO:** Steve [steve@lunarlink.com](mailto:steve@lunarlink.com) writes – During the first ARRL EME Contest weekend, on 432 I found conditions and activity good on Saturday. But on Sunday conditions and activity were poor. When I QSO'd K6JEY at 1530 UTC on Sunday, Doug's signals had absolutely NO polarity peak. Only a 2 or 3 dB dip in his signal was identified. Needless to say, Doug's signals were much weaker than normal. I had 40 QSOs with about 10 hours operating time. There has not been much time to operate lately. After 32 years of EME activity (first on 144 and since 1984 on 432), I feel a little burned out right now. I had a great time at the Trenton EME Conference and thought that the organization of the conference, the presentations and activities were all done very well. Thanks go out to Marc, Al and anyone else who helped put the event together.

**K4EME:** Cowles [candrus@rica.net](mailto:candrus@rica.net) reported plans for contest operation on 432 prior to the contest – I do not have my 20' dish up and running yet, so I will only be on 432 using my 8 FO-33 array and 1.5 kW. I hope to work lot of 70 cm stations during the contest. KR4V will be helping me out on 9 Oct. Every time this fall I have wanted to raise the array and get on the moon, the weatherman calls for another hurricane. I have had everything tied down since late July. [Cowles was active, but I have not received a report of his contest results].

**K4QI:** Russ [k4qi@aol.com](mailto:k4qi@aol.com) was active on 1296 in Oct – I finally got back on the moon for the EME contest. I QSO'd on 9 Oct HB9BBD, SK0UX, IK2MMB, K5JL, VE9DW, HB9SV, DL1YWK, K0YW, G4CCH, SM3AKW, PY5ZBU, OH2AXH, W2DRZ, WA6PY, OK1CA, NA4N, F6CGJ, OZ6OL, K5GW, WB5AFY, VA7MM, G3LTF, W9IIX, K9SLQ, W7BBM, JA8IAD, N2UO, JA6CZD and JA4BLC, and on 10 Oct OZ4MM, HB9BBD dup, SM6CKU, DF3RU, K2UYH, K9BCT, PA3CSG, LX1DB, OH2DG, W4SM and VE7BBG. Signals and echoes really seemed down on 9 Oct. I heard many of the stations worked on 9 Oct again on the 10th and they were much better. The strongest were LX1BD, PA3CSG, HB9BBD, HB9SV and F6CGJ in that order.

**K6JEY:** Doug [doughelen@moonlink.net](mailto:doughelen@moonlink.net) reports on the first contest weekend, on 432 -- It was an interesting two days. I was on more often than I usually am. Aurora was unusually intense according to <http://aurora.n1bug.net>, which may have accounted for some of the signals. Some were 7 S units above the noise on peaks with wide QSB. N2IQ was consistently the loudest and OH2PO only slightly less. I bid adieu to my old 8938 amp "Kate Smith" and installed a new Henry 3004A to be called "Mario Lanza". You know - portly, stout, sings high notes very well, fairly classy, and always had a good time. So far works fine. 1,500 W output with no problem. Kate is going to someone else to sing. I'll miss that great pair of lungs. I worked 8 stations DL9KR, N2IQ, KL7M, OE5JFL, OH2PO, HB9Q, WA6PY and K1FO. I am making good progress on 1296. I have a new septum feed thanks to the efforts of KL6M, a new HB9BBG preamp and a 7' dish. For the last leg of the contest in Dec, I intend to be on 432 at about 0900 and switch to 1296 at 1200 on Saturday. On Sunday I will follow the same pattern, but be on an hour later for each band.

**K9SLO:** Wayne [k9slq@parlorcity.com](mailto:k9slq@parlorcity.com) has not yet sent in his report for the ARRL EME Contest, but back in Sept in ARI EME Contest he worked G3LTF, GW3XYW, VE1ALQ, G4CCH, OZ6OL, WA6PY, KA0YW, JA6AHB, IK3COJ, IK2MMB and W9IIX. Wayne note that he is available just about anytime for skeds and will be operating frequently trying for random QSOs on weekends.

**KE2N:** Ken [ke2n@cs.com](mailto:ke2n@cs.com) reports copy problems on 432 during the contest – I seem to have had a lot of trouble hearing things. It appears that my noise floor has risen by about 3 dB. I'm not sure if it is my electronics or something else. I

could hear my echoes most of Saturday, but not with a very good SNR. Anyway, I was able to work the big guns on Saturday for only 11 QSOs and two more on Sunday. Even the big guns sounded weaker on Sunday, although HB9Q, F6KHM, N2IQ and OH2PO were consistently strong. (K1FO and K2UYH were weak!) If you heard me and tried to call me but did not get through, drop me a line. I am trying to get a feel for how deaf my station is.

**KJ7F:** Terry [kj7f@cablone.net](mailto:kj7f@cablone.net) sent -- Sure hasn't been much activity on the contest. I barely worked K1FO and was beginning to think the radio was broken, but then N2IQ called with a FB signal. And on Sunday I worked PE1TR and K2UYH on JT65B QSO.

**KL7M:** Mike [melum@customecpu.com](mailto:melum@customecpu.com) was QRV on 432 during the 1<sup>st</sup> part of the contest and made 33 QSOs, with only 5 more heard but not worked -- There were quite a few I expected to hear on, but nothing. I am planning to be on for the microwave part of the contest. I will try to be QRV on 13 cm. I have a septum feed about 3/4 finished and have to fire up the 200 W brick for the first time. For the 4/5 Dec weekend I hope to be QRV on 23 cm with possibly some 2 m activity. The weekend prior to the contest I worked SM2CEW (559/559) and OH2DG (559/559) on 70 cm.

**KU4F:** Les [ku4f@earthlink.net](mailto:ku4f@earthlink.net) is temporarily QRT as a result of the repeated hurricanes to hit Florida -- I'm on the sidelines for a while. My Az/El mount did not hold up to hurricane Jeanne. Also my fiberglass feed pole snapped in half, even though it was guyed in 2 different places with Phyllystran. The dish came out ok. I hope to have a crane in shortly to drop dish and mount. I plan to build a much stronger mount this time. I should be back on by the 2nd VHF/UHF leg of ARRL Contest -- for sure by the start of 2005.

**N2UO:** Marc [lu6dw@yahoo.com](mailto:lu6dw@yahoo.com) had an excellent weekend on the moon -- I operated only on 23 cm CW and worked 25 stations with my 10' dish and 300 W. Stations worked were GW3XYW, G4CCH, OH2AXH, PA3CSG, G3LTF, HB9Q, DL0SHF, HB9BBD, K5GW, K0YW, SK0UX, OZ4MM, K2UYH, F6CSJ, K4QI, W2DRZ, K9SLQ, OK1CA, HB9SV, OZ6OL, SM6CKU, OE5JFL, OH2DG, LX1DB and WA6PY. Heard also were many others including K9BCT, DL1YMK, IK2MMB, DJ9YW and VE9DW. I tried to work some JA stations, but without success because my window to the west is very badly obstructed by a tree and the house. I can only operate when the moon is above 20 degs in this direction. However, the number of QSOs for the first leg this year was higher than in 2003. On the technical side, I am putting together an EME-class 10 GHz terrestrial station that is not yet ready for EME because the antenna is too small. But the equipment will be ready if one day I replace my current dish with a better one suitable for X band operation.

**OH3AWW:** Matti [matti.vilppula@luukku.com](mailto:matti.vilppula@luukku.com) in KP21qf is available for on the horizon 70 cm skeds on CW and JT44/65. On 9 Oct he made his first 432 JT44 QSO with K2UYH (sync was 4 and strength -16 dB peak). Matti run 240 W in the shack with about 120 W at the antenna (2 x 31 el yagis). During the contest he heard N2IQ on CW many times, but not even receive a QRZ in response to his calls.

**OH3MCK:** Petri [petri.kotilainen@nokia.com](mailto:petri.kotilainen@nokia.com) was QRV during the first leg of the ARRL EME Contest on 1296 from his home station in KP11wl with 4 x yagis (27 dBi) and about 200 W. He has been spending most of his time in OZ where he is working. From Denmark Petri has been taking skeds on 70 cm using a single 19 dBi yagi and about 150 W.

**OZ4MM:** Stig [vestergaard@os.dk](mailto:vestergaard@os.dk) was active during first leg of the ARRL contest on 432 and 1296 -- I was able to be on fulltime as I had other commitments. I found cond normal, but during daylight hours both days, I experienced 90 deg Faraday lockout. This year I also found a raise in noise level at 432. I worked 43 stations on 432 and 40 on 1296. There should still be lot of stations to be worked in last leg. I also spent a few hours on 144. Initials on 432 were SK0UX, DL0GER and RA9DLA to bring me to #262. Heard and called were ZS6JON with an FB signal, VK4AFL and PA2CHR, among others. On 1296 I worked initials with WB5AFY and HB9FX to bring me to #225. I missed LX1DB, who had an outstanding signal. I hope to catch more stations in the last leg. Concerning the microwave part of the contest. I welcome this new way to split the EME contest up. Lets go guys, dust your gear off and lets make a great weekend on 13 cm and up. I am only able to be on 13 cm (if weather permits) and am looking forward to working all the regulars along with the new stations. Many reports on Moonnet indicate several new stations will show up. G3LTF has promoted 13 cm activity on the Moonnet and has been given ideas to solve the frequency offset problem.

**PA3DZL:** Jac [PA3DZL@PLANET.NL](mailto:PA3DZL@PLANET.NL) is in operation again on 432 and 1296. During the contest on 10 Oct he work on 23 cm at 1500 F6CJG (O/O) and after the contest on 70 cm on 12 Oct at 0500 VK4AFL (O/O) for initial #130. Jac is interested in skeds on both CW and JT65. He has worked EA3DXU on JT65.



**K9SLQ's new dish that he is using on 23 cm**

**PE1TR:** Rob [rob@itr-datanet.com](mailto:rob@itr-datanet.com) is QRV on 432 with 2 x 28 el yagis and 180 W -- During the contest I worked HB9Q on CW, KJ7F on JT65B with great signals and had a partial with K2UYH. I also heard N2IQ and N9AB very strong but they didn't hear me.

**PY5ZBU:** Don [py5zbu@onda.com.br](mailto:py5zbu@onda.com.br) was active on 23 cm during the contest -- I have moved my station to a farm on which I now live and finally all systems are installed, tested and working just fine. I am active on both 70 cm and 23 cm. My dish is 7 m with 1 kW at the feed on 70 cm and 800 W at the feed on 23 cm (good SSB echoes!). I am now looking for skeds to show everyone that PY5ZBU is back again!!! My grid has changed to GG54dk. My email address is the same, but my telephone number has changed and is 554130326245.

**S52CW:** Uros [S52CW@9a0tcp.ampr.org](mailto:S52CW@9a0tcp.ampr.org) was QRV only during 1st moon pass of the contest -- I found conditions quite ok in first few hours. I think that polarization was shifted later on and only a few big gun stations were heard here. On Sunday we had heavy rain with thunderstorms, so I was not on the air. Stations worked were DL9KR, HB9Q, OH2PO, F6KHM, OZ4MM, G3LTF, DL7APV, 7M2PDT, N2IQ, SM2CEW, K1FO, K0RZ, N9AB and KL6M.

**SK0UX:** Hans (SM0MXO) [gustavsson.hans@bredband.net](mailto:gustavsson.hans@bredband.net) sends tnx for his clubs many QSO during the contest weekend. We were on 144 almost full time and switched feeds for operation on 432 and 1296. On 432 we had a total of 23 QSOs (21 initials) on CW only. This was our first serious attempt at 432 EME. We used our 6 m dish with a patch-feed (dual polarity) that we made just a few before the contest. It seems to work ok. Some stations not heard at all in one polarity came up to readability 5 when changing polarity. We used 650 W in the feed. This appeared not enough as we heard and called several more stations that could not hear us. Worked were VK3UM, OH2PO, HB9Q, DL9KR, VK4AFL, OZ4MM, F6KHM, SM3AKW, DL0GER, OH2DG, DL7APV, JA6AHB, G3LTF, G4ERG, SM2CEW, PA3CSG, N2IQ, K1FO, KL6M, N9AB, K2UYH, DF3RU and EA3DXU. 1296 was real fun with good activity and good conditions. We made a total of 41 QSOs and 10 initials CW only. QSO'd were DL0SHF, OH2AXH, F5VHX, HB9SV, HB9BBD, G4CCH, GW3XYW, OK1CA, K9SLQ, IK2MMB, W2DRZ, K5JL, G3LTF, SM3AKW, K5GW, K0YW, VE9DW, K9BCT, W2UHI, PA3CSG, N2UO, PY5ZBU, WA6PY, OZ4MM, K4QI, OH2DG, JA4BLC, OZ6OL, JA8IAD, OM6AA, HA5SHF, LX1DB, K2UYH, W9IIX, WB5AFY, DL1YMK, IK3COJ, DF3RU, F6CGJ, VA7MM, OE5JFL. We are already looking forward to the Microwave part and the second leg of the VHF/UHF part.

**SM0FOB:** Kjell [sm0fob@telia.com](mailto:sm0fob@telia.com) is setting up 23 cm EME and did EME SWLing from his garage during the 1<sup>st</sup> leg -- On 10 Oct I tried for some hours to receive EME signals on 23 cm. Of the signals being heard only HB9BBD was copied with complete calls. This was my first EME reception with my own station. My setup was a 1.8 m dish, linear feed and 1 dB NF preamp. My friend Sven, SM5LE, assisted me. I hope to be QRV in the near future.

**SM6CKU:** Ben [sm6cku@parabolic.se](mailto:sm6cku@parabolic.se) show up again on 1296 for the contest -- I worked 21 stations with only 50 W during one day of contest activity. Heard and called a number of stations including would-be-initials SK0UX, NA4N, K9BCT, W9IIX and DF3RU. I will work on the PA for next time.

**SV1BTR:** Jimmy [jimmyv@hol.gr](mailto:jimmyv@hol.gr) is back on the moon again -- Saturday on 432 conditions were excellent. Many signals were in the range of (559-579) but on



Sunday's moonrise signals were heavily distorted, so even if they were strong, I had trouble decoding them. I expected much more activity from US stations. QSO'd were PA2CHR, OH2PO, DL9KR, DL7APV for an initial (#), KL6M (#), OZ4MM, F6KHM (#), G3LTF, SM3AKW, G4ERG, HB9Q, N2IQ, SM2CEW, DJ6MB (#), DLOGER (#), VK3UM (#), SP6JLW (#), JA6AHB, DL1YMK (#), DF3RU, I5CTE (#), N9AB (#) and VE6TA. If I am not on travel, I will be on for the 2nd leg. I would like to thank all who participated and hope that the ARRL will one day understand it is totally unfair to put CW + digital modes in the same competition class. It is like comparing a current 100 m Olympics champion (JT modes) vs. one in same sport but in ancient Greece where Olympics originated 3,000 years ago (CW). One trains modern and wears the best shoes, the other one has no technology enhancements of any kind, no doping whatsoever, and receives only an olive branch in case he wins.

**VE4MA:** Barry is working on 47 GHz station and making progress, but plans to be on 10 and 24 GHz in the Microwave EME Contest. He is also trying to get set up for 23 cm EME again. He has a new 60 W DEM 23 cm xvrtr. He had hoped to get rid of his 7289 driver, but so far all he has is an oscillator.

**VE6TA:** Grant [ve6ta@telusplanet.net](mailto:ve6ta@telusplanet.net) contest report -- I was on 432 for about 15 hours total operating time and found conditions quite good on the first moon pass, and a lot of polarity spreading on the second moon pass. Coincidentally, there was a very nice visual Aurora Saturday evening. I worked a few less QSOs than last year, but a few more initials than I was counting on, so all in all it was a good weekend. Stations worked were on 9 Oct SM2CEW, DL7APV, DL9KR, F6KHM, N9AB, N2IQ, OH2PO, K0RZ, G3LTF, G4ERG, KL6M, K1FO, HB9Q, K2UYH, VK3UM, JA6AHB, and on 10 Oct OE5JFL, YO4FRJ for initial #101, SM3AKW, SV1BTR #102, OZ4MM, DL1YMK and JJ1NNJ #103. For the next weekend, I will be replacing the 432 feed with 2304 and now have the ability to RX on 2304, 2320, and 2424. I hope to see many during the microwave segment of the contest.

**VA7MM:** Mark (VE7CMK) and Toby (VE7CNF) report on their group's [va7mm@rac.ca](mailto:va7mm@rac.ca) Recent 1296 MHz EME activities: In the Italian EME Contest on 11 Sept 5 stations were contacted on CW: WA6PY, G3LTF, G4CCH, K0YW and OZ60L. In the first leg of the ARRL EME Contest on 9/10 Oct 17 stations were contacted on CW: HB9Q, OZ4MM, OK1CA, K9SLQ, K0YW, G4CCH, K4QI, K5GW, G3LTF, W2DRZ, K2UYH, PA3CSG, F6CGJ, SK0UX, WA6PY, VE9DW and OE5JFL and one station on JT -65B: VE7BBG. A new LNA has been installed and our reception has improved. We intend to be active on the second leg of the contest in early Dec.

**W2DRZ:** Tom [w2drz@madbbs.com](mailto:w2drz@madbbs.com) operated the contest multiop (K2TXB and W2DRZ) on 23 cm only -- This was our best weekend ever from this location. We ended up with 42 contacts and 30 multipliers. The station seems to be working very well with the new HB9BBD preamp and the new 500 W power amp right at the dish. We certainly were hearing much better than ever before, although there were still signals I wished I could copy - but I guess that is always the problem. I have never been satisfied that any of my VHF or microwave receiving systems was good enough, hi, hi. The weaker stations we worked were W9IIX, NA4N, IK3COJ and JA6AHB. We were right at moonset on Sunday when working JA6AHB and ground noise was certainly a factor in making the copy difficult. We also heard and copied the 50 W signal from SM6CKU, but never heard him call CQ or got an answer to our calls. There were some real strong stations as usual, but even stronger here this year. HB9BBD, DL0SHF, K5GW, HB9Q, K5JL, all got a (579) from me. There were also a few of the others that were that loud later after they were worked. There were over a half dozen stations that were (569) and 10 that were (559). These are real S-Meter readings (over noise) on the FT-1000MP. On the down side, I felt there was a sad lack of activity on Sunday. We only worked 10 new stations Sunday and the band never sounded as active as it did on Saturday. A number of stations were notable by their absence. We heard comments on the 20 m net that guys would be on 23 cm "next month". I wonder if everyone realizes that next month is 2304 and above only, and it will be Dec for the second half for 6-1296? Dec is heavy snow season here in Western NY, so it is questionable if we will be able to get on then. I'd sure like to urge more of the US hams to get on the air for the contest on 23 cm. Once the moon is down in Europe the band becomes a wasteland here. With the new rules allowing US states and Canadian provinces to be multipliers, there is no reason why we cannot have a very active period of working each other after we loose the EU gang. We did work 11 states and 2 provinces giving a multiplier count in excess of what we did in the whole contest last year (30 vs. 24) and making our score larger already than last year. Of course one cannot really compare the contests that way due to the scoring changes. It was fun working LX1DB on SSB and we also caught VE7BBG via JT65B for our first digital contact (and only attempt). We worked 4 JA stations this year, which is the most for us, but did not hear some we worked in previous years.

**W2WD:** Warren [wbutler@comcast.net](mailto:wbutler@comcast.net) did a little operating on 432 during the contest -- My antennas are still in bad shape. The vertical section of the 9 w/ CP Yagi is 2 dB down on sun noise from the horizontal and not useful for EME. I did hear N2IQ, OH2PO and HB9Q. I worked the only station called HB9Q, but it was quite a struggle. I heard K2UYH and K1FO on tropo but no EME echoes.

**WA6PY:** Paul [pchominski@jaalaa.com](mailto:pchominski@jaalaa.com) was QRV on 2 m, 70 and 23 cm during the contest -- For 432 operation I simply extended a dual dipole feed with number of cross directors. Total length of the structure is 6.5 w/ Performance of this yagi is not perfect, because the launch section does not much to narrow beam structure of the yagi directors. I also tried to optimize the antenna impedance using simulations to obtain similar matching as my original feed, as I did not want to retune my old dish feed. Prior to the contest I checked out the system with K2UYH and we had an easy QSO. Using this antenna I QSO'd during the contest DL9KR, F6KHM, N2IQ, HB9Q, OH2PO and SM2CEW. At the beginning of the QSO with DL9KR, the Moon was still 2 degrees below the mountain on the horizon. The Moon was at 4 deg and mountain height is 6 degs! Later during the contest I heard Jan much stronger. I could not get the attention of SV1BTR and N9AB. On 1296 I QSO'd HB9BBD, IK2MMB, K5GW, K9SLQ, K5JL, K2UYH, G4CCH, SK0UX, VE9DW, DL1YMK, K0YW, W2DRZ, F6CGJ, OH2DG, OK1CA, OH2AXH, K4QI, G3LTF, JH1KRC, JA4BLC, JA6CZD, OZ4MM, N2UO, PA3CSG, LX1DB, OE5JFL, IK3COJ, SM6CKU, VA7MM, W9IIX, WB5AFY, JA8IAD and JA6AHB. In additions I made 9 QSOs on 2 m. In the microwave section of the contest I will be QRV on 13 cm and 3 cm. I can transmit only in 2304 band, but I will listen also on 2320 and 2424.



**WA6PY's Feed Yagi**

**YO2IS:** Szigy [yo2is@yo2bt.ampr.org](mailto:yo2is@yo2bt.ampr.org) sends info on the 1st leg of contest -- I am glad to report that all went well in my 15th in row participation in the annual ARRL EME Contest. Conditions were quite good on Saturday, but not the best on Sunday, especially after 0400 when my local Moon window started (el > 40 degs). Despite some problems at the start with my AZ readout, (always Murphy is around - hi), I was able to log on 70 cm the following random QSOs: DL9KR (579/559), HB9Q (569/539), OZ4MM (569/449), F6KHM (O/O), OH2PO (559/559), G3LTF (559/549), N2IQ (569/549), SM2CEW (559/O) and N9AB (O/O). CWNW were JL1ZCG very loud and S52CW (449). Heard were JA6AHB, K0RZ, UT3LL and PA3CSG. Some of the signals may have been covered by the multitude of PC birdies/noises of my downtown areas QTH. No QSOs were made Sunday morning and no DX heard at all. I plan to be active again in Dec and hope the second leg will be better for me. I am also thinking about trying 23 cm EME someday. I am pleased to report that I finally received my 2003 ARRL EME Contest Award. It's already on the wall of my shack - a nice one. I would have really missed not having it for my EME collection. It definitely stimulated my preparation in the 2004 contest. It's good to remember the positive things about EME when most recent comments criticize the lack of activity with no effective solutions to overcome the problem.

**ZS6AXT:** Ivo [zs6axt@global.co.za](mailto:zs6axt@global.co.za) writes -- I have not been too active... I am just busy repairing all the stuff. In addition, I had some health problems (nothing really serious), but I was "under the weather" for quite a while. WX has not been much cooperative too! I hope to make it on for ARRL Contest and the microwave part on 13 cm too. I will start soon on a mount for a 3 cm dish. I am also working on 24 GHz equipment, but not for EME. John, ZS6JON is now representing ZS on 70 cm. He has most of my 432 equipment and finally has it

all working well. He is on CW only - hi. His e-mail address is [JOHNSYGO@NETACTIVE.CO.ZA](mailto:JOHNSYGO@NETACTIVE.CO.ZA).

**K2UYH:** I was active during the pre-contest weekend. I ran skeds at on 2 Oct at 0500 OZ/OH3MCK (O/-) on JT44 - Petri never decoded my full call, 0600 WA6PY (449/559) - Paul testing new 432 antenna, 0630 partial PE1ITR due to use of JT44 rather than 65 and 0815 partial OH1JCS (O/-) - never got full calls, and on 3 Oct 0500 partial OZ/OH3MCK (O/O) - we needed just Rs when a 4CX250 in my driver failed! I again operated the contest multi-operator, but most of my regulars were unavailable due to conflicting ham conferences. Both the AMSAT Conference and the Packrat Hamarama were the same weekend! KIDS and N2LO were able to operate for a few hours, but most of the contest I was on my own. I started on 9 Oct on 1296 at 0912 G3LTF (559/559), 0923 HB9Q (559/559), 0732 DL0SHF (589/569), 0943 K9BCT (559/569), 0949 G4CCH (559/559), 0954 HB9BBD (589/589), 1002 VE9DW (559/569), 1007 KOYA (569/569), 1010 W2UHI (569/569), 1018 OM6AA (449/559), 1033 OZ6OL (559/569), 1048 K9SLQ (569/569), 1100 DL3OCH nil on JT44, 1130 K5GW (569/569), 1134 WA6PY (559/559), 1140 N2UO (559/559) and 1146 W2DRZ (559/559), on 432 at 1158 F6HKM (569/569), 1201 OH3AWW (O/O) on JT44 for initial #679, 1247 OH2PO (569/569), 1254 N9AB (559/559), 1257 N2IQ (579/569), 1304 VE6TA (559/559), 1320 K1FO (559/439), 1325 KE2N (569/569), 1342 DL7APV (549/549), 1350 partial EA3DXU (539/?), 1413 SK0UX (559/559) #680, 1427 HB9Q (579/549), 1442 KL6M (559/559) and 1450 SM2CEW (559/559), on 1296 1514 VA7MM (559/559), and partial 1630 W7GBI (559/), and 432 at 1754 K4MM (579/569), 1815 J1NNJ (O/O), and 1822 JA6AHB (O/O), and on 10 Oct on 1296 at 1000 OH2AXH (569/569), 1016 HA5SHF (449/O), 1030 SM6CKU (559/569), 1039 DL1YMK (559/559), 1107 OM6AA (449/559) dup, 1114 SK0UX (559/559), 1125 LX1DB (589/579), 1138 OK1CA (569/559), 1143 OZ4MM (579/569) and 1156 K4QI (579/559), on 432 1207 OE5JFL (579/569), 1221 SM3AKW (559/569) and 1300 partial PE1ITR (O/O) on JT65C - no Rs, on 1296 1348 OH3CMK (O/O) on JT 44, 1500 partial OE5JFL (O/O) - disappeared, 1522 DL1YMK (559/559) and 1645 partial W4SM - called and called but only replied once with part of my call, on 432 at 1700 KJ4F (O/O) on JT65B, on 1296 at 1800 VE7BBG (O/O) on JT65C and 1835 WB5AFY (559/559) for initial #229, and on 432 at 1855 VK3UM (559/559) for a score of 21x18 on 432, and 29x22 on 1296. Conditions on 70 cm seemed particularly bad. Faraday appeared to be often near 90 degs producing weak echoes and requiring a 90 deg rotation between TX and RX to be heard. CW copy was also very difficult. I was called many times by multiple stations, but could not decode the calls of any because of a combination of librations and QRM - very frustrating. Hopefully Dec will be better. The leaves will be off the trees to greatly improve my moon window. I also plan to operate the Microwave portion of the contest on 13 cm and possibly 3 cm.

**NET NEWS BY G4RGK (BASED ON KIROG's: DL4EBY:** Klaus has a new e-mail address [klaus@snafu.de](mailto:klaus@snafu.de). Please note the change. **LA9NEA**, Viggo [la9nea@online.no](mailto:la9nea@online.no) is working on a 1296 EME system. **AD5RY** in NM is interested in EME and looking for 23 cm gear. He located a 30' dish that is disassembled. It is a Collins solid 10.3 m dish. He is looking for comments on Septum feeds. Contact Joe at [jmartin@nano-life.com](mailto:jmartin@nano-life.com). **N7KA** is building a mount for his 13' dish. He has a 2300 V power supply for a GS-15B PA about complete. **K3ME** is QRV on 432 EME with 8 x 13 el quags and 450 W output. Wayne will QRV during the ARRL EME contest. Skeds are welcome. **WA9FWD** has been working feverishly on his dish. Tracking now seems to be working, but he needs to slow down the motors. John hopes to be on the 13 cm and up for the Microwave contest weekend. **G4RGK** suffered from high winds most of the 1<sup>st</sup> contest weekend - one of the perils of living on a hilltop. Dave was only on a couple hours and worked 10 stations; nothing new. Condx were ok, but the high winds caused problems with his Az drive and forced him to QRT. **MOEME** should be on with 100 W and 4 x FO22 yagis for the next activity weekend. He has already worked HB9Q. **WB5AFY** worked 21 on 23 cm during the contest and is happy with his first attempt at a contest. He is using a 15' dish and 8 x 7289 PA. **W7CI** is getting back into EME. His 23 cm PA is now air-cooled. He needs to build a feed and get it mounted in the dish. **HB9BBD** reports good activity on 1296 with more DXCC mults and more mults with provinces and states. Dominique ended with 16 states and 24 DXCC! PY5ZBU was QSO'd for initial #206. He had a scare when his dish feed crashed into the service tower, but was able to fix it - only got jammed with no damage. **N2IQ** had been sick for days, but was on 70 cm all weekend. Marc reports a good start to the contest, but that his score is down a bit from last year with small stations in short supply. **K9BCT** has his PA back up to normal and was QRV on 1296 for the contest. **ZLIKA** was QRV on 23 cm during the contest, but says activity was down. **W9IX** was on the moon on 1296 during the contest and reports reasonable activity with 19 QSOs in the log. **G4ALH** was QRV on 70 cm for the first time since the DUBUS Contest and made 9 QSOs. He increased drive to his PA, but half way through a QSO with G3LTF it died and he is now back to his original driver amp. **N4PU** listen much of the contest weekend and heard HB9BBD, F6CGJ, OH2AXH, K5GW and a lot of

weaker ones on 1296. **K4EME** had fun during the contest on 432, but worked no new ones. He had 18 QSOs including 2 VKs. **W2UHI** worked a dozen or so in the contest on 1296 and found lots of activity. **K5JL** worked quite a few in the contest on 23 cm, but had problem with the stability of his PA. **W5LUA** was busy with microwave update and not on the moon for the contest.

**FORSALE:** **K7XQ** is looking for two more M2 432 9 WL yagis to get back on 432 EME. Contact Jeff at [k7xq@elite.net](mailto:k7xq@elite.net). **W9IX** [jix1@comcast.net](mailto:jix1@comcast.net) is looking for a spectrum analyzer with tracking generator to do 1296 and 2304 work. **W7CI** is looking for 80' of 1 5/8" hardline with connectors.

**RECEIVING ON 2320 BY G3LTF:** The next contest weekend is for 13 cm and up. I want to persuade all you guys that have systems for 2304 to get yourself a receive capability for the other 13 cm allocations, so that you can work those countries who cannot legally transmit on 2304 MHz. If you start now, you can be ready. To receive on 2320 is quite simple, if you already have a capability for 2304. A 2304 signal entering your down converter from the preamp will be converted *typically* to 144 at the IF port and then to your 2 m receiver. A 2320 signal will produce an IF signal which is 16 MHz higher (160). So all you have to do is get a receive capability on 160. There are several ways to do this: 1) dig out an old 2 m converter, change the LO, get rid of the RF stage and feed it into a 28 MHz receiver. 2) Get a receiver that tunes 160. Many of the multimode 2 m rigs tune 160 MHz even though they cannot TX there. 3) You can convert 160 back to 144 by mixing it with a 16 MHz crystal oscillator, which is a catalogue item from Newark-in-one. You can then switch between the two 144 ports. Us 2320 guys do it in reverse. Our 2304 signals come out at 128. I made a simple converter that brings that out at 14 MHz (my station's standard IF... dont ask!). The advantage in doing it in the way I have described is that you know exactly where the cross band signals will be ...16 MHz difference low or high. 4) You could of course build or buy a second down converter, or a second LO, but then how do you know exactly where 2320 is? You don't have any beacons to check. Well, by one of those happy coincidences 145 times 16 = 2320. Thus providing you know 145 exactly, you can feed a tiny bit into a diode and put it near the 13 cm converter input... sometimes you don't even need to use a diode as there's sometimes a bit of 16th harmonic about anyway. Check it by moving the 145 MHz signal by a known amount, say 5 KHz, and noting that the 2320 signal moves by 16 times this or 80 kHz. FAQ #1 - Will my 2304 feed horn work at 2320 MHz? For the purposes of receive, YES. The 16 MHz difference in 2320 is negligible, 0.25%. FAQ #2 - Will the 2320 signals come through the RF filters in the down converter? I did a poll some years ago and concluded that for all the popular designs the answer is YES. In any case even if they are a few dB down the skirt of the filter, it will make a negligible difference to performance. You have a wide preamp in front at the feed to establish the NF. FAQ #3 - How do I know its working on 2320? Do the freq check described above and measure sun noise or moon noise on both channels. If the sun noise is within a dB that's fine, if it's a bigger difference its worth trying to find out why. The JAs are on 2424 MHz and that does need a second down converter, but the satellite band of 2400-2402 is close by so a converter for that can be used with the same concepts as above, 2424 is only 22 MHz above, so again it will come through the filters. FAQ #4 - Will my feed horn work at 2424 MHz? My VE4MA one seems to work fine. I've never measured it, but the JAs are good signals with me. FAQ #5 - How do I find 2424 MHz? I don't have a good answer to this one, but I note that the 11th harmonic of the 220 MHz band might be useful. The JAs may have a contribution to make on this one. I hope this is of some help. It really is worth getting a 3 band receive capability on 13 cm. I want to encourage others to contribute their ideas and experiences in this area so that we have a good turn out on 13 cm in November.

**FINAL:** There have been a number of inquires about JT1 announced by K1JT at the EME Conference. Joe reports that he is still working on JT1, but that a heavy work schedule has slowed his progress. He is hoping to have a general release by Christmas and with luck, possibly sooner than that. He also notes that he is not confident that JT1 will play very well at UHF and above.

◆ Plans for the next EME Conference a moving along. Pre-registration for EME2006 is now possible online at <http://www.eme2006.com>. Everyone who plans to attend is encouraged to pre-register now as this info is needed for further preparation of the conference.

◆ Thanks for all the reports. We do need more technical material. Please keep the information coming!

◆ WA6KBL sends in the following website of DF5AI. Volker has written an interesting article on the physics of EME scattering that is well worth reading at <http://www.df5ai.net/ArticlesDL/EMEPysics2/EMEScatter.html>

◆ I don't know if it was my limited moon time because of the lower dec of the contest weekend combined with my tree blockage, but there seem to be very little dead time. I am looking forward to the microwave EME contest weekend and the final leg of the contest on VHF/UHF. I sure hope the WX holds for everyone and will be looking for you off the moon. 73, AI - K2UYH