

# ***THE AERO AERIAL***

The newsletter of the Aero Amateur Radio Club



Congrats ND3D Proud Winner of the 33 Days/Nights Trophy

Middle River, Md

Volume 11 Issue 4

April 2014

Editor Frank Stone AC3P

## Officers

Joe Miko	WB3FMT	President
Bob Venanzi	ND3D	Vice-President
Lou Kordek	AB3QK	Recording Secretary
Frank Stone	AC3P	Corresponding Secretary
Warren Hartman	W3JDF	Treasurer
Ron Distler	W3JEH	Resource Coordinator

## Committees

Repeater	Phil Hock W3VRD
VE Testing	Pat Stone AC3F
Public Service	Bob Landis WA3SWA
Webmaster	Al Alexander K3ROJ
Trustee	Frank Stone AC3P
Club Nets	Joe Miko WB3FMT
Contests	Bob Venanzi ND3D

## ABOUT THE AERO AMATEUR RADIO CLUB

Meetings: First and Third Wednesdays at 7:30 pm at Coffman's Diner  
(Middle River and Orem's Rd.)

Nets: See Local Area Net Schedule

Repeaters: W3PGA (147.24 MHz - / 449.575 MHz -)  
W3JEH (223.84 MHz -)

## LOCAL AREA NETS

Day	Time	Frequency (MHz)	NET NAME
Daily	9 – 10 am	147.33	ORIOLE Net
Daily	6 pm	3.820	Maryland Emergency Phone Net
Daily	6:30 – 7 pm	146.670	Baltimore Traffic Net
Daily	7 pm and 10 pm	3.643	Maryland/DC/Delaware Traffic Net
2 <sup>nd</sup> Tues	7:30 pm	146.670	Baltimore County <u>RACES</u> Net
2 <sup>nd</sup> Wed.	8 pm	28.445	AERO ARC Net
4 <sup>th</sup> Wed	8 pm	147.240	AERO ARC Net
5 <sup>th</sup> Wed.	8 pm	449.575	AERO ARC Net
When Activated by NOAA		146.67	SKYWARN

## AERO NET REPORT

**28.445 MHz: AC3P(NCS) W3JEH N3VJB WA3TAD**

**147.24 MHz: WB3FMT(NCS) W3VRD W3JEH W3IRE AC3P KA3VAE KC3BWT**

## Station Activities

**AC3P** worked **W3JDF** on the 440 repeater with an ht from **INSIDE** the Maryland Science Center. **KB3JDE/4** reports his truck broke down in an area of Tennessee where cell phone coverage was non-existent. He was able to summon help via 91 year old ham in Indianapolis. **WB3FMT** has been having fun removing the snow in Middlesex with his new toy. **W3VRD** has installed the new control card and adjusted the audio on the 2 meter repeater.

## Aero Club Website Changes

Al, K3ROJ, reports that support for the [www.aeroars.us](http://www.aeroars.us) website is suspended.

The company hosting the Website has raised its monthly fee to \$185. Al has been paying for the service out of his own pocket but this increase is too expensive to continue.

The web page is still accessible but is no longer being supported or updated. All links to the site from the ARRL, QRZ.COM and Mt. Essex Observatory have been disabled.

Meanwhile Frank, AC3P, has set up a bare-bones web page at:

<http://home.comcast.net/~frank-stone/Aero%20ARC/aero.htm>

until a permanent site can be found.

## Greater Baltimore Hamboree



The Greater Baltimore Hamboree will be held at the Timonium Fairgrounds on Saturday April 5, from 9 a.m. To 4 p.m.

For more information see their website at <http://www.gbhc.org>.

# Moonbounce?

Inclement winter weather has kept progress on the EME project at a standstill.

## VE Counts

The ARRL VEC maintains running totals for sessions worked over the years. Here is a breakdown of totals for the Aero ARC VE Team Members past and current members.

AC3F: 88, AC3P: 86, WB3FMT: 44, KB3KRV:39, ND3D: 17, K3ROJ: 16, W3IRE: 12, AB3QK: 9, K3GOD: 8, N3VEJ: 8, KC3EK: 1.

Thanks to all our VE's for their dedicated service in promoting Amateur Radio.

## Battle of North Point Special Event



Plans are underway for a special event station commemorating the 200<sup>th</sup> anniversary of the Battle of North Point.

Frank, AC3P has secured the 1X1 call, N3P, for use during the event. N3P will be on the air September 13, 14, and 15. Frank is looking for volunteers to operate from home during the event. Operators would operate at their convenience on bands within their license class. To volunteer, drop Frank an email at [ac3p@juno.com](mailto:ac3p@juno.com).

## ***AERIAL ARCHIVES***

### **2004 -**

WB3FMT – Time Study

K3PHH – Life Member

First Essex- Middle River Hamfest

### **2009 -**

Contests Award Presentation

New “FCC Allocations”

Phonetics Tutorial by KA3SNY

## **SKYWARN Class**



There will be a SKYWARN Basic I Class held at the Harford County EOC on April 15<sup>th</sup> from 6 to 9 p.m. This class is available individuals interested in becoming a volunteer spotters and for current spotters interested in a refresher course.

Contact Jenn Phelps at 410-638-3406 or email: [jlphelps@harfordpublicsafety](mailto:jlphelps@harfordpublicsafety).

For additional information about SKYWARN: <http://www.weather.gov/lwx/skywarn>

## Alternative Energy by ID1OT

Most club members who have been to an Aero Club Field Day Site know that one of the category for bonus points is a requirement to make five contacts using a natural power source. Dave, KB3KRV and Al, K3ROJ have supplied batteries charged using solar panels. But what if the sun is not available?



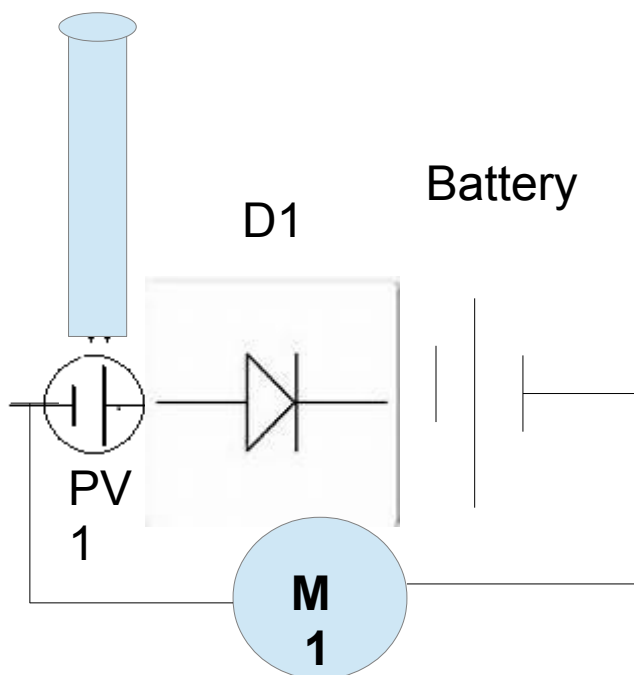
KB3KRV Solar Charger

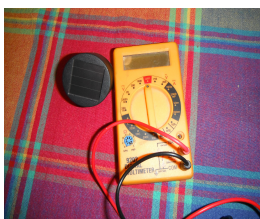
Enter the Lunar Power Station!

The Lunar power station uses a telescope aimed at the moon with a photo-voltaic cell attached at the objective lens' prime focus. The telescope objective collects the photons coming from the moon and focuses the light onto the cell or cmos detector. The current can then be fed through a diode to a battery to charge it.



Light Source





*1.2 volt cell and multimeter*



*Mt. Essex Astronomer AC3P*



*VOLTAGE!!*

To test this concept the staff at Mt. Essex observatory obtained a single solar cell from one of those “garden light” accessories which already contains a charging circuit and fed the output to a voltmeter. The solar cell was placed at the focus of the 8-inch Schmidt-Cassegrain Reflector which was tracking a full moon.. The reaction of the voltmeter was instantaneous, displaying a voltage reading.

Can the possibility of charging a battery with solar power by day and lunar power by night be on the horizon?

## **Dark Moon Net Reminder**

Don't forget the Dark Side Of The Moon Net..March 30<sup>th</sup> at 8 PM local time on 50.240 MHz. SSB.

## **AERO Club Contest Results 33 Days & 33 Nights of Fun** *submitted by Bob ND3D*



*President Joe presents Contest Winner Bob ND3D*

*with his Major Award for 1<sup>st</sup> place in the 33 Days & 33 Nights of Fun*

Despite revisions to the scoring system favoring voice and digital contacts, as well as lengthening the contest period by 13 days, Bob ND3D returns as the winner of the 2014 edition of our club contest.

While only making 21 casual CW contacts from his home station, Bob participated in several contests at other stations including NAQP CW, NAQP SSB and CQ 160 CW. In a close race for second place, Chuck KB3EK edged out Phil W3VRD making 490 points with 98 digital contacts, a very nice showing indeed! Phil was close behind with 363 points utilizing a number of modes and bands; many of Phil's contacts were made during the ARRL January VHF Contest! Frank AC3P and Pat AC3F together made nearly three (3) dozen CW and Voice contacts.

A number of noteworthy contacts were made. Frank was able to work three (3) of the ARRL Centennial Stations including W100AW! Chuck, Phil and Pat were each able to contact a Centennial Station too! In addition, Chuck & Frank even worked Phil for club contest points! Working each other may be a good 'bonus category' for next year's running of the 2015 AERO Club Operating Contest!



2014 Club Contest Breakdown <b>CALL</b>	<b>NAME</b>	<b>Q's</b>	<b>TOTAL POINTS</b>
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ND3D	Bob	1184.1	1327.3
KB3EK	Chuck	98	490
W3VRD	Phil	103	363
AC3P	Frank	27	59
AC3F	Pat	7	11

<b>TOTALS</b>	<b>215</b>	<b>763</b>
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<b>By MODE</b>	<b>CW</b>	<b>VOICE</b>	<b>Digital</b>
ND3D	1112.5	71.6	0
KB3EK	0	0	98
W3VRD	10	56	37
AC3P	11	16	0
AC3F	5	2	0
<b>Sub-TOTAL</b>	<b>1138.5</b>	<b>145.6</b>	<b>135</b>

<b>Grand TOTAL</b>	<b>1419.1</b>
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# From the Skies over Mt. Essex

## SKY Events for April 2014

*Apr 7<sup>th</sup>* - First Quarter Moon.

*Apr 8<sup>th</sup>* - Mars is at opposition, 15" arc seconds in diameter and -1.5 magnitude.

*Apr 12<sup>th</sup>* - Conjunction between the Venus and Neptune, Venus is 0.7° N of the Neptune. 04:19 EDT

*Apr 14<sup>th</sup>* - Conjunction between the Moon and Mars, Mars is 3° N of the Moon. 14:24 EDT

*Apr 15<sup>th</sup>* - Full Moon . "Growing Moon" for the Celtic and the "Full Pink Moon" Traditional Full Moon Names.

Total Eclipse of the Moon     SEE >>>>>>>>

*Apr 17<sup>th</sup>* - Conjunction between the Moon and Saturn, Saturn is 0.4° N of the Moon. 03:42 EDT

*Apr 22<sup>nd</sup>* - Last Quarter Moon and the Lyrid Meteor Shower., fair predictions with 10 meteors per hour expected .

*Apr 25<sup>th</sup>* - Conjunction between the Moon and Venus, Venus is 4° S of the Moon. 19:16 EDT

*Apr 29<sup>th</sup>* - New Moon, Annular Solar eclipse, not visible in the U.S.

## Planet Lookout at mid-Month

### Sunrise 06:29 EDT and Sunset 19:44 EDT

**Mercury** in the Morning Sky, magnitude -1.0; 5.1 arc seconds

**Venus** in the East at sunrise, magnitude -4.2 and 19.5 arc seconds.

**Mars** At opposition , magnitude -1.5 and 15 arc seconds wide.

**Jupiter** Set by 02:00 EDT, magnitude -2.1 size 36.8 arc seconds.

**Saturn** Rises before 22:00 EDT, magnitude +0.2 size 18 arc seconds.

**Uranus** Sets by 20:30 EDT, magnitude +5.9, size 3.4 arc seconds.

**Neptune** In the dawn sky rises by 05:00 EDT, magnitude +7.9, size 2.4 arc seconds.

### Blood on the Moon – A Total Lunar Eclipse.

"There is something called "blood on the moon" and that is when there is a large red ring around the moon giving it a red appearance. The moon will pass completely into the shadow of the Earth producing a striking total lunar eclipse. The total phase throws an eerie reddish color across the face of the moon. The Earth's atmosphere acts like a prism, bending a little sunlight into the shadow and giving it a copper tint. In essence, what falls on the eclipsed moon is the light of all the sunsets and sunrises on Earth." From a

Yahoo Answer.

The astronomers classify the color we see during a Lunar Eclipse using the "Danjon Scale of Lunar Eclipse Brightness" and goes from L0 to L4. It was developed by Andre-Louis Dajon in 1921.

#### L Value

0 – Very dark, the Moon is almost invisible, especially at mid-totality.

1 - Dark Eclipse – gray or brownish in color. Details distinguishable only with difficulty.

2 - Deep Red or rust-colored. Very dark central shadow, while outer edge of umbra is relatively bright.

3 -- Brick-red eclipse. Umbra shadow usually has a bright or yellow rim.

4 – Very Bright copper-red or orange eclipse, Umbral shadow has a bluish, very bright rim.

Determination of the value of L for an eclipse is best done near mid-totality with the naked eye. The scale is subjective, and different observers may determine different values. In addition, different parts of the Moon may have different L values, depending on their distance from the center of the Earth's shadow or umbra.

Many factors can affect the appearance of the Moon during a lunar eclipse. The Moon's path through the Earth's umbra is important, but so too are the current conditions of the Earth's atmosphere. While the Earth's shadow blocks any direct light from striking the Moon during a lunar eclipse, some light is refracted through the Earth's atmosphere giving a Moon a hue ranging from black to an bright orange..

The amount of light refracted by the atmosphere effects the brightness of the moon at mid-eclipse, and this depends on several factors. Volcanic eruptions, forest fires and pollution are the most significant. A volcanic eruption which spews significant amounts of ash into the air can cause several years of dark, deep red eclipses.

The Lunar Eclipse on April 15, begins at 00:53 EDT when the moon touches the Earth penumbral shadow. First contact with the darker umbra shadow occurs at 01:58 EDT. The darkest or mid-point of the eclipse is 03:46 EDT. The moon leaves the umbra at 05:33 EDT and the eclipse ends at moonset at 06:36 EDT.

If you miss this one there's another one occurring on

October 8, 2014, starting at 04:15 EDT.

