WATTS

11-2011

Year 81 + 11m

Monthly newsletter of the Pretoria Amateur Radio Club
Maandelikse nuusbrief van die Pretoria Amateur Radio Klub.

PARC, PO Box 12602, Die Hoewes, 0163, RSA

web http://www.parc.org.za mail: zs6pta@zs6pta.org.za

Bulletins: 145,725 MHz 08:45 Sundays/Sondae
Relays: 1.840, 3.700, 7.066, 10.135, 14.235, 51.400, 438.825, 1297 MHz
Activated frequencies are announced prior to bulletins
Swapshop: 2m and 7.066 MHz Live on-air after bulletins
Bulletin repeats Mondays | herhalings : Maandae 2m 19:45

ZR6FD logo

Drukwerk printing ZS6JPL

Papier / Paper ZS6JPL

7P8EME DX-pedition

Final report page 6

In this issue

In hierdie uitgawe

Next social and fleamarket

Date: Sat 29 Nov. 2011
Time: 08:00

Venue:
PMC, Silverton

PARC Management team / Bestuurspan Aug. 2012 - Aug. 2013

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Minutes of the monthly club meeting of the Pretoria Amateur Radio Club held at the South Campus of the University of Pretoria on 8 Oct. 2011.

No meeting was held at this time due to many of our members being committed to other activities and too few attended for proper proceedings.

SEE IMPORTANT ANNOUNCEMENT PAGE 3

Maintenance at ZS6P by Craig ZS6RH

Craig at 30m

Need help? Press Craig's button and he will solve your vertigo problems at reasonable consideration.

Birthdays Nov. Verjaarsdae

07 Andrew, son of Lynn and Andre ZS6BRC
10 Luther ZS6E (**95**)
16 Vlasta ZS6-2501 sw of Ivan ZS6CCW (OK1LL)
16 Jean, daughter of Lynn and Andre ZS6BRC
27 Janice, dogter van ellen en Joe ZS6AIC

Anniversaries Nov. Herdenkings

none

Joys and Sorrows | Lief en Leed

Diary | Dagboek (UTC times)

Nov

12	**PARC Fleamarket**
12-13	WAE DX Contest, RTTY 00:00-23:59
12-13	OK/OM Contest CW12:00-12:00
13	PEARS HF DX Contest 12:00-16:00
18	YO international PSK contest 16:00-22:00
19-20	ARRL EME Contest 00:00-23:59
19-20	**SARL Field Day contest 10:00-10:00**
26-27	CQWW CW contest 24:00-24-00

Forgot?

PARC SUBS / LEDEGELD 30-06-2011

Please remit your subs in time to our treasurer or by transfer to:

Betaal asb. u ledegeld betyds aan ons tesourier of per oorplasing aan:

Bank : FNB
Branch : 25 20 45
Account : 546 000 426 73

Ordinary members/ gewone lede R150
Spouses, pensioners R50

Your call sign must appear as statement text! !

Snippets | Brokkies

ANNOUNCEMENT TO ALL MEMBERS:

The committee has decided that monthly club meeting attendance on either Wednesdays or Saturdays do not attract enough members to warrant having such meetings - which to most members in the present format are 'boring' and have too few presentations to make them interesting.

Consequently as from now – 29 October – informal social get-togethers with presentations where possible – will be held after every fleamarket at PMC – generally from around 11 AM.
This implies your attendance will be appreciated on fleamarket Saturday mornings 4 times a year.

Special formal meetings may still be called but only for pressing and important matters.
Annual General Meetings will not be affected and are called during August every year.

This October 29th will have a presentation by Koos ZS6JPY on APRS.
Come and browse/buy/sell that morning and listen to the presentation.
Refreshments are available at the PMC bar and a fire may even produce boerewors rolls.

Roger ZS6RJ did well in CQWW RTTY:

CQ World Wide RTTY Contest

Home | Rules | Plaques | Results | Records | Logs | Contact Us

Logs Received | Club Names

2011 CQ World Wide RTTY List of Electronic Logs Received

Receipt of paper logs is not reported.

Page created Fri Oct 7 09:00:02 UTC 2011 and updated daily.

If you notice anything reported here that is in error or that you would like to change, please make the change(s) and resubmit your log to rtty@cqww.com.

Callsign	Operator	Claimed-Score	Transmitter	Band	Power	Assisted
ZS1JY	SINGLE-OP		ONE	ALL	LOW	NON-ASSISTED
ZS1LS	SINGLE-OP	36064	ONE	ALL	HIGH	ASSISTED
ZS6RJ	SINGLE-OP	25075	ONE	ALL	HIGH	NON-ASSISTED

Three Hams Purchase HRD Suite Source and Rights

Tampa FL, St. Paul MN, Pittsburgh PA - September 19, 2011 - Mike Carper (WA9PIE), Randy Gawtry (K0CBH) and Rick Ruhl (W4PC) have acquired the source and rights to the Ham Radio Deluxe suite of software. The trio plans to continue the improving the best ham radio package available.

"Simon has done a fantastic job with this software. His vision for integrating rig control, rotor control, logging, digital modes, and satellite operations into a single integrated feature-rich software suite has captivated the ham radio community. We'd like to see this product continue in a way that respects the hard work put into this package by Simon and others," said Mike Carper. "Maintaining that vision, while delivering timely fixes and feature enhancements in the future, will be the number one priority."

"After many years writing the HRD software it's necessary to take a break and hand the whole project over to another team," said Simon Brown (HB9DRV). "The support effort required has become more than I can realistically manage – with many thousands of users, new radios and other hardware appearing all the time and unexpected changes to the infrastructure used by HRD such as QRZ.com I no longer have any time at all for other projects. As some of you will know I have formed a company SDR-RADIO.com GmbH and am now working in the Software Defined Radio arena with RFspace. This is the technology of the future; a future which I want a part of. In 2012 I plan to return to England and get back on the air, something I haven't done much during the last 25 years."

The trio is in the process of building a development environment for HRD and plans to begin by addressing some of the bugs in the existing "To Do List" for an upcoming 5.1 release. The 5.1 release will be made available at no charge to registered users when completed.

All three principals have more than 25 years of experience with radio data communications. Rick Ruhl is the president of W4PC Software, Inc. whose products include the PakRatt, PKTerm and Radio Operations Center software suites. Randy Gawtry is the president of Timewave Technology Inc. whose products include the PK and DSP families of data controllers and other commercial data products. Mike Carper is an experienced Fortune 500 technology executive, educator, and featured speaker in the areas of wireless technologies and IT Service Management.

WA9PIE is on the web at http://www.wa9pie.net/hamradio

Timewave Technology is on the web at http://www.timewave.com

W4PC Software is on the web at http://www.w4pcsoftware.com

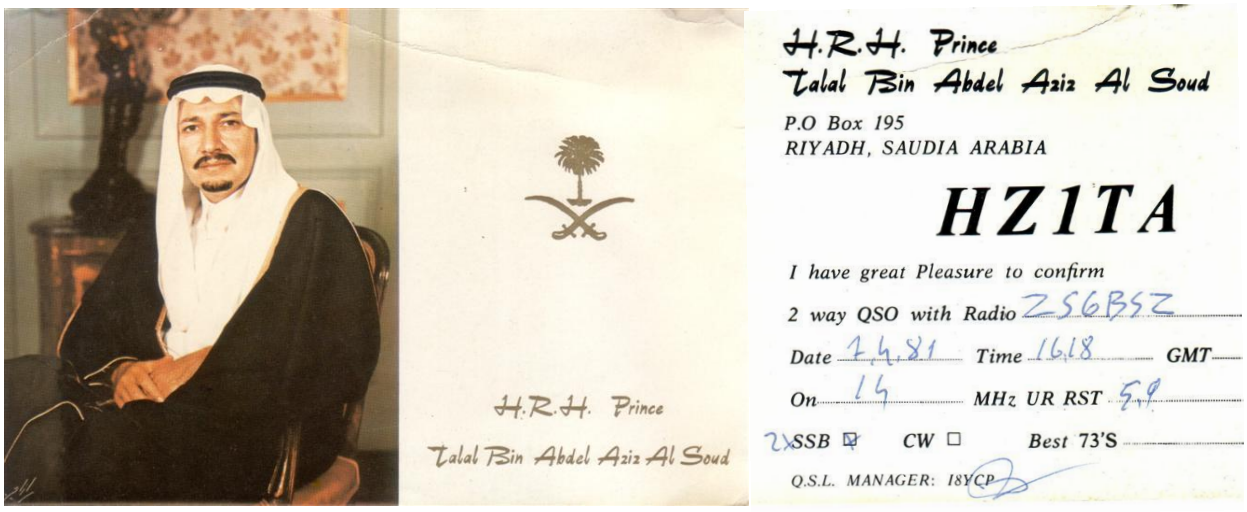
Have you ever worked the rich and famous?

Here follows a list of callsigns of which at least half are still current – listen out for these!

Callsigns from the past and present:

more on http://www.qsl.net/w5www/famous.html

FO5GJ Marlon Brando
WA4WYV Andy Griffith
WA4CZD Chet Atkins
LU1SM Carlos S. Menem, Pres. of Argentina
CN8MH King Hassan II, King of Morocco
I0FCG Francesco Cossiga, ex Pres. of Italy
N6YOS Priscilla Presley
WD4SKT Donna Osmond
HS1A King Bumiphol Adulayadej of Thailand
JY1 King Hussein of Jordan
N6KGB Steward Granger
W6FZZ Samuel FB Morse III
EA0JC King Juan Carlos I of Spain
JY2, JY1H, Queen Noor of Jordan
JY2HT Prince Halasan Ibn Talal, Brother of King Hussein of Jordan, Prince of Jordan.
JY2RZ Prince Raad Ibn Zeid, cousin of King Hussein of Jordan, Prince of Jordan and chairman of the Royal Jordan Radio Am Society
3A0AG Albert Alexandre Louis Pierre Grimaldi, Albert II, Sovereign Prince of Monaco.
A41AA Sayyid Qaboos bin Sa'id bin Taimur Al 'Bu Sa'idi GCB, GCMG, GCVO, Sultan of Oman.
9K2CS Sheikh Dr. Muhammad Yousuf Al-Sabah, Prince of Kuwait and Minister of State for foreign affairs.
HS1D Maha Chakri Sirindhorn, Princess to throne of Thailand
HZ1TA, HZ1TC, SU1VN, Prince Talal bin Abdul Aziz Al Saud, Prince of Saudi Arabia: (ZS6BSZ was the original callsign of ZS6KR)



CEPT proposes frequency allocation for amateur radio on medium wave

From HF HAPPENINGS 475

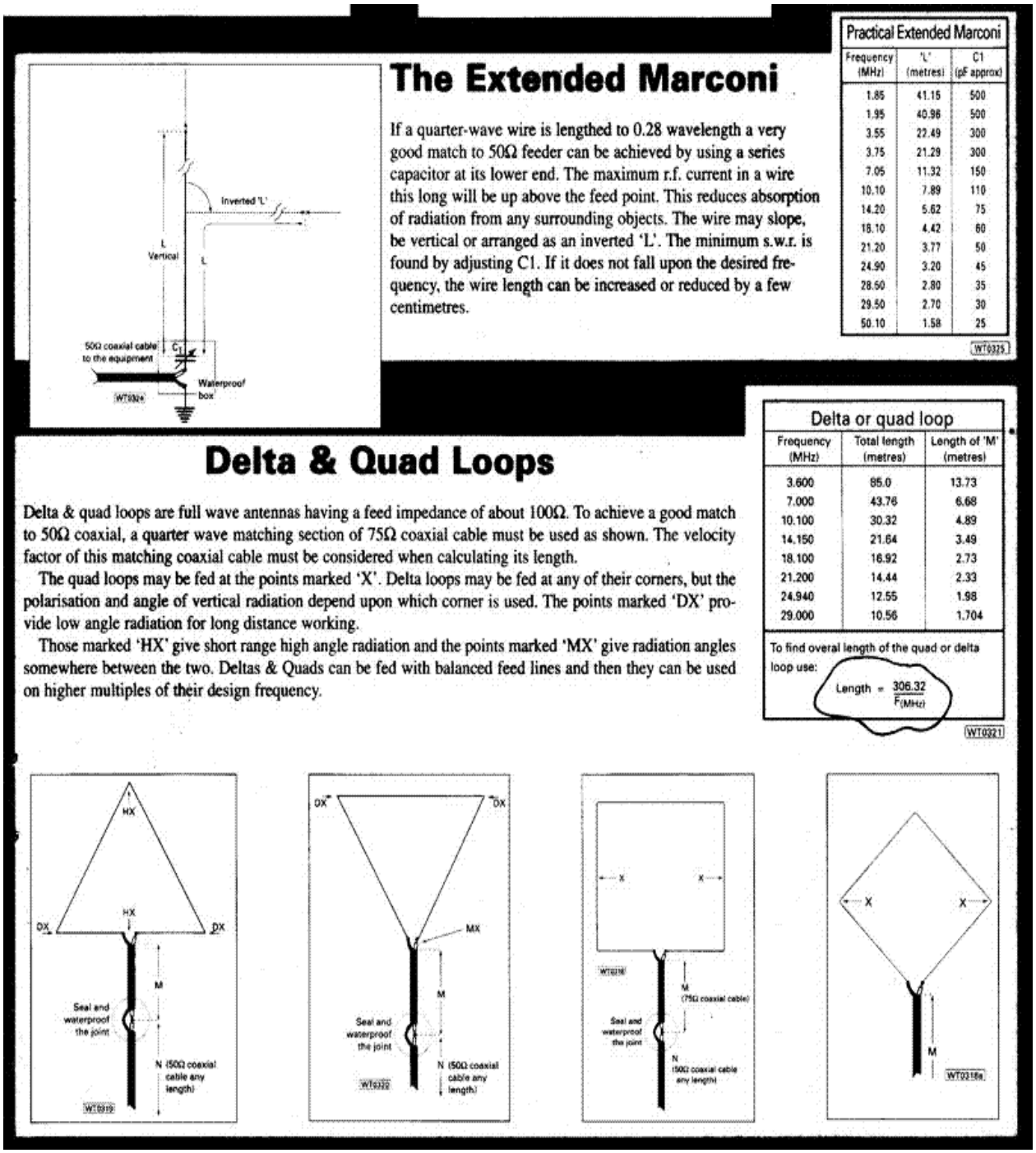
A small allocation of about 15 kHz in parts of the 500 kHz band to the amateur radio service on a secondary basis - this proposal has been made by a project team of about 50 reprRentatives of European governments and other stakeholders in preparation for the next World Radiocommunication Conference WRC12.

They followed an invitation of the Federal Network Agency in Germany and met by the end of September in Mainz. The discussion led to a compromise of the size of the amateur radio band, namely 480 kHz - 472 kHz, with a maximum power of 5 W EIRP.
Apart from Colin Thomas, G3PSM representing IARU Region 1 and John Gould G3WKL for the British Amateur Radio Association RSGB, were Peter Frey, HB9MQM, and Ulrich Mueller, DK4VW, DARC representative for frequency management, each a member of the Swiss or German delegation

.

Nine administrations have declared their willingness to support the results of the discussion as a joint European proposal at the last meeting of the CEPT's WRC Conference Preparatory Group in November 2011 in Bucharest.

It is likely that other governments may join this result of the Mainz meeting, so that the CEPT on behalf of all its members could go to WRC12 taking place in Geneva in Jan/Feb 2012.



From the mountains to the Moon. 7P8EME

by Pieter ZS6PA/7P8PA

On Sept 14th 2011 after 2 years of planning and intense preparation a small group of radio amateurs depart from Pretoria, capital of South Africa in three 4x4, vehicles. each towing a heavy loaded trailer. Their mission was simply to activate a DX EME expedition, from a small village, Ha-Ramabanta (KG30 VI) in the mountain Kingdom of Lesotho. The main purpose of the expedition was to provide an opportunity to other radio amateurs all over the world to work and add 7P8 as long overdue EME DXCC on four different bands being: 144MHz, 432MHz, 1296MHhz and 50MHz. The call sign **7P8EME** was graciously earlier allocated to the team by the Lesotho Communications Authority for the purpose of the expedition.

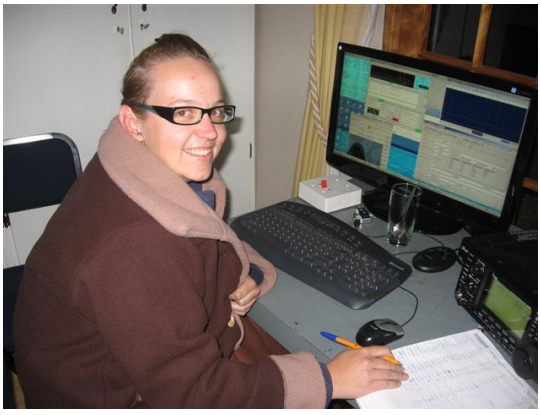
The team consisting of 8 members with the team leader Pine ZS6OB /7P8EME, his XYL Erica, Herman DL2NUD /7P8HP, Dick - ZS6BUN / 7P8BUN, his XYL Lana, Pieter - ZS6PA / 7P8PA, Wynand- ZS6ARF / 7P8QRO and Lynette ZR6LHT / 7P8LHT being the only YL radio amateur on the team. Herman an experienced EME DX operator has flown in from Germany, two days prior our departure. After being held-up for almost 4 hours by the the RSA / Lesotho border bureaucracy, we arrived in the dark at Ramabanta Trading Post and lodge. This was to be our home for the next 14 days. Ramabanta, meaning the "the man with many belts". Ramabanta is situated about 60 Km south of Maseru, the capital of Lesotho. The minimum night temperature as recorded during our stay was 4 deg C and the maximum day temperature was 29 degrees C. Don't be misled by the 60Km distance from Maseru to Ramabanta, it took us 3 hours to cover the route. The last 15Km of stony road tests vehicles to the extreme, a drive you rather want to forget. You might get a better idea if I say it rattles your teeth! Ramabanta being at 1850m above sea level and surrounded by mountains being as high as 2700m above sea level.

The next day, Thursday, 15th was taken up by establishing the station and painstakingly assembling the antennas. Four XP20 cross yagi's for 2meters, four 22 element K1FO/ex 6OB yagi's for 70cm, a 6element LFA antenna for 6meters and a 55 element antenna for 23cm. Radio equipment would be an ICOM 9100 and ME-1500V amp for 2 meters, ICOM 910 and HLV 550 BECO amplifier for 70 cm, Kenwood TS2000 and ACOM 1000 amp for 6meters and a second Kenwood TS-2000 and QRO amp for 23 cm. All antennas except the 6m LFA were fitted with low-noise pre amps. Both 2 meter and 70cm arrays could be switched between vertical and horizontal. The antennas of both the 2 m and 70cm set-up were redesigned and constructed by Pine ZS6OB. The 6m LFA antenna was built by Pieter ZS6PA, based on the design provided by Justin G0KSC. An ICOM IC 7200 HF transceiver fed into an inverted V antenna for 40meters has been set-up as a link back to South Africa.

Due to the remoteness of the location and sparse infrastructure no AC power was available and a 10KVA Honda generator, generously sponsored by Dick-ZS6BUN was used to supply power to the EME station. Fuel for the generator was to become another logistic nightmare, not knowing at that time that the generator will be consuming 500 litres of fuel over the 14 days. Luckily the friendly people of Ramabanta Lodge agreed to provide fuel, transporting it in 20 litre containers per 4x4 vehicle from Roma, the closest little town.

With the first lunar window of opportunity starting that evening of the 15th just after 20h30 UTC, it was a big scram to get everything ready. Moonrise for us was +8deg, (due to the the mountain towards the horizon on the east). Our 1st stretch of operation was by no-means a textbook start. After the very first transmission cycle the JT65 screen lit up to look like a real waterfall in flood. With lots of stations on the screen, in fact 27 of them! The first successful 2m contact was with I2FAK @ 20h49, received at –18dB. Unfortunately our joy was short lived and soon had to deal with our first equipment gremlin. After a few hours of operation a curious smell filled the room, becoming stronger and stronger after every TX session. Who can ignore the smell of burning bakelite? And then like a flash in the sky everybody was awake as a fuse blew with a bang, the 2m amplifier was working no more! Activity on 2 m was halted till the next morning. A faulty switch was identified and replaced. The following night our operation commenced on 2m with a similar failure. This time investigation revealed a badly burnt fuse housing on the supply to the HT transformer. Luckily Wynand ZS6ARF was able to replace the fuse assembly borrowed from a standby amp.
During the first night the contacts on 23 cm progressed very well. Herman managed to make 6 QSO's during his first night of operation.

On 6 meters it was a different story. Notwithstanding skeds being arranged on the ON4KST forum no contacts could be made. Everyone was blaming "Mr. Faraday"! As we all know the 6m band, also sometimes referred to as the magic band was again up to its tricks and full of surprises. Unlike 2m and 70cm where we were not able to switch between vertical and horizontal, between transmit and receive respectively, this could not be done on 6m to cancel out the "Faraday rotation" effect. Signals kept coming in at around -30dB to -33dB, making decoding basically impossible. Keeping the 6 element LFA antenna locked onto the moon all the time proved to be a humongous task. As the azimuth was done by hand, one had to run outside to do the adjustment run back to the shack, adjust the elevation with the controller and run out again just to check if it is correctly aimed! But it was all fun.



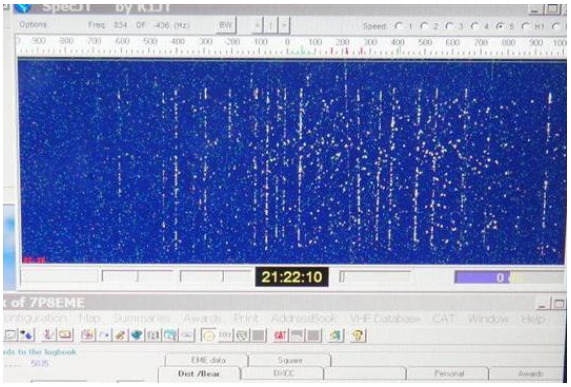
Attainment on 6 meters only came on Tuesday, 20th, the 5th night of operation. when Lynette ZR6LHT/7P8LHT - under the strict guidance of Dick ZS6BUN / 7P8BUN - manages to successfully complete a QSO with ES6RQ KO28 at 03h33. He was received at -24dB. This was a joyful moment for all team members as this was not only the first 6m contact but Lynette also now being the first YL to achieve a 6 meter EME contact in Africa and maybe also the first YL in the Southern hemisphere to achieve this feat. She in the next days also manages to make several contacts on 144 MHz and 432 MHz, well done Lynette! We were further blessed with 4 more contacts on 6m, 2 made by Dick (ZS6BUN) and 2 made by Pieter (ZS6PA).

The dedicated stations to work us were: ES6RQ, K6MYC, G8BCG, W7GJ, and W1JJ. We were extremely happy with the performance of the single 6 element LFA antenna.

By this time we all got used to the gentle purr of the generator, just like a cat being pampered when it all became silent, all of a sudden. No more purr – no more power! The generator was down again and no luck getting it started. Pieter ZS6PA quickly accessed the situation, a blocked fuel supply! Off came the fuel tank, cleaned it out and that put the "purr" back into the generator. This was by no means the end of our problems, but nothing is going to stop us, we were on a roll! Next to go was the 2 m preamp, but again Wynand came to the rescue. The tiny delicate static sensitive Gas-FET was replaced after a soldering job with surgical precision. Good news, 2m was back in operation.

Then came a turn for the worst, the 23cm preamp gave up the ghost. Unfortunately an attempt to replace the Gas-FET did not bring the desired gain and as we were running low on replacement feds it was decided to run without the pre-amp. Herman DL2NUD /7P8HP who were running 23cm then decided to move his radio and amplifier outside the shack. This was to shorten the coax between the antenna and the radio in an attempt to minimize the coax losses. This implied that he could only work during daytime as it was too could during night and early morning. By this time the moon was moving towards its last quarter and MR was only at about 03h00UTC.

Everything was going well on the 432 MHz side and QSO's were accumulating till there was another bang! The 70cm amp went silent. Unfortunately this time a surface mount electrolytic capacitor on the 50v supply line went short on the RF board and Wynand ZS6ARF determined that he would need his SMD hot air station back at his QTH to lift the board and do the repair. Subsequently we had to run barefoot, only 75 watts.



Towards the last 2 days tracking the moon became a real challenge as the moon reached "new moon" phase. During day time it was impossible to track the moon visually and a compass, GPS and a protractor had to be used to ensure correct antenna position. But even with difficult conditions Pine manage to work 23 stations on 2 meters until we had to close down.
One can now asked what have we learnt from this expedition? To answer this question could result in an endless debate but I will try and elaborate in short!

Reliability, Reliability, I cannot put enough emphasis on this aspect. Remember you are out in the sticks. To have something failing on you can jeopardize the whole expedition, and this is the last thing you want to happen! Every piece of equipment is a shackle of the chain, one fails and the chain breaks. Apart from various equipment failures already mentioned we also developed a troublesome sound card on the main JT65 computer forcing us to revert to laptops. I'm still convinced that some of the failures could be link to the random failure of the generator due to dirty fuel. Next time ALL fuel going into the tank will be pre filtered!
What has proven to be a big success is the fact that we were able to switch by the throw of a switch between vertical and horizontal on the 2 meter and 70 cm antenna stacks. Many of the 2m QSO's wouldn't have been possible if it was not for this functionality. This is probably the easiest way of trying to beat "Mr. Faraday".

What are we going to improve? Our receiving and decoding capability especially on 6m, the lack of having a good low-noise preamp was an oversight. We could have doubled, maybe even tripled our contacts on 6 meters if we had a preamp. Secondly we need to find a way to beat "Mr. Faraday" again! We spend many hours and funds on the equipment chain but took our soundcard setups for granted. For normal leisure operations the run of the mill soundcards normally will suffice, but for DX expeditions this important component of decoding chain, should also be optimized. Before I forget, always use the best coax you can lay your hand on, even on 6 meters!

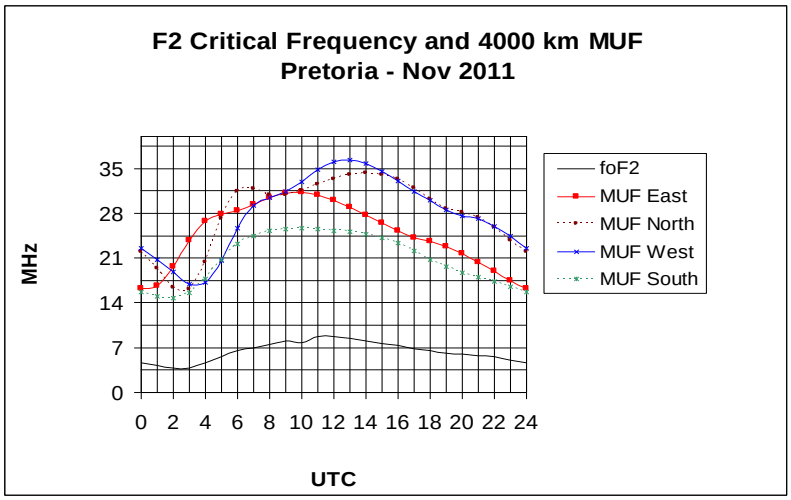
Last but not the least – Location-Location-Location! It is not always possible combining safety, convenient accommodation and other logistics altogether, but good ground gain is a bonus. Try and select the best possible largest open area as possible, no big trees. As this is gain for free, it also will not fail! A clear horizon with moon rise and moonset not only stretches your operating window for that extra one or two contacts needed to achieved your target. If your station is operating multiple bands, careful positioning your different antennas not to have an aperture overlap while tracking the moon from east to west is very important. On EME working the buzz-word is "**GAIN**". Optimizing and squeezing out every dB is what will make you to succeed at the end.

Then there is one other crucial component of the expedition that I haven't mentioned. For a team to function at full performance in the wee hours of the night they need to have a well-balanced diet. If I can echo the words of Herman DL2NUD/7P8HP, "The food on this expedition surpasses ALL food on all the other expeditions he has joined". Well done to each and every one who had a chance to operate the gas stove and feed the team!

The team 7P8EME managed to make in total 327 QSO's combined. On EME: 281 on 2 meters, 23 on 70cm, 18 on 23cm and 5 QSO's on 6 meters, all using JT 65. On HF (CW) a few contacts were made in between EME operations by Wynand ZS6ARF while some pleasant chats were conducted on 40 meters with South African radio amateurs by Pieter ZS6PA.
To **all** our sponsors, especially **DAN HB9CRQ**, the South African Radio League, Multisource Telecoms and all radio amateurs who supported us, a BIG THANKS.

To our leader, Pine we can only salute you for a well planned and executed expedition. To the rest of the team well done! We have once again proved that unity equals strength. Knowledge and perseverance is the key to success.
Lesotho is a great country with lots of friendly people living very close to earth. It was a great experience that we will not forget.
Pine, we are looking forward to the next frontier and moonrise.

73, Pieter ZS6PA/7P8EME



Long Term HF Propagation Prediction for Nov 2011

Courtesy ZS6BTY

(see also our website propagation tab)

DX Operating

The graph shows the 4000 km maximum useable frequency (MUF) to the East, North, West and South from Pretoria for the first hop using the F2 layer.

Local Operating

The F2 critical frequency (foF2) is the maximum frequency that will reflect when you transmit straight up. E-layer reflection is not shown.