

# **MOUNTAIN SPARK GAPS**

**NPARC—The Radio Club for the  
Watchung Mountain Area**



**Website: <http://www.nparc.org>  
Club Calls: N2XJ, W2FMI  
Facebook: New Providence Amateur Radio Club  
(NPARC)**

**VOLUME 51 NO. 12 December 2016**

## **UPCOMING EVENTS**

**Kids Day  
1/8/17 2:00—5:00 PM  
DeCorso Community Center**

### **Regular Meetings**

**1/9 and 1/23  
Mondays at 7:30  
DeCorso Community Center**

## Meeting Schedule

**Regular Meeting:** 7:30—9:00 PM  
**2nd Monday of each month** at the  
NP Senior & Adult Center  
15 East Forth Street  
New Providence

**Informal Project Meeting:** 7:30—9:00 PM

**4th Monday of each month**  
**Same location**

**Everyone is Welcome**  
If a normal meeting night is a holiday,  
we usually meet the following night.  
Call one of the contacts below  
or check the web site

## Club Officers for 2016

President: W2PTP Paul Wolfmeyer  
201-404-6914  
Vice President: K2GLS Bob Willis  
973-543-2454  
Secretary: K2AL Al Hanzl  
908-872-5021  
Treasurer: K2YG Dave Barr  
908-277-4283  
Activities: AC2GL David Hartman  
908-908-665-1419

## On the Air Activities

Club Operating Frequency  
145.750 MHz FM Simplex

### Sunday Night Phone Net

Murray Hill Repeater (W2LI) at 9:00 PM  
Transmit on 147.855 MHz  
With PL tone of 141.3 Hz  
Receive on 147.255 MHz  
Net Control K2AL

## Club Internet Address

Website: <http://www.nparc.org>  
Webmaster K2MUN David Berkley  
Reflector: nparc@mailman.qth.net  
Contact K2UI, Jim

## MOUNTAIN SPARK GAPS

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Editor: K2EZR Frank McAneny  
Contributing Editors:  
WB2OOO Rick Anderson  
WB2EDO Jim Brown  
K2UI Jim Stekas

Climatological Data for New Providence for  
November 2016

The following information is provided by  
Rick, WB2OOO, who has been recording  
daily weather events at his station for the  
past 35 years.

### TEMPERATURE -

Maximum temperature this November, 70 deg. F  
(November 2,3)

Last November (2015) maximum was 74 deg.  
F.

Average Maximum temperature this November,  
55.1 deg. F

Minimum temperature this November, 28 deg. F  
(November 18)

Last November (2015) minimum was 24 deg. F.

Average Minimum temperature this November,  
37.2 deg. F

Minimum diurnal temperature range, 4 deg. (54  
-50 deg.) 11/30

Maximum diurnal temperature range, 26 deg.  
(63-37 deg.) 11/18

Average temperature this November, 46.2 deg.  
F

Average temperature last November, 47.6 deg.  
F

### PRECIPITATION -

Total precipitation this November - 4.51"  
rain/melted snow; 0.4" snow

Total precipitation last November - 2.47"  
rain

Maximum one day precip. event this November  
-

November 29, 2.02" rain

Measurable rain fell on 7 days this Novem-  
ber, 6 days last November.

YTD Precipitation - 38.16" (included rain +  
melted snow, as of 11/31/16)

=====  
Rick Anderson  
12/11/16

243 Mountain Ave.  
New Providence, NJ  
(908) 464-8912

[rick243@comcast.net](mailto:rick243@comcast.net)

**Lat = 40 degrees, 41.7 minutes North**

**Long = 74 degrees, 23.4 minutes West**

Elevation: 380 ft.

CoCoRaHS Network Station #NJ-UN-10

## **Comments made by K2AL at the presentation of awards at the annual Holiday Luncheon**

The Secret Order of the Rttysnitch convenes each year to bestow awards to worthy members of the NPARC.

The first award today is for outstanding achievement by a newly licensed ham or new member of the club.

This individual has taken an active part in club activities, namely our annual Field Day exercise in June, our weekly Sunday night net and has been present at club meetings. He has also volunteered his time for assisting communications for the NYC Marathon.

It is with great honor and privilege to award the 2016 ROOKIE OF THE YEAR AWARD to Kevin Glynn, N2TO.

The next award honors a long standing club member who throughout the many years has made numerous contributions to the club.

He is a real and an active Extra Class ham, having been a ham for over 50 years, participating in many on the air activities and is an avid and expert contester, winning many of them.

He has in the past served us well as a club officer for many years.

He has taken an active part at many Field Days, mentoring newer members in how to operate and how to use the equipment.

The Secret Order of the Rttysnitch takes great pleasure in awarding the 2016 GRAND OL' HAM AWARD to K2YG, Dave Barr.

The final award that the Secret order of the Rttysnitch will be presenting today is the 2016 Wouff Hong Award.

No one is really sure how the term Wouff Hong came about or for that matter what it is. The term originated in the 1920's.

If you Google "The Wouff Hong and Rttysnitch Legends", it will describe "Two gruesome instruments of excruciating torture used to enforce law, order and decency in Amateur Radio operation"

Nowadays, the Wouff Hong is a revered symbol for awards given to outstanding hams.

It is a very special award. The Secret Order of the Rttysnitch reviews many candidates and there are years when it has not been awarded.

This year's recipient of the 2016 NPARC WOUFF HONG AWARD goes to a club member who has been a steadfast participant in our Sunday night on the air nets and is at virtually every club meeting throughout the year.

He has used his technical savvy and talents to mentor other club members and to assist other local radio clubs

in helping to solve technical problems.

The Royal Order Of the Wouff Hong is honored to present this year's Wouff Hong Award to AC2GL, Dave Hartman.

**Pictures from the Annual Holiday Luncheon  
December 9, 2016**



Club Officers for 2017



Presenting "Rookie of the Year"  
award



Presenting the "Grand Old Ham"  
award



Some of the attendees

# SCIENTIFIC TIDBITS

## Human Life Span Limit

Many scientists believe that the first human who will live to the grand old age of 150 has already been born. Advances in medicine and sanitation have consistently pushed up the average life span over the past century, with a baby born today in the United States expected to live to 79, up from 50 in 1900. But a new study suggests that we have already hit our maximum longevity, and that life expectancy probably peaked in 1997 with the death of the world's oldest person ever: 122-year-old Jeanne Calment of France. Geneticists at New York's Albert Einstein College of Medicine analyzed two international data bases on age and found that after decades of increases, the average maximum age plateaued in the mid-1990's at just under 115. The study indicates that 115 is a ceiling that cannot be pierced. It is believed that certain biological limits cannot be overcome by technological and medical advances. Our DNA and cells naturally accumulate damage over time, which eventually leads to the failure of crucial bodily functions. Rather than focus on lengthening life span, it is argued that we should focus on extending our healthiest years through exercise, eating healthily, and perhaps taking drugs to fix some of the cellular damage. This would help us improve our health span. It would seem that most individuals would rather have shorter but healthier lives.

## The Mysterious Fault Line

The residents of Southern California live in constant fear of the "Big One," a long overdue devastating earthquake on the San Andreas Fault. Now seismologists may have discovered why they have been waiting so long. While conducting experiments in the Salton Sea, a lake near Palm Springs, a team of researchers found a previously unknown fault line running roughly parallel to the San Andreas Fault. They speculate that the Salton Trough Fault, which remained undetected because of its lack of seismic activity, may be absorbing some of the tectonic strain from its much larger neighbor. This may explain why the southern section of the San Andreas Fault has not produced a major earthquake for 300 years. The discovery does not mean the "Big One" is any more or less likely. But by learning how these faults interact, geologists may be able to improve their earthquake modeling. To aid in accurately assessing seismic hazard, it is crucial to correctly identify and locate faults before earthquakes happen.

## A Possible Fifth Force of Nature

The Standard Model of physics holds that four fundamental forces govern the interaction of all matter in the universe: gravitation, electromagnetism, and the strong and weak nuclear forces. But physicists in Hungary have discovered a previously unknown subatomic particle that suggests the presence of a fifth force of nature. Their findings may turn the Standard Model on its head and shed light on a range of mysterious phenomena.

This would include dark matter and dark energy, which account for 85 percent of the total mass of the universe. The researchers had originally been trying to hunt down “dark photons,” hypothetical particles that physicists theorize may be indicators of dark matter, which is impossible to detect directly because it neither absorbs nor emits light. They did not find dark photons, but they did discover a “protophobic X boson,” a strange particle that only interacts with electrons and neutrons at very close range. Since it’s not a mass-bearing particle and is not governed by any of the four known forces, the researchers proposed that it could be evidence of a fifth fundamental force of nature. If confirmed by further experiments, this discovery of a possible fifth force would completely change our understanding of the universe.

### **The Solar System’s New Addition**

Pluto now has company in our solar system. Astronomers from the University of Michigan have discovered another dwarf planet in the Kuiper Belt, the vast field of icy objects and debris that lies beyond Neptune in our solar system. Known for now as 2014 UZ224, the Iowa-size object is about half as big as Pluto, and almost twice as far from Earth, about 8.5 billion miles away. There are currently five recognized dwarf planets in the Milky Way (Pluto, Ceres, Eris, Haumea, and Makemake) but astronomers believe there could be at least 100 more. The latest discovery was made using a specially designed camera that maps far-flung galaxies. By studying the relatively still backdrop of distant star systems, the researchers were able to identify the subtle movements of closer bodies, including the new dwarf planet. They say their methods could help them track down “Planet Nine,” a hypothetical, massive planet thought to be hiding in the murky outer edges of the Milky Way. The fact that a very distant slow moving object can be found, there is a very good chance that other similar objects out there can also be found.

### **A Trillion Galaxies**

The vast scale of the universe just became even more unfathomable. Until now, astronomers believed there were up to 200 billion galaxies that could theoretically be detected from Earth. But a new study suggests the actual figure could be 10 times that, at least 2 trillion, and possibly more. Researchers at the University of Nottingham in England used all the available data on deep space to create a 3-D map of the observable universe. When they then ran that information through their mathematical models, they concluded that for the universe to behave in the way it does, it must contain more than 2 trillion galaxies. The findings do not suggest the universe is any bigger than previously thought, or that it contains more stars; they simply imply that stars are dispersed among a larger number of smaller galaxies. It really boggles the mind when one considers that over 90 percent of the galaxies in the universe have yet to be studied. It is interesting to speculate on the interesting properties that will be found when we study these galaxies with the next generation of telescopes.

## **Sensing Touch with Prosthetics**

For the first time, scientists have enabled a paralyzed man to experience the sense of touch through a mind-controlled robotic arm, Nathan Copeland, 30, was left unable to use or feel any of his limbs after a car accident more than a decade ago. Last year, doctors from the University of Pittsburgh and the University of Pittsburgh Medical Center implanted four tiny electrodes into the sensory cortex of Copeland's brain. They then wirelessly linked the electrodes to a robotic arm he could control using thought alone, and configured the prosthetic fingers to relay sensory signals back to the brain. Bypassing his damaged spinal cord, these signals stimulate the areas of Copeland's cortex that used to light up when his fingers touched something, restoring his natural sense of touch. What a fantastic breakthrough this will be for all those with spinal cord injuries. This example can be built on to restore movement and sensation as the development of this technology moves forward.

## **Centuries Old Shark**

At her recent death, a female Greenland shark was nearly 400 years old making her the longest-lived vertebrate on record. In other word, The charcoal-colored fish was swimming the North Atlantic while Rembrandt was turning out selfies and the Pilgrims were settling Plymouth, Massachusetts. Greenland sharks have a well established reputation for longevity. In the 1930's a Danish researcher tagged several hundred Greenland sharks and discovered that they grow less than half an inch per year, suggesting it would take centuries for them to reach their maximum length of about 22 feet. In the new study, a team from the University of Copenhagen verified this theory by examining 28 female Greenland sharks and carbon dating their eye lenses, which contain proteins that accumulate over time and give clues to the animal's age. The researchers determined that the oldest died at 392 years of age. The sharks' anti-aging secret remains something of a mystery, though it's believed their frigid habitat slows down biological processes. This research definitely shows that this creature is extraordinary and should be considered among the oldest animals in the world. Hopefully, they do not procreate rapidly.

## ***Farewell***

*This issue of Scientific Tidbits will be the last one unless some one of the Club members steps forward to continue the column. I sincerely hope that the material that we brought to these pages provided some enjoyment to the Club members. I have enjoyed researching the eclectic material included in this column over the past several years. It is now time for me to retire and leave the future to the younger generation.*

73,

*Jim WB2EDO*