



# WATTS 04-2017

Year 87 + 04m

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

✉ PARC, PO Box 73696, Lynnwood Ridge 0040, RSA  
Ⓜ <http://www.parc.org.za>      [zs6pta@zs6pta.org.za](mailto:zs6pta@zs6pta.org.za)



**Bulletins : 145.725 MHz on Sundays / Sondag at 08:45**  
Relays: 1.840, 3.700, 7.066, 10.135, 14.235, 51.400, 438.825, 1297 MHz  
Activated frequencies are announced prior to bulletins  
**Swoopshop : 2m and 7.066 MHz live on-air after bulletins**  
Bulletin repeats on Mondays / herhalings op Maandae : 2m 19:45



*The recent PARC flea-market held at SAM was a great success, with lots of equipment and refreshments for sale. More on page 4. Die onlangse PARK vlooiemark wat by SAM gehou is, was 'n groot sukses, met baie toerusting en lafenisse beskikbaar. Meer hieroor op bladsy 4.*

### Next PARC Flea Market dates for 2017 / Volgende PARK Vlooiemark datums vir 2017

**29 April ; 29 July / 29 Julie ; 28 October / 28 Oktober**

For more information please listen to the Sunday Bulletins or contact Alméro Du Pisani  
ZS6LDP at 083-938-8955 or [almero.dupisani@up.ac.za](mailto:almero.dupisani@up.ac.za)

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### Club Meetings / Klub Vergaderings

#### Club Social Meeting :

Saturday the 1<sup>st</sup> of April 2017 from  
14h00 at SAM

#### Committee Meeting :

Wednesday the 12<sup>th</sup> of April 2017  
from 19h00 at SAM

## PARC Committee Members / Komiteelede : 2016 - 2017

<u>Elected Members</u>	<u>Name</u>	<u>Callsign</u>	<u>Email Adress</u>	<u>Tel No</u>	<u>Mobile No</u>
Chairman, Web co-ordination	Graham Reid	ZS6GJR	<a href="mailto:greid@wol.co.za">greid@wol.co.za</a>	012-667-2720	083-701-0511
Vice Chairman, Repeater & Rallies	Johan de Bruyn	ZS6JHB	<a href="mailto:zs6jhb@gmail.com">zs6jhb@gmail.com</a>	012-803-9418	079-333-4107
Bulletins, RAE & Liason	Etienne Naude	ZS6EFN	<a href="mailto:etienne@afrigrid.com">etienne@afrigrid.com</a>	012-661-6745	082-553-0542
Treasurer	Andre van Tonder	ZS6BRC	<a href="mailto:andre.vtonder@absamail.co.za">andre.vtonder@absamail.co.za</a>	012-361-3292	079-869-0753
Clubhouse Manager	Pieter Fourie	ZS6CN	<a href="mailto:pieterzs6cn@gmail.com">pieterzs6cn@gmail.com</a>	012-804-7417	082-573-7048
Social	Whitey Joubert	ZS6JJJ	<a href="mailto:zs6jjj@gmail.com">zs6jjj@gmail.com</a>	012-993-2267	072-120-4516
Secretary, Watts & RAE	Louis de Wet	ZS6SK	<a href="mailto:louis.zs6sk@gmail.com">louis.zs6sk@gmail.com</a>	012-349-1044	072-140-9893
<u>Co-Opted Members</u>	<u>Name</u>	<u>Callsign</u>	<u>Email Adress</u>	<u>Tel No</u>	<u>Mobile No</u>
Fleamarkets	Alméro Dupisani	ZS6LDP	<a href="mailto:almero.dupisani@up.ac.za">almero.dupisani@up.ac.za</a>	012-420-3779	083-938-8955
Auditor	Tony Crowder	ZS6CRO	<a href="mailto:tcrowder@telkomsa.net">tcrowder@telkomsa.net</a>	011-672-3311	
Historian, Archives, Awards	Tjerk Lammers	ZS6P	<a href="mailto:zs6p@iafrica.com">zs6p@iafrica.com</a>	012-809-0006	083-976-4387
Contests	Jaco Cronje	ZR6CMG	<a href="mailto:jacocronje@yahoo.com">jacocronje@yahoo.com</a>		081-474-2220
Contests	Pierre Holtzhausen	ZS6PJH	<a href="mailto:zs6pjh@telkomsa.net">zs6pjh@telkomsa.net</a>	012-655-0726	082-575-5799

### Birthdays / Verjaarsdae - April

10 Nic Louw ZS6NWL

29 Jyri Hamalainen ZR5AAE

19 Etienne Naude ZS6EFN

#### Spouse's Birthdays / Verjaardae - April

10 Joey, sw of Graham Reid ZS6GJR (Chairman)

15 Joanne, sw of Evan Seligmann ZS6ELI

22 Marita, gade van Roy Alexander ZS6MI

27 Ronel, gade van Emil Bohme ZS6EGB

29 Heather, sw of Vincent Harrison ZS6BTY

#### Anniversaries / Herdenkings - April

06 Lyn en Andre van Tonder ZS6BRC (Erelid)

10 Joanne and Evan Seligmann ZS6ELI

30 Joey and Graham Reid ZS6GJR (Chairman)

### Lief en Leed / Joys and Sorrows

Menno Havelaar ZS6AGC moes 'n toon amputasie ondergaan. Dit het goed gegaan en hy sterk aan.

Pieter Fourie ZS6CN moes 'n oogoperasie ondergaan, wat suksesvol was. Hy is terug by die werk.

Ivo Chladek's ZS6AXT wife underwent a hip replacement operation. We wish her a speedy recovery.

Kenny Martin ZS6KMM has completed chemo therapy and he is doing well.

#### Contests and Diary of Events - April 2017 / Kompetisies en Dagboek van Gebeure - April 2017 (UTC Times)

01	RaDAR Challenge
01 - 02	SP DX Contest : 15h00 - 15h00
<b>06</b>	<b>SARL 80m QSO Party : 17h00 - 20h00</b>
08	Autumn QRP Sprint
08 - 09	JIDX CW Contest : 07h00 - 13h00
08 - 09	Yuri Gagarin International DX Contest : 21h00 - 21h00
09	International Vintage Contest HF : 07h00 - 11h00 and 13h00 - 19h00
09	Hungarian Straight Key Contest : 15h00 - 17h00
14 - 15	Holyland DX Contest : 21h00 - 21h00
<b>15</b>	<b>Closing date for May RAE registration</b>
15 - 16	YU DX Contest : 12h00 - 11h59
<b>18</b>	<b>World Amateur Radio Day</b>
<b>22</b>	<b>SARL Noise Floor Workshop : NARC</b>
22 - 23	SP DX RTTY Contest : 12h00 - 12h00
<b>29</b>	<b>PARC Fleamarket : 10h00 - 13h00</b>
29 - 30	10-10 International Spring Contest, Digital : 00h01 - 23h59
29 - 30	Helvetia Contest : 13h00 - 12h59

#### PARC SUBS : PARK LEDEGELD : FROM / VANAF : 30-06-2017

Bank	First National Bank	<b>Ordinary Members / Gewone Lede : R160</b> <b>Spouses / Pensioners : R60</b>	<b>Your call sign must appear as statement text!</b>
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 ledegedelde betyds aan ons Tesourier, of betaal per oorplasing in die PARC rekening**

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

## PARC Bulletins / PARK Bulletins

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.

PARK Bulletins word op Sondar oggende 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.

PARC Bulletin Presenters : January - March 2017			
Date	Presenter	Date	Presenter
19 February	Tjerk Lammers ZS6P	9 April	Louis de Wet ZS6SK
26 February	Johan de Bruyn ZS6JHB	16 April	Almero du Pisani ZS6LDP
5 March	Louis de Wet ZS6SK	23 April	Etienne Naude ZS6EFN
12 March	Almero du Pisani ZS6LDP	30 April	Tjerk Lammers ZS6P
19 March	Etienne Naude ZS6EFN	7 May	Johan de Bruyn ZS6JHB
26 March	Tjerk Lammers ZS6P	14 May	Louis de Wet ZS6SK
2 April	Johan de Bruyn ZS6JHB	21 May	Almero du Pisani ZS6LDP

*Please do contact Etienne Naude ZS6EFN or Jean de Villiers ZS6ARA for more information or any Bulletin arrangements*

## Rally News 2017 : Tydren Nuus 2017 and 2017 Cross Country Championship Calendar



### 2017 Rally Calendar / 2017 Tydren Kalender

*Round	Date	Province	Location
2	21/22 April	Mpumalanga	Sabie
3	19/20 May	Mpumalanga	Secunda
5	18/19 August	Gauteng	Bronkhorstspuit
7	21 October	Free State	Welkom

*\*Other rounds 4 and 6 are in Port Elizabeth and Caledon*

### 2017 Cross Country Championship Calendar

Round	Date	Location
2	12/13 May	Dundee Battlefields Lodge
3	23,24 & 25 June	Jwaneng Botswana
4	28/29 July	TBC
5	15/16 September	Sun City
6	27/28 October	TBC

Indien u sou belangstel om met radio ondersteuning betrokke te raak, kontak gerus vir Johan de Bruyn ZS6JHB by 079-333-4107 of [zs6jhb@gmail.com](mailto:zs6jhb@gmail.com)

## PARK Vlooiemark – PARC Flea Market

Die onlangse PARK vlooiemark het op die 25<sup>ste</sup> Maart plaasgevind op die terrein van SAM, waar die klubvergaderings gewoonlik gehou het. Alhoewel die oppervlak vir uitstalling aansienlik kleiner was, het die boomryke area tog gesorg vir lekker skaduryke hoekies waar almal rustig kon kyk na die ware wat te koop aangebied is. Danksy die reelings van Almero Dupisani ZS6LDP, asook die worsbroodjies wat deur Whitey Joubert ZS6JJJ en sy gade, Erna, Sarel Stapelberg ZS6EK en sy gade, Karen, en Kenny Martin ZS6KMM en sy gade, Paddy verskaf is, was die vlooiemark 'n groot sukses. Yskoue lafenis vir die keel is deur Johan de Bruyn ZS6JHB en Louis de Wet ZS6SK diskreet onder een van die bome verkoop. Die volgende vlooiemark is Saterdag, die 29ste April weer by SAM langs die boeremark, Silverton, vanaf 10h00. Kontak gerus Almero Dupisani vir meer inligting.



## Die Lichtenburg Cross Country Off-Road : Irene ZS6IEA en Johan ZS6JHB

Die tydrenspan wat bestaan het uit Johan de Bruyn ZS6JHB, Willie Greyling ZR6WGR, Irene Myburgh ZS6IEA, Pieter Myburgh ZS6 PAM en Willie & Annelie van Niekerk, het toegesak op Lichtenburg om te help met die Lichtenburg 400 cross country Off Road wat plaasgevind het vanaf 31 Maart 2017 tot 1 April 2017. Die twee- en vierwiel motorfietse het die Vrydag gery en die motors het Saterdag deelgeneem.

Ons het Donderdagaand 'n vergadering bygewoon om al ons toerusting te kry en daarna gebrui, en eers 12h30 gaan slaap. Ons moes self die banting en padtekens op die korrekte plekke aanbring. Dit was nogal 'n nuwe ervaring gewees want een persoon moet staan met die skets, terwyl die ander een die tekens op die korrekte posisie moet plaas. Dit was heeltemal iets anders ons gewone tydrenne, maar dit was baie lekker.

Ons het ook meer insig verkry oor die take van die tydhou beampte, en dit het ons die geleentheid gegee om met tydhou toerusting te werk, en van hulle radios gebruik te maak.

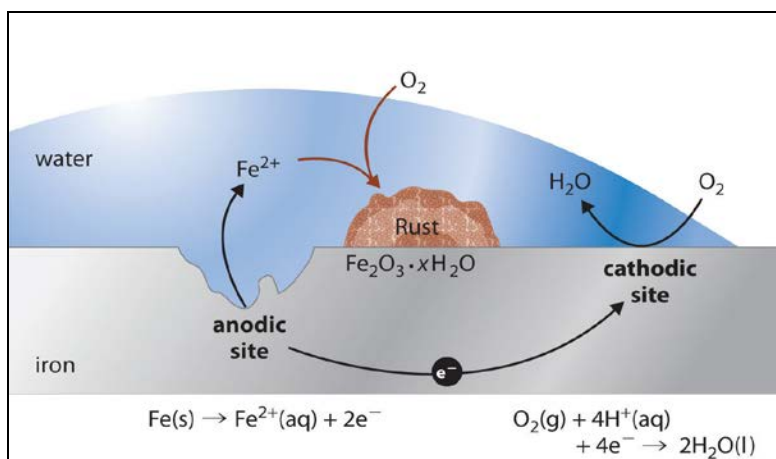
Irene Myburgh ZS6IEA en Willie van Niekerk het die Saterdag baie stof gevreet, maar nou ja dit is deel van die tydrenne. Ons het gekamp op die Lichtenburg skougronde, en toestande was nogal primitief, soos van die fotos hieronder wys! Wel, al was die toestande nie so modern, het ons nog steeds lekker gekuier in die aande.



## What is Galvanic Corrosion?

In the previous edition of Watts we briefly touched on the phenomenon of corrosion, and the effects it has, and has had globally throughout the history of humankind. The most common form of corrosion is that of Iron, a process generally known as rusting. Rust is a hydrate of Iron(III)-oxide which can be represented by the formula:  $\text{Fe}_2\text{O}_3 \cdot n\text{H}_2\text{O}$ . The “ $n$ ” before  $\text{H}_2\text{O}$  indicates that the water content of this molecule can vary considerably. As iron does not corrode or rust in dry air, or below the surface of air-free water, it clearly indicates that both oxygen ( $\text{O}_2$ ) and water ( $\text{H}_2\text{O}$ ) participate in the corrosion reaction of iron.

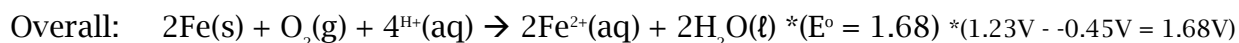
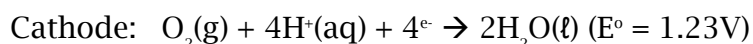
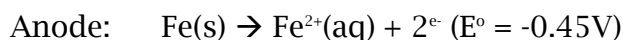
With the exception of gold and platinum, the oxidation or corrosion of most metals is thermodynamically spontaneous under ambient conditions. Fortunately, some metals such as aluminum are quite resistant to corrosion due to reaction kinetics. Aluminum plate metal such as on antennas or airplanes and soft drink cans is protected by a thin coating of metal oxide on the surface, and which acts as an impenetrable layer or barrier that prevents further corrosion. Other metals such as chromium and nickel also form protective oxide films, while stainless steels are remarkably resistant to corrosion, as they contain significant amounts of chromium, nickel, or both.



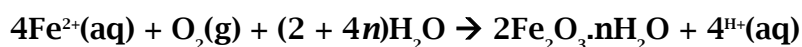
On the surface of the Iron, an impurity or lattice defect forms an anodic site, where  $\text{Fe}(\text{s})$  is oxidized to  $\text{Fe}^{2+}(\text{aq})$ . At a different site of the iron, which is the cathode, oxygen is reduced to water. Electron transfer takes place from the anode to the cathode through the electrically conductive metal.

Water acts as a solvent for the  $\text{Fe}^{2+}$  that is produced initially, and acts as a salt bridge. Rust or  $\text{Fe}_2\text{O}_3 \cdot n\text{H}_2\text{O}$  is formed by the subsequent oxidation of  $\text{Fe}^{2+}$  by atmospheric oxygen.

As shown in the figure above, which actually is a galvanic cell, the iron metal acts as the anode, and is oxidized to  $\text{Fe}^{2+}$ . At the cathode, oxygen ( $\text{O}_2$ ) is reduced to water ( $\text{H}_2\text{O}$ ). subsequently, the following reactions take place:



During these reactions,  $\text{Fe}^{2+}$  produced in the initial reaction are oxidized by atmospheric oxygen to produce the insoluble hydrated oxide containing  $\text{Fe}^{3+}$ , which is represented by the following reaction:



The red-brown hydrated metal oxide, or rust does not provide a protective film, as with other metals, and often flakes off to leave a new exposed area, thereby continuing the rusting process. Iron immersed in deoxygenated water, will not corrode, as there is an oxygen deficiency. Similarly, iron immersed in oxygen saturated kerosene or mineral oil will also not corrode, as there is an absence of water. Next month this series will continue with galvanic corrosion between two dissimilar metals.

## Upcoming Technical Events

While on the subject of corrosion, the Corrosion Institute of South Africa will host a Corrosion Awareness Day on the 21<sup>st</sup> of April. It is open for the public, and if you wish to exhibit, please do contact Thobi at [admin@corrisa.org.za](mailto:admin@corrisa.org.za). Full details on the time and venue below.

### CORROSION INSTITUTE OF SOUTHERN AFRICA

CorrISA Invites you to join us at our

#### Corrosion Awareness Day

21st April 2017

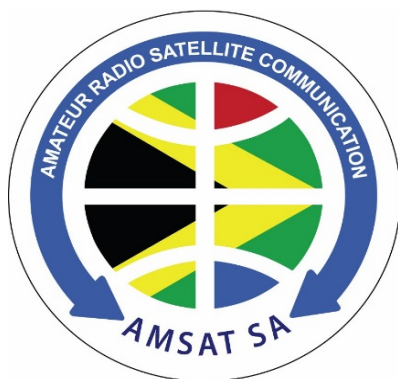


The Corrosion Institute Invites you to exhibit at our Annual Corrosion Expo. Universities, colleges, Companies, Members of the Institute and the Public have been invited.

#### QUICK FACTS:

Date: 21 April 2017  
Setup time: 07:30 to 08:30  
Exhibit time: 09h00 to 13h00  
Venue: the CORĒ, 38 Allan Road, Glen Austin, Midrand  
Bring: Your own table, Shade, Exhibition backdrop and company info, to be set up around the grounds, stand size not to exceed 3m X 2m  
Members Exhibit for free.  
Cost to Non-Members: R1000 excl vat  
Book your place by contacting Thobi at: [admin@corrisa.org.za](mailto:admin@corrisa.org.za) / [members@corrisa.org.za](mailto:members@corrisa.org.za)  
010 224 0761

Limited space available. Booking on first come, first served basis.



### AMSAT SA Space Symposium 2017 Saturday 27 May 2017 Innovation Hub Pretoria

The annual AMSAT Space Symposium will take place on the 27<sup>th</sup> of May at the Innovation Hub, Pretoria. The keynote speaker will be Dr Valanathan Munsami, the CEO of SANSA, who will present a talk entitled "Reinvigorating South Africa's Satellite Capabilities".

The Program will include a number of very interesting topics:

- Es'hailSat-2: build a station on a budget to operate on this Geostationary Satellite due for launch in third quarter 2017
- Modulation techniques and applications to information transfer
- SDR on the Raspberry as an entry level system
- Introducing Nayif-1 as a vehicle for STEM development
- BACAR 2016 - analysis of the flight data and findings
- The Port Elizabeth CubeSat project

For more information, as well as an entry form, please visit [www.amsatsa.org.za](http://www.amsatsa.org.za)

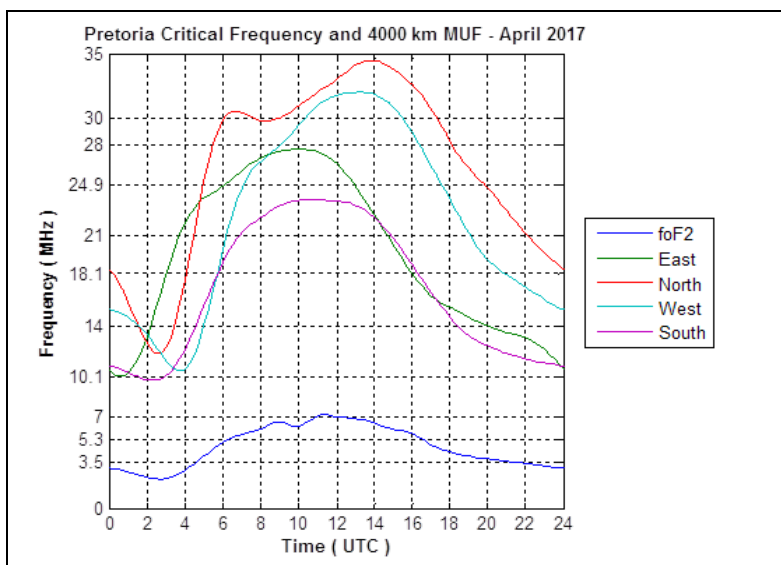
## SOUTH AFRICAN RADIO LEAGUE : WORKSHOP ON THE RISING RF NOISE FLOOR

The South African Radio League is to conduct a workshop on the rising RF noise floor on the 22<sup>nd</sup> of April at the National Amateur Radio Centre. A concern raised by the SARL during a recent SABS TC73 meeting highlighted the need to include the question of the increasing level of the RF noise floor to the Strategic Business Plan of the Technical Committee, and to add it to the schedule of Working Group 6.

Noise in this context indicates any unwanted Radio Frequency (RF) energy originating from man-made sources. Like many spectrum users, Radio Amateurs have reported that the noise floor in the radio spectrum is rising as the number of devices in use that emit radio energy grows. However, in search for concrete evidence of increased noise floors, it appears that only limited data is available to support this presumption.

The purpose of this workshop will be to develop a coordinated program and form a study group with the objective of establishing a monitoring system to assemble more information while also considering mitigation methods to deal with man-made noise affecting amateur radio frequencies.

This will be an open meeting and everyone who has an interest in the subject is welcome to attend. For more information, please email [sarlgwg@sarl.org.za](mailto:sarlgwg@sarl.org.za) with your contact details. This invitation was compiled by Hans van de Groenendaal ZS6AKV and posted by Dennis Green ZS4BS on the SARL Communication email.



### **Long Term HF Propagation for April 2017**

#### **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 F-layer frequency for short range communications.

For worldwide propagation see:  
<http://www.parc.org.za/index.php?page=propagation>

Courtesy Vincent ZS6BTY

C/O NELSPOORT & 801 MALMESBURY STR, WINGATE PARK, PRETORIA [S25.49.36 & E28.16.07]

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