

432 AND ABOVE EME NEWS MAY 2002 VOL 30 #6

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CONDITIONS: There is so much news this month it is nearly incredible! The big new should be the 2nd leg of the DUBUS/REF Contest, but 24 GHz is steeling the headline. RW3BP has extended 24 GHz EME to Eur by working both W5LUA and VE4MA. Later Sergei worked AA6IW for his initial #3 and a new 24 GHz distance record. VE4MA is now up to initial #4 on 24 GHz after completing with VE7CLD and AA6IW. Conditions appeared very good during the EME contest on 1296 with high QSO counts. OZ6OL worked 48 stations with only one day of operation. However, 10 GHz is started to pull activity from 23 cm with many stations achieving over 10 QSOs. The times are certainly changing! We truly need a separate EME contest for the microwave bands. KL6M made it on 1296 for the 1st time and generated some special interest. 70 cm was not to be out done. IS0/DJ5MN showed up on 432 and was worked by at least DL9KR and SM2CEW. Unfortunately this dxpedition received very little publicity. This will not be the case for W2WD's trip to NB – see below. The success of JT44 on 70 and 23 cm would be big new, if this were a quieter month. DL4KG and others made several JT44 QSOs on 432. W7SZ is experimenting with it on 1296.

NEBRASKA 432 EME DXPEDITION: W2WD is going to put NB back on 70 cm EME on 14, 15 and 16 June – see Warren's report for details.



KL6M's dish with 1296 feed – see Mike report

3B8/ON4AME: Johan johan.vandevelde@skynet.be is considering adding 70cm EME to his dxpedition planned March 2003. He is looking for help with equipment. There are some other hams going along who have EME experience. He is looking for people willing to donate (ship stuff to a secure address in 3B8). He needs bits and pieces - coax, antennas, amps, preamp. You can drop me a mail or contact Herman on4ame@pandora.be. It must be clear that any sponsored equipment is bound to stay in 3B8 so that it can be reused for the next expedition. Herman has secured a home for a 2 week period in Flic en Flac on the westcoast.

CT1DMK: Luis cupido@mail.ua.pt writes – I was not too active since the ARRL contest. I had a 23 cm amp failure at the end of the 2nd ARRL contest weekend. My G17b could not handle all the contest "emotion" (>350 W is really too much for this tube). I ended with 37x20. Now I am thinking of building a GS23b or a GS35b for 23 cm for the next contest. Participation in the DUBUS Contest started not too well on 5.7 GHz with just one QSO with F2TU. All the other signals were much weaker than before. Later I heard from Jean Pierre F1ANH that he got no signal from me during the QSO with F2TU. This was rather strange as I was hearing 12 dB echoes. The fact was that I had the TX and

RX ports swap and was running the wrong pol sense. I don't know this happened. Past QSOs on 5.7 GHz were F2TU, F1ANH, and recently ZS6AXT. However my 5.6 GHz setup was not at its best as I'm having a lot of humm noise (100 Hz) from the TWT power supply. The 2nd part of the DUBUS contest, on 10 GHz, went much better. There was higher activity and faultless operation from my old 10 GHz feeder with 22 W in linear pol. I worked on random F6KXSX, WA7CJO, F2TU, G4NNS (9 W only), F1BLL, PA3CSG (sked), W6HD, and OK1KIR. I ended with 9x7. I always have a huge amount of trouble with the changes in pol with the moon position (I'm using a polar mount). I'm building a new feed assembly for 10 GHz with circular pol and hopefully with much higher power. I understand that a linear pol system is a bit easier to construct, but the geographical spread of stations and the mix of mount types makes a rotatable linear feed essential. It is simpler to build a fixed circularly polarized feed assembly. I thus support the use of circular pol on all microwave bands and will shortly be there on all bands.

DF4PV: Günter df4pv@yahoo.de send 1296 EME info -- I am back on 1296 with a 10 m dish. The old one was destroyed from snow overload when I was on holiday at Christmas. I had some problems with the feed, but now it seems to be working fine. Sun noise is about 23/24 dB (Flux 170). My echoes are really impressive comparing with my old 6 m dish. I still have several mechanical problems and can only operate with calm weather.

DL4KG: Gerald znoyek@t-online.de writes – I had a good time in April. On the 17th I played a bit with the new JT44 mode in the WSJT program and had a good QSO with DK3BU for initial #72. The signals were not audible, but the program decoded all details. The QSO was complete in 13 minutes! I worked on 20 April VK4AFL (O/O) #73, on 21 April DL8OBU (O/O) #74 and partial G4RGK - heard were DL9KR and DJ5NV, on 22 April DJ3FI on random with good signals but rapid fading. All these stations were with normal CW. A sked with WB5APD failed on JT44 at his moonrise. I will be not QRV in May due to vacation.

F1EHN: J-Jacques jim_f1ehn@wanadoo.fr has his new F1EHN EME System software available. The new version (4.3.20) (FREEWARE) can be downloaded at <http://www.nitehawk.com/rasmit/f1ehn.html>. The new version includes some improvements in the real time management and Doppler shift calculation. There is also a complete new EME calculator program (EME and Noise calculators). The tracking supports now the ARSWin interface from EA4TX. Of course the complete program runs without the tracking interface. Thanks to W6/PA0ZN and VE1ALQ for their help. I very much appreciate e-mail reports from users. Please include a short station overview. These will help me to improve the system and make the next version.

F2TU: Philippe's F2TU@guido.fr REF/DUBUS Contest results – In April on 10 GHz, I QSO'd F6KXSX, PA3CSG, DL2LAC for initial #20, OH2AXH, F1BLL, WA7AJ0 #21, CT1DMK # 2, G4NNS, F1ANH, LX1DB, W6HD, AA5C, K6RE #23 and partial DLOEF. Heard were ISPPE, OK1KIR and F1BLL. On 23 cm I made 50 QSOs with the happy surprise to contact KL6M in Alaska towards the east at moonrise. Back in March on 70 cm I made 39 QSOs, but found bad conditions with 90° between RX and TX. I was on 13 cm the evening of 23 March and found conditions fine. QSO'd were F1ANH, OE9XXI, OK1CA, ON5RR for initial #32, OE9ERC, SM3AKW, OK1UWA, OH2AXH, G3LQR, OZ4MM, G3LTF, JA4BLC, LX1DB and OK1KIR. I was also active on 6 cm and worked F1ANH, JA7BMB, ZS6AXT, LX1DB and CT1DMK. My finals tally was on 70 cm: 39x25, 23 cm: 50x24, 13 cm: 14x10, 6 cm: 5x5 and 3 cm: 13x10 for an overall score of 121x74 for 1,132,200 points.

F6KXSX: J-Jacques, F1EHN jim_f1ehn@wanadoo.fr sends his groups Eur EME contest results – We were QRV on 3 cm EME (single band and multi-operators)

in JN18ar. We made 14 QSOs (all on random) and 10 multipliers. The station was 50 W output, 3.3 m dish, 0.8 dB NF and F1EHN EME tracking system. The operators were F6ECX, F6DLA, F4UPG, F1SXC and myself. We worked at on 20 April at 1609 15PPE (O/O), 1705 DL0EF (O/439), 1737 G4NNS (M/O), 1805 OH2AXH (O/O), 1906 PA3CSG (O/O), 1912 F2TU (O/O), 2020 WA7CJO (539/O) and 2110 CT1DMK (M/O), and on 21 April at 1540 F3VS (M/O), 1657 IK2RTI (M/O), 2027 F1BLL (539/O), 2055 OK1KIR (M/O), 2135 W6HD (549/539) and 2201 K6RE (O/M) for 14,000 points. The random activity was very poor during the Eur window and increased during the NA window in spite of the large number of Eur stations. We regret that the rules don't reward random QSOs on the microwave bands. This possibly could improve the activity.



Pioneer F9FT with F5SE... Marc is still interested in EME!

G3LQR: Simon G3LQR@aol.com reports on the 2nd weekend of the DUBUS/REF Contest -- Activity seemed quite high and condx pretty here with a visible moon most of The time, so I could track with camera. I can now work with some success quite early in my east window, even with one of my tropo towers in front of dish and also some tinned roof buildings. A little work on the position of the feed produced 18 dB of sun noise with flux at 200. I think this is the best for my 4.2 m dish. Power is 250 W in the shack and about 150 W at the feed. I worked 26 stations without trying too hard as follows: G3LTF, SM3AKW, G4CCH, F2TU, OE9XXI, HB9Q, F6KHM for an initial (#), ON5RR, HB9BBD, OK1CA #, KA0Y, W2UHI, OE9XXI, ZS6AXT, JA6AHB, F6CGJ, OZ6OL, OZ4MM, K2UYH, K5JL, W4OP, HB9SV, VE6TA, VE9DW, WA1JOF # and WA6PY # - I was surprised by Paul's reply to my low power call. At least another 10 stations were heard, but not called as they were busy.

G3LTF: Peter 100633.1656@compuserve.com was active on 2 weekends in April -- On the 13th, I was on 1296 and worked W2UHI, KA0Y on SSB, IK2MMB and CWNR IK3COJ. I QSO'd in the DUBUS Contest 20 April SM3AKW, HB9BBD, F2TU, F/G8MBI, F1ANH, G3LQR, DL1YMK, HB9SV, JA6AHB, DH9FAG, ON5RR, ZS6AXT, F6KHM, SM6CKU, OZ6OL, GW3XYW, F6CGJ, K5JL, F6ETI, OZ4MM, W2UHI, K2UYH, OK1CA, KA0Y, WA6PY, VE6TA, HB9BHU and DK0ZAB, and on the 21st OE9XXI, OE9ERC and DL4MUP. CWNR were JH0YSI and K9KFR. My operating time was limited, especially on the 2nd day. I fixed up a sked with KL6M for the 24th April. Fortunately I set the alarm an hour early as when I got up the preamp had condensation in it and had to be changed. We made the QSO for initial #188 at 0250 with nearly 2/3 of my dish obscured by bushes. I was very pleased with this one! I also worked VE9DW, who was about on the frequency. I'm busy rebuilding the dish drive mechanism again, having got a hold of some very good reduction drives. I also am planning to upgrade the dish surface to enable it to work on 9 cm. The transverter for that band is progressing.

G4NNS: Brian BrianColeman@compuserve.com reports on his April 10 GHz activity -- I Worked WA7CJO (O/O) -- before start of contest for initial #8, DL0EF (O/O) #9, F6KXSX (O/M), OH2AXH (O/O) #10, CT1DMK (M/M) #11, partial F2TU (M/T), PA3CSG (O/M), LX1DB (O/O) #12 all on random. Also heard and called were 15PPE, IK2RTI and F1BLL. K6RE was heard on sked and was heard W6HD but not call. I have been following the JT44 debate, but prefer my ears. It was observed by G4FUF, who was listening in to the G4NNS operation, that ears appear to work best when their owner stands at the back of the shack away from the rig and well behind the operator who frequently hears nothing but white noise, and appears to become mesmerized into ignoring even perfectly readable signals! Any serious test of JT44 will have to outperform the

ear placed well behind the operating position and without the use of headphones. [I not sure that JT44 will work with signals you can't detect with your ears. I have seen many occasions where I can detect, but not identify a station. Here is where the big advantage of JT44 lies. By the comparison on repeated transmissions, it can decode what has been sent.] Regarding the debate on pol for 10 GHz, I offer the following: Due to my semi-polar mount I have to adjust pol with Azimuth. To do this I have a motor and worm drive to rotate the OMT feed assembly, WG switch and Pre Amp behind the dish. This is remote controlled from the shack with a pot driving a meter to display the setting, thus it is quick and easy to adjust pol. I decided to try rotating the pol while listening to some of the more stable signals on 10 GHz. My initial impression is that pol doesn't make a lot of difference at 10 GHz. presumably this is because the pol of the echo is scattered. But I do not have the means to accurately quantify this statement at the moment.

G4RKG: Dave was on 70 cm for the April SW. He worked DJ5NV, K1FO, UA3PTW and DL7APV who had an outstanding signal. Dave heard K9SLQ and S52CW with a very good signals, but couldn't raise them. DL4KG called, but was lost.

GW3XYW: Stu was QRV on Saturday 20 April on 23 cm EME and worked the following: HB9SV, G4CCH, SM3AKW, HB9BBD, G3LTF, F1ANH, ON5RR, OE9XXI, OE9ERC, F2TU, ZS6AXT, VE9DW, OK1CA, W2UHI, K2MMB and OZ6OL for a total of 16x12. Stu reports that work is proceeding on re-using his 10 GHz EME gear, and that he may be QRV again before too long.

HB9BBD: Dominique dfaessler@bluewin.ch was active the 1st day of the Eur Contest and scored 43x23 on 1296 with 3 initials. My window to moonset is very limited so I tried to still call with more than half the dish obstructed. Surprisingly, some more stations could be worked, including WA6PY with good signals.

HB9Q: Dan hb9crq@hb9q.ch writes -- Stations wishing to work us on 144, 432 or 1296 EME, please drop us your e-mail or post address. We will inform you on short notice about our next activity date. We will keep you updated on when and where to look for us. Our next activity will be 18 May. We will advice about exact times and frequencies. Have you updated your initial standings on the only online-EME-initial-toplist? If not click <www.hb9q.ch> now!

15PPE: Alex, IK5WJD ik5wjd@tin.it reports on the "10 GHz Toscana EME Team"s" contest results -- Pietro 15PPE and myself operated under the call 15PPE (from JN53ns). We noted good activity during the DUBUS/REF Contest, despite poor WX conditions. We worked 6 stations (F6KXSX, DL0EF, OH2AXH, DL2LAC, WA7CJO, W6YFK and F1BLL) and CWNR 4 others (G4NNS, K6RE, F2TU, LX1DB) and possibly copied PA3CSG. The station is 3 m dish with f/d = 0.28, HB corrugated "Chaparral like" feed with switchable V/H pol, 35 W (at horn) Siemens TWTA, HB ATF36077 LNA and DB6NT Transverter. Moon noise is about 0.9 dB. Moon Tracking is manual with VK3UM software + Video infrared CCD.

JA6AHB: Toshio's ja6ahb@nifty.ne.jp log for the DUBUS/REF contest includes the following QSOs on 432 on 23 March at 0402 K1FO (559/549), 0414 K5WXN (549/559), 0440 KL6M (559/549), 0447 VE6TA (559/559), 0531 VK3UM (559/559), 0554 VK4AFL (559/559), 0608 K2UYH (O/O), 0623 J1INN (M/O), 1323 DL9KR (589/579), 1328 UA3PTW (559/559), 1335 F6KHM (569/569), 1344 DJ5NV (569/559), 1358 SM2CEW (559/559), 1411 HB9Q (569/549), 1430 G3LTF (559/559), 1515 JA9BOH (M/M), 1526 JS3SIM (559/549), 1541 OE5EYM (559/559), 1613 OH2DG (549/559) and 1625 ON5OF, (559/539), and on 24 March 0656 7M2PDT (559/549), 1440 JH0WJF (549/559), 1452 PA0AVS (559/559), 1514 JH4JLV (559/559), 1619 RA3LE (449/549), 1635 F2TU (559/559), 1647 DK3WG (O/O), 1718 DL1YMK (O/O), 1758 DJ3FI (O/O) and 1810 OK2BDQ (539/549) for 30x19. Toshio worked on 1296 on 20 April at 0304 K5JL (569/559), 0315 K9KFR (559/559), 0358 JH5LUZ (559/559), 1224 OZ6OL (559/559), 1232 F2TU (569/559), 1241 OE9ERC (569/559), 1251 HB9BBD (579/569), 1307 F6KHM (559/529), 1315 HB9SV (569/569), 1323 SM3AKW (549/549), 1330 OE9XXI (579/559), 1357 G4CCH (559/559), 1406 OK1CA (559/549) 1443 HB9BHU (549/439), 1456 HB9Q (579/429), 1507 G3LTF (559/559), 1545 DH9FAG (549/549) and 1600 ZS6AXT (549/559), and on 21 April 0522 K2UYH (O/O), 0532 VE6TA (O/M), 1340 F6ETI (O/O), 1352 F/G8MBI (M/O), 1422 F6CGJ (559/559), 1429 F1ANH (549/439), 1455 OZ4MM (559/559), 1512 F5HRY (O/O), 1527 DL1YMK (329/539), 1608 ON5RR (O/O), 1641 DL4MUP (549/529) and 1656 G3LQR (549/559) for 30x12. His overall score was 60x22 or 132,000 points.

K4EME: Cowles candrus@rica.net is temporarily off 70 cm EME -- I suffered a lightning hit that took out a lot of my Ham and equipment. The azimuth rotor is dead along with my FT-736R and tracking computer. It appears that my

power amp was unharmed. I had good grounds and surge protection on the antenna system. The hit appears to have come in on the phone lines. The Bell box was in sad shape. I am in the process of getting things fixed, so I hope not to be down for too long. I will let everyone know when I'm QRV again.

KD4LT: Scott cscott@surfsouth.com has decided to down size his EME efforts and has his big dish and parts of his stations up for sale – see the FOR SALE section. He says that pressure from work has prevented from doing the needed maintenance and that he has “an itch to try some QRP (.5 kW or less) EME on 23 and 70”. He is going to rebuild a smaller antenna system. He may use yagis on 70 cm and a 5 m dish on 23 cm.

KL6M: Mike melum@customepu.com was QRV for the DUBUS/REF Contest on 1296. The system included barrowed equipment and was only temporary. However, he does plan to get back on 1296 permanently in the future -- I finally made it on the air on 1296. I still have not gotten my new position indicator working, so pointing is a big problem for 1296 operation. I managed to work 7 QSOs the 1st day even though I had quite a few interruptions, including a funeral to attend. We had high winds (79 mph) here right up until the start, so I wasn't sure I would be on at all. My 1st QSO was with K5JL (very appropriately, since he has been bugging me to get on 1296 for quite some time). My receive performance is way short of my expectations. QSO'd during the contest were on 20 April 0505 K5JL (539/559), 1107 HB9Q (539/429), 1113 F2TU (539/539), 1205 OZ4MM (529/429), 1211 HB9BBD (539/549), 1305 OE9ERC (539/449) and 1309 OE9XXI (539/559), and on 21 April 0005 W2UHI (O/O), 0014 G4CCH (O/O), 0104 F6KHM (O/O) and 0124 K9KFR (529/449). Among those QSO'd after the contest were G3LTF (429/429), VE9DW (539/539) and K2UYH. Nil on W4OP. Thus far I am up to initial #15. I will be traveling until the Italian contest and then return on 432.



SSPA at back of KL6M's dish

OK1CA: Franta ok1ca@ges.cz reports – I was QRV on 1296 MHz on 20 April and the early hours on 21 April. I worked on 1296 35 QSO and 6 initials (F6KHM, W4OP, KA0Y, DL1YMK, DK0ZAB and DL4MUP). 1296 signals on Saturday were very fine. I also tried 10 GHz, but had the trouble with the tracking of my 3 m dish.

OZ4MM: Stig's vestergaard@os.dk contest report – I found general good condx on 1296 in the contest except at moonrise on Sunday. I worked 47 stations despite only little time for activity. Among these contacts I had initials with: JH0YSI (529/O), KL6M (429/529), DL1HTT (539/579), F5AQC (55/55) and F6KHM (579/579) to bring me to initial #198. Saturday night we experienced some very strange condx: I heard OZ6OL calling CQ at 2204 (AZ 261, EL 32) with aurora like sound! I have never heard Hans direct during 1296 EME operation as we are living more than 100 km away and both are using narrow dishes. I heard him calling CQ for only one sequence, then he disappeared. After tuning around I found Hans again working K2UYH with good signal via the moon (559). At +2 KHz higher his “Aurora like” signal was found. I would say at (55A). I got busy to get Hans' attention and we phoned each other. After moving higher in the band we could give each other (55A) - now with 263 deg AZ and 31 deg EL. We then moved our dishes to 0 deg EL and 263 deg AZ. Now we gave each other 59+A. 20 min later I found SM3AKW making CQs, but NO aurora sound on Carl's signal! We are not sure what we experienced, maybe some kind of backscatter or even aurora on 1296?

We wonder if any others have experienced similar on 1296, maybe in the contest. [I have heard aurora like signals over similar distances on 1296.]

OZ6OL: Hans' 6ol@get2net.dk report for April 1296 EME – I worked on 12 April K9KFR (559/449) for an initial (#), F6KHM (559/449) and (53/52) on SSB (#) and DF4PV (559/559). I was not able to be QRV for the whole DUBUS contest, but managed to work 42 stations. I was active 20 April and QSO'd JA6AHB, HB9BBD, HB9SV, F6KHM, OE9XXI, ON5RR, F2TU, SM3AKW, JH0YSI (#), F/G8MBI, DL1YMK, F1ANH, OE9ERC, G3LTF, VE9DW, N21QU, W2UHI, GW3XYW, F5PAU, HB9Q, K5JL, ZS66AXT, OZ4MM, F6CGJ, G4CCH, VE6TA, K2UYH, KA0Y, OK1CA, DL4MUP, F5HRY, DH9FAG, G4LQR, IK2MMB, SM6CKU, F5AQC, F6ETI, W4OP, VE6NA, W7GBI, WA1JOF and WA6PY.

RW3BP: Sergei rw3bp@co.ru has joined the very elite club of those completing EME QSOs on 24 GHz – On 18 and 20 of April I had my 1st QSOs on 24 GHz with W5LUA and VE4MA. I also heard AA6IW when he tested before his sked with VE4MA. On Sunday April 21 I worked AA6IW for initial #3, and a 1st 24 GHz EME QSO for Lars. What is remarkable about this QSO is that the moon was only at about 7.5 deg el at the end. The atmosphere normally absorbs RF at low angles on 24 GHz and adds Rx noise from the temperature of the atmosphere. [This is certainly a new 24 GHz distance record (KO85ws to CN87vi).] My station is a 2.4 m offset dish with rectangular horn as a feed. I can set speed of Az and El motion to provide autotracking with better than 0.1 deg accuracy in a 30 min period. The TX is a 50 W TWT placed at the feed point on a water-cooled Al plate. The PS (13 kV/5.6 kV) is homemade and placed at home. The RX uses a DB6NT LNA with 1.65 dB NF, and a converter and LO by RA3ACE. I use separate feeds for TX and RX. TX/RX change-over is provided by moving the TWT - LNA block up and down by 40 mm. It takes 0.25 s to move it down to the RX position. So it is possible to get own echo very well. In the TX position, the RX feed is shielded by lossy rubber. It is also good reference for noise measurements.

SM3AKW: Carl sm3akw@mail.bip.net reports on the contest -- I chopped a couple of trees down a few days before the contest to gain an extra 45 min of moonset window! I was surprised to work K5JL and OE9XXI at the start of the contest with 9 degrees of el and the moon totally invisible through dense forest. My score was 46x26 on 1296. QSO'd were K5JL, OE9XXI, OZ4MM, OE9ERC, F6KHM, OK1CA, JA6AHB, HB9BBD, F2TU, G3LTF, HB9SV, F1ANH, OZ6OL, G3LQR, ZS6AXT, G4CCH, HB9Q, F5AQC, GW3XYW, SM6CKU, N21QU, W2UHI, DH9FAG, ON5RR, KA0Y, K9KFR, F6CGJ, K2UYH, IK2MMB, WA6PY, VE6TA, W4OP, W6HD, OK1KIR, DL4MUP, F6ETI, F/G8MBI, IK3COJ, DL1YMK, F5HRY, F5PAU, VE9DW, OE5EYM, K9BCT, WA1JOF and W7GBI. CWNr were VE6NA, W7BBM, DK0ZAB, JH0YSI, HB9BHU, HB9BCD, OK1UWA and G4DZU. I made a few contacts on 144 as well and ended with 98x65 (4 bands) for 637,000 points.

SM6CKU: Ben sm6cku@parabolic.se was back on 1296 for the DUBUS/REF Contest. He reports that signals were good and that he worked 22 stations. He was using only with my 50 W to his old 8 m dish. He CWNr DL4MUP and VE6TA many times, but only received QRZs. A couple of initials were also added.

VE4MA: Barry ve4ma@shaw.ca writes -- I had a very nice and easy (M/O) QSO with RW3BP on 24 GHz. His signal was very solid (almost "O"). This is initial #2 for both of us. Lars AA6IW and I had a sked, but I did not hear him, however RW3BP heard both of us in spite of his low elevation angles. Three days later VE7CLD and I completed an (M/M) QSO #3, a new country (3) and a 1st 24 GHz EME QSO for Gunter. After I also had an (M/M) QSO with AA6IW #4. Signals were very smeared (except for Sergei who was heard with Lars). Interestingly Lars observed a very much narrower spreading on RW3BP than myself. Unfortunately W5LUA missed all the activity as he was in New Orleans. Next month is sure to bring much activity and many new QSOs. All stations are running high power TWTAs (>75 Watts) most through the assistance of Paul, W2PED.

VK3FMD: Charlie ibnkarim@bigpond.com in QF22MC writes – I am trying to arrange some 70cm EME skeds. I am a small station with a 21.6 dBi gain antenna and 200 W and no EL control (yet!) I have had success on 2 m EME with the bigger stations and the EME bug has bitten! I would now like to try 70 cm. [Elevation is much more important on 432 then 2 because of the much lower sky noise. I am sure you can make some QSOs, but if you can move the main lobe of your antenna above the ground, it will make a big difference!]

W2WD: Warren wbutler@comcast.net has lots of news this month! He is heading out to Omaha, NB for a family reunion and plans to put the state back on 70 cm EME while there. He expects to arrive on 13 June and operate from

the 14th through the 16th. Warren plans to operate from K9RZ's QTH K9rz@radiks.net with a portable 20' stress dish. He wants to concentrate on random operation, but will consider skeds with stations with special problems. He will try to maintain contact via HF (20 m net) and e-mail. Warren has also taken over the task of maintaining the 70 cm up EME e-mail directory from KD4LT. So if you have a change of e-mail address, make sure you get it to Warren. He plans to regularly distribute the directory just as Scott did.

W4OP: Dale par@parelectronics.com was active during the recent contest on 1296 and made contacts OE9XXI, W2UHI and K2UYH. He writes -- Currently I am running a 12' dish with VE4MA polarizing stubs feed, 0.32 dB NF LNA and a 2 x 2C39 cavity PA at the dish. I just got in a nice PYE YD1336 UHF TV cavity that others are running conservatively at 500 W. This will be a big project. I doubt I'll get it done before the fall contest.

W5LUA: Al al_ward@agilent.com reports that he worked RW3BP (M/M) on 24 GHz EME on 18 April about 7 days before Perigee -- It was tough conditions with high temp and high humidity in Texas. This was my 2nd initial. My station is a 3 m dish and 55 watts at the feed.

W6PY: Paul pch@us.ibm.com was active with his 2.4 m dish in the Eur EME Contest -- I QSO'd on 432 4 stations and on 1296 21 stations. After the contest I had a sked with KL6M. KL6M was quite weak. I heard my echoes stronger. In the middle of the sked my echoes disappeared and I discovered that my AZ motor was not moving. Fortunately only a wire to the motor had broken and I lost only one sequence. We completed our sked (M/M) to give me initial #56. I have lost track of who has received my QSLs and who has not. If I omitted someone please send me yours. I have all my old QSLs from the very beginning and all my logs from the past.

W8RJF: Tony temanuele@kentdisplays.com in OH (EN91) is assembling a station for 23 cm EME. He hopes to be QRV this summer and has a 12' dish with 0.37 f/d, VE4MA feed with circular polarization and 2 x 7239 PA.

X-GW8OOV: Denis <radio@modesgate.com> has serious gear for both 70 cm (GS35b PA and fully steerable 4x9 wavelength M2 yagi array) and 23 cm (YD1336 cavity) and is interested in becoming active again. Denis is located just North of Chepstow on the G/GW border. He wants to make contact with local hams who are already active and wouldn't mind him coming to take a look at their station - or maybe even sitting in on a contact or 2?

ZS6AXT: Ivo's zs6axt@global.co.za April report -- After working JA7BMB on 6 cm, I asked LX1DB for a 6 cm sked and we made it just before the Eur Contest, on 19 April, with (559/449) reports. This was my #13 initial on 6 cm. Clear and windless WX helped a lot. 23 cm operation in the contest started well on Saturday the 20th, but after few QSOs output power of my PA became erratic and I lost few hours before I found that one of the connectors on the dish tower was loose. After repair I worked HB9Q, HB9BBD, HB9SV, OE9ERC, OE9XXI, F2TU, SM3AKW, JA6AHB, ON5RR, F6KHM (is he a new station, or just special callign? [See the April NL. I believe this is a new station.]) for initial #179, G3LTF, F5PAU, DF4PV, G4CCH, GW3XYW, OK1CA, DK0ZAB, N2IQ, VE9DW, W2UHI, OZ4MM, F6CGJ, F6ETI, K2UYH, KA0Y, OZ6OL and K5JL. CWNR were HB9AGE and K9BCT. On Sunday 21 April I added F1ANH, G3LQR, SM6CKU, DL4MUP, F/G8MBI, DH9FAG, HB9BBD (dup), OE5EYM, W4OP, IK2MMB, VE6TA and WA1JOF on horizon. CWNR were F5HRY, K9BCT, GM4ISM and W7GBI. And again due to my limited moon window I missed the west of the US. Not a very exciting score of 38 stations, but I was running limited time and due to the repairs and lower power, just around 150 W. Despite that I was getting mostly good reports and my own echoes were good. There was perfect WX during the weekend, which helped to make it a Great Contest! Before removing my 6 cm assembly from the feed for service and checking I put a proposal for 6 cm skeds on MOON-NET, but only Luis, CT1DMK responded. We made it again on Thursday 25 April at 2300. It was a few minutes QSO this time in perfect WX, which was spoiled by few clouds just few minutes after the sked started. I was using my CCTV camera for accurate moon tracking. I am not happy with the signal strength of my echoes and low moon noise, just 0.6 dB at best. I hope to improve it. The position of the 6 cm horn is not yet optimized.

K2UYH: I tried to concentrate on 1296 and the DUBUS/REF Contest as much as possible during the April SW. We had a warm spell just before the contest and this put the leaves back on the trees to greatly limited my moon window. What a difference one week makes! I was QRV on 20 April shortly after the contest start and worked at 0021 K5JL (579/579), 0027 VE6TA (559/559), 0034 OE9XXI (58/56) on SSB and 0045 K9KFR (559/559). Activity dropped after the end of the Eur window. I had to quit early and missed the Asian window. N2OU and KB2TIS came by on Saturday to help with operating. We QSO'd at

1950 OE9ERC (579/569), 1956 W2UHI (559/559), 2000 G4CCH (569/569), 2021 K9BCT (559/559), 2030 SM3AKW (559/559), 2033 ZS6AXT (559/569), 2039 ON5RR (569/559), 2045 DH9FAG (559/559), 2052 G3LTF (559/559), 2055 IK2MMB (559/559) [QRM?], 2108 HB9Q (579/559), 2113 F1ANH (449/559), 2118 W4OP (449/549), 2135 HB9BBD (589/579), 2202 F6CGJ (579/569), 2209 OZ6OL (559/569), 2216 HB9SV (579/589), 2223 DL1YMK (449/549), 2240 HB9BHU (449/449), 2311 W6HD (559/569), 2316 KA0Y (569/559), 2337 OK1CA (559/559) and 2345 F2TU (55/54) on SSB. I had to leave the contest early and Marc and Brian were not available either. When I returned home I was able to get on for the end of my Asian window. The dish was more than 50 % blocked by trees, but amazingly I was able to QSO on 21 April at 0450 WA6PY (O/O) and 0522 JA6AHB (O/O). On Sunday I added at 2011 OZ4MM (579/569), 2030 partial F5HRY (549/? [QRM]), 2049 F6HKM (569/559) for initial #200, 2100 SM2CKU (559/569), 2113 G3LQR (559/569), 2119 VE9DW (569/569), 2253 WA1JOF (559/559) and 2315 W7GBI (559/559) for a total of 37x24. It was an excellent contest. At 2130 I switched to 432 for a sked. Around 2150 I heard DL7APV with an excellent signal and gave him several calls, but he only replied with QRZs. I then worked at 2205 PAOPLY (549/529) for initial #652, and immediately switched back to 1296. After the contest we tried a sked with KL6M. We heard Mike, but he could not copy us. We tried again and worked on 24 April at 0325 KL6M (449/539). I am setting up for JT44 and very interested in skeds via this mode (as well as normal CW).

TECHNICAL: The use of JT44 requires accurate time. The following download is software that will automatically keep your computer clock up to date by syncing your PC to the Federal clocks in Boulder, CO. -- <http://www.boulder.nist.gov/timefreq/service/its.htm>. Tnx to AB2IO for this info. Also see F1EHN's report on his new moon tracking software.

EME AROUND THE NET BY NU7Z: ♦ In the past month there has been a lot of discussion about Linux and it's usefulness to the EME community. If you at all interested you may want to watch this thread. ♦ JT44 and WSJT has been in the news. There have been several contacts made, now, off the moon on 6 and 2 meters. Those that are using it have really enjoyed the opportunity. I'm sure we will be seeing more information in the weeks to come. ♦ Congratulations to all those who made contacts via EME on 24 GHz this past month. It has been a long time coming, but now that the door is open more and more contacts are being made. ♦ In the last NL a fellow was looking for info on 23 cm PA designs using the GS-35 tube. RA1AW has information on his amp at the following website: <http://www.nd2x.net/RW1AW.html>. ♦ Did you see the post from DF6NA regarding the combining of 3456 amplifiers for 150 watts output! Yep, that's correct, he combined two 40 W amps, upped the voltage to 12 V dc and was about to get 150 W out. For further details contact Rainer direct. ♦ Seattle, September 25th, 26th, and 27th, 2003 are the dates for the Microwave Update 2003 conference. Start planning now. We want to make this the best conference ever and picturesque Seattle and the surrounding area some of the most beautiful country you'll ever see. Come early and bring the family too.



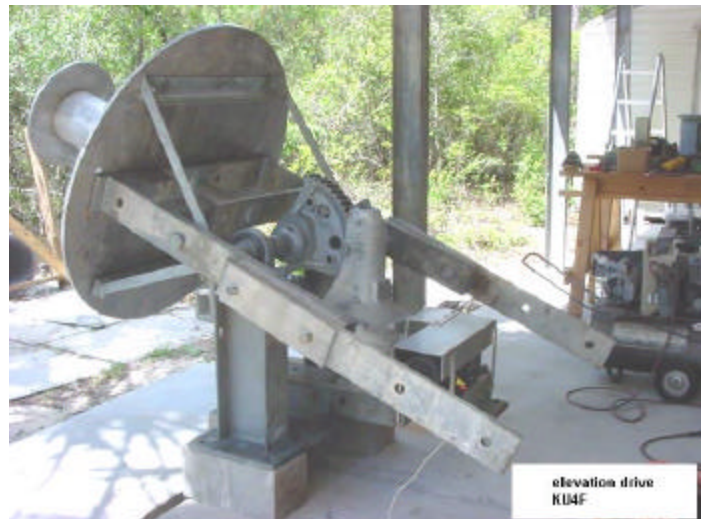
Can you identify any of these EMEers at the 2001 MWU?

NETNEWS BY G4RGK: SM2CEW was not on 23 cm due to high winds, but was on 70 cm and worked IS0/DJ5MN. **IS0/DJ5MN** was using 1 long yagi and 1kW. **DJ5NV** worked IS0/DJ5MN on 432. **DL9KR** also worked IS0/DJ5MN. **W5ZN** reports no progress on his EME projects. He will be working on the system this summer. **K5PJR** hopes to be on 23 cm shortly with portable station using a 4 m dish and 350 W. **K6JBY** has his array back up and should be QRV on 432 in May. **WB0GGM** made 4 initials on 70 cm in March with JJ1NNJ, G3HUL, F6KHM and PA0AVS and is now up to initial #107. **WA0WPI** (EM29) in MO has many questions about 23 cm PAs. **F5SDD** has a big problem with his 70 cm amp. He hopes to have it fixed for the next SW. **W7SZ** worked W7LHL using JT44 on 23 cm EME. [I believe this is the 1st JT44 23 cm QSO.

How about more details? **NA4N's** dish is up and the az/el is operational. He hopes to be QRV on 23 cm in a few months. **N4PU** reports good progress on his dish project. **K5JL** worked about 60 stations in the contest on 1296. During the JA window only JH6AHB and KL6M were on the 1st night. There was no other activity heard. **KA0Y** worked F6KHM, G3LTF, KL6M, GM4ISM and HB9SV - who was over S9 during the contest on 1296, among many others. **W2UHI** worked during the Eur Contest on 23 cm IK2MMB, DK0ZAB, KL6M and F6KHM, but lost WA6PY; in all he made 32 QSOs. **WA9FVD** has fired up the GS35 PA his is working on, and is concerned about "N" connectors at high power on 23 cm. He asks for comments? **K9BCT** worked K9KFR for a new initial on 23 cm during Eur contest. **KU4F** has a G3SEK triode control board built now and autotracking running on his dish. **W7MEM** had a good contact with G4YTL using JT44 on 70 cm. Mark has wave files available. **KG6FCB** reports a little progress. The dish is up and he is waiting on power amp. **K9KFR** is QRV again on 1296 with a big signal. He made many contact in the DUBUS Contest but did not complete with VE6NA. **VE6NA** now has 250 W on 23 cm. **VE1ALO** asks for information on F6KHM. [See the last NL!] **W1IPL** hopes to be back on 70 cm in a couple of weeks and is working towards 23 cm EME. **VE6TA** was on 23 cm during the contest and worked 24 stations with 4 initials. The new brick is working better. **WA1JOF** is now at initial #58 on 23cm tnx to K9KFR. **PA3CSG** made a few QSOs on 10 GHz and added 2 initials. **GM00NN** will not be QRV on 1296 in May. **GM4ISM** made 3 contacts on 23 cm during the contest. **F/G8MBI** was active on 1296 during April contest weekend and added JA6AHB and 2 other new ones to bring his total to initial #36. He will not be on for May SW, but will be back in June. **DL1YMK** is working on YD-1336 amp. He has 400 W out so far and would like to exchange info others. **G3LTF** is looking for US stations on 13 cm. He had a nice QSO with KL6M on 23 cm in April. **K5WXN** had a problem with his 70 cm AZ rotator during the SW, but now has it working again. **W6HD** during the April DUBUS/REF Contest weekend was operated multiband/multiop. K0YW was at the 23 cm position and Tay was on the 3 cm controls. **KM5A** has a new e-mail address <smwheaton@earthlink.net>. Steve is making progress on his EME system. It will consist of 4 x 21 el yagis on 432. The pointing system and 1 yagi are complete. **W9IIX** at <iix@interaccess.com> wants info on setting up a 1296 EME station. He has a 150 W PA and a 10' dish. **K7XQ** has a new e-mail address k7xq@elite.net.

FOR SALE: **KD4LT** cscott@surfsouth.com has available a FT-736R with 50, 144, 432 and 1296; 2x 2C39 1296 amp w/ PS and water cooling system; TH-327 1296 cavity amp w/all power supplies except HVPS (spare tubes); TH-551 432 cavity amp w/all power supplies (extra tube); Parabolic TVS 1296 transverter; Parabolic TVS 144 transverter (have 2); and 32' 432 dish, mount and computer control system as well as the 1294 22' dish system. Scott's tel is 229-890-2506. **F5RYZ** has a 300 W 50 dB gain 5-8 GHz TWTA for sale. He will delivery it at Dayton. He will be at Dayton and I can bring the complete set up with a Varian VTX6381T1 TWT and VPW6893B3 PS. It's perfect for 5.7 GHz EME. The output of the tube is to WR137, but cannot be used on 10 GHz because there's a resonant window. The set up is fully tested and in perfect working condition. It could be used on triphase 110 V or 208 V mono. He will consider an exchange for T&M hardware. Contact Sebastien by e-mail at F5RYZ@aol.com. **N6BO** has a 23 cm feed (no polarizer) but with probes and high power DL7YC hybrid. Send e-mail to lll@pacifier.com. **VE6NA** is looking for 7289 type tubes with screw on caps. **NA4N** is collecting parts for a 23 cm PA and is looking for a 90 deg shaft assembly to tune the plate. **W2DRZ** is looking for digital position encoders to get autotracking going with his dish. **DL1YMK** is looking for a spare YD-1336 tube. **G0RUZ** <g0ruz@btinternet.com> has a Hirschmann TH347 cavities available. It is complete except for the HT connector and square top cover, G1 and G2 are fed via MHV (high voltage BNC connectors). It will work on either 432 or 1296 MHz with minor modification. The cavity is totally complete and intact and in very good condition. Please e-mail Conrad if you are interested. He does not have any spare tubes but can probably obtain one. **N7AM** has a 432 MHz KW Amp, using the GS23B for sale. It is in an enclosed cabinet with metering, but no high voltage. The grid and screen bias supplies are internal. It was built by N7ART and never used, but tested. With 40 W drive, it gives 1 kW out. The amp weighs 30 lbs and is professional looking with white front Panel and light blue sides and back. A spare brand new GS23B is included along with instruction manual and schematics. Jack is asking \$US1,300 and can be reached by e-mail at <jackriggs@attbi.com>. **VE3AX** has a new, never used 15' Andrews dish with 0.34 f/D crated, ready for pick-up. It comes in 2 pieces, which bolt together. He also has heating pads, AZ rotator for above (large prop pitch with cover) that has been converted and is ready for use. A brand new,

never used, Thompson Saginaw 36" linear ball-drive actuator. Also 2 20' commercial tower sections. Contact Peter at ve3ax@sympatico.ca.



KU4F's Elevation Drive

FINAL: This has been one of those impossible months! Two weekends ago we had the SETI League Conference at my College (TCNJ). It was a great conference. I was only disappointed that there were none of the regular EMEers in attendance. N6TX did a presentation on the EME beacon the SETI League has in operation on 1296.000. It is on when ever the moon is in view and transmits a carrier for the 1st minute of ever 5 minute period followed by a CW ID. It is a great way to test the sensitivity of your 23 cm system. Last weekend I chaired the TCF2002, the Computer Festival I been involved with for 27 years.

I am running a week behind in posting this NL and am off for a business trip tomorrow. One way or another the NL will be completed - Hi. There are no skeds this month, so I guess running late is not as critical as normal.

As you can see there is lots going on! There has been considerable discussion on the 20 m net about the Galileo Satellite (Eur GPS) and the interference it could cause on 1296. This could be a real problem, but one we are not going to solve this month.

DL4EBY, Klaus has corrected a bug in the HTML version of his EME Directory and reminds everyone that they are welcome to use it a tklaus@snaftu.de.

K1RQG notes the annual change in 20 m EME net start time during daylight savings. It will start at 1400 on Saturday and immediately following VARO Net on Sunday.

DUBUS/REF Contest entries must be submitted no later than 20 May to (Patrick Magnin, F6HYE Marcorens, F74140 BALLAISON France) or e-mailed in ASCII format to: f6hye@ref-union.org.

Plans for the Prague EME2002 Conference are in their final phase. I predict that this one will be the biggest ever! For those of us going from NA, I have investigated the cost of sending a bank transfer for the EME Conference registration. Banks are charging about \$US50 for this transaction. This cost is not dependent on the amount of the cash transferred. As this fee is a significant percentage of the registration fee, I propose that other NA stations attending the conference send a check to me for the amount of their registration. I will lump all these funds together and send one money transfer at my expense. If you are interested in getting in on this offer, please contact me ASAP as time is running out!

There is a lot more, but I have to stop for this month. Please keep the info coming. I will probably not be on the moon for the SW (18/19 May) as I am going to try to get to Dayton. I hope to work you all off the moon soon. Don't miss the upcoming dxpeditions. 73, A1 - K2UYH

HB9Q's TOP LIST

| Pos. | Callsign | Equipment | Band | Initials | Updated | |
|------|----------|------------------------|------|----------|---------|------------|
| 1 | DL9KR | | | 432 | 768 | 2002.02.01 |
| 2 | K2UYH | 28" Dish 8938 PA | | 432 | 649 | 2002.02.22 |
| 3 | DK3WG | 16x27el LY, kW | | 432 | 385 | 2001.12.14 |
| 4 | SM2CEW | 8 mtr dish and 1.5kW | | 432 | 382 | 2002.03.03 |
| 5 | SM3AKW | | 432 | 357 | | 2002.01.22 |
| 6 | G3LTF | | | 432 | 353 | 2002.01.13 |
| 7 | KU4F | 14.6 meter dish | | 432 | 326 | 2002.02.18 |
| 8 | K0RZ | | | 432 | 301 | 2001.11.28 |
| 9 | JA4BLC | 20ft dish, 2-3CX800A7s | | 432 | 261 | 2001.06.01 |
| 10 | VK3UM | | 432 | 256 | | 2002.03.04 |

| Pos. | Callsign | Equipment | Band | Initials | Updated | |
|------|-----------|----------------------|------|----------|---------|------------|
| 1 | OE9ERC | 8 m dish | | 1296 | 252 | 2002.02.23 |
| 2 | K2UYH | 28" Dish | 1296 | 197 | | 2002.01.21 |
| 3 | G3LTF | | | 1296 | 187 | 2002.01.13 |
| 4 | ZS6AXT | | 1296 | 177 | | 2002.02.22 |
| 5 | HB9BBD | 10m Pb | 1296 | 175 | | 2002.02.01 |
| 6 | WD5AGO | | 1296 | 170 | | 2001.12.15 |
| 6 | SM3AKW | | 1296 | 170 | | 2002.01.22 |
| 7 | G4CCH | 5.4m dish, 500W | 1296 | 164 | | 2001.12.16 |
| 8 | SM6CKU | 8m Dish | | 1296 | 158 | 2002.02.04 |
| 9 | EA6/DF5JJ | 5.5m-Dish, 900W, QRT | | 1296 | 148 | 2001.12.23 |
| 10 | SM2CEW | 8 mtr dish and 600W | | 1296 | 140 | 2002.03.03 |

| Pos. | Callsign | Equipment | Band | Initials |
|------|----------|---------------------|------|----------|
| 1 | OE9ERC | 8 m dish | 2304 | 51 |
| 2 | ZS6AXT | | 2304 | 31 |
| 3 | JA4BLC | 20ft dish, 0.6dB | 2304 | 26 |
| 4 | SM3AKW | | 2304 | 23 |
| 5 | WA6PY | 2.4 m dish | 2304 | 10 |
| 6 | ON5RR | 3.7m dish, TX : 70W | 2304 | 7 |

| Pos. | Callsign | Equipment | Band | Initials | Updated | |
|------|----------|---------------------|------|----------|---------|------------|
| 1 | OE9ERC | 8 m dish | | 5760 | 24 | 2002.02.23 |
| 2 | CT1DMK | 5.6m dish - twt 35W | | 5760 | 15 | 2002.03.13 |
| 3 | ZS6AXT | | 5760 | 11 | | 2002.02.22 |

| Pos. | Callsign | Equipment | Band | Initials | Updated | |
|------|----------|---------------------|------|----------|---------|------------|
| 1 | AA5C | | | 10000 | 32 | 2002.03.13 |
| 2 | CT1DMK | 5.6m dish - twt 50W | | 10000 | 16 | 2002.03.13 |
| 3 | W6HD | 3.1 meter dish | | 10000 | 13 | 2002.03.10 |
| 4 | OE9ERC | 8 m dish | | 10000 | 12 | 2002.02.23 |
| 5 | G4NNS | | | 10000 | 7 | 2002.01.13 |
| 6 | PA0EHG | 3 mtr dish 200 Watt | | 10000 | 6 | 2002.03.11 |
| 7 | WA6PY | 2.4 m dish | | 10000 | 1 | 2002.02.22 |