EDITOR: AL KATZ, K2UYH; DEPT. ELECTRICAL/COMPUTER ENGINEERING, THE COLLEGE OF NEW JERSEY, PO BOX 7718 EWING, NJ 08628, TEL (W 609-584-8424) OR (H 609-443-3184), FAX (609-631-0177), E-MAIL alkatz@tcnj.edu
NETNEWS EDITOR (BASED REFLECTOR NEWS) REIN, W6SZ
PA0ZNI(X)ARRL WITH HELP OF N4PZ AND WB2BYP
INITIAL LIST G4RGK, DAVID DIBLEY, E-MAIL zen70432@zen.co.uk, AT: http://www.zen70432.zen.co.uk/Initials/index.html
EME INFORMAL NETS: 14.345, 13.070 SATURDAY AND SUNDAY, NET COORDINATOR: JOHN KATHMAN, K4RMP
ON0EME EME BEACON, 1296.000 IS QRV WHEN MOON >10°, SEND RX REPORTS TO WALTER (ON4BCB) on4bcb@xjgmail.com
NL EMAIL DISTRIBUTION and EMAIL LIST COORD: WARREN, W2WD
http://www.nitehawk.com/rasmit/em70cm.html
http://www.zen70432.zen.co.uk/Initials/index.html
THE NL WEB VERSION IS PRODUCED BY REIN, W6SZ AND AVAILABLE AT http://www.nitehawk.com/arrl/em70cm.html

CONDITIONS: EME2014 was great success. See my report in this newsletter (NL) for more details. Praise for the conference and its organizers was universal. Bravo to Guy (F2CT), Corine and the rest of the team! The next conference will be in Venice in 2 years and organized by an ARRL team. What a difference a month can make! EME wise the Moon has to be warm with RF. The DUBUS Digi EME Contest was on 18/17 Aug with the 70 cm CW activity time period (ATP) the same weekend. And if this was not enough, the weekend had also the 20 cm microwave EME activity weekend. NW had a good turnout. HK1H brought a new DXCC to 23 cm on 16 and 30 Aug. 5B/PE1L added another 23 cm DXCC on 12/13 Sept. The ARCI CW EME Contest was this weekend, 20 Sept and 21 Sept were the 3 cm and 4 cm periods. NW respectively. F5SE will also put commerative call TMI1GM on 1296 EME – see Franck’s report. Coming up is a 70 thru 13 cm dxpedition to Sardina on 26-28 Sept – see ISO/DL6NUD’s report in this NL, an XXD/L1YMK mystery dxpedition from 5 Oct to 11 Oct on 6 and 3 cm EME, and the Z2I EME dxpedition to Zimbabwe on 1 to 8 Nov – see details in the Aug NL. This dxpedition over laps the MAIN EVENT, the first of the ARRL’s EME Contest weekend for the microwave bands, 13 cm up on 12/12 Oct! Because of all the contest activity there will be no ATP until Dec. The two 50 to 1296 ARRL EME Contest weekends are on 8/9 Nov and 6/7 Dec.

There was a big turnout for EME2014 with JA, VK, W/K, VE, SA and most of EU represented.

5B/PE1L: Rene pe1l@cdx.nl and his team (PA3FPQ and SP4K) pulled off another outstanding EME dxpedition; this time to Cyprus (KM64ux). 23 cm operation was on the Moon pass starting Friday 12 Sept to Saturday 13 Sept. They used the same system as in the past, a single 67 el yagi and 100 W. They did add a preamp. For this system they had an amazingly good signal and made 27 QSOs on 23 cm.

DL7APV: Bernd dl7apv@qxm.de writes that he has not been as active on EME as in the past because he is involved with a new business – I have opened a restaurant with a friend that keeps me busy with problems like testing new wine and other well tasting products. It is really hard work! But in reality it is keeping Astrid and me very busy. We sell lots of vegetables and fruit from our own garden including juice and jam – see http://www.bauernscheune-kremmen.de/! Despite all this, I did get some new stations into the log on 432. I added in July R2IAWT and in Aug IV3DXW, W2PU, VK5APN, VK5APN/8 and XE2AT.

E2FG: John johnhearne@eircom.net sends the following overview of his recent EME activity – I started on 23 cm EME this year with the encouragement of HB9CRO who was keen to do DXCC on 23 cm and was missing EI. On 23 April I made my first contact with HBSQ using our VHF Field Day setup of 200 W into 4 x 35 el Tonna yagis and an LNA with about a 1 dB NF. I was most surprised when UA3PTW called me after I had worked Dan. Our E18E club has over the last few years activated rare squares on the west coast of EI during the Perseids meteor shower in Aug. This year’s outing was to County Kerry (I041t). Seeing the success of GS3PYE/p with a single antenna earlier in the year, we decided to take along with us a simple system with a single Wimo 67 el yagi for 1296. The Wimo yagi is very easy to assemble. We also took an AzEl rotator and we manually tracked the moon. K2UYH kindly arranged some skeds for us and we were absolutely delighted to work on 10 Aug OK1KIR, G4CCH, 11NLP, I6CQJ and DL6SH, on 11 Aug DK0SF, K2UYH, HB9Q, DF3RU, OK1KIR again, G4CCH again, and PV6SK, and on 12 Aug OK1KDC and UA3PTW. For us this was a resounding success and the icing on the cake for our dxpedition. On the last night we changed the LNA to a lower noise one, but ran out of daylight, and while we did to get the antenna back up, we lost the

5B/PE1L’s 67 el yagi used on 1296 to make 27 QSOs

DK3WG: Jurg dk3wg@web.de was QRV on 70 cm in Aug – I worked using JT6SB W8PAT (2 x 9 w yagis and 100 W), W2PU, W0SS, XE2AT, SP1JNY and EB5GP.
orientation and we were not able to make our last JT65 skied with OZ4MM - sorry Stig! We did not feel that we would have been able to copy anyone's CW signals and did not try any of the CW skeds. We also operated on MS on 6, 4 and 2 m and some EME on 2 m after our success on 1296. Next year we plan to travel to IO44 for our annual Perseids outing. Work has already started on planning the EME antenna system. We expect the EME operation to complement the MS operation. We will certainly take 23 cm on MS again and we are discussing a dish. We already have a 3 m solid dish, but it is not easy to handle. We would like to improve to the level where we can also make CW contacts. Since we came home, I have been working 23 cm from home in IO61ax and I have worked G4CCH, PA3FNB, PA2AEG, L52ID, DC9UP, DF3RFU, UA4HTS and 1NDFP, all on JT65C. One evening I was not far off being able to copy G4CCH's CW, so that is another aim for me to improve the system to be able to complete CW contacts. I used a TS2000X as I found my LT23OS transverter was drifting enough to make it quite difficult to decode. An OCXO has arrived for installation in to the transverter and I should have a better signal again before too long. The TS2000X's more stable signal definitely makes it easier to decode. It seems to me that the decoding gain due to the better frequency stability is greater than the loss of output power due to the transceiver's 10 W output. Before I attended the Cambridge EME conference my 23 cm gear had only one annual outing for VHF Field Day at the beginning of July, I was thinking I had too much tied up in equipment that was only used once a year. And at that conference encouragement came from all quarters. "Get on the air" they all said, particularly G3LTF, WS5UX, N4PZ, WB2BYF and of course OK1DFC, who offered EI on 70 cm, which we gave him for DXCC. So, thanks to all for that encouragement; we've made a start and it's only onward and upward from here.

TM1GM: Franck (F5SE) kozton@free.fr sends news of a special commemorative EME event -- In remembrance of the beginning of WW1 in 1914, many French stations will be active using a special call sign given to each department involved in the Big War. In the department Marne (#51), the special event call sign TM1GM will be used by operators throughout the department, mostly on HF. It happens that the location where I am operating from (Fort Chenay, JN19XH) was a former military fort involved during the war. So we decided to install some HF station on the spot. It was also decided to operate TM1GM "off the Moon" using my equipment. TM1GM will be operating on EME on Saturday 27 Sept from 1300 to 1730, Sunday 28 Sept from 1300 to 1800, Monday 29 Sept from 1300 to 1900, Tuesday 30 Oct from 1400 to 2000 and Monday 1 Oct from 1530 to 2000. The freq will be 1296 030 2 Doppler. I will be on CW only (SSB if signals are good enough). NO digital modes. PSE QSL via F6AJM. For more info see the web site http://www.tm1418.fr/, which has an English page (click on "FSVMB") to access this page. F5VMB is ex G4YLQ.

G3LTF: Peter's pbk100@blinternet.com report for Aug/Sept -- I was active on three bands this month with initials on all of them. I'm afraid the 6 cm AW was a bit of a non-event here due to the windy weather, but I did have one QSO on 16 Aug with SM6FHZ. I was also active on 13 cm, looking for OK1DFC's activity from SP. On 13 cm on 16 Aug, I worked OK1KGD on CW and SSB and OK/L6SH on SSB from the same station. Also worked were SM2CGW and G4BAO. On 17 Aug I worked on 13 cm, SP/OK1DFC for initial #119, SV3AFA, G4BAO, O25G, ESSPC and PA0BAT, and heard HB9Q, PY2BS and PE1LWT, and later on 23 cm ONSTA and DCOUP for initial #388 (all on CW). I came up on 6 cm during the EME conference and worked TM16EME on 3 days on SSB and CW. On 24 Aug I added on 6 cm IKC3CJ for initial #51. On 8/9 Sept I was on 23 cm and found excellent perigee conditions. I worked on CW on 8 Sept SP6ITF, IK5VLS, G4CCH, EA1RJ #389, and on 9 Sept ISYDI, L21DX, PA3CQE and OZ2OL for a random SSB QSO having seen him testing on SSB on the SDR! During the 9 CM AW on 21 Sept I had a problem starting in having a critical switch in the wrong position in the LO chain, but when that was sorted out, I worked PY2BS, OH2DG, OZ6OL, PA0BAT, SM6GHP, DL1YMK, K2UHY, and VE6TA. Reports given ranged from (449) to (579) and both PY2BS and DL1YMK were copied on SSB although a bit auroral sounding due to the libration. Thanks to all for the contacts and to those who mailed me their Sun and moonrise measurements, which I am collecting.

G4BAO: John john@g4bao.com was QRV on 13 cm for the MW AW on 16 Aug -- I found good activity and added 2 initials and 2 DXCCs on CW. QSO's were SM4IWE and OZ4MM.

HK1H: Máximo (EA1DDO) ea1ddo@hotmail.com has put HK on 1296 EME for the first time as he did a in 2006 on 432 (although not the first 70 cm from Columbia, which was HK1TL in 1976) -- My station consists of a horn antenna using WDSAGO's design. It is made of wood and aluminum foil and around 2 m long and 800 cm wide at the mouth. I drive it with square circular polarized septum feed and a 250 W single transistor SSPA (kit from G0RUX). On RX I am using G4DDK VLN with a 0.3 NF and 37 db gain. I plan to write an article for DUBUS about my experiences. The target was to test the horn antenna and be able to put HK on 1296 EME; this mission was accomplished. On my first try on 16 Aug, the transmitter relay failed and I had to manually switch the preamp to a dummy load every period. Despite this problem, I was able to QSO G4CCH, HB9Q, PY2BS and PI9CAM on JT65C. I tried again on 30 Aug and added OK1KIR and K2UHY. I have created a simple video with details on the horn antenna and EME system -- see http://hk1h.ea1ddo.es/HK1H_2014.html. Please, send your QSL card to MHOAO.

HK1H 0.8 m on a side horn used on 1296 EME

K3CQJ: Aldo k3cqj@gmail.com is now QRV on 5760 as well as 1296 -- After a first attempt in April on 6 cm with only 8 W during which I made 2 QSOs (DL7YC for initial #1 and TM8PB #2), I decided to increase my power. I now have a 20 W TWT at the feed of my dish. To accomplish this, I had to make an extension cable that can carry 3 kV as the TWT's power supply was too heavy to put at the focus. I was able to contact on 19 Aug PA0BAT and 24 Aug SM6FHZ, G3LTF, OK1KIR and TM16EME. It's definitely more difficult pointing the dish on 6 cm, especially when the Moon is not visible. 20 W is not high power, so I am looking for a bigger PA, but in the meantime am content to make QSOs. On 12/28, I added E6SE and 5B/PE1L for DXCC 67, both on JT65C.

ISO/DL2NU and /DJ4TC: Herman and Peter will be on from Sardinia (JM48lx) for an exclusive UHF/microwave EME expedition! Operation is planned for 432 on 26 Sept, for 1296 on 27 Sept, and for 2300 on 28 Sept. They will use single yagis on all bands with 300 W on 70 cm, 150 W on 23 cm and 300 W on 13 cm. If the Internet is available, they will be on the HB9Q reflector. [ISO has been on 70 and 23 cm before but never QRV on 13 cm.]

JA4BLC: Yoshiro ja4blic@web-sanin.co.jp send the following news on his recent activity -- On 5760, I worked on 14 Aug JA6CZD (569/439), on 22 Aug TM16EME (579/559), and on 24 Aug SM6FHZ (569/0) for initial #27 and TM16EME (579/559). I QSO'd in the ARRI contest on 15 Sept, on 2320/2424 ON5RR (559/559) for initial #63, and on 1296 UA4HTS, OK1CS, OZ6OL, SP6ITF for an initial (#), IS5PK, JA1WQF, JA6AHB and ISYDI (#) for a score of 8x7 on 1296 and 1x1 on 13 cm.

K3MF: Wayde was active off the Moon in the ARRL’s tropo contest on 6/7 Sept using 8 x 25 K1FO yagis and an 8938 PA at 1.2 kW. [I do yet not have Wayde’s results. He recently made his first QSO on 23 cm EME using his tropo system.]
**1296 yagi**

K3MF's yagi for 23 cm EME was mounted on his 70 cm array

**K4MSG:** Paul Phbhr@aoi.com sends his 432 "small-station" EME report -

- Despite a lot of non-ham activity and travel from Jan thru July, I still managed to upgrade my 432 EME station by adding a second Innov 18 el LFA yagi. A small rotor (U-100) handles azimuth, and elevation is adjusted manually as needed. The PA/preamp unit is normally installed right under the antenna. Installation and testing were completed in time for the DOUBUS 432 Digital EME Contest on 16/17 Aug. My contest score was 85 for a score of 81. I was reasonably pleased with my score, especially considering my set-up is only 170 W to a 2 yagi array. A highlight was working UT5DL after several unsuccessful attempts prior to the antenna upgrade. I am looking forward to the ARRL EME Contest in Nov and Dec.

**K4MSG's 2 x 18 el LFA yagi array**

**K3QE:** Marshall k5qe@k5qe.com was also QRV off the Moon in the ARRL's Sept Tropo Contest. He reports doing his best ever on 432 during the contest. He made 14 QSOs, up from his previous high of 13. Marshall sends his thanks for the contacts.

**K6ICF:** Don don.rea@verizon.net sends the follow report on his reception of the 1296 EME Beacon - I have been working for quite some time on a project related to EME. My objective was to build a fairly simple system to receive signals bouncing off the Moon from radio amateur stations. In early 2013, I started work on this project and in Oct was ready to give it a try. Basic choices I had made along the way were: Band - 23 cm, Antenna - 35 el M2 yagi (10' boom length and about 20 dBi gain), LNA - kit from G4DDK with NF of about 0.5 dB, location - cabin at Pine Cove, CA, Mount - yagi attached to my 10" telescope with the scope's drive doing the Moon tracking, and RX - ICOM IC R7000. I also had JT65C running on a laptop PC. In Oct I got it all set up and running at Pince Cove in one day of intense effort. Sun noise measurements looked reasonable - about the same as at home. I then scanned around to the 10 kHz EME segment looking for anything that looked like an EME signal. There were a few unmodulated carriers, but nothing resembling a JT65 signal. These were probably just unintended radiators like WiFi LO's and such. After an hour or two, it was time to tear the system down and head home. No success. Since everything seemed to be working, I could think of only two possibilities: 1) my system was not sensitive enough to detect EME signal, or 2) there were no such signals present at that time. I set the whole project aside for a couple of months, pondering from time-to-time as to what my next move should be. I realized that the ON0EME EME Beacon located in Belgium, while not a JT65 signal, should be detectable visually on the JT65 waterfall display. This test would have many advantages over the hit-or-miss random signal approach I tried in Oct. The beacon TXs at all times when the moon is > 10 degress above the horizon in Belgium, thus I could be sure when the signal would be present. The TX frequency would be exactly known and I could predict the receive frequency very closely by applying corrections for predicted Doppler. An exact receiver dial setting could then be determined by combining the receive frequency with a known dial calibration offset. The receiver tuning error would be less than a few ten's of a hertz. The modulation on the beacon consists of a pattern that lasts one minute and starts exactly on 00 sec. It consists of a slow CW code ID for 30 seconds followed by 20 sec of pure carrier followed by 10 sec code ID. This was created to allow someone watching that display that would be distinctive. I set out to convince myself that I should be able to see this signal. Earlier in the project, I did a lot of work in the lab to make sure that the back end of the system was working as expected. I was able to generate a simulated JT65 signal using SIMJT, a program that generates a base-band audio JT-65 signal plus noise at any desired SNR. I used this to drive the modulation input of my Fluke signal generator to provide the simulated signal at 23 cm. use the waterfall display would be possible down to about -29 dB (referenced to 2500 Hz bandwidth, as JT65 signals always are). The ON0EME beacon feeds about 400 W into the antenna feed a 12' dish. Using the VK3UM EME Performance Calculator, an excellent tool for predicting EME performance, I figured I should receive the beacon signal at about -24 dB SNR on the date and time in question. This should be well within my predicted detection threshold of -29. It looked like a go. The one remaining problem was timing. In order to do this test the Moon has to be well clear of obstructions at my end, while the beacon is transmitting in Belgium, a 9 hour time difference. I figured I would need at least an hour of overlap to safely have enough time to do the test. At my site in Pine Cove, the moon doesn't clear the trees until several hours after moonrise. This situation, coupled with the nine hour time difference results in there only being three or four days during a lunar cycle when there is an hour or more of overlap. Based on other considerations I choose Monday, 21 July 21 to try the test. Moonrise would be at 145 AM LT and I figured it would be well clear of the trees by around 5:30 AM. ON0EME would be shutting down at about 6:45 AM my time. The timing work. I went up the day before and I got everything set up and running. I decided to leave everything powered up overnight because the Icom takes a couple of hours to completely stabilize, I set the alarm for 5:00. The Moon was already clearing the trees when I got up. At 5:11 the antenna was pointed and tracking started. At 5:31 the Moon was quite clear of the trees and I tweaked the pointing. The receiver tuning was then set according to predicted Doppler shift. At 5:40 the beacon signal was very obvious on the waterfall exactly where it was expected. With this success in hand, I'm now working on my next move. There is an EME event in November and there will be a lot of stations on the air. This is probably my best opportunity to receive and decode live JT65 EME signals and hopefully complete my original objective. "What about transmit?", you ask. We'll see. [TNX the ON0EME group for forwarding this report.]
EME. I plan on pouring concrete in the spring and could be receiving and possibly transmitting by the summer. I’m currently working on the AZ/EL control. I have an older water-cooled 2 x 7289 amp for TX, but am looking for an SSPA. A new daughter has been keeping me very busy, but my plans for EME are still on track.

**KO7OG:** Steve eagle572@comcast.net (DM42mh) sends an update on his progress toward 70 cm EME -- I have replaced a blown LDMOS MRFE5600H power transistor in my W6POL 70 cm SSPA and re-packaged it into a better cabinet. With an idling current about 0.7 amps, Pout is 400 W. Soon my existing 70 cm LNA/relay assembly will be mast-mounted with a pair of M2 432-12 rear mount yagis with Az-EI and manual rotation on a short tower.

**KL7UW:** Ed kl7uw@acsalaaska.net sends his 1296 EME status -- My way for the welder is over. I am now in the process of re-calibrating my azimuth encoder so that I can accurately track the Moon. I am also making a minor upgrade to the dish mount for my amps. I have a 4.9 m dish, W2IMU feed, G4DDK VLNA and 50 W PA at the dish. [Ed recently worked UA3PTW on 1296.]

**N4GJV:** Ron bad79@yahoo.com fills us in on his recent 432 EME operation -- I found conditions to be good during the Aug 70 cm CW ATP and I logged QSOs with G4RGK, OZ4MM, SM2CEW and K2UYH. Frequent thunderstorms were a problem during the AR’s CW Contest weekend on the 13/14 Sept. When I was able to be QRV, I spent some of the available operating time on 2 m EME. Perhaps this caused me to miss much of the 70 cm activity. CW QSOs were logged with I2FHW, L21DX and SM2CEW. Got-aways include K2UYH and UT5DL.

**OK1KIR:** Vladka and Tonda vladimir.masek@volny.cz send their club’s report for Aug and early Sept -- We worked on 70 cm during DUBUS JT Contest on 17 Aug at 0055 V5SAPN8 (25DB/25DB) for digital initial [#113] and PG field, 0106 OK2POI (18DB/14DB), 0110 UT5DL (11DB/11DB), 0117 UA1ATL (22DB/20DB), 0130 SP1LYN (22DB/O) and 0741 XE2AT (27DB/20DB) [#114] and DL field, on 23 cm on 10 Aug at 1951 YL2GD (8DB/8DB) on JT65C. 2029 DG5CST (559/589), 2135 SP6ITF (559/589) and 2135 E19E (22DB/O) [#182] with LP feed, on 11 Aug at 2153 DC9UP (11DB/5DB) JT65C [#183], 2204 E19E (27DB/24DB) JT65C with CP feed, 2259 EA3UM (70DB/70DB) JT65C [#184], 2359 PA2CHR (28DB/28DB) JT65C [#185] when testing equipment for Z21 expedition, on 12 Aug at 0416 ISIPK (569/579), on 15 Aug at 1555 PA3CQE (10DB/8DB) JT65C, 1651 EI9E (22DB/O) JT65C, 1734 QA3TST (22DB/12DB) JT65C [#186] first HK/OK on 23 cm QSO and JT-field, and on 12 Sept at 0504 SB/PE1L (22DB/O) [#187] and new DXCC; on 13 cm on 17 Aug at 0449 SP/OK5EME (569/569) for initial #140 and 0520 SP/OK5EME (9DB/O) [#20] then tested the new proposed JA band 2400 and found free of interference(); on 6 cm on 23 Aug at 0725 UN6PD (M/O) for initial #75 (unfortunately new SSPA with Chinese TiM does not produce expected pwr increase) and 0816 TM16EME (O/O) for initial #85, on 30 Aug at 1114 VK7MO (16DB/19DB) JT4F [#22] from new PH70 field, on 29 Aug at 0610 VK7MO (19DB/19DB) JT4F [#20] from new QH00 field, on 27 Aug at 0804 VK7MO (18DB/18DB) JT4F [#19] from new PH70 field, on 23 Aug at 0350 VK7MO (19DB/18DB) JT4F [#20] from PH90, on 24 Aug at 0545 VK7MO (18DB/17DB) JT4F [#21] from new QG09 field, on 25 Aug at 0610 VK7MO (19DB/19DB) JT4F [#22] from new QH00 field, on 27 Aug at 0804 VK7MO (18DB/16DB) JT4F [#23] from QG17, on 28 Aug at 0832 VK7MO (19DB/17DB) JT4F [#24] from QG26, on 29 Aug at 1011 VK7MO (18DB/17DB) JT4F [#25] from QG25, on 30 Aug at 1046 VK7MO (16DB/17DB) JT4F [#26] from QG34, on 4 Sept at 1554 VK7MO (17DB/16DB) JT4F [#27] from QF48, and on 5 Sept at 1648 VK7MO (16DB/17DB) JT4F [#28] from QF46 and 1652 VK2JD (15DB/15DB). The great tour of Rex through Australia’s mainland (more than 10,000 km!) verified the possibility of JT4F(G) portable EME operation on 10/24G with reasonable dish size of 80 cm on 10 GHz and 1.1 m on 24 GHz (both prime focus with loose long “shepherds hook” feeds) even with high frequency spreading and very low elevations at antipodal QSOs! Only rain and heavy clouds were found as unbeatable enemies! The rf power of 50 W at 10 GHz and 20 W at 24 GHz from SSPAs and DB6NT LNAs were used at VK7MO’s side. The opposite communicating party needs similar equipment, but a bigger dish of size about 3 m (or even less if all losses at RX and TX are kept at a minimum and at the current “state-of-art”). Some more details about Moon and sky background noise ratios measured at the each test can be found on OK1KIR web site. Furthermore Rex plans to write a tour summary for an article in DUBUS Magazine and to place the reports of each particular test (day by day) on VK3HZ’s web site.

**ON5RR:** Marc and his co-operator Michel (ON7EH) moonbouncer@sky-net.be are back on EME with a 6 m dish as they started out with more than 20 years ago. They are at a new location that Marc recently moved to, and are QRV on 23, 13 and 6 cm. They are interested in skeds and can be reached via email. During the ARRL Microwave EME Contest, they plan to concentrate on 13 cm EME.

**PA0EHG:** Hans h.v.alphen@planet.nl reports on his demonstration of small antenna EME at EME2014 -- I enjoyed the conference very much; it was nice to meet many EME enthusiasts and very stimulating for new plans. My compliments to the organizers of this very fine event. I was quite surprised by the huge turnout for my live demo of 3 cm EME reception using only a 50 cm dish. I was very happy that it worked instantly. If not, I would have had a big problem, Hi! I want to send a very special TXN to DK7LJ for all the work he has been doing on DL0SHF 3 cm Beacon. Per is very cooperative and always willing to TX high power and to place the reports of each particular test can be found on his web site. Furthermore Per plans to write a tour summary for an article in DUBUS Magazine and to place the reports of each particular test (day by day) on VK3HZ’s web site.

**ON5RR and ON7EH in front of their 6 m dish used for EME**
PA0EIHG with 0.5 m used to demo 10 GHz EME

PA2V: Peter p.gouweleeuw2@kpnplanet.nl is now QRV on 70 cm with a bigger array -- During July and Aug I was very busy completing the final installation of my new 4 x LFA yagis. I worked to make my phasing cables as equal as possible. All 4 cables (Ecoflex 15) are within 3 degs (measured) and have a cable loss of 0.3 dB. My HB combiner is within 2 degrees per port. I saw that temperature changes phase as well. All yagis have a return loss > 33 dB. I had a 4 week holiday in August and planned to put the antennas, but all I could do was watching the rain falling. We had a very wet Aug. (We Dutch know how to handle water, but this Aug saw up to 30 cm water in some areas). The first week of Sept, duty called and I start to work again. Also nice sunny WX and I start to build up the array during the evening. In 3 evenings it was together and the performance tests could start. The tropo beams were much louder. 5.5 dB of more gain is a huge difference. I measured Sun noise and saw 0.5 dB less than I could get according the VK3UM calculator. The main reason is that I still have my LNA in the shack. The Ecoflex15 run is 9 m, I also live in an urban area and this might cause a higher noise floor. This is what has been worked the last months. With the single yagi, I QSO’d in July SM4IVE (549/0) for mixed initial #39 and LZ1DX (24DB/0) JT65B, and in Aug KN0WS (27DB/O) JT65B #40, EA5CJ (26DB/24DB) tJT65B, K3MF (24DB/0) JT65B #41 and I5CTE (22DB/O) JT65B. With the 4 yagis I worked on 6 Sept LZ1DX (19DB/O) JT65B, on 8 Sept EB5GP (26DB/O) JT65B #42 and DF3RU (12DB/21DB) JT65B, on 10 Sept VK3UM (449/549) #43, on 13 Sept NC1I (11DB/12DB) JT65B, VA3ELE (26DB/O) CW (?) #44, UA3PTW (17DB/O) JT65B and EA5CJ (24DB/O) JT65B, and on 14 Sept K4EME (21DB/O) JT65B, K5OE (22DB/O) JT65B, K3MF (21DB/O) JT65B, W2SZ (23DB/O) JT65B #45, SM2CEW (339/549) #46, W7MEM (23DB/O) CW (?) #47 and WP8AT (28DB/O) JT65B #48. Conditions during the ARI contest weekend on 13/14 Sept were heavily affected by Aurora and it was nearly impossible to hear or work EU stations. I worked on 18 July SM6DCD for initial #31 on sked for the first SS-SM 6 cm QSO, on 19 July K2UYH #32 on sked and SM9DCC on random and heard K2UDP calling K2UYH, but did not find him later, on 16 Aug JA6CZD, JA8ERE #33, PA0BAT, I2ZDJP #34 (3 m dish and 10 W), SM6PGP, SV3AAB and G3LTF, on 24 Aug JA4BLC #35, TM1EHE on both CW and SSB (armchair cpy) and IK3COJ #36, on 6 Sept UN6YD #37 (1.6 m dish and ~50 W) for the first UN-SM 6 cm QSO, PA0BAT on SSB (very clear signal and good copy) and F1PYR #38, and on 14 Sept in the ARI contest DL7YC, SP6GWN, DL7YC on SSB, I2ZDJP, VE6TA #39 and LX1DB. The conditions on 6 Sept were outstanding with close to perigee path loss and very low libration. The echoes on 6 cm sounded like 23 cm, with almost no Doppler spread at all, making SSB signals very enjoyable to listen to. I am glad that a few stations could work in spite of the low declination and enjoy these conditions. My 6 cm rig is a solid 5.5 m dish with a SM6FHZ septum feed and GaN PA giving 100 W at the feed. I plan to be active on 6 cm during the ARRL EME contest microwave leg, if the WX does not stop activity (rain and excessive winds). I hope to see you all then.

PA2V's new 4 x LFA yagi array

SM6FHZ: Ingolf ingolf.fhz@gmail.com submits the following info on his most recent 6 cm activities -- During my summer vacation, I finally found the time to optimize the feed position on 6 cm using solar noise. I gained a considerable performance improvement from this exercise. The feed was ~ 40 mm too far out and my Moon noise went from ~ 0.8 dB to 1.3 to 1.6+ pending on Moon distance and phase. I still do not have a clear opinion on how much the Moon phase affects Moon noise on 6 cm. I do see a clear peak at full moon. This improvement has paid off well in 6 cm QSOs. I worked on 18 July S59DCD for initial #31 on sked for the first SS-SM 6 cm QSO, on 19 July K2UYH #32 on sked and S59DCC on random and heard I2ZDJP calling K2UYH, but did not find him later, on 16 Aug JA6CZD, JA8ERE #33, PA0BAT, I2ZDJP #34 (3 m dish and 10 W), SM6PGP, SV3AAB and G3LTF, on 24 Aug JA4BLC #35, TM1EHE on both CW and SSB (armchair cpy) and IK3COJ #36, on 6 Sept UN6YD #37 (1.6 m dish and ~50 W) for the first UN-SM 6 cm QSO, PA0BAT on SSB (very clear signal and good copy) and F1PYR #38, and on 14 Sept in the ARI contest DL7YC, SP6GWN, DL7YC on SSB, I2ZDJP, VE6TA #39 and LX1DB. The conditions on 6 Sept were outstanding with close to perigee path loss and very low libration. The echoes on 6 cm sounded like 23 cm, with almost no Doppler spread at all, making SSB signals very enjoyable to listen to. I am glad that a few stations could work in spite of the low declination and enjoy these conditions. My 6 cm rig is a solid 5.5 m dish with a SM6FHZ septum feed and GaN PA giving 100 W at the feed. I plan to be active on 6 cm during the ARRL EME contest microwave leg, if the WX does not stop activity (rain and excessive winds). I hope to see you all then.

SM4IVE: Lars sm4ive@telia.com writes that he attended the Weinheim EME gathering with SM7QVI – We had a real nice time, meeting some of the other ports. I cannot get it any better. I also ran some tests on 10 GHz, but the results were not brilliant. With my 3.2 m mesh dish ground noise was only 3 dB and Sun noise 6 dB. So definitely 6x6 mm feeds for 3, 6 and 9 cm all on one focus ring. Plans for the 2015 Swedish EME meeting in May are moving along well.

SM6CCKU: Ben ben@sm6cku.se is now QRV on 10 GHz using circular polarization -- Geometry is the same at 3 cm as on the other bands. Normally 45 deg / 3 dB to the east coast of the US and approaching 90 deg to the west of that. With the increasing activity from different parts of the world simultaneously gives circular polarization an advantage. 6 cm is circular, why not 3 cm EME activity? In 1990 I went to the EME Conference in Trenton, NJ with a very nice 10 GHz copy of the W2IMU horn for 3 cm, and everybody was impressed. There were not many stations on the band at that time and most of them were linear. Except my good friend SM4DHN, who made his own version and has been circular since then. The same issue came up in Prague in 2002 and it was decided that use of circular pol was recommended. 24 years and not much has changed. Today there are several good designs of feedhorns for CP, and mine is one of SM6FHZ’s. I also think there are CP horns available commercially. Anyway, I have worked OK1CA, OH2DG, SM4DHN and DL0SHF on 3 cm. I also heard UA4HTS several times. I measured 16 dB of Sun noise and 2.3 dB of Moon noise with my 4 m dish. Power output to the CP horn is 15-18 W through a very short cable.

PA0EHG with 0.5 m used to demo 10 GHz EME
I am using a OA5JFL/DRIACS controller. I hope to be QRV in Oct.

wa3lbi@me.com

billw3xs@gmail.com

aa6eg@hotmail.com

UA0ALA

W8JG

DIN connectors for 1
M4 Satellite

Don't forget Microwave Update (MUD) is coming up on 24/25 Oct in Rochester – see http://www.microwaveupdate.org/.

WEINHEIM - Andi (DJ3JJ) di3ji@gmx.net reports that there was a very nice 3 hour EME meeting at Weinheim with a lot of info exchanged. Participants were HB9BBB, ON5TA, OZ1FF, PA2DW, SM4VE, SM7GVF, DJ8FR, DK3UC, DL6SH, DL1YMK with Monica and DJ1ES, who discussed 9 cm transverters.

G4RGK reports that he has updated the initials lists and that they are posted at http://www.zen70432.zen.co.uk/Initials/index.html. [Dave also mentions that he had a great time at the EME Conference.]

Great video clips of EME2015 by SM6CKU can be found at https://www.youtube.com/watch?v=Ax01iB8HFbE, https://www.youtube.com/watch?v=JBJukEsw40c, and https://www.youtube.com/watch?v=8ZPyWvAk.

EME antenna for 77 GHz – RW3BP’s conference paper will of interested to 10 GHz and up EMEers trying to get the most out of their antennas. Sergeil's conference paper can be found at http://www.vhfdx.ru/rw3bp/RW3BP.pdf.

The latest version of VK3UM’s EME Planner (V1.89) is now available. Doug has updated the ARRL DXCC data base and also included a fast find option for locations and prefixes. See http://lists.moonbounce.info/listinfo/moon.

Another big dish should be on EME soon! This one is the 60’ dish at the site where the original Diana Moonbounce echoes were received back in 1946 in the Evens area of Fort Monmouth. It is now the InfoAge Science Center http://www.infoage.org. The dish has been refurbished and is now fully steerable – see photo. It is just a matter of time before big echoes will be heard off the Moon!

INFOAGE 60’ dish is now fully steerable and should be on the Moon soon.

EME Scouting Activity - PA0PLY pa0ply@pa0ply.nl sends news that the CAMRAS group (P9CAM) 2 years ago organized a “Jamboree on the air” type of activity for Dutch scouting groups. They all were equipped with a 70 cm transceiver (20 - 50 W), 7 m long HB yagi and a computer with JT. The Dwingeloo radio telescope acted as a kind of EME repeater using the WEDSDR of P9CAM and the participating scouts could find each other and some were even QSO’d with P9CAM. I designed a simple to construct yagi using PVC conduit and aluminum tubing. The building of the yagi and the aiming to the Moon are typical scouting activities. The operation of the station using WSJT was more a challenge for the assisting ham. At P9CAM we copied and/or answered a total of 11 stations. The drawback was that only sending was active; the receiving part was through the reception of the live stream from Dwingeloo. This means that P9CAM itself could not be worked live as they were streaming continuously. This activity will happen again on the 3rd weekend of Oct. The support of BIG Guns is desired in order to have some direct contact via the Moon. So here is my request to you. Can you be active and watch for small stations (without experience). The JOTA-JOTI weekend is 17/18/19 Oct. I have no clue yet how many stations will join this year. Info can be found on our CAMRAS website www.camras.nl under the menu item JOTA2011. The descriptions are still valid; however, the Moon will be in a different in position. The event coordinator is Frans, PE1RX.

OK1CA, D6SH and OK1CS visiting the ON0EME Beacon after the conference

There is more, but I have run out of time. I will be at the Mid Atlantic VHF Conference this weekend trying increase microwave EME in the states with a talk on getting started on 1296 EME. Because of travel the next NL will not be until after the ARRL EME Microwave Contest on 11/12 Oct. I hope to see many of you off the Moon then operating as part of the K1JT team. 73, Al – K2UYH