



WATTS 2019-08

Year 89 + 08m

Monthly Newsletter of the Pretoria Amateur Radio Club
Maandelikse Nuusbrief van die Pretoria Amateur Radio Klub

✉ PARC, PO Box 73696, Lynnwood Ridge 0040, RSA
<http://www.parc.org.za> zs6pta@zs6pta.org.za



Bulletins : 145.725 MHz : Sundays from 08h45 / Sondae vanaf 08h45
Relays: 1.840, 3.700, 7.066, 10.135, 14.235, 51.400, 438.825, 1297 MHz
and Echolink. Activated frequencies are announced prior to bulletins
Swoptshop : 2m and 7.066 MHz live on-air after bulletins
Bulletin repeats on Mondays / herhalings op Maandae : 2m 19h45



Both the SARL AMSAT SA VHF Symposium and the SARL Winter QRP Contest took place on Saturday, the 20th of July 2019. In this issue of Watts we will report on the presentations of the speakers at the Symposium, as well as the fun PARC Members had at Fort Schanskop.

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Club Meetings / Klub Vergaderings

Club Committee Meeting :

There will be no formal Committee Meetings up to the AGM on the 21st of September

PARC Committee Members : 2018 – 2019 / PARK Komiteelede : 2018 - 2019

<u>Name & Callsign</u>	<u>Portfolio/s</u>	<u>Email Address</u>	<u>Tel No</u>	<u>Mobile No</u>
Louis de Wet ZS6SK	Chairman, Watts, Club History	louis.zs6sk@gmail.com	012-349-1044	072-140-9893
Graham Reid ZS6GJR	Vice Chairman, Treasurer, Website	greid@wol.co.za	012-667-2720	083-701-0511
Etienne Naude ZS6EFN	SARL Liaison, Bulletin Coordinator	etienne@afgrid.com	012-661-6745	082-553-0542
Irene Myburgh ZS6IEA	Club Secretary	irene@srsa.gov.za	012-304-5109	082-462-6001
Johan de Bruyn ZS6JHB	Rallies, Repeaters & Membership	zs6jhb@gmail.com	012-803-9418	079-333-4107
John Minter ZS6LED	Technical & RAF Training	john.minter.za@gmail.com	012-349-0019	083-291-5422

PARC Co-opted Members : 2018 – 2019 / PARK Ge-koopteerde Lede : 2018 - 2019

<u>Name & Callsign</u>	<u>Portfolio/s</u>	<u>Email Address</u>	<u>Tel No</u>	<u>Mobile No</u>
Alméro Du Pisani ZS6LDP	Flea-markets	almero.dupisani@up.ac.za	012-420-3779	083-938-8955
Tony Crowder ZS6CRO	Auditor	tcrowder@telkomsa.net	011-672-3311	
Nic Louw ZS6NWL	Youth Development	nic.louw@telkomsa.net		083-596-1026
Whitey Joubert ZS6JJJ	Social & Competitions	zs6jjj@gmail.com	012-993-2267	072-120-4516
Pierre Holtzhausen ZS6PJH	Competitions	zs6pjh@gmail.com		082-575-5799
Pieter Myburgh ZS6PAM	Repeaters	wooden@mweb.co.za		076-140-7562

Birthdays and Anniversaries / Verjaarsdae en Huweliks Herdenkings

Member's Birthdays August 2019 / Lede Verjaarsdae Augustus 2019

03 Paul Sterling ZS6BMF
07 Whitey Joubert ZS6JJJ
08 Raymond de Wet ZS6ALG
28 Jean de Villiers ZS6ARA

05 Hans Gürtel ZR6HVG
07 JB de Beer (Erelid) ZR6YV
08 Tobie Jansen van Rensburg ZS6ZX

Spouse's August 2019 / Gades Augustus 2019

09 Gelga, gade van Hans-Peter Knoepfler ZS6AJS

Anniversaries August 2019 / Herdenkings Augustus 2019

07 Peggy and Edmar Willers ZS6UT
29 Joydene and Albert Schreuder ZS6SE

Member's Birthdays September 2019 / Lede Verjaarsdae September 2019

02 Vernon Fryer ZS6AIG
19 Johan Classen ZS6IAM
21 Johan de Bruyn ZS6JHB
27 Ryan Bibson ZS6GGR

06 Danny Liebenberg ZS6AW
20 Hugo Pretorius ZS6HP
26 Graham Reid ZS6GJR
28 Irene Myburgh ZS6IEA

Spouse's September 2019 / Gades September 2019

06 Antoinette ZS6D, gade van Danny Liebenberg ZS6AW
16 Annelize, gade van De Jager Burger ZS6ZO
27 Liezel, gade van Sybie van der Spuy
28 Irene ZS6IEA, gade van Pieter Myburgh ZS6PAM

Anniversaries / Herdenkings September 2019

03 Sanette en Dennis van Schalkwyk ZR6JET
25 Aida en Hugo Pretorius ZS6HP
27 Rika en Gideon van der Merwe ZS6GJV
28 Erika en Jan Pienaar ZS6OB

Lief en Leed /Joys and Sorrows

Irene ZS6IEA en Pieter ZS6PAM Myburgh het die trotse grootouers van 'n kleindogter geword. Pieter was ongelukkig kort daarna vir longontsteking gehospitaliseer, maar het sedertdien baie goed herstel. Ons wens vir Irene en Pieter alle sterkte toe, en mag jul kleindogter groot vreugde vir jul bring.

Vernon Fryer ZS6AIG moes twee weke terug 'n noodoperasie ondergaan. Vernon was vir 'n week in die intensiewe eenheid, en is sedertdien onstlaan en sterk aan tuis. Alle sterkte en voorspoed aan Vernon en Judy.

PARC Membership Fees / PARK Ledegelde

During the 2018 AGM, the decision was made that Club Fees would not be increased for the financial year. Club Fees therefore remain at R160 for Ordinary Members, and R60 for Pensioners and Spouse. Gedurende die 2018 AJV, die besluit is geneem dat Klub Ledegelde nie verhoog sal word nie. Dus bly die gelde op R160 vir Gewone Lede, en R60 vir Pensionarisse en Gade.

PARC SUBS : PARK LEDEGELD : FROM / VANAF : 30-06-2018

Bank	First National Bank	Ordinary Members / Gewone Lede : R160 Spouses / Pensioners : R60	Your call sign must appear as statement text!
Branch Code	25 20 45		
Account No	546 000 426 73		
Please remit your subs in time to our Treasurer, or pay per transfer into the PARC account Betaal asb. u ledegelde betyds aan ons Tesourier, of betaal per oorpasing in die PARC rekening			

Please Note : If your Club fees are not paid up to date, birthday details cannot be displayed in Watts

PARC Bulletin Roster / PARK Bulletin Rooster

PARC Bulletins are presented on Sunday mornings at approximately 08h45, after the SARL Bulletins in English and Afrikaans, from 08h15. The Bulletin Presenters for the following two months are presented below. Please do contact the applicable presenter beforehand if you wish to make a contribution to the Bulletin. PARC Bulletins are broadcast on the 2 meter repeater on 145.725 MHz, and 70 cm on 438.025 MHz. Relays are done on 7.060 MHz by Hans Kappetijn ZS6KR and on Echolink by Johan Lehman ZS6JPL. A re-broadcast of the Bulletin is done the following Monday evening at 19h45 by Hans ZS6KR.

PARK Bulletins word op Sondagoggende aangebied om 08h45, na die SARL Bulletins in Engels en Afrikaans, vanaf 08h15. The Bulletin aanbieders vir die volgende twee maande word onder aangedui. Kontak gerus die toepaslike Bulletin leser indien u 'n bydrae tot die Bulletin wil maak. PARK Bulletins word uitgesaai op die 2 meter Herhaler op 145.725 MHz, en 70cm op 438.205 MHz. Herleidings word gedoen op 7.060 MHz deur Hans Kappetijn ZS6KR, en op Echolink deur Johan Lehman ZS6JPL. 'n Heruitsending van die Bulletin geskied die opvolgende Maandag aand om 19h45 wat behartig word deur Hans ZS6KR.

PARC Bulletin Presenters : June - September 2019

Date	Presenter	Date	Presenter
2 June 2019	Alméro Du Pisani ZS6LDP	4 August 2019	Johan de Bruyn ZS6JHB
9 June 2019	Johan de Bruyn ZS6JHB	11 August 2019	Louis de Wet ZS6SK
16 June 2019	Louis de Wet ZS6SK	18 August 2019	Etienne Naude ZS6EFN
23 June 2019	Etienne Naude ZS6EFN	25 August 2019	Alméro Du Pisani ZS6LDP
30 June 2019	Alméro Du Pisani ZS6LDP	1 September 2019	Johan de Bruyn ZS6JHB
7 July 2019	Johan de Bruyn ZS6JHB	8 September 2019	Louis de Wet ZS6SK
14 July 2019	Louis de Wet ZS6SK	15 September 2019	Etienne Naude ZS6EFN
21 July 2019	Etienne Naude ZS6EFN	22 September 2019	Alméro Du Pisani ZS6LDP
28 July 2019	Alméro Du Pisani ZS6LDP	29 September 2019	Johan de Bruyn ZS6JHB

PARC Fleamarket Dates 2019 / PARK Snuffelmark Datums 2019

The last PARC Flea Market for 2019 will be on:
The laaste PARK Snuffelmark vir 2019 sal wees op:

2 November

To book a table, please do contact: / Om 'n tafel te bespreek, kontak gerus:
Alméro Du Pisani ZS6LDP at 083-938-8955 or almero.dupisani@up.ac.za

Diary of Contests & Events / Dagboek van Kompetisies en Gebeure

Contests and Events - August 2019 / Kompetisies en Gebeure - Augustus 2019 (UTC Times)	
03	Pretoria Amateur Radio Club Flea Market: From 10h00 at Pretoria Old Motor Club
03 - 04	10-10 International Summer Contest, SSB: 00h01Z - 23h59Z
03 - 04	European HF Championship: 12h00Z - 23h59Z
03 - 04	North American QSO Party, CW: 18h00Z - 06h00Z
04	SARL HF Phone Contest: 13h00Z - 16h30Z
10 - 11	WAE DX Contest, CW: 00h00Z - 23h59Z
17 - 18	International Lighthouse / Lightship Weekend (22 nd Annual): 00h01Z - 24h00Z
17 - 18	SARTG WW RTTY Contest: 00h00Z - 16h00Z
17 - 18	North American QSO Party, SSB: 18h00Z - 06h00Z
24 - 25	YO DX HF Contest: 12h00Z - 12h00Z
25	SARL HF CW Contest: 14h00Z - 16h00Z
Contests and Events - September 2019 / Kompetisies en Gebeure - September 2019 (UTC Times)	
07	Pretoria Amateur Radio Club: Annual General Meeting: From 11h30 at POMC
07 - 08	Region 1 SSB Field Day
07 - 08	RSGB SSB Field Day
08	North American Sprint, CW: 00h00Z - 04h00Z
14 - 15	WAE DX Contest, SSB: 00h00Z - 23h59Z
14 - 15	SARL National Field Day Contest: 10h00Z - 10h00Z
21 - 22	SARL VHF/UHF Digital Contest: 16h00Z - 10h00Z (Please confirm times with SARL)
21 - 22	All Africa Contest / Railways on the Air
21 - 22	Scandinavian Activity Contest, CW: 12h00Z - 12h00Z
28 - 29	CQ Worldwide DX Contest, RTTY: 00h00Z - 24h00Z
The Pretoria Amateur Radio Club does not accept responsibility for the accuracy of contest details listed above. For verification and more information, please visit the SARL website, www.sarl.org.za , as well as the WA7BNM international contest calendar at the following website: http://hornucopia.com	

PARC Participation in Local Contests for 2019

The Pretoria Amateur Radio Club intends getting back with full force into the contest game during 2019. Under the leadership of Pierre Holtzhausen ZS6PJH, PARC is going to participate in all the South African Radio League contests hosted in 2019. Details of the remaining local contests for 2019 are listed below:

South African Radio League QRP Contests:

Spring: 12 October 2019: 12:00 to 15:00 UTC

South African Radio League National Field Days:

Spring: 10:00 UTC on Saturday 14 September to 10:00 UTC on Sunday 15 September 2019

South African Radio League HF Phone, Digital & CW Contests from home:

SSB: 14:00 to 17:00 UTC on Sunday, 4 August 2019

Digital: 14:00 to 17:00 UTC on Sunday 18 August 2019

CW: 14:00 to 17:00 on Sunday 25 August 2019

For more information on contest participation, please do contact Pierre Holtzhausen ZS6PJH at zs6pjh@gmail.com or 082-575-5799.

**NOTICE OF THE ANNUAL GENERAL MEETING OF THE
PRETORIA AMATEUR RADIO CLUB
KENNISGEWING VAN DIE ALGEMENE JAARVERGADERING
VAN DIE PRETORIA AMATEUR RADIOKLUB**



**PRETORIA AMATEUR RADIO CLUB
89TH ANNUAL GENERAL MEETING
Saturday, 21st September 2019
From 11h30 at the Pretoria Old Motor Club**

**PRETORIA AMATEUR RADIO KLUB
89^{STE} ALGEMENE JAARVERGADERING
Saterdag, 21^{ste} September
Vanaf 11h30 by die Pretoria Ou Motor Klub**



AGENDA OF AGM / AGENDA VAN AJV

- 1) Welcome and Attendance / Verwelkoming and Teenwoordigheid
- 2) Apologies and Proxies / Verskonings en Volmagte
- 3) Declaration of Quorum / Verklaring van Kworum
- 4) Opening by Chairman / Opening deur Voorsitter: Louis de Wet ZS6SK
- 5) Minutes of previous AGM / Notules van vorige AJV: Irene Myburgh ZS6IEA
- 6) Treasurer's Report / Penningmeester Verslag: Graham Reid ZS6GJR
- 7) Appointment of Auditor / Aanstelling van Ouditeur
- 8) Chairman's Report / Voorsitter Verslag : Louis de Wet ZS6SK
- 9) Election of Committee 2019-20 / Verkiesing van Komitee 2019-20
- 10) General Matters / Algemene Sake
- 11) Presentation of Awards / Toekenning van Pryse
- 12) Guest Speaker / Gasspreker
- 13) Closing / Afsluiting
- 14) Lunch (see below) / Middagete (sien onder)

**The PARC AGM will be followed by a bring-and-braai. Please
bring your own meat and refreshments. PARC will supply salads,
cutlery and crockery for the meal**

**Na afloop van die PARK AJV sal daar 'n bring-en-braai plaasvind.
Bring asseblief u eie vleis en verversings saam. PARK sal slaai
en eetgery verskaf.**

PARC AGM: PROXY & NOMINATION FORMS PARK AJV: VOLMAG EN NOMINASIEVORMS



89th ANNUAL GENERAL MEETING 89^{ste} ALGEMENE JAARVERGADERING Pretoria Amateur Radio Club



Pretoria Old Motor Club
Keuning Str. Silverton

Venue

Saturday 21 September 2019

Time : 11h30

Agenda : To be published

Plek

Saterdag 21 September 2019

Tyd : 11h30

Agenda : Sal gepubliseer word

NB

Nominations awaited. Latest acceptance by 11h00 on 21 September 2019
Nominasies word afgewag. Laatste indiening teen 11h00 op 21 September 2019
Contact details on page 2 of WATTS / Kontakdetails op bladsy 2 van WATTS

PROXY Form (cut out) || VOLMAG Vorm (knip uit)

Only paid-up members may submit proxies || Slegs opbetaalde lede mag volmagte indien

I/Ekbeing ZS/R/U..... give/geeZS/R/U.....

Proxy to vote on my behalf at the 2019 PARC AGM

Volmag om namens my te stem tydens die 2019 PARK AJV Geteken/Signed.....

NOMINATION Form (cut out) || NOMINASIE Vorm (knip uit)

Committee Nominations must be in writing and signed by both the Proposer and Nominee and be handed in on 21 September 2019 at 11h00 at the latest. Use the Nomination Form below. The Proposer and Nominee must both be paid-up members.

Komitee Nominasies moet skriftelik wees en deur beide die Voorsteller en Voorgestelde geteken word en moet op laaste teen 11h00 op 21 September 2019 ingehandig word. Gebruik die Nominasievorm hieronder. Beide Voorsteller en Voorgestelde moet opbetaalde lede wees.

Proposer:

ZS

Signature:

Voorsteller:.....

ZR

Handtekening:.....

ZU

NOMINEE GENOMINEERDE	CALLSIGN ROEPSEIN	NOMINATION ACCEPTED NOMINASIE AANVAAR
1		
2		
3		
4		



A promotional poster for the TRACN4 National Rally. The top left features the TRAC logo with 'N4 TOLL ROUTE' and 'TRANS AFRICAN CONCESSIONS'. The date '27 & 28 SEPTEMBER' is prominently displayed. The main title 'TRACN4 NATIONAL RALLY' is in large yellow letters. Below it, the location 'WILLEM PRINSLOO MUSEUM, PRETORIA EAST' and stages 'STAGES: BRONKHORSTSPRUIT & SURROUNDS' are listed. A checkered flag is in the top right. The central image shows a white Mazda rally car with 'TRACN4' on the front, driving on a dirt road. In the bottom left, there's a graphic with the South African flag colors and the text 'nrc NATIONAL RALLY CHAMPIONSHIP'.

TRAC
N4 TOLL ROUTE
TRANS AFRICAN CONCESSIONS

27 & 28 SEPTEMBER

TRACN4 NATIONAL RALLY

WILLEM PRINSLOO MUSEUM, PRETORIA EAST
STAGES: BRONKHORSTSPRUIT & SURROUNDS

nrc
NATIONAL RALLY CHAMPIONSHIP



Please contact Johan de Bruyn ZS6JHB at 079-333-4107 or zs6jhb@gmail.com for more information.

SARL AMSAT SA VHF SYMPOSIUM

The South African Radio League and AMSAT SA VHF polarization symposium was held on the 20th of July 2019 at the National Amateur Radio Centre. The event was chaired by Hans van de Groenendaal ZS6AKV, who introduced the guest speaker, Nico van Rensburg ZS6QL, President of the South African Radio League. Nico, who returned from a Yota handover in Germany, elaborated on the French proposals on using the 2-meter band for aeronautical communications. Nico asked for local support when future discussions and negotiations will take place. He also discussed the threats to the future of the microwave bands for radio amateur use. The SARL will continue with their efforts behind the scenes to promote the use of these frequencies by amateur radio, but pledges the support of local amateurs.



Dick Coates ZS6BUN



Brian Jacobs ZS6YZ



Jan (Pine) Pienaar ZS6OB



Hans van de Groenendaal ZS6AKV

The big debate: Horizontal vs Vertical Polarization was presented by Dick Coates ZS6BUN who discussed the QSL that was made on VHF between the Western Cape and the Island of St. Helena, which is a distance of approximately 2740 kilometers. Variations in air density and temperature in close proximity of sea currents cause changes in the refractive index of radio signals, resulting in ducts of low attenuation. Power signals emerging from these ducts are between 20-50 dB over the noise floor. The first local tropo-duct was demonstrated on 144.300 MHz, from the East Coast between Port

Elizabeth and the Reunion Island, which was a distance of approximately 2300 kilometers.

Dick discussed in details the advantages and disadvantages between V - V and H - H polarizations, and indicated a compromise of 45°, but indicated that it was not clear which orientation was the best. However, Dick indicated, as we are all familiar with, the conventional orientation for HF and VHF was horizontal, and that cross polarization losses can be large, in the order of 30 dB. Dick concluded his presentation with information from the last EME Conference in 2012 where the effect of ground reflection was discussed. Reflection of signals with ground mixes with the signal resulting in a phase change. However, this depends on the nature of the reflecting surface, where the dielectric characteristics (Conductivity and Permittivity) of the soils have a significant influence. Dick concluded with a discussion on the physical characteristics of sea water (cold and warm streams) in comparison with polar ice and snow, and the possible effects they may have on signal attenuation.



Sam Ford ZS6BRZ presenting Nico van Rensburg ZS6QL with Diamond X 700H 2-meter antennas donated for SARL beacon projects

Brian Jacobs ZS6YZ presented a follow-up on the previous VHF workshop that was held on the 20th of October 2018 where a beacon proposal was discussed. A centrally situated beacon was subsequently established in Bethlehem, while a second site will soon be established at de Aar. Using a 25W Icom IC-FS022 at 144.425 MHz the FM transceiver is used as a CW keyer. However, the FM signal is too wide, with the signal bleeding through and causing interference. Brian and the team are working on the issue to obtain a pure CW signal on a narrow band. They anticipate to have the transmitter modified and have the beacon up within the next two months.

Pine Pienaar ZS6OB presented a comprehensive overview on the layout and requirements of a VHF station and all the aspects to consider, which included transmitter characteristics, feedlines, antenna requirements, power dissipation to losses at various points, SWR and connectors.

Hans van de Groenendaal ZS6AKV presented the “West Coast Phenomenon”, where tropospheric propagation is influenced by weather conditions and atmospheric moisture, as well as ocean current characteristics. Hans wrote an article entitled “Vertical vs horizontal antenna polarization benefits questioned” which was published in Engineer IT, and can be found on the EE publisher’s website which appeared on 26 July 2019. A copy of his article is presented below. During the event, Sam Ford ZS6BRZ presented Nico van Rensburg ZS6QL with a donation of two Diamond X 700H 2-meter antennas for use by the SARL beacon projects.

Recent spectacular two-way communication between South Africa’s West Coast Radio amateurs and St Helena during good tropospheric propagation condition has raised the question whether horizontal polarisation (H-Pol) of the antenna would yield better results than a vertically polarised (V-Pol) antenna.

Operating on the simplex frequency of 145,500 MHz making a two-way contact over a distance of over 3000 km does not happen every day. The amateurs on both sides were using vertically polarised antennas which started the debate. The convention says that H-pole antennas during tropospheric ducting conditions are preferred and should provide a gain advantage over V-pol antennas. It is, of course, important that both sides should use the same polarisation, which was the case with the St Helena contacts. This started a North-South debate that over the past years has become quite intense.

At a joint SARL/AMSATSA VHF workshop recently held in Gauteng, this subject was the main item on the agenda with a paper presented by Dick Coates (ZS6BUN) entitled “Are you serious about the last dB?” Coates did an intensive literature review and, coupled with experiential data from various radio amateurs, discussed the merits of both polarisations which proved that there was a marginal advantage using H-Pol over V-Pol. But does it really matter in practice? Well, yes and no!

Research into H-Pol and V-Pol started in the 1930s when the question was raised when one of the early TV stations in New York was planning to install their antenna on the Empire State building. The outcome was inconclusive so they decided on a compromise solution mounting the antenna at a 45-degree angle. It stopped the argument for some time but it did not prove anything.

By convention, the polarisation of an antenna is defined as the orientation of the electric field component of the wave it emits. For a yagi or a dipole this matches the orientation of the elements of the antenna. For many years, the “conventional orientation” for VHF and HF beams has been horizontal. Cross-polarisation losses, in other words a V-pole antenna at one end and a H-pole antenna at the other end, can be large, up to 30 dB is often quoted.

One of the misconceptions is that the polarisation of antennas is determined by the mode of transmission. For many years people believed that V-pol was best suited for FM modes. This idea came about because radio amateurs started using the FM mode when repeaters were established on the 145 and 435 MHz bands for mobile communication. It was simpler to fit a vertical antenna on a motor vehicle as it basically radiates omnidirectional while an H-pole antenna radiates directionally.

“Just recording audio or video of contacts with different antenna polarisations does not provide any reliable proof. One would need to set up two identical stations on either side with the ability to physically switch the antennas from V-pol to H-pol several times and take accurate signal strength readings with the AVC switched off. Simple readings on the s-meter built into the receiver will not work as S-meters are notoriously inaccurate”, Coates said. “I have not come across any experiments as I have described.”



Fig. 1: 144 MHz contact between South Africa and St Helena

From science we learn that an H-pole antenna is more efficient, even if it is relatively marginal, as ascribed to the electromagnetic characteristics (magnetic susceptibility μR , conductivity σ and relative permittivity ϵR) of the soil. However, under absolute perfect conditions there should be no difference between the two polarisations.

The question to consider is whether the signal at the other end is received in or out of phase. Transmitted radio waves can follow slightly different paths before reaching a receiver. The waves can arrive at slightly different times and will be slightly out of phase due to the different path lengths. Depending on the magnitude of the phase shift, the waves can interfere constructively and destructively. The path between the transmitted and received signals is described as the Fresnel zone named after physicist Augustin-Jean Fresnel.

If a signal is vertically polarised and it deflects off the ground the resulting signal will be inverted relative to the original signal. This means the high points of the sine wave are now low points, and vice versa. Hence the bounced signal will arrive out-of-phase, which will weaken the received signal. If a signal is horizontally polarised and it deflects off the ground the resulting signal will be received in-phase resulting in a stronger signal.

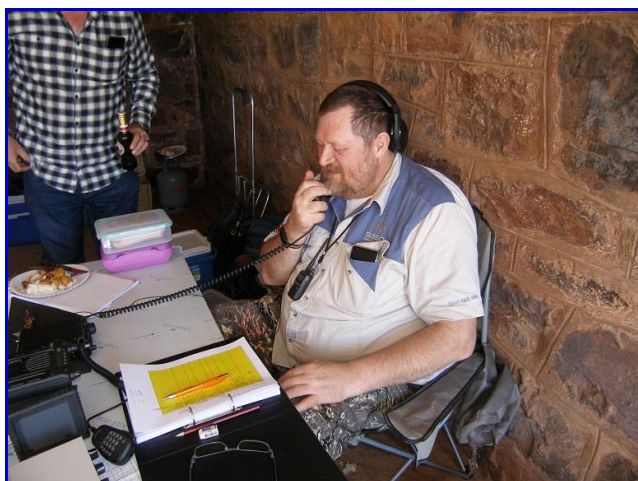
Wikipedia has an interesting analogy. Place a mirror on the floor in the middle of a room, hold a flashlight on the other side of the room. The flashlight represents a signal and your eyes are the receiver. The mirror represents the ground. Move the flashlight move up and down representing vertical polarisation. Note that in the mirror, the flashlight moves in the opposite direction, that is, it moves down and up rather than up and down. This is out-of-phase. Now have the flashlight move to the left and right

representing horizontal polarisation. If you look in the mirror, the reflected image of the flashlight moves exactly in tandem with the actual flashlight. Left is left, right is right. This is in-phase.

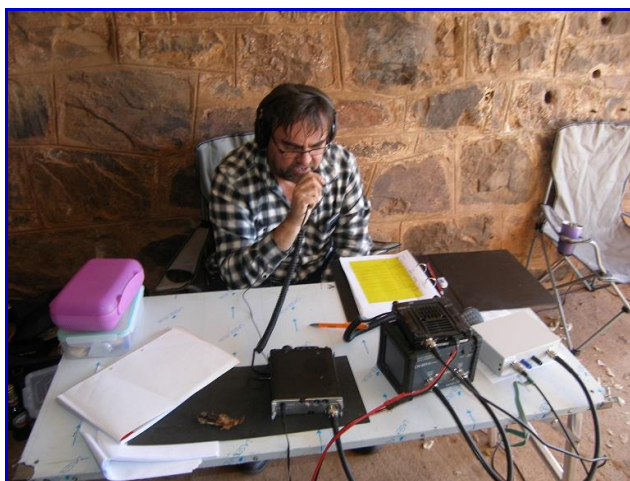
For poor ground the modulus of the reflection coefficient for V-pol is lower than for H-pol. It is also dependent on the angle. For grazing reflections, the modulus premium of H-pol over V-pol is less. Antenna height also plays a part. The additional signal strength of H-pole over V-pole antennas has been calculated as between 3 - 4 dB, hardly noticeable for FM or SSB signals. The mathematical treatment of the ground wave reflection was developed some years ago by two European radio amateurs, Gaeten Horlin (ON4KHG) and Palle Preben-Hansen (OZ1RH). The 3 - 4 dB gain comes into play in weak signals modes such as in the WJT digital modes. Between the West Coast and St Helena, one would not notice the difference when tropospheric conditions are good. On the other hand, one would not use V-pole in attempting tropospheric propagation communication between the West Coast of South Africa and Brazil, here the 3 - 4 dB of the H-pole polarised antenna would come in handy. In theory a tropospheric contact on 144 MHz between the countries is possible but definitely using H-pole antennas.

Die SARL Winter QRP Kompetsie

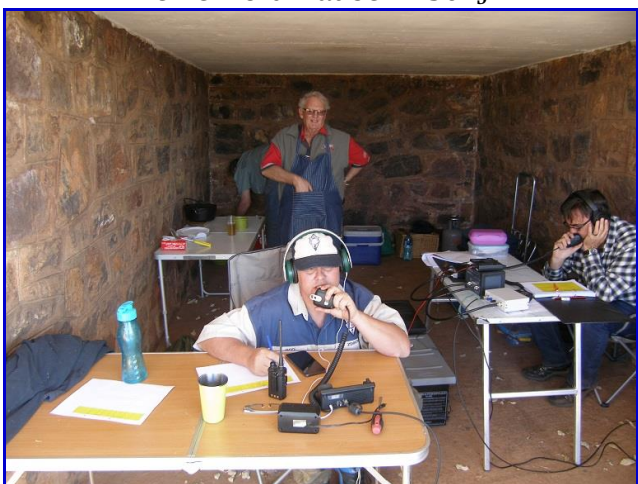
Die SARL winter QRP kompetisie is op die 20^{ste} Julie gehou, en van die manne van Pretoria Amateur Radio Klub het die koue getrotseer en op Fort Schanskop 'n stasie opgeslaan. Pierre Holtzhausen ZS6PJH, Albert Schreuder ZS6SE, Zack Pienaar ZR6ZAK, Francois Duminy ZS6FPS en pa-en-seun span Jaco Cronje ZR6CMG en Christopher Coetzee ZU6CC het die harde werk verrig op soek na kontakte vir die nodige punte.



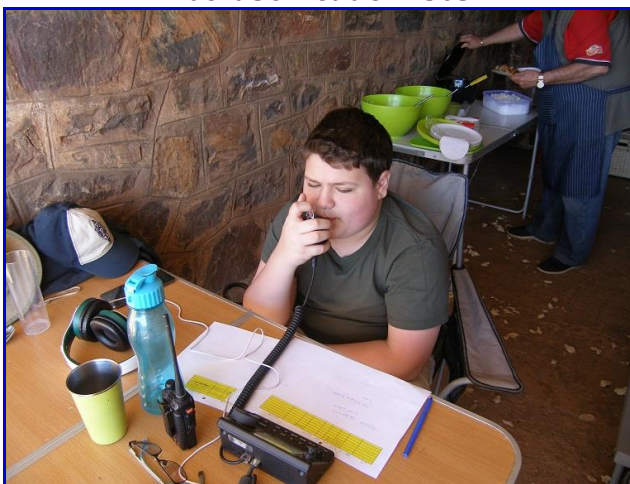
Pierre Holtzhausen ZS6PJH



Albert Schreuder ZS6SE



Jaco Cronje ZR6CMG



Christopher Coetzee ZU6CC



Zack Pienaar ZR6ZAK



Multi dipool veldantenna



Johan de Bruyn ZS6JHB met lekker potjie wat hy gemaak het



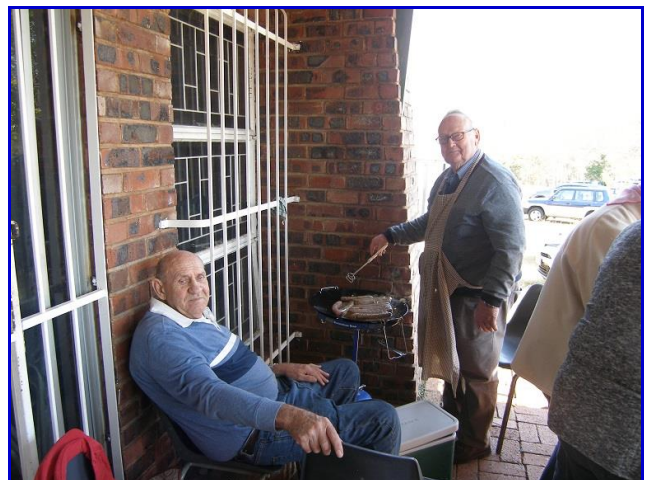
Andre Coetzee ZS6GCA en Albert Schreuder ZS6SE besig met 'n vinnige braai



Pierre en Albert het in 'n span saamgewerk en mekaar afgelos, terwyl Zack en Francois hul veldstasie vanaf hul voertuig bedryf het. Pa Jaco en seun Christopher het mekaar ook gereeld afgelos. Tussendeur het Johan ZS6JHB, terwyl sy potjie aan die gang was, en Andre ZS6GCA, asook Louis ZS6SK geroep as die manne se stemme moeg geword het. Na 'n heerlike potjie deur Johan, het die son begin sak aan die weste van Pretoria, en 'n ysige windjie het begin opsteek. Met die son baie naby aan die horison, moes daar noodwendig vining opgepak word voordat die hekke sou sluit. Almal het ingespring en met die temperatuur wat vining val, het almal saamgewerk en die antennes laat sak en alles ingepak, net betyds voor die son agter die horizon verdwyn het. PARK wil almal wat die dag deelgeneem het, van harte bedank vir hul bereidwilligheid en entoesiasme.

Pretoria Amateur Radio Klub Snuffelmark

Die gebruiklike winter vlooiemark het op die 2^{de} Augustus soos oudergewoonte by die Pretoria ou Motorklub plaasgevind, en in teenstelling met die verwagde opkoms tipies vir 'n winter snuffelmark, was daar 'n groot hoeveelheid besoekers vanuit Pretoria en ander klubs. Soos gewoonlik was daar baie toerusting en komponente te kies en te keur, en die gebruiklike worsrolletjies was weereens 'n treffer. Graag wil PARK vir Alméro Du Pisani ZS6LDP bedank vir die voortreflike reëlins met die snuffelmarkte. Die gebruiklike dank graag ook hiermee aan Kenny ZS6KMM en Paddy Martin en Whitey ZS6JJJ en Erna Joubert vir die gewaardeerde hulp met die voorberei en verkope van die worsrolletjies. PARK bedank hiermee almal wat die snuffelmark bygewoon het, en herinner almal aan die volgende snuffelmark op die 2^{de} November weer by POMK.





Long Term HF Propagation for August 2019: Courtesy Vincent Harrison ZS6BTY

The graph below shows the predicted F-layer Maximum Usable Frequency (MUF) for propagation from Pretoria^[1] using monthly sunspot numbers from SILSO^[2].

Local Propagation (up to 500 km): The F or F2 critical frequency (f_oF_2) is the MUF for short range, near vertical incidence sky-wave (NVIS) propagation.

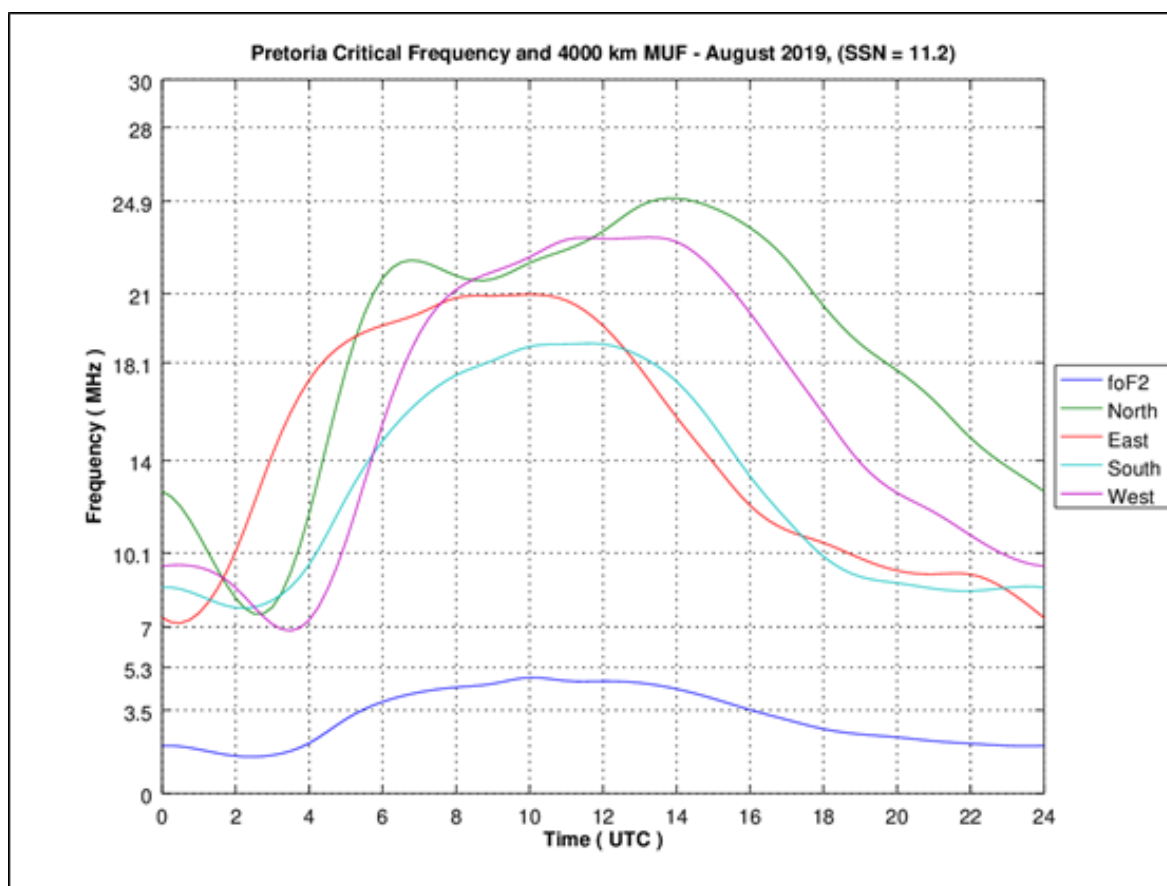
Long Distance Propagation: The MUF for a first hop of 4000 km in the cardinal directions is labeled North, East, South and West. They indicate the direction that propagation may be expected.

Worldwide Propagation Maps: <http://www.parc.org.za/index.php?page=propagation>

"Prediction is difficult, especially when dealing with the future". . . Danish Proverb. 73 Vincent, ZS6BTY

^[1]FTZMUF2: A simple method of estimating the ionospheric parameters of f_oF_2 and $M(3000)$ with the aid of a home computer - Thomas Damboldt and Peter Süßmann, Deutsche Bundespost, December 1988.

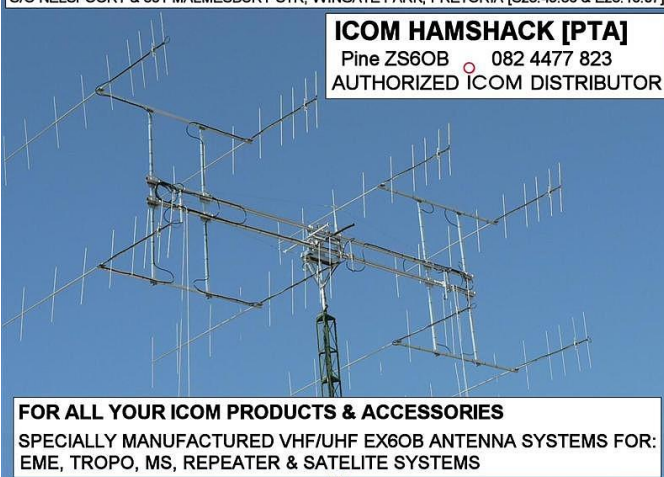
^[2] Silso 12-month forecasts of the monthly sunspot number (<http://sidc.oma.be/silso/FORECASTS/prediml.txt>)



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