



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

>>>>>>> <http://www.barconline.org> <<<<<<<<

March 2017



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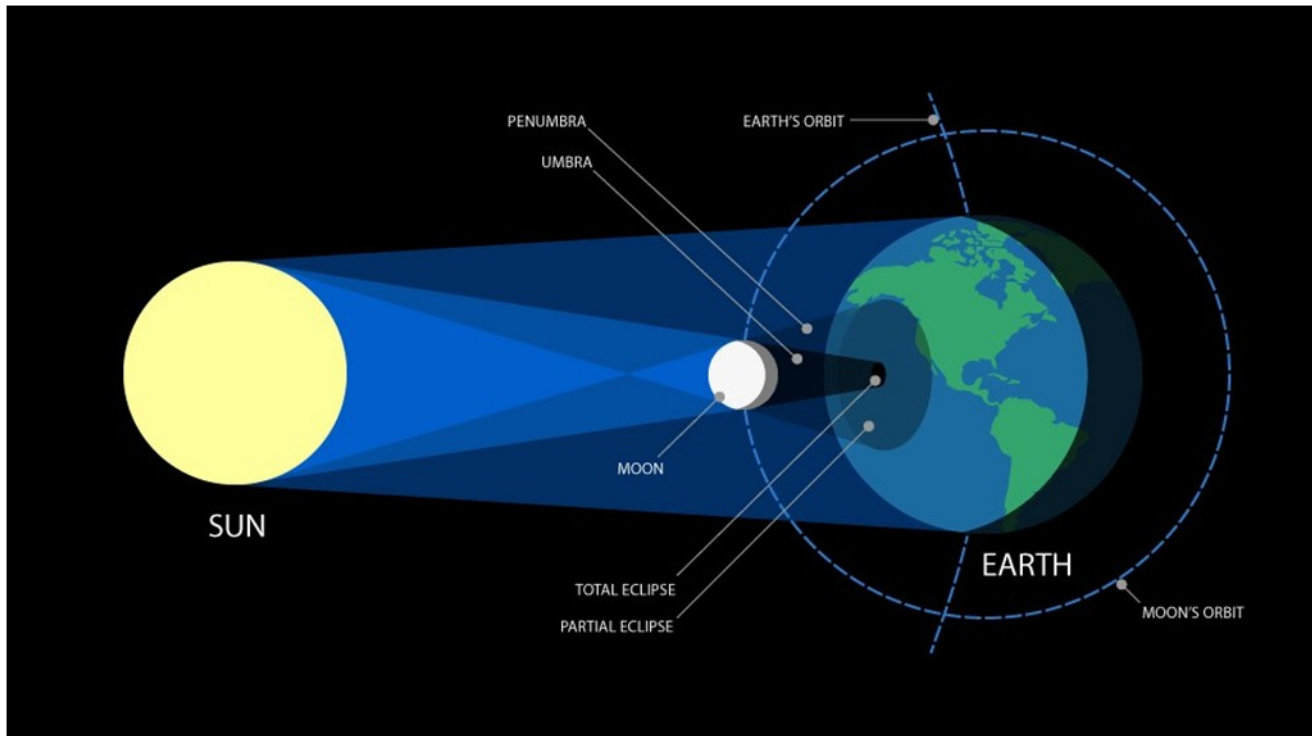


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PRESIDENT'S MESSAGE

On August 21, 2017, there will be a total eclipse of the sun traversing the middle of the United States. Below is a picture (not to scale) that shows the two parts of the Moon's shadow during an eclipse. The penumbra is the faint outer shadow, partial eclipses are seen from within this shadow. The umbra is the dark inner shadow, total eclipses are seen from within this shadow.



The August 2017 total eclipse will move across the United States starting on the Oregon Coast and passing over the states of Idaho, Wyoming, Nebraska, Kansas, Missouri, Illinois, Kentucky, Tennessee, North Carolina, Georgia, and finishing in South Carolina. This totality path is approximately 100 miles wide. Along the totality path, the time from the start to end of the partial eclipse is about 1 hour 40 minutes and in the middle is the full eclipse that will last approximately 2 minutes 20 seconds depending upon the transverse area. For more information on the eclipse, see the [NASA Eclipses and Transits](#) web page, [Eclipse2017.Org's Interactive Google Map](#), and [Xavier Jubier 2017 August Eclipse](#) web site. To download Xavier's Google Earth kmz file, go [here](#) and then click on the date of the eclipse.

For a normal sunset and sunrise, there is a band that extends around the Earth that separates daylight from darkness. This band is called the "[gray line](#)" and radio propagation along the grey line is very efficient. Solar radiation collides with the molecules in the D, E, and F ionosphere layers and causes the density of each ionosphere layers to change. The increased density for each layer is what determines the maximum usable frequency (MUF) that is reflected back to the earth. The radio wave absorbing D-layer disappears faster than the higher altitude radio wave propagating F2-layer around the time of sunset (and vice versa

(Continued on page 4)

UPCOMING 2017 ACTIVITIES

- 08 Mar, 7:30 PM - ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 11 Mar, 10:00 AM - BARC Club Mtg** — Cache County Sheriff's Office 3rd Floor
ARES Mini Conference ([More info see Page 6](#))
- 15 Mar, 7:00-9:00 PM** — Cache County **ARES meeting** at the Sheriff's Office
- 18 Mar, 8:00 AM** — **RACES HF Net** 3920 KHz
- 21 Mar, 6:30-9:00**—**Elmer Night** @ Cache County Sheriff's Office 3rd Floor
- 25 Mar, 9:00 AM—5:30 PM**—Utah Digital Communications Conference 2017
Digital Conference held at: 410 W 9800 S Sandy, UT 84070 ([Info](#))
- 08 Apr, 10:00 AM-BARC Club Meeting** Cache County Sheriff's Office 3rd Floor
Types of Radios, Good and Not as Good
- 12 Apr, 7:30 PM - ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 15 Apr, 3:00 PM**—**ARRL VEC License Test Session** @ USU Engineering (NEW)
Building Room 302, Logan, UT. This test follows the one day General License
class. ([More Info Here](#))
- 18 Apr, 6:30-9:00**—**Elmer Night** @ Cache County Sheriff's Office 3rd Floor
- 19 Apr, 7:00 PM** — Cache County **ARES meeting** at the Sheriff's Office
- 20 Apr, 8:00 PM - RACES VHF Net** 146.72 Mt. Logan 147.180 Snowbird 147.20 IRLP
- 2-3 June, Wasatch Back Relay** - Lead Person for BARC: Tyler Griffiths ([More Info](#))
- 03 June, Little Red Riding Hood bicycle race** — Lead Person: Russ Leikis ([Info](#))

For more calendar information see the barconline.org/calendar

Local Radio Nets:

The **Weekly BARC net** is for BARC members and anyone else that would like to check in, held **every Tuesday night at 9:00 p.m.** local time on the Mt Logan BARC Repeater and Linked Systems (146.720)

The **BARC Ladies Net** is every **2nd and 4th Tuesday at 8:00 p.m.** on the BARC Repeater and Linked Systems (146.720). All licensed lady amateur radio operators are welcome to check in.

(Presidents Message Continued from page 2)

for sunrise). Because the F2-layer of the ionosphere remains strongly ionized along the gray line, HF signals often have less attenuation when they travel along the gray line as compared to the more direct shorter route. The gray line makes for about 60 minutes of interesting operation during that time.

During a solar eclipse, the solar radiation across the D, E, and F layers changes differently during the eclipse because of the Sun/Moon's overhead orientation to other points in the eclipse path. There are significant differences between the conditions during a solar eclipse and the conditions normally experienced at sunset and sunrise, including the east-west motion of the eclipse terminator, the speed of the transition, and the continued visibility of the corona throughout the eclipse interval. Taken together these factors imply that unique ionospheric responses may be witnessed during eclipses.

The Ham Radio Science Citizen Investigation ([HamSCI](#)) is a platform for the publicity and promotion of projects that are consistent with the following objectives: Advance scientific research and understanding through amateur radio activities, encourage the development of new technologies to support this research, and provide educational opportunities for the amateur community and the general public. Although the ionospheric effects of solar eclipses have been studied for over 50 years, many unanswered questions remain. HamSCI is inviting amateur radio operators to participate in the [2017 Total Solar Eclipse Project](#) which will characterize the ionospheric response to the total solar eclipse and target open science questions.

There are other organizations that will be doing research on the effects of the solar eclipse. One is Virginia Polytechnic Institute and State University, Blacksburg, VA and they will be conducting an [experiment](#) that includes standard ionospheric sounding techniques including the Continuously Operating Reference Station (CORS) GPS receivers and SuperDARN radars as well as various amateur radio networks. Amateur radio will be used in four of the six experiments for collecting data on the changes in radio propagation in the eclipse.

Better plan to get on the air for this eclipse. Many amateur radio operators will be on the air during the day of the eclipse and some have a special event station, so they can experience the changes in radio propagation in a daytime night.

The next total solar eclipse in the US will be on August 12, 2045 and this one will cross over Utah!

73,
Cordell
KE7IK



Technician License One Day Class and Exam Session Results

On Saturday, February 4, 2017 members of the Bridgerland Amateur Radio Club taught a one day Technician License class. A test session followed the class. Here are the results of the exams given at this session.

The following individuals earned a Technician License:

Brian Anderson – KI7KIN	Tanner Linton – KI7KIO
Lawson Burnett – KI7KJF	Mario Mazyck – KI7KJC
Phillip Bury – KI7KIX	Curtis Packer – KI7KIY
Justin Canova – KI7KIV	Joseph Parry – KI7KIR
William England – LI7KIQ	Jan Petersen – KI7KIT
Andrew Hadfield – KI7KJJ	Zakk Rhodes – KI7KJA
Doug Hahn – KI7KJD	Elwood Richardson – KI7KIW
Chris Hardy – KI7KIS	Dana Sorensen – KI7KJB
Joshua Heater – KI7KIU	Trevor Steenblik – KI7KJE
Nathan Israelsen – KI7KJI	Robert Tanner – KI7KJH
Christopher Jenkins – KI7KIP	Elden Tolman – KI7KJK
Patrick Laney – KI7KJG	Sam Whiting – KI7KIZ
Laurence Leonhardt – KI7KJL	Mallory Wood – KI7KJZ

The following passed the Technician, General and Extra Exams:

Steven Livingston – AG7EH

Here is a summary of the number of exams given and new licenses earned at this session:

Technician License Exams Given:	35	New Technician Licenses Earned:	26
General License Exams Given:	21	New General Licenses Earned:	0
Extra License Exams Given:	1	New Extra Licenses Earned:	1
Number of Exams Given:	57	Number of New Licenses Earned:	27

Number of People Served: 35

Welcome to the Bridgerland Amateur Radio Club to all those that earned their first Amateur Radio license on February 4th.

A big thank you to all of the VEs that helped with this exam session.

Richard Elwood
KE7GYD
VE Liaison





WWW.ARRL.ORG

MARCH 11TH 10:00 AM BARC MINI ECOMM CONFRENECE

March Club Meeting

Emergency Communications. Saturday, March 11th at 10:00 AM, 3rd floor of the Cache County Sheriff's Office. There will be multiple presenters covering topics on emergency communications.

Cache County Sheriff Office, Third Floor
1225 West Valley View (200 North), Logan, Utah



GRAB N GO RADIO
AND MEDICAL KITS

ECOMM TRAILER
DEMO

SOLAR POWER

72 HR KITS

CERT

**BRIDGERLAND
AMATEUR RADIO
CLUB**

PO Box 111
Providence, Utah 84332

www.barconline.org

March 11th 10:00 am

The ARRL Letter for January 12, 2017

Illegal Drone Transmitters Could Interfere with Air Traffic Control, ARRL Complaint Asserts

In what it calls an "[extremely urgent complaint](#)" to the FCC, ARRL has targeted the interference potential of a series of audio/video transmitters used on unmanned aircraft and marketed as Amateur Radio equipment. In a January 10 letter to the FCC Spectrum Enforcement Division, ARRL General Counsel Chris Imlay, W3KD, said the transmitters use frequencies intended for navigational aids, air traffic control radar, air route surveillance radars, and global positioning systems.

"This is, in ARRL's view, a potentially very serious interference problem, and it is respectfully requested that the products referenced...be investigated and removed from the marketplace immediately and that the importers be subjected to normal sanctions," ARRL's letter said. Some of the transmitters operate on frequencies between 1,010 and 1,280 MHz. "These video transmitters are being marketed ostensibly as Amateur Radio equipment," the League said, "but of the listed frequencies on which the **devices** operate, only one, 1,280 MHz, would be within the Amateur Radio allocation at 1,240-1,300 MHz." Even then, ARRL said, operation there would conflict with a channel used for radio location.

ARRL said the use of 1,040 and 1,080 MHz, which would directly conflict with air traffic control transponder frequencies, represented the greatest threat to the safety of flight. The use of 1,010 MHz, employed for aeronautical guidance, could also be problematic.

ARRL cited the Lawmate transmitter and companion 6 W amplifier as examples of problematic devices being marketed in the US. Each costs less than \$100 via the Internet. The device carries no FCC identification number.

"[T]he target market for these devices is the drone hobbyist, not licensed radio amateurs. The device, due to the channel configuration, has no valid Amateur Radio application," ARRL told the FCC. "While these transmitters are marked as appropriate for amateur use, they cannot be used legally for Amateur Radio communications." In the hands of unlicensed individuals, the transmitters could also cause interference to Amateur Radio communication in the 1.2 GHz band, ARRL contended.

The League said it's obvious that the devices at issue lack proper FCC equipment authorization under FCC Part 15 rules, which require such low-power intentional radiators to be certified.



ARRL cited the Lawmate transmitter as an example of problematic devices.

"Of most concern is the capability of the devices to cripple the operation of the [air traffic control] secondary target/transponder systems," ARRL said. "These illegal transmitters represent a significant hazard to public safety in general and the safety of flight specifically."

The surge in sales of drones has been dramatic. The FAA has predicted that combined commercial and hobby sales will increase from 2.5 million in 2016 to 7 million by 2020.

In Exhibit A of the January 10 letter, "Illegal Drones Threaten Public Safety," the League noted that some of the drones and associated equipment it has come across "are blatantly illegal at multiple levels," with some drone TV transmitters described as "particularly alarming."

"Rated at six times over the legal power limit, *and on critical air navigation transponder frequencies*, these devices represent a real and dangerous threat to the safety of flight, especially when operated from a drone platform that can be hundreds of feet in the air," the exhibit narrative asserted.

The ARRL Letter for February 16, 2017

ARES Volunteers Support Evacuation, Shelters, in Wake of Oroville, California, Dam Crisis

[Sacramento Valley ARES](#) Section Emergency Coordinator Greg Kruckewitt, KG6SJT, reported this week that Amateur Radio Emergency Service (ARES®) volunteers actively supported communication for the evacuation and sheltering of nearly 200,000 people living below the damaged Oroville Dam in rural California. The dam, on the Feather River east of Oroville, is the tallest in the US. Following a period of heavy rain, a section of the earthfill-embankment dam's spillway eroded, and authorities ordered residents living below the dam to evacuate, in case the dam should fail. Crews have been attempting to fill the eroded area with rock transported by helicopter. On February 14, authorities lifted the mandatory evacuation order, but said it could be re-imposed, if necessary. Residents returning home were advised to remain vigilant, should the situation again become critical, and some ARES activity continues.

"Things have really calmed down for now after the mandatory evacuation notice was reduced to an evacuation warning," Kruckewitt told ARRL on February 15. "At this time, only the Butte County ARES group is deployed to the Chico Fairgrounds to support the Red Cross -- possibly through the weekend." The Chico shelter will remain open until the next storms pass.

FEMA reported that the Kelly Ridge Powerhouse located below Oroville Dam is flooded and unsafe. "Any further flooding could result in the potential release of 500 gallons of turbine oil stored in tanks," the agency said on February 15.



The California Department of Water Resources released 100,000 cubic feet per second from the damaged spillway to decrease the lake level by 50 feet to handle the next round of storms expected this week.

Butte County ARES EC Dale Anderson, KK6EVX, was called out by the emergency operations center (EOC) on the evening of February 12. Six members of the Butte County ARES team have been deployed to the Red Cross evacuation shelter at the Chico fairgrounds. "ARC still wants us at the Chico Fairgrounds," Anderson told Kruckewitt on February 15. "We are down to one VHF unit and one operator on watch for now."

On February 12, Yuba/Sutter ARES EC Steve Sweetman, K6TAZ, opened and managed a net to provide information and gather reports of road closures or problems during the evacuation. The net received reports from radio amateurs who were evacuating. Traffic was reported to be very heavy, with a trip that would normally take 20 minutes extending into a "3-hour stop-and-go ordeal," Sweetman said. The net also gathered and disseminated information on where evacuees could get fuel. "This became a critical need, as the thousands of people evacuated their houses with 1-hour notice," Kruckewitt said. Sweetman provided shelter for 17 evacuees.

The Sacramento County EC Vince Cracchiolo, KI6NHP, was called into the Sacramento County Emergency Operations Center (EOC) on February 13 as the Red Cross opened a shelter at Cal Expo

in Sacramento. Kruckewitt said the Sacramento Valley Section received offers of help from hams outside of California. As of February 15, FEMA was reporting 16 shelters open with 2,606 occupants.

"All ARES groups in the section are on standby, if help is needed. So far, the dam is holding, and repair work is under way at last report," Kruckewitt said.

According to the California Department of Water Resources ([DWR](#)), evacuation orders were issued to residents surrounding Lake Oroville late Sunday afternoon. "DWR has been monitoring conditions at Lake Oroville's main and auxiliary spillways around the clock for signs of erosion that could threaten the integrity of the emergency spillway and allow large, uncontrolled flows to the Feather River," the agency says on its website.



California Department of Water Resources crews inspect and evaluate the erosion just below the Lake Oroville emergency spillway site after lake levels receded on February 13.

Amateur Radio Emergency Service Posts its 2016 *Annual Report*

The Amateur Radio Emergency Service (ARES) has posted its 2016 annual report. The [2016 ARES Annual Report](#) focuses on documenting the value that ARES provides to the nation, states, and localities in collaboration with partners at all levels. The report features basic data drawn from Section Emergency Coordinators' reports, a breakdown of ARES figures by state and FEMA region, and a challenge for 2017. According to the report, ARES membership in 2016 was 27,754 -- up from 17,756 in 2015 -- and the Service was active in 42 states and US territories. ARES volunteers responded to 33,136 events last year.

"Sharing information about what ARES provides at all levels is critical to our work overall, as hard numbers provide better detail about our work," ARRL Emergency Preparedness Manager Mike Corey, K11U, said. "We all need to pitch in to ensure that our contributions are counted, and here at HQ, we will be sure to do our part."

ARES volunteers will see changes in some reporting forms in 2017; all forms, starting in January 2017, have been updated and renumbered. According to the report, 76% of ARRL sections filed reports for 2016, a significant improvement over past years. The report challenges ARRL Section Emergency Coordinators to raise that number to 85% in 2017.

In addition to the annual ARES report, ARRL Field Services staffers will produce their own monthly report, a link will appear in the [ARES E-Letter](#), showing monthly data for ARES, as well as information about ARRL Headquarters emergency preparedness and Field Service activities.



***Nayif-1* CubeSat with Amateur Radio Transponder Launched from India**

AMSAT-UK reports the Indian Space Agency ([ISRO](#)) on February 15 successfully launched the *Nayif-1* Amateur Radio CubeSat, along with 103 other satellites -- a record for a single launch. The *Nayif-1* 1U CubeSat includes a full [FUNcube](#) communication package. *Nayif-1* carries a U/V linear Amateur Radio transponder for SSB and CW and a telemetry transmitter. *Nayif-1* started transmitting about 1 hour after launch, and radio amateurs on the west coast reported the first signals.



Nayif-1 is a joint project of the Mohammed Bin Rashid Space Centre ([MBRSC](#)) and American University of Sharjah ([AUS](#)). The United Arab Emirate's first nanosatellite, *Nayif-1* was developed by Emirati engineering students from AUS under the supervision of a team of engineers and specialists from MBRSC. The partnership between the two entities was aimed at providing hands-on satellite-manufacturing experience to engineering students.

Telemetry is transmitted on 145.940 MHz, 1.2 kb BPSK (FUNcube standard). The SSB/CW transponder uplink passband is 435.045-435.015 MHz, and the downlink passband is 145.960-145.990 MHz.

A mission-specific [telemetry dashboard](#) is available. In a manner similar to that of the FUNcube-1 dashboard, this one will be capable of uploading the telemetry received to a central data warehouse. [More information](#) on the telemetry dashboard is available, as is a [test file](#).

Initial spacecraft operation will be in a low-power "safe" mode, with just the telemetry transmitter activated.

National Museum to Mark 75th Anniversary of Voice of America

The National Voice of America (VOA) Museum at the VOA-Bethany site in West Chester, Ohio, will join in celebrating the 75th anniversary of the [VOA](#). The Voice of America [marked its diamond jubilee](#) on February 1. In 1942, not 2 months after the US officially entered World War II, a live, 15-minute shortwave broadcast was transmitted into Germany from a small studio in New York City. Introduced by "The Battle Hymn of the Republic," the voice of announcer William Harlan Hale declared, "We bring you Voices from America. Today, and daily from now on, we shall speak to you about America and the war. The news may be good for us. The news may be bad. But we shall tell you the truth."

"We're planning a series of events and exhibits this year to celebrate the VOA's commitment across America and the world to embrace best practices in telling the truth in order to let the world decide," said Jack Dominic, the museum's executive director. The West Chester Amateur Radio Club is a museum partner and operates WC8VOA from the museum.



The VOA-Bethany station in West Chester, Ohio, now a museum.

At the dedication of VOA-Bethany, FCC Commissioner Clifford Durr referred to the forest of towers on the site as "siege guns of radio...that can hurl explosive facts against the enemy's weapons of lies and confusion... They are also potential guns of peace." Helped by an array of rhombic antennas, VOA-Bethany station transmitted news to Europe during World War II and to South America during the Cold War. The federal government decommissioned the Bethany station in 1994.

"The men and women who made up the VOA broadcasting system were our journalistic

beacons of light during the 20th century," said Ken Rieser, president of the VOA Museum board. "Elmer Davis, John Houseman, Edward R. Murrow, and Robert Bauer all had positions of leadership within the VOA."

Today the VOA is the world's largest international broadcaster, transmitting news and information in 47 languages to 236 million people each week, according to the VOA website. The National VOA Museum of Broadcasting, located in the art deco Bethany station building, houses three collections -- the Gray History of Wireless radios, VOA-Bethany station's Voice of America control room, and the Media Heritage Cincinnati Museum of Broadcast History.



Siege guns: VOA-Bethany's six transmitters were connected to dozens of large antennas spread across a 1-square-mile area. Many people may recall seeing these towers as they drove past on Interstate 75.

The National VOA Museum of Broadcasting is open on the third Saturday of each month -- including February 18 -- from 1 to 4 PM Eastern Time. [For more information](#), visit the VOA Museum website.

Alaska's HAARP Facility Once Again Open for Business

The High Frequency Active Auroral Research Program ([HAARP](#)) in Gakona, Alaska, will soon undertake its first scientific research campaigns since the facility was taken over by the University of Alaska Fairbanks (UAF) Geophysical Institute 18 months ago. Among the investigators is UAF Researcher Chris Fallen, KL3WX, who will be working under a National Science Foundation [grant](#), "RAPID: Spatiotemporal Evolution of Radio-Induced Aurora." Fallen says the HAARP transmissions will take place within the facility's transmitter tuning range of 2.7 to 10 MHz and should be audible outside of Alaska, and may even produce visible effects within the state.

"This time my experiments will largely focus on artificial radio-induced airglow that potentially can be photographed from nearly anywhere in Alaska -- weather permitting," Fallen told ARRL. "I plan to start and stop each experiment block with an audio Luxembourg-style broadcast -- transmitting two amplitude-modulated carrier waves at different frequencies separated by about 1 MHz, with the

resulting skywave signal being a mix of both frequencies."

Fallen said that he has prior success reproducing the "Luxembourg effect" using two DTMF tones. "But this time, I have a short, simple musical composition recorded by a local musician," he said. "It was composed specifically to take advantage of the Luxembourg effect."

According to UAF, Fallen, an assistant research professor in space physics, will create an "artificial aurora" that can be photographed with a sensitive camera within Alaska. The phenomenon has been created in the past above HAARP during certain types of transmissions.

Just which HF frequencies Fallen will use won't be determined until shortly before he begins his research. "The specific frequency chosen during a particular experiment depends on the experiment's objectives, FCC regulations, and ionospheric conditions at the time," Fallen explained. He will use ionosonde data to guide frequency selection.

In his explanatory Gakona HAARPoon 2017 [blog](#), Fallen explains that HAARP scientists use the ionosonde to estimate two important parameters: (1) the amount of low-level ionosphere D-region HF radio absorption that frequently occurs due to natural, but not well understood, processes that prevent HAARP radio wave energy from reaching the higher ionosphere E and F regions; and, (2) the ionosphere vertical "critical frequency" [sometimes referred to as f_oF_2], above which any radio transmissions pass through the ionosphere into space rather than being reflected or absorbed."



UAF Assistant Professor Chris Fallen, KL3WX. [Photo courtesy of UAF]

Fallen said experiment times and frequencies for his airglow and Luxembourg experiments will be updated on his blog and on his Twitter account linked in the blog. He encourages radio amateurs and SWLs to record the events they hear and post reports to social media or [e-mail](#) him.

Built and operated by the US Air Force until August 2015, HAARP includes a 40-acre grid of antennas and a very high-power array of HF transmitters to conduct ionospheric research. Later this month, scientists will use HAARP to conduct other experiments that will include a study of atmospheric effects on satellite-to-ground communications and over-the-horizon radar experiments.

Research funding agencies also include the US Department of Energy's Los Alamos National Lab and the Naval Research Laboratory. HAARP also has a [Facebook page](#).



Part of the vast HAARP antenna array with the control center in the background, set against the majesty of the Alaska landscape.

Membership in **The Bridgerland Amateur Radio Club, Inc. (BARC)** is open to anyone interested in Amateur Radio. You do not need an amateur license to join. Learn more online at <http://www.barconline.org/>.

Students receive free membership while they are in school.

BARC provides the following to its members:

- A repeater system that covers northern Utah from Bear Lake to Salt Lake Valley.
- Public Service Events where you can practice your radio skills in a fun learning environment.
- Club meetings are held the second Saturday each month; October, November and January through May. An opportunity to meet and learn from other amateur operators.
- Social activities where members can make friends and interact with other members.



Your tax deductible membership supports club activities and the BARC repeater system.



The Bridgerland Amateur Radio Club, Inc.

Membership application for the year 2017

Dues are in effect January 1, 2017 through December 31, 2017

Please indicate if you or family member is an American Radio Relay League (ARRL) member

Name _____ Call Sign _____ Date Paid _____

ARRL member

P.O. Box _____ Street Address _____

City _____ State _____ Zip Code _____

Phone () _____

E-mail _____
 (The club's newsletter, THE OHM TOWN NEWS, is sent to your E-mail Address)

Student Membership (no cost while you are in school, give school name and year graduating)

_____ *Your School* _____ *Year Graduating*

Individual Membership - \$25 \$ _____

Addition Family members in same household - \$3 ea \$ _____

Donation for Repeater upgrades / equipment purchases \$ _____

Total \$ _____

Names and Call Signs of additional family members

Name _____ Call Sign _____

E-mail _____ ARRL member

Name _____ Call Sign _____

E-mail _____ ARRL member

Mail your completed form and a check to: B.A.R.C., P.O. Box 111, Providence UT 84332-0111 or pay online at <http://barconline.org/join-barc/> via PayPal

B.A.R.C. is a non-profit 501(c)(3) organization



Bridgerland Amateur Radio Club
is an ARRL affiliated club

Questions for The Technician Class License

1. (T1C08) What is the normal term for an FCC-issued primary station/operator amateur radio license grant?
 - A. Five years
 - B. Life
 - C. Ten years
 - D. Twenty years
2. (T2B08) Which of the following applies when two stations transmitting on the same frequency interfere with each other?
 - A. Common courtesy should prevail, but no one has absolute right to an amateur frequency
 - B. Whoever has the strongest signal has priority on the frequency
 - C. Whoever has been on the frequency the longest has priority on the frequency
 - D. The station which has the weakest signal has priority on the frequency
3. (T3C01) Why are direct (not via a repeater) UHF signals rarely heard from stations outside your local coverage area?
 - A. They are too weak to go very far
 - B. FCC regulations prohibit them from going more than 50 miles
 - C. UHF signals are usually not reflected by the ionosphere
 - D. They collide with trees and shrubbery and fade out
4. (T4B09) Which of the following is an appropriate receive filter bandwidth to select in order to minimize noise and interference for SSB reception?
 - A. 500 Hz
 - B. 1000 Hz
 - C. 2400 Hz
 - D. 5000 Hz
5. (T5C06) What does the abbreviation “RF” refer to?
 - A. Radio frequency signals of all types
 - B. The resonant frequency of a tuned circuit
 - C. The real frequency transmitted as opposed to the apparent frequency
 - D. Reflective force in antenna transmission lines
6. (T6A07) What electrical component is usually composed of a coil of wire?
 - A. Switch
 - B. Capacitor
 - C. Diode
 - D. Inductor
7. (T7A07) What is meant by term “PTT”?
 - A. Pre-transmission tuning to reduce transmitter harmonic emission
 - B. Precise tone transmissions used to limit repeater access to only certain signals
 - C. A primary transformer tuner use to match antennas
 - D. The push to talk function which switches between receive and transmit
8. (T8D01) Which of the following is an example of a digital communications method?
 - A. Packet
 - B. PSK31
 - C. MFSK
 - D. All of these choices are correct
9. (T9B07) Which of the following is true of PL-259 type coax connectors?
 - A. They are preferred for microwave operation
 - B. They are water tight
 - C. They are commonly used at HF frequencies
 - D. They are a bayonet type connector
10. (T0C08) Which of the following actions might amateur operators take to prevent exposure to RF radiation in excess of FCC-supplied limits?
 - A. Relocate antennas
 - B. Relocate the transmitter
 - C. Increase the duty cycle
 - D. All of these choices are correct

(For answers to test questions see bottom of page [15](#))

BARC Club Officers

President

Cordell Smart KE7IK
president@barconline.org
(435) 245-4581

Vice President

Ted McArthur AC7II
ac7ii33@gmail.com
(435) 770-9169

Secretary

Tammy Stevens N7YTO
secretary@barconline.org
(435) 753-2644

Treasurer

Kevin Reeve N7RXE
treasurer@barconline.org
(435) 753-1645

Board Members

Tyler Griffiths N7UWX
N7UWX@comcast.net
(435) 881-3834

Chris Clement K7CTC
K7CTC@icloud.com
(661) 208-6431

Mitch Smith N7USU
n7usu@mitchsmith.me
(435) 764-4828

Richard Elwood KE7GYD
r.d.elwood@gmail.com
(435) 753-4360

Newsletter Editor

Dale Cox KB7UPW
newsletter@barconline.org
(435) 757-4063

Web Page Editors

Kevin Reeve N7RXE and Bob Wood WA7MXZ
webmaster@barconline.org



Answers to questions on page [14](#): 1-C, 2-A, 3-C, 4-C, 5-A, 6-D, 7-D, 8-D, 9-C, 10-A