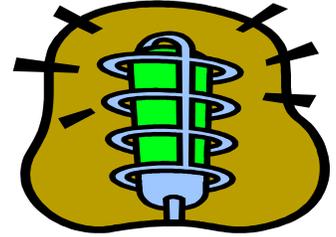




THE LED

Published by The Livingston Amateur Radio
Klub



February 2006

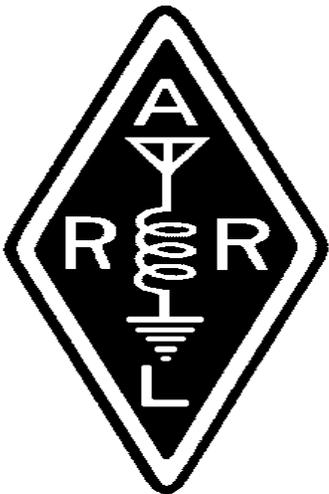
Livingston Amateur
Radio Klub
PO Box 283
Howell, Michigan
48844

www.qsl.net/milark

146.680
SUNDAY 9PM

CLUB CALL IS: W8LRK

NEXT KLUB MEETING
February 9th 7:30PM at the EOC,
Highlander Way, Howell, MI



BOARD MEMBERS

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LED Editor	Jim	WB8AZP
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PIO Officer	Jim	N8ENX

SOCIAL EVENTS

4 Feb 2006 H.A.R.A. Swap and Shop Hiawatha Amateur Radio Association <http://www.qsl.net/k8lod/> Talk-In: 147.27 (PL 100) Contact: Robert Serfas, N8PKN 1600 Bayview Drive Marquette, MI 49855 Phone: 906-225-6773 Email: N8PKN@aol.com

11 Feb 2006 Annual Swap-n-Shop Cherryland Amateur Radio Club <http://www.carc.tc> Talk-In: 146.86 Contact: Joe Novak, W8TVT 201 South Spruce Street Traverse City, MI 49684 Phone: 231-947-8555 Email: jjnovak@charter.net

12 Feb 2006 Mansfield Mid*Winter Hamfest and Computer Show InterCity Amateur Radio Club <http://www.iarc.ws> Talk-In: 146.94 - (PL 71.9) Contact: Dean Wrasse, KB8MG 1094 Beal Road Mansfield, OH 44905 Phone: 419-589-2415 (after 10:30 AM) Email: deanwrasse@yahoo.com

19 Feb 2006 Livonia Amateur Radio Club <http://www.larc.mi.org> Talk-In: 145.350 (-) Contact: William Johnston, W8WSJ PO Box 51532 Livonia, MI 48151-5532 Phone: 734-673-5071 Fax: 248-486-6401 Email: swap2006@larc.mi.org

PREZ SAYS



"Why not attend a meeting in person, or at least join us for breakfast on the first and third Saturday of the month? Amateur Radio needs your involvement to help keep it an important hobby and public service."

73, from your President, Art KC8WAZ

LARK SOCIAL NOTES

K Dinner before the Meeting (DBTM)

ck on the 146.68 repeater



Secretary's Report General Meeting

Not Available at press time

SECRETARY'S REPORT LARK Board Meeting Board Minutes

Not Available

TREASURER REPORT

Not available at press time

Saturday Morning Breakfast!

Ray N8CPO

A Saturday morning breakfast and gab session for the local hams had been brought up on several occasions. Ron K8RDR came across a book he thought I would enjoy and suggested we meet for breakfast. I suggested we invite all the hams to meet us and he agreed. Ron picked a Leo's on Grand River in Howell. I got Jon KC8VAB to put a message on the DVR and Jim WB8AZP and I both sent out emails promoting the get-together.

Six hams showed up and we had a great time. A couple guys showed up that cannot normally make the Thursday night LARK meeting. Some of the guys had never met each other. It was good to see friends some of us hadn't seen in many months. The conversation varied from ham radio, work happenings, conversations on the repeater and the weather to name a few. The get-together lasted almost two hours. All had a great time!

Before parting we took a consensus and agreed to get-together on the first and third Saturdays of the month at 8:00 AM. The next meeting will be at the Crossroads Grill 138 W. Highland Rd, Howell. Crossroads Grill is located in the west end of the Kroger shopping center at M-59 and Oak Grave Rd.

Those in attendance were: Ron K8RDR, Wayne AB8MI, Van N8GVD, John K8OCL, Jim WB8AZP and Ray N8CPO.

EDITORS COMMENTS



Welcome to February! Don't forget Valentine's day!

Articles

We still need YOUR articles for the newsletter. Swap items, favorite stories, magical operating moments, remembering your first rig, the time your transmitter set off all the fireworks, swap and for sale items, favorite recipes, antenna projects, when you first discovered that you were metabolically challenged, or whatever. While I appreciate those who forward previously published material, it clearly isn't new and fresh, like something you create yourself. Need a suggestion for a good article? Just call! Need help writing it down? We can assist you. In case the thought of Valentine's Day has you thinking about romance, and you just can't seem to remember how to reach me:

Jim Kvochick WB8AZP
10366 Greystone Court
Brighton, MI 48114-7650

810-220-2098 Voice
810-220-2126 Fax
330-283-7070 Cellular

WB8AZP@ARRL.NET

146.680 MHz most evenings

50/50 Plus Drawings

If you haven't attended a recent regular meeting, then you've missed out on fabulous prizes that are given away along with splitting the raffle pot. Ask a member who has attended for the low down. Better yet, why not show up at the next regular meeting? Regardless, the 50/50 drawing is a great way to help support the Klub, and the extra prizes give everyone a chance to win! This month, some really special prizes donated by another LARK member!

SUNDAY EVENING NET ON 146.68

Let's not forget about the Sunday evening LARK net on 146.68 at 9PM.

It's a great time to connect with other LARK members, share information, and just in general gather on the repeater. My thanks to all of you who have made an effort to check in!

TECHNICAL COMMITTEE

The technical team has been very busy during the cold months planning for warmer days. If you need to find them, give them a call on the air. Funding snags are definitely setting back the progress of the remote receiver project. Several other projects are moving forward, however.

OTHER COMMENTS

Our PR campaigns are starting to bear fruit. Come to a meeting and see for yourself.

Ray, N8CPO, took it upon himself to organize the first LARK breakfast in January. Thanks Ray, for moving this project along. We enjoyed food and fellowship with 6 or so other hams that we don't always get a chance to see at the LARK meetings. The next breakfasts are scheduled for the 1st and 3rd Saturday of the month, at the Crossroad Diner in Howell, in the same plaza as the Kroger store. They are shooting for a 8AM start time, so come on over, and grab some food and visit!

See you at the next meeting, right? (Even if you're not a member now, you can become one!) Need a ride to the meeting? We'll send someone to get you! Need someone to buy you dinner before the meeting? We can probably take care of that, too. Not sure if you have enough change to buy yourself a refreshing beverage at the meeting? We'll handle that for you as well. Afraid the room will be too cold for you? Bring your blanky. Dress is casual, so don't worry about digging out your Tux or Formal. We have plenty of seats in the front (or back) row for you. Do you have another unique excuse for not attending the meeting? Why not share it with others, in a lovely article for the newsletter?

Public Service Corp

We finally have received most of the equipment for the four district trailers. The only missing equipment is the coax! We will form a work party in the near future to get the equipment installed, probably in January. I will sending out an email with the date and time and will also post the information on the DVR. This equipment came through a federal grant by the CDC to the First District Regional Medical Coalition. Livingston County EMS currently has possession of one of the trailers. The others are assigned to Gratiot, Eaton and Lenawee Counties.

1. Once this is accomplish I would like have training on the use and setting up of the equipment with all of the members.
2. I would also like to set up a call up list of those who would be available to travel with the Livingston County trailer to other parts of the district to run the amateur equipment and the public safety radio equipment.

We have also received the equipment for our two SPARK Kits and again we will be forming a work party for this equipment to be organized, also some time in January.

The 2006 Livingston County Skywarn Class will be hosted by Hamburg Township Fire Department, 3666 East M-36, Hamburg, MI on March 8, 2006 at 7:00pm. Please mark you calendars.

Sometime either the last part of July or first part of August 2006, the First District Regional Medical Coalition will be holding another full scale exercise. I believe amateurs will be involved with this exercise throughout the district. I will keep you updated as I get more information.

Bruce Pollock, N8WWX, EC/RO



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FEATURE

SuitSat

01.26.2006

Using a simple police scanner or ham radio, you can listen to a disembodied spacesuit circling Earth.

January 26, 2006: One of the strangest satellites in the history of the space age is about to go into orbit. Launch date: Feb. 3rd. That's when astronauts onboard the International Space Station (ISS) will hurl an empty spacesuit overboard.

The spacesuit *is* the satellite -- "SuitSat" for short.

"SuitSat is a Russian brainstorm," explains Frank Bauer of NASA's Goddard Space Flight Center. "Some of our Russian partners in the ISS program, mainly a group led by Sergey Samburov, had an idea: Maybe we can turn old spacesuits into useful satellites." SuitSat is a first test of that idea.



Right: ISS astronaut Mike Finke spacewalks in a Russian Orlan spacesuit in 2004. SuitSat will have no one inside. [\[More\]](#)

"We've equipped a Russian Orlan spacesuit with three batteries, a radio transmitter, and internal sensors to measure temperature and battery power," says Bauer. "As SuitSat circles Earth, it will transmit its condition to the ground."

Unlike a normal spacewalk, with a human inside the suit, SuitSat's temperature controls will be turned off to conserve power. The suit, arms and legs akimbo, possibly spinning, will be exposed to the fierce rays of the sun with no way to regulate its internal temperature.



"Will the suit overheat? How long will the batteries last? Can we get a clear transmission if the suit tumbles?" wonders Bauer. These are some of the questions SuitSat will answer, laying the groundwork for SuitSats of the future.

SuitSat can be heard by anyone on the ground. "All you need is an antenna (the bigger the better) and a radio receiver that you can tune to 145.990 MHz FM," says Bauer. "A police band scanner or a hand-talkie ham radio would work just fine." He encourages students, scouts, teachers and ham radio operators to tune in.

For years, Bauer and colleagues at Goddard have been connecting kids on Earth with astronauts on the ISS through the ARISS program (Amateur Radio on International Space Station). "There's a ham rig on the ISS, and the astronauts love talking to students when they pass over schools," Bauer explains. ARISS is co-sponsoring SuitSat along with the Radio Amateur Satellite Corporation (AMSAT), the American Radio Relay League (ARRL), the Russian Space Agency and NASA.

Right: Tune your FM radio to 145.990 MHz.

When will SuitSat orbit over your home town?

Use Science@NASA's [J-Pass](#) utility to find out. The online program will ask for your zip code—that's all. Then it will tell you when the ISS is going to orbit over your area. (Be

SuitSat will find that SuitSat passes overhead once or twice a day—usually between midnight and 4 o'clock in the morning. At that time of day, SuitSat and the ISS will be in Earth's shadow and, thus, too dark to see with the naked eye. You'll need a radio to detect them.

"Point your antenna to the sky during the 5-to-10 minute flyby," advises Bauer, and this is what you'll hear:



SuitSat transmits for 30 seconds, pauses for 30 seconds, and then repeats. "This is SuitSat-1, RSORS," the transmission begins, followed by a prerecorded greeting in five languages. The greeting contains "special words" in English, French, Japanese, Russian, German and Spanish for students to record and decipher. (Awards will be given to students who do this. Scroll to the "more information" area at the end of this story for details.)

Next comes telemetry: temperature, battery power, mission elapsed time. "The telemetry is stated in plain language—in English," says Bauer. Everyone will be privy to SuitSat's condition. Bauer adds, "Suitsat 'talks' using a voice synthesizer. It's pretty amazing."

The transmission ends with a Slow Scan TV picture. Of what? "We're not telling," laughs Bauer. "It's a mystery picture." (More awards will be given to students who figure out what it is.)



Right: In a laboratory at Goddard, SuitSat bends over to display its antenna and control box. [[More](#)]

Students and teachers who want to try this, but have no clue how to begin, should contact their local ham radio club. There are thousands of them around the country. [Click here](#) to find a club near you. "Hams are notoriously outgoing; most would be delighted to help students tune in to SuitSat," believes Bauer.

Bauer expects SuitSat's batteries to last 2 to 4 days. "Although longer is possible," he allows. After that, SuitSat will begin a slow silent spiral into Earth's atmosphere. Weeks or months later, no one knows exactly when, it will become a brilliant fireball over some part of Earth—a fitting end for a trailblazer.

More Information

[This is SuitSat-1!](#) -- an overview of the SuitSat mission by Frank Bauer.

Students and teachers: How do you get your Suitsat awards? Frank Bauer explains: "Those that hear SuitSat should send their signal reports with a large (9x12 inch) self-addressed stamped envelope to one of the addresses listed below."

- **USA:** ARRL Headquarters SuitSat QSL 225 Main Street Newington, CT 06111-

1494 USA

- **Canada:** Radio Amateurs of Canada SuitSat QSL 720 Belfast Road, Suite 217 Ottawa Ontario K1G 0Z5
- **Europe:** F1MOJ - Mr CANDEBAT Christophe SuitSat Europe QSL Manager 7 Rue Roger Bernard 30470 AIMARGUES FRANCE
- **Japan:** SuitSat Japan QSL JARL International Section Tokyo 170-8073 JAPAN
- **Russia:** Alexander Davydov, RN3DK Novo - Mytishchinsky prospekt 52 - 111 Mytishchi 18, Moskovskaya obl. 141018, RUSSIA
- **Other countries,** please use the US or Canadian address above.

"Students will get a certificate commemorating their reception. Those that receive the picture or copy the special words will get a special endorsement on their certificate."

[\[more\]](#)

This guy is working on the buses and collecting tickets. He rings the bell for the driver to set off when there's a woman half getting on the bus. The driver sets off; the woman falls from the bus and is killed.

At the trial the guy is sent down for murder and seeing as it's Texas he's sent to the electric Chair. On the day of his execution he's sat in the chair and the executioner grants him a final wish. "Well" says the man, "is that your packed lunch over there?" "Yes" answers the executioner. "Can I have that green banana?"

The executioner gives the man his green banana and waits till he's eaten it.

When the man's finished, the executioner flips the switch sending hundreds of thousands of volts through the man. When the smoke clears the man is still alive.

The executioner can't believe it. "Can I go?" the man asks. "I suppose so" says the executioner, "that's never happened before."

The man leaves and eventually gets his job back on the buses selling tickets. Again he rings the bell for the driver to go when people

are still getting on. A man falls under the wheels and is killed. The bloke is sent down for murder again and sent to the electric chair. The executioner is determined to do it right this time so rigs the chair up to the electric supply for the whole of Texas. The bloke is again sat in the chair.

"What is your final wish?" asks the executioner.
"Can I have that green banana in your packed lunch?" says the condemned man. The executioner sighs and reluctantly gives up his banana.

The guy eats the banana all up and the executioner flips the switch. Millions of volts course through the chair blacking out Texas. When the smoke clears the man is still sat there smiling in the chair. The executioner can't believe it and lets the man go.

Well, would you believe, the bloke gets his job back on the buses. Once again he rings the bell whilst passengers are still getting on, this time killing three of them. He is sent to the electric chair again. The executioner rigs up all the worlds' electricity to the chair, determined to get his man this time. The man sits down in the chair smiling. "What's your final wish?" asks the executioner.

"Well" says the man, "Can I have that green banana out of your packed lunch?"

The executioner hands over his banana and the man eats it all, skin included. The executioner pulls the handle and a zillion million trillion volts go through the chair. When the smoke rises the man is still sat there alive without even a burn mark.

"I give up" says the executioner, "I don't understand how you can still be alive after all that?" He stroked his chin. "It's something to do with that green banana isn't it" he asked "Nahh" said the bloke,

-
-
-
-
-

"I'm just a really bad conductor"

(Editor's note: It wasn't original, but at least it was a submission I didn't have to type all over!)

SWAP & SHOP

For Sale: Alinco DX70 HF rig w/ 6meters...100watts on all bands... I have the cable for detaching the front plate. I also have the ext. cable for the mike. This radio is probably a 9 out of 10 It still has the plastic on the display. it comes with everything it did new. The mike, dc power cord and the manual, and the box. I would like to get about 475.00 for this. It will make someone a nice mobile or even a base. Contact me at aa5go@amsat.org if you're interested. Tnx and 73 Greg

I have a Heil good line mike with the GM-4 cartridge in it. I have the cable for the Icom radio and a boom. This is not a shock boom but it is just as large. It is all in good shape. The mike is 149.00

new at AES right now, the boom was about 40.00 and the mike cord was about 15.00. To buy all of this new from AES would be about 200.00 with shipping. Would like 100.00 Contact me at aa5go@amsat.org 73 and thanks for reading. Greg

For Sale: A like brand new Tri-Ex LM354HD Tower. This tower is a very heavy duty and would take almost any kind of antenna array that you could put on it. This tower still glistens in the sun it is in such good shape. It is a beautiful site. This tower nests at about 22 feet and cranks out to about 54 or 55 ft. This tower belongs to a silent keys widow. She has asked me to try to help her sell this. This tower weighs 875lbs so it will take a decent trailer to move it with. The cost of this tower new was 3,450.00..... She would like to get 1,300.00 for this. If you are interested in this please contact me either on the repeater or on the computer at aa5go@amsat.com tnx and 73 Greg

JBA MEETING

Happy New Year to one and all. Just a friendly reminder that we are going to be having our first meeting of the year on Wednesday the 8th of Feb at 7:30 p.m. I have pushed the start time back 30 minutes so that we can accommodate our VE Session. I have heard from at least 2 people that they will be attending to take exams. As always you can arrive early and enjoy some chat time with people you may not have seen face to face in while.

There are no speakers scheduled for this meeting so I thought we might take the opportunity to discuss Field Day endeavors of other training topics that we can look forward to. Another great topic would be to talk about creative solutions to these terrible band conditions that we have been suffering through.

Steve N8GQ

==>"SUITSAT-1" LAUNCHED FROM ISS

"SuitSat-1" is orbiting Earth! ISS Expedition 13 flight engineer Valery Tokarev released the unique and enthusiastically anticipated satellite into orbit February 3 at 2303 UTC as he and ISS Expedition 12 Commander Bill McArthur, KC5ACR, began a six-hour space walk. SuitSat-1 consists of a

discarded Russian Orlan spacesuit reconfigured to function as a free-floating Amateur Radio transmit-only satellite. Activated at 2259 UTC, the satellite was programmed to come to life some 16 minutes later on 145.99 MHz. The 16-minute delay is said to be a crew safety measure. SuitSat-1's deployment over the south-central Pacific Ocean was the first task of the space walk.

"Dosvidanya! Good-bye, Mr Smith!" Tokarev said in Russian as SuitSat, unhooked from its tether and pushed away from the space station, tumbled slowly away into the void. "It's moving at the specified acceleration." A project of the Amateur Radio on the International Space Station (ARISS) program <<http://www.rac.ca/ariss>>, SuitSat drifted off until it appeared as a mere speck silhouetted against brightly illuminated Earth below.

The NASA trajectory operations officer at Mission Control called it "a good deploy within the cone for safety to ensure no re-contact with the International Space Station." NASA-TV provided live coverage of the space walk and SuitSat-1's release.

The Amateur Radio community, students, scanner enthusiasts, space fans and others have been eagerly awaiting the launch of the most novel satellite ever to orbit Earth. SuitSat-1 will transmit its voice message "This is SuitSat-1 RSORS!" in several languages plus telemetry and an SSTV image on an eight-minute cycle as it orbits Earth. The three batteries powering the satellite are expected to last about a week, and SuitSat-1 should re-enter Earth's atmosphere after several weeks of circling the globe.

SuitSat-1's 500 mW transmitter will report mission time, suit temperature and battery voltage (28 V is nominal) down to Earth. Its single Robot 36-format SSTV image is said to be similar in resolution to a cell-phone quality picture. SuitSat-1's signal should be strong enough to hear using a VHF transceiver or scanner and a simple antenna. Its payload also includes a CD containing hundreds of school pictures, artwork, poems and student signatures. JH3XCU/1 in Japan posted the first reception reports, noting a weak signal.

Those who copy the SuitSat-1 transmissions on 145.99 MHz are asked to post a real-time report on the SuitSat Web site <<http://www.suitsat.org/>>, which contains additional informational links. Initially, its orbit will approximately coincide with that of the ISS. Later, as SuitSat-1's orbit begins to decay, it may show up a few minutes earlier than the space station. The AMSAT Web site offers a listing of ISS passes <<http://www.amsat.org/amsat-new/tools/predict/>> and a graph showing the position of the ISS <<http://www.amsat.org/amsat-new/tools/predict/satloc.php?lang=en&satellite=ISS>>. ARISS invites schools and other educational groups--formal or otherwise--to post educational outreach reports and SSTV images via e-mail <suitsat@comcast.net>

ARISS International Chairman Frank Bauer, KA3HDO, credits ARISS-Russia's Sergei Samburov, RV3DR, and his colleagues with coming up with the spacesuit-cum-satellite concept. SuitSat-1--called Radioskaf or Radio Sputnik in Russian--is a first test of that idea, he says. If successful, there's another unneeded Orlan spacesuit still aboard the ISS.

For a SuitSat-1 QSL, send signal reports accompanied by a large (9x12 inch) self-addressed, stamped envelope to the appropriate address:

* USA: ARRL, SuitSat QSL, 225 Main St, Newington, CT 06111-1494 USA

* Canada: Radio Amateurs of Canada, SuitSat QSL, 720 Belfast Rd--Suite 217, Ottawa, ON K1G 0Z5 Canada

* Europe: FlMOJ - Mr CANDEBAT Christophe, SuitSat Europe QSL Manager, 7 Rue Roger Bernard, 30470 AIMARGUES FRANCE

* Japan: SuitSat Japan QSL, JARL International Section, Tokyo 170-8073 JAPAN

* Russia: Alexander Davydov, RN3DK Novo-Mytishchinsky prospekt 52-111 Mytishchi 18, Moskovskaya obl. 141018, RUSSIA

* Other countries: Use the US or Canadian address above.

Students will receive a certificate commemorating their reception. Those who receive the SSTV picture or copy the "special words" will get a special endorsement on their certificate. The special words--in English, French, German, Spanish, Russian and Japanese--are embedded in the pre-recorded greetings in multiple languages from students around the globe.

SuitSat-1 has piqued the imagination of the news media over the past couple of weeks. In addition to articles in The New York Times, the Houston Chronicle and Associated Press, National Public Radio, Fox News, CNN, the Canadian Broadcasting Corporation, MSNBC and others also produced broadcast or cable news reports. A magazine article is set to appear in Aviation Week and Space Technology.

Additional information about SuitSat on the AMSAT Web site <<http://www.amsat.org/amsat-new/articles/SuitSat/>>. See "This is SuitSat-1 RSORS!" by Frank Bauer, KA3HDO <<http://www.amsat.org/amsat-new/articles/BauerSuitsat/index.php>>.

ARISS is an international educational outreach with US participation from ARRL, AMSAT and NASA.

==>LEAGUE URGES NEW YORK MEMBERS TO PROTEST STATE GRANT TO TROUBLESOME BPL TRIAL

ARRL Directors Frank Fallon, N2FF, of the Hudson Division and Bill Edgar, N3LLR, of the Atlantic Division have called on the League's New York membership to protest a state grant to help fund a problematic BPL pilot project. ARRL learned this week that the New York State Energy Research and Development Authority (NYSERDA) has contracted with electric utility Consolidated Edison (ConEd) and BPL manufacturer Ambient to provide up to \$200,000 in funding for a BPL pilot in the Westchester County community of Briarcliff Manor.

"If you share our dismay that NYSERDA's funds are being used to support a known source of radio spectrum pollution, write to Gov Pataki and NYSERDA President Peter Smith to demand that the State of New York use its influence to ensure that the Briarcliff Manor BPL project is either brought into compliance with the FCC rules immediately or shut down," Fallon and Edgar said in a joint statement to New York ARRL members.

The Briarcliff Manor project has been the subject of a string of complaints to the FCC, including several requests from the ARRL--the last filed just last month--to shut down the project until it complies with FCC rules.

Fallon and Edgar called on ARRL members in the Empire State to write Gov George E. Pataki, State Capitol, Albany, NY 12224 and Peter R. Smith, President, NYSEDA, 17 Columbia Circle, Albany, NY 12203-6399. Pataki is a former Amateur Radio licensee, K2ZCZ (since reissued).

ARRL CEO David Sumner, K1ZZ, points out that the League's concerns regarding the public grant have been on record with NYSEDA since June 2004, when Ambient prematurely announced a funding grant. Sumner said John Love, the NYSEDA project manager for the BPL grant, this week confirmed that a contract had been signed.

"I shared with him our disappointment at Ambient's involvement, given their miserable track record in Briarcliff Manor," Sumner said. In his conversation with Love, Sumner said he explained that Ambient was violating FCC rules in Briarcliff Manor by exceeding Part 15 emission limits, causing harmful interference in the amateur bands and failing to post required information in the public BPL system database.

Love "clearly didn't know much about the interference issue," Sumner said, adding that the official indicated NYSEDA's interest in BPL was as a means to improve the quality of electric power delivery. "However, he said the contract requires the parties to monitor and report on interference and its mitigation," Sumner noted. "I offered ARRL's technical resources to educate him."

On January 5, citing FCC inaction in response to previous complaints, the ARRL renewed its complaint to the Commission about the Ambient Corporation BPL project in Briarcliff Manor. The BPL system uses power lines owned and operated by ConEd under a Part 5 Experimental FCC authorization. The League requested that the FCC instruct the BPL facility's operators to shut it down immediately and not resume operation until it can demonstrate full compliance with all applicable FCC rules.

==>NASA, INTERNATIONAL PARTNERS TAP TWO HAMS AS NEXT SPACE STATION CREW

NASA and its International Space Station partners have announced that astronaut Jeff Williams, KD5TVQ, and cosmonaut Pavel Vinogradov, RV3BS, will be the ISS Expedition 13 crew. They'll arrive aboard the orbiting outpost in early April to relieve the current crew of ISS Commander Bill McArthur, KC5ACR, and Valery Tokarev. Vinogradov will be the Expedition 13 commander, while Williams, a US Army colonel who's logged one space flight, will serve as ISS flight engineer and NASA ISS science officer.

Brazilian astronaut Marcos Pontes will join Williams and Vinogradov aboard the Russian Soyuz spacecraft that will transport the new crew to the ISS. Vinogradov and Williams will spend six months on the station, while Pontes will spend eight days conducting research under a commercial agreement between the Brazilian Space Agency and the Russian Federal Space Agency. Brazilian telecommunications authorities have granted Pontes the call sign PY0AEB for use on his space journey, and there are plans for him to do Amateur Radio on the International Space Station (ARISS) school group contacts during his mission. He will return to Earth in April with McArthur and Tokarev, who have been in orbit since last October.

Scheduled to fly on the next NASA space shuttle mission is German astronaut Thomas Reiter, DF4TR. If NASA clears the shuttle for flight by June, Reiter would join Williams and Vinogradov aboard the ISS for the remainder of Expedition 13. It's considered likely that Reiter, who had been scheduled to be aboard the ISS for Expedition 12, will be active on Amateur Radio.

Williams flew aboard the shuttle Atlantis in May 2000 on a 10-day space station assembly mission. During that mission, he performed a spacewalk lasting almost seven hours.

Vinogradov, a veteran of one long-duration spaceflight, flew aboard a Soyuz spacecraft to the Russian Mir space station as flight engineer for the 24th resident crew in 1997. During the 198-day mission he performed five spacewalks.

ISS veteran Mike Fincke, KB5UAC, and Russian cosmonaut Fyodor Yurchikhin, RN3FI, have been designated as the Expedition 13 back-up crew.

==>LEAGUE CALLS ON FCC TO DENY PART 15 RULE WAIVER REQUEST FOR 902-928 MHZ

Expressing concerns about interference potential and increased noise levels, the ARRL this week asked the FCC to deny an industry request to waive three sections of its Part 15 rules. Octatron Inc and Chang Industry Inc sought the waivers last November to accommodate unlicensed analog video and audio surveillance products they're developing that would operate in the 902-928 MHz band--an Amateur Radio allocation. The FCC opened the proceeding, ET Docket 05-356, for comments in late December.

"The manufacturer here has made a choice as to how to engineer its product," the League said in comments filed January 30. "It now seeks to avoid a series of rules specifically intended to limit interference potential of analog devices in a band allocated to various licensed radio services simply because it deliberately engineered the device in a particular manner."

The decision by Octatron and Chang Industry to employ analog, rather than digital, emissions at 1 W is at the heart of the waiver request. Section 15.247(b)(3) permits a 1 W power level for digital and spread-spectrum devices, but not for analog. The companies say they need 1 W to ensure reliable transmission. Digital devices still must meet the Part 15 power spectral density limitation, the League pointed out.

"Neither can either device meet the power spectral density requirement of Section 15.247(e), applicable to digital intentional radiators which engage in continuous transmissions," the League contended. "Finally, the devices cannot meet the specifications for high-power, point-to-point operation in certain bands using highly directional antennas set forth in Section 15.249 of the Commission's rules."

The League took issue with the manufacturers' unsupported assertion that the surveillance systems "will not create significant interference."

"Since the petitioners have apparently failed to determine, much less explain, the interference potential of their devices, it cannot be determined whether or not the underlying purposes of the rules limiting power and power spectral density for analog and digital devices in the 902-928 MHz band would be frustrated by a grant of the proposed waiver in this case," the League continued. "A waiver cannot be granted without such a finding."

The ARRL argued that given their potential to interfere with licensed services in the 902 to 928 MHz band, they should instead be operated in a Public Safety allocation, such as 2450 to 2483.5 MHz, and on a licensed basis.

"The precise purpose of the rules sought to be waived here was to preclude interference before it arises," the League said. "The purpose of this rule would be directly frustrated by permitting, without rulemaking, high-power analog devices that cannot meet the power spectral density limitation of Section 15.247(e)."

The petitioners fail to show that the devices could not have been designed to meet FCC rules, the League said, adding that it appears the lower cost of manufacturing analog devices is apparently the reason why they're seeking the waivers. "This is not a valid basis for a waiver grant," the ARRL said.

Granting "repeated waivers" for Part 15 analog devices that don't meet the fundamental interference-avoidance requirement of the power spectral density limit, the League concluded, "adds to the aggregate noise levels in the subject bands and contributes to the already prevalent 'tragedy of the commons' interference problems" in bands such as 902-928 MHz.

==>AMATEUR RADIO ANTENNA BILLS IN PLAY IN MISSISSIPPI, VERMONT

Legislation is under consideration in Mississippi and Vermont to incorporate the essence of the limited federal preemption known as PRB-1 <http://www.arrl.org/FandES/field/regulations/PRB-1_Pkg/prb-1.pdf> into the statutes of those two states. Echoing the language of PRB-1, the measures call on localities establishing ordinances regulating antenna placement, screening or height to reasonably accommodate Amateur Radio communication and impose the minimum practicable regulation to accomplish the municipality's legitimate purposes. ARRL Mississippi Section Manager Malcolm Keown, W5XX, reports similar bills were introduced this session in the House and Senate. The Senate version has already passed and been sent on to the House.

"Since 2001, Mississippi hams have been trying to get a bill through the Mississippi Legislature to provide for 'reasonable accommodation for the erection of antenna structures' by local zoning boards and to separate us from the cellular telephone tower interests," Keown says. The Senate version of the PRB-1 legislation, SB 2709, cleared the County Affairs and Municipalities committees January 31, and it passed the full Senate February 1. The House version, HB 736, is on the House General Calendar for a vote there by February 9.

"We now have two horses in this race," Keown said this week, urging Mississippi ARRL members to urge their state senators and representatives to support the measures. "Keep your fingers crossed!" Assuming one of the PRB-1 measures succeeds in the House, minor differences in wording would be worked out in committee, Keown speculates. In past years, he says, a PRB-1 bill has made it through one legislative chamber only to die in committee in the other.

Both Mississippi PRB-1 bills leave it up to local governing authorities to determine "the types of reasonable accommodation to be made and the minimum practicable regulation necessary . . . within the parameters of the law." The House version includes an additional sentence: "This legislation supports the Amateur Radio Service in preparing for and providing emergency communications for the State of Mississippi and local emergency management agencies."

In Vermont, meanwhile, the House Government Operations Committee on February 2 heard public testimony on a PRB-1 bill introduced in the House, H.12. Several Amateur Radio operators attended the session along with

representatives from the Vermont League of Cities and Towns, which opposes such legislation, and several public safety officials.

The proposed Vermont antenna bill not only calls for community regulators to "reasonably accommodate" Amateur Radio communication, it includes a schedule of minimum regulatory heights, below which localities could not impose restrictions.

On lots smaller than one acre, municipalities could not restrict the overall height of an Amateur Radio antenna and associated support structure to less than 75 feet above ground level "nor restrict the number of support structures."

On parcels of one acre or larger, the bill, as written, would prohibit municipalities from restricting the height of an Amateur Radio antenna "to less than that specified in 47 CFR §97.15(a) nor restrict the number of support structures." That section of the Amateur Service rules actually does not specify a height, but it does require antenna structures more than 200 feet above ground to notify the Federal Aviation Administration and register the structure with the FCC.

In historic or design control districts, the Vermont bill would permit localities to restrict the height of antennas and associated support structures to less than 75 feet but would not allow them to prohibit Amateur Radio antennas and support structures altogether nor to limit their height to less than that of the tallest permitted structure within such a district.

The measure would grandfather existing Amateur radio antennas and support structures and provide for their repair or replacement "with comparable components" without further permitting or review.

To date, 21 states have enacted Amateur Radio antenna bills that reflect the PRB-1 limited federal preemption.

==>NOMINATIONS INVITED FOR 2005 ARRL TECHNICAL AWARDS

The League is accepting nominations from ARRL members and affiliated clubs for its three technical awards for the year 2005. The deadline is March 31 to submit nominations for the ARRL Technical Service Award, the ARRL Technical Innovation Award and the ARRL Microwave Development Award.

The ARRL Technical Service Award goes annually to a radio amateur whose service to the amateur community and/or society at large is of the most exemplary nature within the framework of Amateur Radio technical activities. These include, but are not limited to:

- * Leadership or participation in technically oriented organizational affairs at the local or national level.

- * Service as an ARRL technical volunteer.

- * Service as a technical advisor to clubs sponsoring classes to obtain or upgrade amateur licenses.

The Technical Service Award winner receives an engraved plaque. In addition, the winner may request ARRL publications of a value of up to \$100.

The ARRL Technical Innovation Award is presented each year to an Amateur Radio licensee whose accomplishments and contributions are the most

exemplary nature within the framework of technical research, development and application of new ideas and future systems. These include, but are not limited to:

- * Development of higher speed modems and improved protocols.
- * Promotion of personal computers in Amateur Radio applications.
- * Activities to increase efficient use of the amateur spectrum.
- * Digital voice experimentation

The technical innovation award winner receives a cash award of \$500 and an engraved plaque.

The ARRL Microwave Development Award is given each year to an individual radio amateur or group conducting research and activity and applying new and refined uses in the amateur microwave bands. This includes adaptation of new modes both in terrestrial formats and satellite techniques.

The Microwave Development Award winner receives an engraved plaque. In addition, the winner may request ARRL publications of a value of up to \$100.

Full information on these awards appears on the ARRL Technical Awards page <<http://www.arrl.org/FandES/ead/instructor/instructor/awards.html>>.

Nominations should thoroughly document the nominee's record of technical service and accomplishments. Include basic contact information for both you and the nominee when making nominations for any of these technical awards. Submit all supporting documentation or information along with a letter of nomination that includes endorsements of ARRL affiliated clubs and League officials.

Nomination forms for all three technical awards are available on the ARRL Web site <<http://www.arrl.org/FandES/ead/award/application.html>>. Send completed forms to ARRL Technical Awards, 225 Main St, Newington, CT 06111. Nominations must be received at ARRL Headquarters by March 31, 2006. Supporting information must be received at ARRL Headquarters by April 15.

For more information, contact Norm Fusaro, W3IZ, <w3iz@arrl.org> at ARRL Headquarters.

==>SOLAR UPDATE

Propagation prognosticator Tad "Don't Let the Sun Go Down on Me" Cook, K7RA, Seattle, Washington, reports: Solar activity is very low! Average daily sunspot numbers for the week were down by more than 40 points to 9.1. Average daily solar flux dropped nearly 11 points to 80.6. Geomagnetic conditions, with the exception of January 26, were stable and quiet. On January 26 the interplanetary magnetic field, which can shield Earth from solar wind if it is pointing north, turned south, and the mid-latitudes experienced some moderate geomagnetic activity, with the A index for the day at 15. Polar regions saw a lot more activity, with the College A index in Alaska going to 36.

The sun has been spotless since January 29, and daily readings of zero sunspots could continue for another week. We will observe more and longer periods such as this as we head toward the solar minimum, still expected about to occur about a year from now. Geomagnetic conditions should remain

quiet and solar flux at around 77. It may not begin to rise again until February 10.

Sunspot numbers for January 26 through February 1 were 24, 29, 11, 0, 0, 0 and 0, with a mean of 9.1. The 10.7 cm flux was 86.9, 83.5, 80, 79.5, 78.8, 77.6, and 77.6, with a mean of 80.6. Estimated planetary A indices were 29, 8, 6, 3, 1, 2 and 4, with a mean of 7.6. Estimated mid-latitude A indices were 15, 7, 4, 1, 0, 1 and 3, with a mean of 4.4.

==>IN BRIEF:

* ARRL Certification and Continuing Education course registration: Registration remains open through Sunday, February 5, for these ARRL Certification and Continuing Education (CCE) Program on-line courses: Amateur Radio Emergency Communications Level 2 (EC-002), Amateur Radio Emergency Communications Level 3 (EC-003), Antenna Modeling (EC-004), VHF/UHF Beyond the Repeater (EC-008), Radio Frequency Propagation (EC-011) and HF Digital Communications (EC-005). Classes begin Friday, February 17. To learn more, visit the CCE page <<http://www.arrl.org/cce>> or contact the CCE Department <cce@arrl.org>.

* ARRL Contest Advisory Committee releases white paper: The ARRL Contest Advisory Committee (CAC) has released a white paper, "HF Contesting--Good Practices, Interpretations and Suggestions" <<http://www.arrl.org/contests/hf-faq.html>>. The document, which discusses common situations encountered during HF contesting, results from CAC work that arose over the course of an informal committee meeting at Dayton Hamvention. While not a comprehensive set of "Frequently Asked Questions" (FAQ), the white paper does address many issues that periodically arise related to HF contesting and even some that may apply to VHF/UHF contesting. The white paper operates from an HF perspective, however, recognizing that there are many differences between HF and VHF/UHF contest practices. ARRL Contest Branch Manager Dan Henderson, N1ND, stresses that the white paper's interpretations do not supersede the rules for any contest but are intended to assist contesters by providing some interpretations and operating suggestions based on CAC members' accumulated experience.

* Injured miner Randy McCloy, KC8VKZ, moved to rehab facility: Randy McCloy, KC8VKZ, the sole survivor of the January 2 Upshur County, West Virginia, coal mine tragedy, has been transferred from the hospital to a rehabilitation center. McCloy, 26, was moved to HealthSouth Mountainview Regional Rehabilitation Hospital in Morgantown on January 26. McCloy's condition remains fair. He is no longer in a coma, although he remains unable to speak, according to his physician, Dr Larry Roberts. McCloy's fever has dropped and he has not needed kidney dialysis in the past few days. The explosion at Sago Mine killed 12 other miners and left the mine filled with deadly carbon monoxide. McCloy has been hospitalized for the past three weeks at West Virginia University's Ruby Memorial Hospital. Well-wishers have been sending cards and QSLs to McCloy at PO Box 223, Philippi, WV 26435. A fund has been set up to accept donations for McCloy's benefit: The Randal McCloy Jr Fund, c/o Clear Mountain Bank, 1889 Earl Core Rd, Morgantown, WV 26505.

* Scarborough Reef tops The DX Magazine's 2005 "Most Wanted" list: Scarborough Reef (BS7H) has replaced North Korea (P5) as the most-wanted DXCC entity, according to The DX Magazine's

<http://www.dxpub.com/dx_mag.html> 2005 survey of DXers. The Daily DX <<http://www.dailydx.com>> (and QST's "How's DX?") Editor Bernie McClenny, W3UR, says several groups are working toward activating Scarborough Reef. "The problem is not obtaining a license or transportation to the rocks," he reported this week. "There must be serious diplomacy between China and the Philippines in order for this one to be pulled off." The second most-wanted is Lakshadweep (VU7). Swapping spots with Scarborough Reef at number three is North Korea (P5), at four is Peter I (3Y/P), and at five is Yemen (70). The 3Y0X DXpedition to Peter I <<http://www.peterone.com/>>, expected to begin as early as February 6, could move that entity down the list for this year's survey. McClenny notes that the imminent 3Y0X operation, which received a \$7500 ARRL Colvin grant award, will be the most expensive DXpedition ever. Rounding out the top 10 most-wanted DXCC entities on The DX Magazine's 2005 survey were: Navassa (KP1), Desecheo (KP5), South Sandwich (VP8/S), Glorioso (FR/G) and Andaman and Nicobar Islands (VU4). The Andamans, last activated in late 2004 during the VU4RBI/VU4NRO DXpedition cut short by the South Asia tsunami, are scheduled to be on the air again this April.

* AMSAT Space Symposium set for October: The 2006 AMSAT Space Symposium will take place October 5-11 in the San Francisco Bay area (Crowne Plaza San Francisco Mid-Peninsula Hotel in Foster City). Registration will open and a first call for papers and presentations will be issued approximately April 1. This year's Symposium will include meetings of the AMSAT-NA Board of Directors, the AMSAT general membership, the Amateur Radio on the International Space Station (ARISS) international delegates, the International Amateur Radio Union (IARU) Satellite Advisors Committee and the AMSAT international delegates. Additional information is available on the AMSAT Web site <<http://www.amsat.org/amsat-new/symposium/>>.

* DXCC Desk approves operation for DXCC credit: The ARRL DXCC Desk has approved this operation for DXCC credit: YI9VCQ (Iraq), November 30, 2004 through November 5, 2005. For more information, visit the DXCC Web page <<http://www.arrl.org/awards/dxcc/>>. "DXCC Frequently Asked Questions" can answer most questions about the DXCC program. ARRL DX bulletins are available on the W1AW DX Bulletins page <<http://www.arrl.org/wlaw/dx/>>.

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"Plenty of space for your article.....why haven't you written one?"