

# WEST SIDE SIGNAL

Official Bulletin of Toronto's Oldest Amateur Radio Club

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## Meetings

Meetings held at 7:30pm on the third Tuesday of each month, Etobicoke. Municipal Offices (Burnhamthorpe & The West Mall) No meetings in July or August. Visitors always welcome.

## Club Nets

### FM Net

Wednesday 8:00pm  
VE3SKY repeater 146.985 Mhz

### CW Net

Sunday 10:00am 7.029.5 Mhz

### SSB Net

Sunday 11:00am 7.075 Mhz

Issue No.125 Nov 2009



## Next Meeting

Tuesday Nov 17th 2009

7:30pm

Etobicoke Municipal Building  
Burnhamthorpe Rd & West Mall  
Etobicoke

## CLUB NEWS

Not much of a turnout for the October meeting just 3 members showed up President Dave VE3RER, treasurer Mike VE3PNX and long time stalwart Al VE3UT. I just don't seem to be able to get myself motivated any longer to drive in at night time during the colder and darker evenings, I guess that's part of growing old for some people. I am certainly looking forward to the luncheon meeting in December though and as long as the weather cooperates I plan to be there. Band conditions on HF are still very poor, but I was pleasantly surprised on Sun Nov

1st when I could hear Toronto quite well on our morning net and when I switched in the amplifier at about 500w the guys in Toronto could hear me quite well also, perhaps a sign of things to come, certainly hope so. Unfortunately I had to spend a few days in hospital at the end of October, I suffered intense stomach and chest pains when eating lunch on the Sunday and had to call 911 because I thought it was the end of the line for me. Fortunately the paramedics arrived very quickly and got me to hospital where an ECG indicated it was not heart related X-rays and a CT Scan revealed the problem to be the gall bladder where there appeared to be some stones. The specialist they called in told me the intense pain was usual when you were unlucky enough to pass one. It lasted until the Tuesday during which time I was allowed only ice chips to eat I then went on a 'clear fluids' diet to see if that was OK and when I passed that test I was put on to normal food which also passed the test so, being desperately in need of beds they kicked me out of there with an appointment with the surgeon to have my gall bladder removed toward the end of November. GOLDEN YEARS ? Rusty years would be a more appropriate term I think Hi...



Let us thank those club members who served during WWII and are still with us, and remember those the years have taken from us.

**K4EF Ev Brown RCAF (SK)**  
**VE3AHX Art Blachford RCAF (SK)**  
**VE3CDM Tom Atkins RN (SK)**  
**VE3EO Phil Empey RCSC (SK)**  
**W0IAK Earl Chiswell RCAF (SK)**  
**VE3AR Bill Loucks RCN**  
**VE3UT Al West RCAF**

O Valiant hearts, who to your glory came  
Through dust of conflict and through battle flame;  
Tranquil you lie, your knightly virtue proved,  
Your memory hallowed in the land you loved

## **THE POPPY**

Each November, Poppies blossom on the lapels and collars of over half of Canada's entire population. Since 1921, the Poppy has stood as a symbol of Remembrance, our visual pledge to never forget all those Canadians who have fallen in war and military operations. The Poppy also stands internationally as a "symbol of collective reminiscence", as other countries have also adopted its image to honour those who have paid the ultimate sacrifice.

This significance of the Poppy can be traced to international origins.

The association of the Poppy to those who had been killed in war has existed since the Napoleonic Wars in the 19th century, over 110 years before being adopted in Canada. There exists a record from that time of how thickly Poppies grew over the graves of soldiers in the area of Flanders, France. This early connection between the Poppy and battlefield deaths described how fields that were barren before the battles exploded with the blood-red flowers after the fighting ended.

Just prior to the First World War, few Poppies grew in Flanders. During the tremendous bombardments of

that war, the chalk soils became rich in lime from rubble, allowing “popover rhoes” to thrive. When the war ended, the lime was quickly absorbed and the Poppy began to disappear again.

The person who was responsible more than any other for the adoption of the Poppy as a symbol of Remembrance in Canada and the Commonwealth was Lieutenant-Colonel John McCrae, a Canadian Medical Officer during the First World War.

Lieutenant-Colonel McCrae was born on 30 November 1872 in Guelph, Ontario. At age 14, he joined the Highfield Cadet Corps and, three years later, enlisted in the Militia field battery. While attending the University of Toronto Medical School, he was a member of the Queen’s Own Rifles of Canada.

With Britain declaring war on Germany on 4 August 1914, Canada’s involvement was automatic. John McCrae was among the first wave of Canadians who enlisted to serve and he was appointed as brigade surgeon to the First Brigade of the Canadian Forces Artillery.

In April 1915, John McCrae was stationed near Ypres, Belgium, the area traditionally called Flanders. It was there, during the Second Battle of Ypres, that some of the fiercest fighting of the First World War occurred. Working from a dressing station on the banks of the Yser Canal, dressing hundreds of wounded soldiers from wave after wave of relentless enemy attack, he observed how “we are weary in body and wearier in mind. The general impression in my mind is of a nightmare.”

In May, 1915, on the day following the death of fellow soldier Lt Alexis Helmer of Ottawa, John McCrae wrote his now famous work, an expression of his anguish over the loss of his friend and a reflection of his surroundings – wild Poppies growing amid simple wooden crosses marking makeshift graves. These 15 lines, written in 20 minutes, captured an exact description of the sights and sounds of the area around him. Lieutenant-Colonel John McCrae left Ypres with these memorable few lines scrawled on a scrap of paper. His words were a poem which started, “In Flanders fields the poppies blow...” Little did he know then that these 15 lines would become enshrined in the innermost thoughts and hearts of all soldiers who hear them. Through his words, the scarlet Poppy quickly became the symbol for soldiers who died in battle. The poem was first published on 8 December 1915 in England, appearing in “Punch” magazine.

In Flanders fields the poppies blow  
Between the crosses, row on row,  
That mark our place; and in the sky  
The larks, still bravely singing, fly  
Scarce heard amid the guns below.

We are the Dead. Short days ago  
We lived, felt dawn, saw sunset glow,  
Loved and were loved, and now we lie  
In Flanders fields.

Take up our quarrel with the foe:  
To you from failing hands we throw  
The torch; be yours to hold it high.  
If ye break faith with us who die  
We shall not sleep, though poppies grow  
In Flanders fields.

## **BOFFINS OF BLETCHLEY PARK RECOGNIZED AT LAST**



### **Bletchley Park commemorative badge**

Surviving veterans on 1 July 2009 who fit one of the following criteria, are eligible for this badge.

Those who

- were employed by the Government Code and Cypher School (GC&CS) at Bletchley Park or its outstations;
- served in the Armed Forces at Bletchley Park or its outstations;
- served in the "Y" Services of the Armed Forces collecting material which was sent to Bletchley Park;
- served in SLUs or SCUs;
- served in the RSS;
- worked for the GPO in the COLOSSUS team at Dollis Hill.

More information and how to apply can be found on the GCHQ website.

### **ELIZABETH CROSS**



On 1 July 2009 it was announced that a new award will be granted to the next of kin of Armed Forces personnel killed on operations or as a result of terrorism in a mark of national recognition for their loss.

Next of kin will receive the Elizabeth Cross - a sterling silver emblem in the shape of a cross over a wreath

- plus a Memorial Scroll signed by The Queen which will bear the name of the person who died.

The Elizabeth Cross and Memorial Scroll will not just be granted to families who have lost loved ones in the recent operations in Iraq and Afghanistan. The Queen's recognition will also be available to the families of those who died in conflicts dating back to 1948, including the Korean War, the Falklands conflict and operations in Northern Ireland.

This is the first time the name of a reigning monarch has been given to a new award since the George Cross was instituted in 1940 by King George VI for acts of bravery by both civilians and the military. Prior to this, the Victoria Cross was introduced by Queen Victoria in 1856 for acts of gallantry by the Armed Forces.

## **ONTARIO REGULATION 366/09**

made under the

### **HIGHWAY TRAFFIC ACT**

Made: September 28, 2009

Filed: September 29, 2009

Published on e-Laws: September 30, 2009

Printed in *The Ontario Gazette*: October 17, 2009

### **DISPLAY SCREENS AND HAND-HELD DEVICES**

#### DEFINITIONS

#### **Definitions**

1. In this Regulation,

“hand microphone or portable radio” means a wireless communication device, consisting of a hand-held unit that is both receiver and microphone, that is operated by a push-to-talk function on a set frequency and that allows for voice communication but not for the transmission and receipt of voice communication at the same time; (“microphone à main ou radio portable”)

“mobile data terminal” means a computerized device that is used exclusively to communicate with a dispatcher or control centre; (“terminal mobile”)

“two-way radio” means a wireless communication device, consisting of a main receiver unit and a separate hand-held microphone, that is operated by a push-to-talk function on a set frequency and that allows for voice communication but not for the transmission and receipt of voice communication at the same time. (“radio bidirectionnelle”)

#### **Time-limited exemption for amateur radio operators**

13. (1) Until January 1, 2013, drivers who hold a valid radio operator certificate issued un-

der the *Radiocommunication Act* (Canada) may drive a motor vehicle on a highway while holding or using a two-way radio.

(2) This section is revoked on January 1, 2013.

## **ANNOUNCED DX OPERATIONS**

### **EASTER ISLAND**

XR0Y

Oct 31 to Nov 15

2 Stations all bands & modes

focus on 30m

QSL LOTW & info on web site

### **PAPUA NEW GUINEA**

P29NI

Nov 2 to Nov 09

Allbands and modes

QSL G3KHZ direct or bureau

### **MALI**

TZ6JA

Nov 2 to Nov 23

All bands SSB only

QSL JA8SLU direct

### **VIETNAM**

XV4D

Nov 4 to Nov 17

3 Stations all bands and modes

QSL DL7DF bureau or direct

### **WEST KIRIBATI**

T30KI & T30IW

Nov 10 to Nov 16

All bands and modes

QSL N1EMC bureau or direct

## COMOROS

D68F

Nov 13 to Nov 23

All bands and modes

Focus on low bands

QSL F6AWL bureau or direct

## ASTRONOMY

### **Sluggish flow inside the sun may cause late sunspot cycle**

**Frank Hill and Rachel Howe**

*Sonograms of the solar interior reveal a flow that is taking longer than usual to move from the poles to the equator and may be related to the current long minimum of solar activity.*

22 October 2009, SPIE Newsroom. DOI: 10.1117/2.1200909.1816

The sun undergoes an activity cycle during which the number of sunspots on its surface increases and decreases over a period of approximately 11 years. Sunspots are huge areas of intense magnetic fields. They are the locations of flares, explosive events that hurl large amounts of charged particles into space. When these particles hit the earth (a phenomenon known as space weather), they disrupt and can damage many of our technological systems, such as global-positioning systems, telecommunications, polar airline routes, satellites, and power grids. The radiation also poses a danger to astronauts. Currently, we are in an unusual and extremely quiet period of solar activity, with several record-setting aspects. But what is causing this?

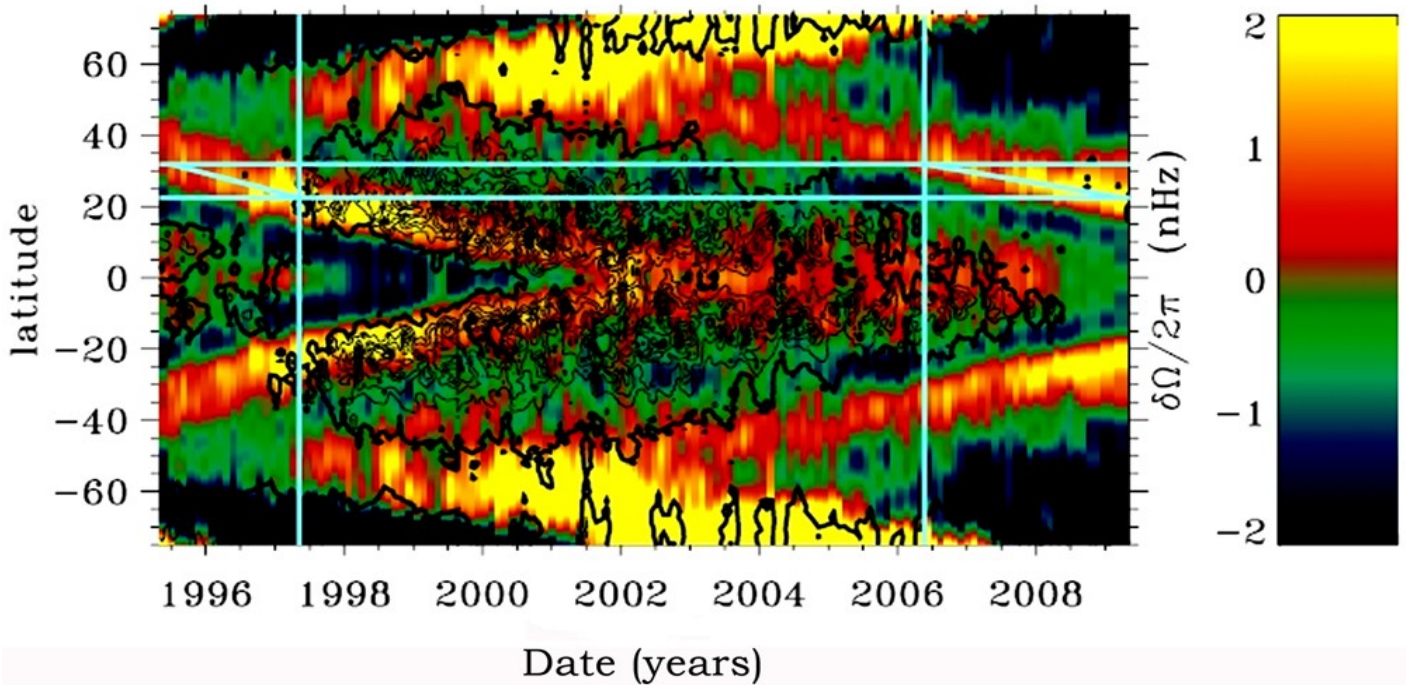
The sunspot cycle is thought to arise from large-scale motions inside the sun: north-south and east-west flows (meridional circulation and torsional oscillation, respectively) and differential rotation in which the solar equator rotates faster than the poles. The combination of these flows and their interaction with the magnetic field set up by the moving, electrically charged particles in the solar plasma is believed to create the sunspot cycle through a dynamo mechanism. The advent of helioseismology has made it possible to probe the solar interior and watch these flows evolve as the cycle progresses.

Helioseismology is the study of the sound waves that fill the solar interior. The acoustic waves are trapped in the thermal gradient inside the sun, and measurements of their properties, in particular their temporal frequencies, can be analyzed to estimate the direction and magnitude of the flows as a function of depth, horizontal position, and time. Using data from the Global Oscillation Network Group (GONG) facility of the National Solar Observatory and from the Stanford University Michelson Doppler Imager (MDI) on NASA's Solar and Heliospheric Observatory (SOHO) spacecraft, we have constructed a map of the torsional-oscillation flow inside the sun over the past 14 years.

GONG has been continuously observing solar oscillations since 1995 with a set of six instruments located in California, Hawaii, Australia, India, Spain, and Chile. This network of telescopes allows us to see the sun 24 hours per day. The data is returned to Tucson, Arizona, where it is calibrated and the frequencies of the oscillations of roughly 200,000 vibration modes are extracted. These frequencies are supplemented with those from SOHO/MDI, which is located in space at a point where it obtains uninterrupted solar observations. The frequencies are affected by motions inside the sun, which essentially create a Doppler shift of the waves that depends on the internal flow and the sensitivity of each mode as a function of depth.

The frequencies are analyzed with a technique known as inversion, and the flows as a function of depth and solar latitude can be inferred. The analytical process is very similar to that used for terrestrial earthquakes, and creates a sonogram of the flows. The result, presented in Figure 1, shows the torsional oscillation at a

depth of 1000km below the solar surface as a pair of red-and-yellow chevron patterns, one for the past cycle, and one for the cycle that is now beginning. Comparison of the two patterns, shown by the blue lines, reveals that the flow for the current cycle is sluggish in its travel from the poles to the equator. To date, compared with the previous cycle, the flow has taken 1.5 years longer to reach the latitude where sunspots typically begin to emerge in large numbers. This delay is equal to the unexpected, extra duration of the current minimum, which suggests that the patterns are related.



**Figure 1.** Torsional oscillation (an east-west flow) inside the sun at a depth of 1000km as a function of date and solar latitude. The color scale on the right shows the amplitude of the flow ( $d\Omega$ , where  $d\Omega$  is the change in rotation rate) in units of nanohertz,  $1\text{nHz} \sim 5\text{m/s}$ . The torsional oscillation appears as the chevron-shaped bands of yellow and red. The black contours represent the surface solar magnetic field, which appears in close association with the position of the torsional oscillation. The blue lines compare the progress of the torsional oscillation as it moves from the solar poles to the equator during the previous and current solar cycles (left and right sides of image, respectively). We can see that the current flow is taking approximately 1.5 years longer to reach the latitude where solar activity generally rises rapidly at the start of a cycle. This delay in the movement of the torsional oscillation may account for the current extended minimum.

We do not know why the torsional oscillation is slowly migrating. We also monitor the north-south meridional flow and the differential rotation, but neither is significantly different between the two cycles. The meridional flow is thought to play an important role in determining the timing and amplitude of the solar-activity cycle, but at a depth far below what we can presently sample reliably.

Thus, several mysteries remain in our quest to unravel the cause of the solar cycle. Because of our analysis technique, the flows in Figure 1 are precisely symmetric across the equator, but the sun shows significant differences between the northern and southern hemispheres that may play a role in the cycle behavior. These differences can be studied using other helioseismological methods, such as ring diagrams and time distance. In addition, we are developing methods to search for the deep meridional flow that should exist about 200,000km below the surface. These techniques will enable us to learn more about the roots of the sunspot cycle.