



THE AERO AERIAL

THE NEWSLETTER OF THE AERO AMATEUR RADIO CLUB

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July 3

MEETING

New location
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for more details



Ham News

2024 ARRL Field Day

From W3PGA

On June 21-23, the Aero Club met at the Essex Sky Park hangar for the 2024 Field Day event. See pages 3-4 to see some highlights.

ARRL and Momobeam Introduce Dual-band Beam Antenna for 6- and 10-Meters

From ARRL

As Solar Cycle 25 continues to increase HF radio propagation on the upper bands, ARRL has partnered with the Italian antenna manufacturer Momobeam to design a dualband beam antenna to help take full advantage of the exciting opportunities for distant contacts. [Read more](#)

Events

Firecracker Hamfest

Date: 7/6/2024

Location: Harrisburg, PA

Sponsor: Harrisburg Radio Amateurs Club

Website: <http://www.w3uu.org>

CVARC Annual Hamfest

Date: 7/27/2024

Location: Chambersburg, PA

Sponsor: W3ACH

Website: <http://w3ach.com>

Reading Radio Club Hamfest

Date: 8/3/2024

Location: Sinking Spring, PA

Sponsor: Reading Radio Club Inc.

Website: <http://www.qsl.net/w3bn/>

SVARC Berryville Hamfest, ARRL Virginia State Convention

Date: 8/4/2024

Location: Berryville, PA

Sponsor: Shenandoah Valley Amateur Radio Club

Website: <https://berryvillehamfest.com/>

More Ham News

Ham Radio: A Critical Link in the Event of Disaster

From KLCC Oregon on the Record

On this edition of Oregon On The Record, you'll hear from Bonnie Altus with the American Radio Relay League and Doug Jimenez, of the Oregon Department of Emergency Management about the critical role ham radio operators will play in the event of a major earthquake in our region. [Listen to this interview](#)

Legislation to Remove Private Land Use Restrictions on Amateur Radio Introduced in Congress

From ARRL

Congressmen Bill Johnson (OH-06) and Joe Courtney (CT-02) reintroduced a bill in the US House of Representatives on June 12 to remove private land use restrictions that prohibit, restrict, or impair the ability of Amateur Radio operators from operating and installing reasonable antennas on property that they own or control. [Read the article](#)

The Ionosphere

From VK3FS

If you'd like to learn more about the D, E, and F regions of the ionosphere, here's an [interesting video](#).

Ham Map

From Amateur Radio Weekly

This map shows WWFF, POTA, SOTA, and GMA references. [View the map](#)

More Events

Valley Forge Hamfest

Date: 8/11/2024

Location: Phoenixville, PA

Sponsor: Mid-Atlantic Amateur Radio Club

Website: <http://marc-radio.org/hamfest2.htm>

CARA Fest 2024

Date: 10/6/2024

Location: West Friendship, MD

Sponsor: Columbia Amateur Radio Association

Website: <https://www.columbiaara.org/caraFest>

RF Hill Amateur Radio Club Hamfest 2.0

Date: 10/20/2024

Location: Perkasie, PA

Sponsor: RF Hill Amateur Radio Club

Website: <https://www.rfhillarc.club/hamfest/>



Field Day 2024

Field Day was held the weekend of June 22-23 at the Essex Sky Park. A special thank you goes out to Rob (AE3B - pictured above) and the others who helped to set up the equipment on June 21 and tear down on June 23. Throughout the event, there were some operators working the radios in the hangar and other operators at their homes.

On June 22, Pat (AC3F) hosted an exam session and issues three new certifications. With plenty of food and water, great discussions, and radio activity, we had a great event. As temperatures continued to rise into Sunday, we decided to shut down a little early to beat the heat.

If you missed it, we hope you'll be able to join us at the next Field Day in 2025. And don't forget, there will be other opportunities to join the club for other contesting events before then.

See page 4 for a few pictures from Field Day.

SKYWARN® Basics Class

Will be held on Thursday, July 11, 2024, 6-8 p.m. at Carroll County's Public Safety Training Center: 50 Kate Wagner Road, Westminster, MD 21157.





Radio License Exams

The Aero Amateur Radio Club sponsors Amateur Radio License Exams with the ARRL VEC. Examination sessions are throughout the year. Walk-ins are welcome; arrive no later than 30 minutes after start time. \$15 charge.

W3PGA Exam Location

American Legion Post 180
1331 Seling Ave.
Rosedale, MD 21237

Contact

Patricia Stone, AC3F
email: ac3f@juno.com
landline: 410-687-7209



W3PGA Middle River, MD



VE CORNER

Pat Stone, AC3F

The AERO VE Team held its ninth annual Field Day Exam session on June 22nd. We served 4 applicants. Congratulations to new Technician David Nagel, New General Karen Mika KC3ZFC, and new EXTRA Mark Turelove K3TRU.

Many thanks to VE's: WA3QLY, N3RES, and AC3EK for assisting me with this session. Also a very special Thank you to Cathy & Steve for the use of their RV for testing. All of you made this session possible. Hope to see you in September. It's always a joy working with you.

Our next test session will be held on Saturday, September 21st at 11AM at the American Legion Post in Rosedale. Hope to see you then.

Upcoming AERO ARC Testing

[09/21/2024 | Rosedale MD 21237-1642](#)

Sponsor: AERO ARC

Location: American Legion Post 180

Time: 11:00 AM (No Walk-ins / Register or Call ahead)

[11/23/2024 | Rosedale MD 21237-1642](#)

Sponsor: AERO ARC

Location: American Legion Post 180

Time: 11:00 AM (No Walk-ins / Register or Call ahead)



nshuman1291/Vecteezy

SKYWARN, ARES, RACES

Harford County ARES/RACES Group meets at the Harford County Emergency Operations Center in Forest Hill, MD, the first Thursday of each month, 7:00-9:00 p.m. Let them know in advance if you would like to attend, via email to Steven Fook (K2EJ), Harford County Emergency Coordinator.

The Harford County, MD, ARES on-air net meets on the second and fourth Tuesday of each month, 7:00 p.m. on the KC3FHC analog repeater, frequency 146.775, (-) PL tone 146.2. ARES/RACES membership is not a requirement to participate in the net.

The Amateur Radio Emergency Preparedness Act of 2024 would require homeowner associations to accommodate the needs of amateur radio operators by limiting the scenarios in which they can ban, prevent, or require the approval of the installation or use of amateur radio antennas.

Among other provisions, this legislation would:

- Prohibit homeowner association rules that would prevent or ban amateur radio antennas;
- Clarify the approval process for installing amateur radio antennas;
- Give amateur radio operators a private right of action.



Club Nets

Second Wednesday Net

70 Centimeters (449.575 MHz Repeater)
@ 8 p.m. Local Time

Fourth Wednesday Net

2 Meters (147.24 MHz Repeater)
@ 8 p.m. Local Time

Fifth Wednesday Net

10 Meters (28.445 MHz)
@ 8 p.m. Local Time

Net Reports

Pat Stone, AC3F

The 70 centimeter net was held on June 12, 20:00-20:24.

AC3F NCS	Pat	Middle River
K3DON	Don	Joppatowne
KB3QWC	Larry	Middle River
KB3VAE	Richard	Essex
KB3YTP	David	Parkville
WA3QLY	Tom	Middle River

Thanks to all who joined us for this net.

Local Area Nets

Day	Time	Freq. (MHz)	Net Name
Daily	9 - 10 am	146.670	Oriole Net
Daily	6 pm	3.820	Maryland Emergency Phone Net
Daily	6:30 - 7 pm	146.670 PL 107.2	Baltimore Traffic Net
Daily	7 pm & 10 pm	3.643	MD/DC/DE Traffic Net
2nd Tue	7:30 pm	146.670	Baltimore County RACES Net
2nd Wed	8 pm	449.575	Aero ARC Net
4th Wed	8 pm	147.240	Aero ARC Net
5th Wed	8 pm	28.445	Aero ARC Net
When activated by NOAA		147.030	SkyWarn (primary)

From the Skies Over Mt. Essex

For current solar activity, visit <https://www.solarham.com/>

SKY Events for July

(h:m) EST & EDT (Add 1 Hour)

Jul 01 14:27 Mars 4.1°S of Moon
 02 11:30 Pleiades 0.3°N of Moon
 04 Happy Birthday U.S.A. 248 yrs; Crab Nebula supernova occurred in 1054 A.D.
 05 01 Earth at Aphelion: 94.510,539 miles
 05 18:57 NEW MOON
 07 14:33 Mercury 3.2°S of Moon
 08 04:14 Jupiter 4.7°N of Aldebaran
 09 07:20 Regulus 3.1°S of Moon
 09 22 Venus at Perihelion
 12 04:12 Moon at Apogee: 404363 km
 12 18:27 Moon at Descending Node
 13 18:49 FIRST QUARTER MOON
 13 21:48 Spica 0.9°S of Moon
 17 15:37 Antares 0.2°S of Moon
 20 15:40 Mars 4.7°S of Pleiades
 21 06:17 FULL MOON
 22 03 Mercury at Greatest Elong: 26.9°E
 24 01:43 Moon at Perigee: 364914 km
 24 16:38 Saturn 0.4°S of Moon: Occn.
 24 21:38 Mercury 1.7°S of Regulus
 26 01:33 Moon at Ascending Node
 27 12 Mercury at Aphelion
 27 18 Delta-Aquarid Meteor Shower
 27 22:51 LAST QUARTER MOON
 29 17:13 Pleiades 0.1°N of Moon

Planet Lookout at mid-Month

Sunrise 5:54 EDT and Sunset 20:21EDT

Mercury Dust Rise 08:03 Set 21:44; Mag +0.2 Size 7.0 arc seconds.

Venus Dust Rise 06:48, Sets 21:04, Mag -3.9 and 10 arc seconds.

Mars Morning Rise 02:02 Sets 16:05, Mag +0.9 and 5..6 arc seconds wide.

Jupiter Morning, Rises 02:54, Sets 17:17, Mag-2.1 size 34.3 arc seconds.

Saturn Evening, Rises 23:03, Sets 10:34, Mag+1.0 size 18.4 arc seconds.

Uranus Morning Rises 02:00 Sets 16:05; Mag +5.8 size 3.3arc seconds.

Neptune Evening Rises 23:27 Sets 11:27; Mag +7.9 size 2.4 arc seconds.

Gravity Waves - A splash in the Universe!

At a fundamental level, there are only four different types of forces in physics. These are strong nuclear forces, electromagnetic forces, weak nuclear forces, and Gravitational forces.

Gravity is responsible for the attraction between masses (and consequently, gravity is responsible for planetary orbits). Comparatively, gravity is much weaker compared to the other three types of forces, and why this is so remains one of the greatest unsolved mysteries in physics.

Gravitational waves were first predicted by Albert Einstein in his famous 1916 paper on general relativity. One of the central, and strangest, tenets of general relativity is that space and time are not separate things but rather are linked together in a single fabric: space-time. Massive objects, like stars, stretch and curve this fabric, sort of like how a bowling ball distorts a rubber sheet. These dips cause objects such as planets, and even light, to take a curved path around those more massive bodies.

On February 11, 2016, researchers affiliated with the Laser Interferometer Gravitational-Wave Observatory (LIGO) reported the detection of gravitational waves. The signal picked up by LIGO came from the collision of two black holes and was detected on Sept. 14, 2015 by LIGO's twin detectors in Livingston, Louisiana and Hanford, Washington.

As a gravitational wave passes through Earth, it squishes space in one direction and stretches it another direction. LIGO looks for that warping of space-time using two "L"-shaped detectors.

Each arm of each detector is 2.48 miles (4 kilometers) long. Near the point where the two arms meet, a pulse of laser light is released down each arm simultaneously. The pulses travel down an arm, bounce off a mirror at the far end and come back near the starting point, at the crux of the "L."

This cosmic crash sent gravitational waves streaming outward at the speed of light, causing ripples in the fabric of space-time, similar to how a dropped pebble disturbs a still pond. Researchers said the collision occurred 1.3 billion years ago between black holes that were about 29 and 36 times more massive than the sun, respectively. During the crash, about three times the mass of the sun was converted into gravitational waves in less than a second, generating a peak power output of about 50 times that of the entire visible universe. Information provided by the LIGO team

About the Aero Amateur Radio Club

Officers		Committees	
President	Joe Miko, WB3FMT	Repeater	Phil Hock, W3VRD Ken Erisman, NE3A Dave Brunner, AC3EO
Vice President	Rob Ballou, AE3B	VE Testing	Pat Stone, AC3F
Recording Secretary	Larry Hill, KB3QWC	Public Service	Bob Landis, WA3SWA
Corresponding Secretary	Pat Stone, AC3F	Webmaster, Facebook	Rob Ballou, AE3B
Treasurer	Tom Hawkins, WA3QLY	Trustee	Dave Frederick, KB3KRV (W3PGA) Jim Marshall, KC3FBL (AE3RO)
Resource Coordinator	Ron Distler, W3JEH	Club Nets	Joe Miko, WB3FMT
		Contests	Bob Venanzi, ND3D
		Newsletter Editor	Cathy Feinman, W3CLF
Website: http://w3pga.net			
Facebook: https://www.facebook.com/W3PGAClub			
Email: w3pgaclub@gmail.com			

Meetings

July 3: The club will meet in-person at 7:30 p.m. at the American Legion Post 180, 1327 Seling Ave., Rosedale, MD 21237, and via Zoom at <https://us02web.zoom.us/j/88003251050?pwd=tHpc9xucnd6Lm2EwuxvJuZmYbI08I8.1> (Meeting ID: 880 0325 1050, Passcode: 147240). All are welcome to attend.

W3PGA	2 M	INPUT: 147.84 MHz, OUTPUT: 147.24 MHz, PL 123.0
W3PGA	70 Cm	INPUT: 444.575 MHz, OUTPUT: 449.575 MHz, PL123.0
W3JEH	1.25 M	INPUT: 222.24 MHz, OUTPUT: 223.84 MHz