the Milliwatt

The award-winning monthly publication of
The Baltimore Radio Amateur Television Society
P.O.Box 5915 Baltimore, MD 21282-5915

October, 2006

French radio amateurs bounce laser signals off a rain cloud

That Amateur Radio is a hobby with variety and challenge was illustrated this week when two French radio amateurs made a one way contact over a distance of 40 km scattering laser signals from rain clouds. The flash pulses were at times 12 dB above the noise at 40 km which seem to indicate that under the right conditions a distance of 150 km could be covered. Laser communication systems are wireless connections through the atmosphere. They work similarly to fibre optic links, except that the beam is transmitted through free space. While generally speaking the transmitter and receiver must require line-of-sight conditions, they have the benefit of eliminating the need for broadcast rights and buried cables. Laser communication systems can be easily deployed since they are inexpensive, small, low power and do not require any radio interference studies. The carrier used for the transmission signal is typically generated by a laser diode. Two parallel beams are needed, one for transmission and one for reception. Laser communication have been a hot topic lately, as solutions for how to satisfy ever increasing bandwidth needs are in high demand. Some have suggested that bandwidth could be distributed in neighbourhoods by putting laser communication systems on top of homes and pointing them towards a common transceiver with a fast link to the Internet. With possible transmit speeds of up to a gigabit per second, this is an exciting area. Other applications for this technology include temporary connectivity needs (e.g. sporting events, disaster scenes, or conventions), or space based communications. The French team proved that laser signals can be scattered from clouds thus proving that the notion that laser communication can only be line of sight, is wrong.
Source: The South African Radio League

Virginia radio amateur not prosecuted on radio-related felony charges

Dennis Alford, KC4VGA, of Wythe County, Virginia, is breathing a bit more easily now that he's no longer facing a felony charge of possessing an unlawful communication device. According to a news report in The Wytheville Enterprise, a misdemeanor charge of unlawful interfering with a two-way radio was taken under advisement. It will be dismissed after a year if no similar charges are brought against Alford, a 60-year-old longtime radio amateur. The newspaper says a Wythe County General District Court judge accepted an agreement worked out by Alford, his attorneys and a local prosecutor. A disabled truck plant worker who had been employed as a Wal-Mart greeter, Alford still must forfeit three of the radios police confiscated last March. One of Alford's attorneys told the court that Alford had bought the confiscated radios used and didn't realize they'd been modified. Following his August 31 court appearance, authorities returned other confiscated radio equipment to Alford. Police had searched Alford's home after the Wytheville Police Department in January reported extensive interference on its dispatching system that was traced to Alford's transmissions. Police subsequently arrested him at work and confiscated several pieces of his radio equipment as well as a computer that since had been returned to him. He had been on bond pending the hearing. Alford denied making any illegal transmissions and said afterward he was satisfied with the resolution of his case to this story.

Silent Key

The Rev. David S. Remington
KA3GBB
September 28, 2005

David was a long-time member of The BRATS.
We will remember him as a quiet, kind gentleman
We will all miss him...

Ed Note: We just found out about David's passing by reading it in October, 2006 QST. We checked The Sunpapers obits on-line and David did indeed pass away a year ago.

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The award-winning monthly publication of The BRATS.
Items herein may be reprinted with credit.

Mayer D. Zimmerman, W3GXK, Editor

Some Thoughts

First of all, we want to thank Martin, M0AAK, for making the effort to be with us at our September meeting. Martin's remarks about the British BRATS (The Bredhurst Receiving and Transmitting Society) were indeed enlightening. Although they have but 40 members, they meet weekly and most of the members show up at each meeting. Hope you enjoyed your stay in our area and hope you had a great trip back, Martin! The Pikesville library is now undergoing renovation for the next 9 months. We have to move to the Randallstown Library; and we move to the 3rd Tuesday of each month at 7:15 PM. Please plan to join us ...
73, Mayer, W3GXK

The Baltimore Radio Amateur TV Society, Inc. P.O. Box 5915 Baltimore, MD 21282-5915
a non-profit organization under section 501(c)(3) of the Internal Revenue Code and a non-profit corporation in the State of Maryland. We belong to and support the Foundation for Amateur Radio (FAR) and the American Radio Relay League (ARRL).
home page: http://www.bratsatv.org
e-mail: mail@bratsatv.org
InfoLine: 410-461-0086
Meetings: 3rd Tuesday, 7:15 PM, Randallstown Library
President: Ed Rosen, N3GXH
Vice Pres: Edward Koritzer, N3DGY
Secretary: Mayer D. Zimmerman, W3GXK
Treasurer: Les McClure, W3GXT
Webmaster: Laura Faussone, KB3LJM
Chairman of the Board: Heru Walmsley, W3WVV
Vice Chairman, Technical: Mike Dees, N3EZD
Vice Chairman, Operations: Ian Millet, N3CVA

BRATS Repeaters

BRATS Linked Repeater System:
WB3DZO: 147.03+, 224.96-, 448.325-
BRATS Stand-alone repeaters:
443.350+
BRATS Packet Network Nodes
W3GXT-5 145.05
W3GXT-10 224.52
BRATS ATV Repeater System:
W3WCQ: inputs: 426.25, 1253.25
outputs: 439.25, 911.25

BRATS Weekly Nets

Mon 9 pm	Traffic and Info Net, W3GXK
Tues 11:45	Informal ATV Net, W3WVV
Tues 9 pm	BRATS Horsetraders Net, Grant, KA3CEA
Wed 9 pm	BRATS ATV Net
Thurs 9 pm	BRATS ATV Net
Sat 1 pm	Weekly News Bulletin, W3GXK
Sat 1:20	The BRATS Answer Men: KB3JQQ
Sun 8 pm	MATS ATV Net
As needed	Weather/Emergency Net, Skywarn

BRATS Board of Directors

Through 12/06:
N3WJH, N3YI, KB3KYM, KB3LJM, KC3FI, K2GZL*
Through 12/07:
KA3IDB, W3ZQI, K3RGG, KD7QOT, KB3FIF, K2ORX*
*Appointed by the President

REGULAR BRATS MEETINGS

Third Tuesday of each month,
7:15 pm at the Randallstown Library
8604 Liberty Rd at Old Court Rd

Next BRATS Meeting

Tuesday, October 17
7:15 PM, *Randallstown Library*
8604 Liberty Rd. at Old Court Rd.

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ISS Commander to Keynote
AMSAT is very excited to announce that ISS Expedition 12Commander William S. (Bill) McArthur KC5ACR has accepted our invitation to be our keynote speaker at the 2006 Space Symposium. The Symposium will be held at the Crowne Plaza in Foster City, California October 6-8. Commander McArthur's keynote will be given during the banquet on Saturday Evening. Commander McArthur is well known to ham radio operators - during his six months aboard the ISS he became one of the most active radio amateurs ever to serve in space. See the complete article at: http://www.amsat.org/amsat-new/symposium/2006Keynote.php (AMSAT)

Anousheh Ansari is a "Go" as First Female Civilian Space Traveler
It's official! Iranian-American businesswoman Anousheh Ansari, 39, will travel to the International Space Station next month as part of the Russian Soyuz TMA-9 "taxi mission," Space Adventures Ltd announced today. Ansari, an eleventh-hour stand-in for Daisuke "Dice-K" Enomoto as the fourth civilian to fly to the ISS, would be the first female civilian "spaceflight participant" -- as Space Adventures calls its orbital flight clients -- to travel to the space station. " Enomoto was removed from the Soyuz flight roster for medical reasons. Although Ansari has had at least some training in using the Amateur Radio on the International Space Station (ARISS) gear, it's not yet known whether she'll make ham radio contacts with Earth during her approximately 10-day stay in space.

RF Problems and the HF Vertical Antenna (N4ZOU)
Are you having RF problems in the shack since you put up your HF vertical antenna? This is a common problem with an easy solution. RF energy traveling into your shack on the outside of the coax feed line causes this problem. The solution is adding an "ugly" 1:1 Balun in the coax to choke off the RF energy before it enters your shack. So what's an "ugly" Balun? Nothing more than a few turns of the coax forming a coil. Don't scramble the turns; they must be side by side for the coax Balun to operate properly. 5 turns or more will be enough for 80-meters and up. Use caution not to coil the coax so tight that it causes the inside conductor to merge into the shield shorting it out. 4" PVC pipe coupler works well and it's cheap. Normally a 1:1 Balun would consist of multiple turns of three wires on a coil form and the simple coax Balun is also multiple turns of three wires when coiled, the center conductor, the inside of the coax shield, and the outside of the coax shield. Now your asking how this could possibly work. RF energy flows on the conductor and not in the conductor. This is the reason silver-plating or copper-clad steel works so well. The RF energy only penetrates the conductor slightly and for plated parts the RF flows entirely in the silver or copper plating and almost never in the conductor below it. In the case of coax this property separates the RF flowing inside the coax from the RF flowing on the outside of the coax. We can use this problem to an advantage by careful placement of the "ugly" Balun. Most of us would think we would want that Balun at the base of the vertical and try and prevent all RF from flowing on the outside of the coax. In reality this is the worst place you could put it! Why? Simply use the outside of the coax as another radial. Putting the Balun at the base of the antenna would choke off the RF but the vertical element would simply put it there again. The Place to put the Balun would be 1/4-wavelength from the feed point of the vertical on the lowest band the antenna is capable of operating on. If your coax run is 1/2-wavelength or more you will want to place a Balun at each 1/4-wavelength point. You will also want to put a Balun on the feed line just before it enters the shack. The formula for figuring out where the Balun should be placed is simple. 234 / frequency in MHz * the velocity factor of the coax = length in feet. An example is a Butternut HF6V 80 through 10 meter vertical. As the antenna is capable of operating on 80 meters simply input 234 divided by 3.5 times .75 would equal 50.14 feet assuming your using modern foam type coax with a velocity factor of .75. The HF6V uses a length of 75-ohm coax as a matching transformer. Simply ignore the velocity factor if different from the 50-ohm coax and measure 50.14 feet from the feed point of the vertical for the proper place to coil the coax forming the 1:1 Balun. If your feed line is shorter than a 1/4-wavelength on the lowest band the antenna is capable of operating on, place the Balun on the next highest band where the coax would be longer than 1/4-wavelength. This should cure RF problems associated with RF flowing into your shack on the outside of the verticals feed point. (eham.net)

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Fasten your seatbelts -- and no cellphones, please

"No cellphone" signs could soon replace the "no smoking" placards currently on U.S. jetliners. Airlines may need to start making that switch next year, when new technology is expected to be introduced that will allow fliers to use cellphones during flight. With that service approaching, Reuters writes that "airlines are seeking ways to police potentially annoying on-board phone" calls by using symbols of a crossed-out cellphone -- much in the way the illuminated no-smoking signs told smokers not to light up. And, for carriers that choose not to allow cellphones in flight, the company that s developing the technology for Airbus jets says cabin crews will be able to remotely turn off phones -- or at least disable their voice function while still allowing text messaging and e-mail. But despite the looming arrival of in-flight calling, many airlines have reservations about allowing anything more than text-messaging or e-mail. "The issue (with voice calls) is how you would get around the problem of disturbing other passengers," a Lufthansa spokesman tells Reuters. In the USA, most travelers appear to be OK with the idea of allowing in-flight texts and e-mails -- but not voice calls. I asked several airlines in March what their thoughts were on allowing in-flight calling. Most were reluctant -- if not outright opposed -- to allowing voice calls. A different answer, however, came from Michael O Leary, the outspoken CEO of European budget giant Ryanair. When asked by reporters if he was worried that in-flight calls would annoy passengers, he responded: "Why should I care if it is generating some money?" He added: "People are in a confined space. People tend to not want to get into long and involved mobile phone discussions with people sitting around them. I think it will be more people sending texts."

Logitech unveils new cordless laser mice

Computer accessory maker Logitech (LOGI) is introducing a mouse with a free-spinning motorized scroll wheel it believes will help people more efficiently race through pages on their computer screens. The company said Thursday it is launching cordless laser mice with an alloy wheel that spins for up to 7 seconds and can scroll through up to 10,000 Microsoft Excel lines with a single flick. Users can stop the wheel by tapping it. The desktop model can automatically switch back to traditional click-scrolling depending on the application, and can toggle back and forth on its own during a task depending on how fast the user is working. A software program synced to the mouse can sense the user's application, and sends a signal to a small motor to engage or disengage the ratchets that regulate the wheel's speed during click-scrolling. Clicking the wheel also allows users to switch back and forth. Users of the laptop model will need to flip a switch on the base of the mouse to toggle between modes, which the company says is because of its smaller size and lack of internal motor. Both mice are now shipping in the USA and Europe for PCs and Macs. They cost $79 for the laptop model and $99 for the desktop model.

AT&T says hackers accessed credit card info

Hackers illegally accessed a computer system and obtained credit card information and other personal data from several thousand customers who purchased DSL equipment from AT&T's online Webstore, the company said Tuesday. AT&T (T) said the system was hacked into over the weekend and the files of fewer than 19,000 customers were affected. The company said it shut down the online store and would pay for credit monitoring services for the people whose files were accessed. The company notified the major credit card companies whose customer accounts were affected, AT&T said. It also sent notification to customers involved via e-mail, phone and letter.

"We recognize that there is an active market for illegally obtained personal information. We are committed to both protecting our customers' privacy and to weeding out and punishing the violators," Priscilla Hill-Ardoin, chief privacy officer for AT&T, said in a statement. The company said the unauthorized access was found within hours of the breach over the weekend.

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Ship lines get on board with cellphone and Wi-Fi service

A few are holdouts, and some set etiquette rules. Wireless offers savings over satellite phones. FOR better or worse, your boss now can reach you on your cellphone or BlackBerry, even when you are vacationing on a cruise ship in the middle of the Caribbean Sea. There's no need for a special satellite phone or calling plan because most ships are being equipped to accommodate late-model wireless devices. When you call the boss or check in with the kids at home, the call on your cellphone will cost you less -- sometimes much less -- than dialing from the satellite phone in your cabin. Wireless voice and data communication is the latest high-tech service cruise lines have embraced. Computer centers with Internet access already are common on most ships. Newer Wi-Fi connectivity, allowing vacationers to access the Internet with their own laptops, is spreading from designated hot spots to all parts of the ship, including cabins. About a dozen lines now have wireless service on some ships. Notable holdouts: Cunard, Princess Cruises and Seabourn. Cunard andPrincess are considering it. Seabourn has not had "a hue and cry from our guests requesting this service," says Bruce Good, director of public relations.

But other cruise lines are promoting cellular service as an amenity that many of today's travelers expect. A July survey of 1,071 adults age 18 and older by International Communications Research for Cingular Wireless showed that a quarter of the respondents used their cellphone when traveling outside the United States. They averaged 10 calls per trip, most of them personal. But not everyone welcomes the idea of hearing those ring tones and the one-way conversations of cellphone users. Cruise lines walk a fine line between passengers who want to disconnect from the real world and those who won't go on a vacation unless they can stay connected to it." Travelers should have the option of choosing just how connected they'd like to be with the outside world while on vacation," Terry L. Dale, president of the Cruise Lines International Assn., said in a statement.CLIA is a marketing organization for 19 North American lines.

"There's clearly an unmet demand," says Leighton Carroll, vice president of Cingular Wireless, which has teamed up with Maritime TelecommunicationsNetwork to form Wireless Maritime Services. WMS is equipping the ships of several cruise lines with cellular service technology. Carroll says he often fields questions from people who want to be sure they can use their wireless devices on a specific ship before they book it. WMS and SeaMobile are two major providers of the wireless technology on cruise ships. The service works with most late-model wireless devices. Guests can make and receive calls -- and send pictures or text messages -- as they do on land. But the service works only when a ship is offshore, Carroll says, because the provider companies don't want to interfere withlocal laws or compete with local shore service. The required distance froma port varies from about a mile in some places in Europe to 20 miles from many ports, Carroll says. Passengers are billed by their home cellular service carrier at international roaming rates and don't have to pay extra to use the phone on board. (Cruise lines share in the revenue with the cellular-service providers.) Costs are $1.99 to $4.99 a minute, according to an association survey. Carroll says Cingular charges $2.49 a minute from anywhere at sea to a U.S. city. Data transmission, such as text messaging, usually is 50 cents a minute. Using a stateroom phone for a ship-to- shore satellite call runs $5 to $25 per minute, CLIA reports. Most major cellular service carriers -- Cingular, T-Mobile U.S., Sprint Wireless and Nextel -- are linked with at-sea service companies, such as WMS and SeaMobile. WMS has agreements with 340 providers, but Verizon is not among them yet. But on ships using SeaMobile, Verizon customers can use their phones.

Although some cruise lines, such as Royal Caribbean and Carnival, have no rules about where passengers may use cellphones, other lines have set some guidelines or are considering them. At Regent Seven Seas Cruises, "We do request that guests set their ringers to vibrate, avoid loud conversations and do not use their cellphones in any of the ships' restaurants, bars or lounges," says spokesman Andrew Poulton. Silversea Cruises asks guests not to use their cellphones in public areas, such as the restaurant, spa, shops, library, Internet center, show lounge, bar, casino and outdoor grill, says Brad Ball, director of corporate communications. "We understand that there is a need for some guests to be fully connected at all times, but they must respect the rights of fellow passengers," he says. Norwegian Cruise Line asks people to avoid using cellphones in theaters and restaurants, and Holland America Line restricts use in all entertainment venues.

CARAFEST -- Howard County Fairgrounds -- Sunday, October 1 ... 410-552-2652

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ISS Crew, ARISS Team Troubleshooting Slow-Scan TV System

The Amateur Radio on the International Space Station (ARISS) team is coordinating with Expedition 13 Commander Pavel Vinogradov, RV3BS, and ARISS-Russia's Sergei Samburov, RV3DR, to troubleshoot the slow-scan television (SSTV) system onboard the ISS. The SSTV system remains off the air for the time being.

"The ARISS team is coordinating with Sergei Samburov and Pavel Vinogradov to resolve some of the issues seen when the SSTV system was hooked up," ISS Ham Radio Project Engineer Kenneth Ransom, N5VHO, told ARRL. Photos of the current SSTV configuration that were downlinked to Earth showed "several unanticipated results" from the initial tests, Ransom said. "More extensive troubleshooting is being developed and could further delay permanent activation of the radio." He added that it could take a long time to work out the kinks because Vinogradov is only able to work on the system in his free time. Vinogradov will return to Earth in September.

ARISS International Chairman Frank Bauer, KA3HDO, earlier this month echoed Ransom's assessment, indicating that ARISS expected SSTV system testing to continue over the next few weeks. "Since this is a 'spare time' activity for Pavel, please bear with us as we go through this aspect of system setup," he said on the SAREX reflector in mid-August. "It is not possible right now for Pavel to switch between modes (eg voice, packet and SSTV) on the Kenwood and continue the methodical process of system setup and reconfiguration."

The SSTV system uses the ARISS Phase 2 station, a modified Kenwood TM-D700E. In recent weeks, ARISS has been using the Phase 1 station, an Ericsson hand-held transceiver, to conduct contacts with schools, since the Phase 1 antenna system is more favorable given the space station's current attitude with respect to Earth.

During the early stages of SSTV testing in late July, Earth station operators were thrilled to receive several pictures Vinogradov was able to transmit manually on 2 meters (the system has been using 144.490 and 145.800 MHz) using the RS0ISS call sign. Ransom says initial tests were run over Moscow, and then the system was left on for a few orbits. Plans call for Vinogradov -- as his schedule permits -- to continue checking out the SSTV software, configure and optimize the radio and perform integration checks necessary. So far, the SSTV system has been unable to function properly in the autonomous "slide show" mode, Ransom said.

Miles Mann, WF1F, who developed the SSTV system as an ARISS project, explains that slide-show mode will permit the crew to preload a directory of images that then will automatically transmitted to Earth. "The crew will not need to keep pushing a button to send images," he said in a recent news release. "In theory, the system can run for weeks at a time without crew involvement."

The SSTV system is not yet configured to receive SSTV transmissions from Earth stations, and no uplink frequency will be made public until testing is done. Earthbound radio amateurs are advised not to attempt to transmit SSTV images to the ISS.

Mann says future ISS crews will use newly developed SpaceCam1 software to enhance the SSTV system and experience for Earth stations. He says SpaceCam1 permits transmission of SSTV images via Amateur Radio primarily using the Robot 36 format.

"One of the key features of the software is that it allows two-way interactive operation," Mann says. "The software also fully automates the transmission of images and use of SSTV repeaters." Mann has posted detailed information about the SSTV project on his Web site.

Long-Silent SuitSat-1 Keeps Going and Going

When SuitSat-1 -- the satellite built in a surplus Russian Orlan spacesuit -- was launched during a spacewalk from the International Space Station last February 3, those familiar with orbital mechanics predicted it would stay in orbit for 120 days at best. Today, some 202 days (nearly seven months) later -- largely forgotten and its ham radio voice long since silent -- SuitSat-1 has defied the odds and remains in orbit some 164 miles above Earth.

Maine's Governor is Now KB1NXP

Maine Gov John E. Baldacci may now be the only sitting state chief executive holding an Amateur Radio license. Following up on an effort begun a few years ago, Baldacci took and passed his Technician license test September 6, and the FCC issued his new call sign, KB1NXP, today.

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World War II-Era *QST* is Bonus with 2007 *ARRL Handbook* Advance Orders
The 84th edition of The ARRL Handbook for Radio Communications -- the 2007 edition -- is set to begin shipping in early October. ARRL Marketing Manager Bob Inderbitzen, NQ1R, says now's the time to place orders for the reference manual, which has proven popular both within and outside the Amateur Radio community. Those placing advance Handbook orders by September 30 will receive a reproduction January 1942 issue of QST as a bonus.

ARRL Granted Experimental License for 500 kHz Research by Radio Amateurs
The FCC's Office of Engineering and Technology has granted a Part 5 experimental license to the ARRL on behalf of a group of radio amateurs interested in investigating spectrum in the vicinity of 500 kHz. Experimental license WD2XSH was issued September 13. The two-year authorization permits experimentation and research between 505 and 510 kHz (600 meters) using narrowband modes at power levels of up to 20 W effective radiated power (ERP). ARRL Member Fritz Raab, W1FR, of Vermont, will serve as experimental project manager for "The 500 KC Experimental Group for Amateur Radio."

Islands on the Air program announces Icom sponsorship deal
The Radio Society of Great Britain (RSGB) has announced that Icom will become the new corporate sponsor of its Islands on the Air (IOTA) program, effective October 1. "This three-year worldwide sponsorship deal is a major boost to IOTA both in the UK and internationally," the RSGB said. "Principally involving sponsorship from both Icom UK and Icom America, this deal is set to build this already-popular program into 2009 and beyond." RSGB says the IOTA program has expanded significantly in recent years and now boasts tens of thousands of participants. New Web-based software has been launched to ease the filing and checking of award applications. Since IOTA's launch in 1964, both Yaesu and Kenwood have served as program sponsors.

Amateur Radio Antenna Law Leads Virginia County to Revise Ordinance
The existence of Virginia's Amateur Radio antenna statute recently was instrumental in convincing the Stafford County Board of Supervisors to adopt changes that make it easier for radio amateurs to erect antenna support structures. Tom Gregory, N4NW -- a former Virginia Section Emergency Coordinator who lives in Stafford -- says that before the amendments went into effect, an Amateur Radio licensee wanting to put up a tower could have been asked to apply for a conditional use permit (CUP) and pay a $7500 filing fee. Gregory says that's because the old county ordinance did not distinguish between Amateur Radio and cellular or other telecommunication towers. Stafford County didn't necessarily oppose ham radio antennas, he said, but the application earlier this year of Lewis Cheek, K4HR, to erect a 120-foot antenna support structure apparently caught county officials unawares.

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"Backward sunspots" may herald start of Solar Cycle 24

The recent appearance on the sun of two so-called "backward sunspots" may mean solar Cycle 23 is drawing to a close and Cycle 24 now is under way or soon will be. At least that's the thinking of some scientists. "We've beenwaiting for this," said Solar Physicist David Hathaway of the Marshall Space Flight Center in Huntsville, Alabama, after the first backward spot showed up. "A backward sunspot is a sign that the next solar cycle is beginning." The term "backward" refers to the sunspots' magnetic polarity. One such sunspot appeared briefly July 31, then disappeared, but its significance was that its magnetic polarity was just the opposite of current Cycle 23 spots. Another more robust spot, Sunspot 905, appeared earlier this month -- although it subsequently began to dissipate -- and some sungazers are saying Cycle 24 already has begun. ARRL propagation guru Tad Cook, K7RA, has been a bit more cautious. "As time goes on, there will be more Cycle 24 spots and fewer Cycle 23 spots," he said in a recent "Solar Update." In any event, radio conditions will not improve any time soon but over a period of several years of the course of the 11-year cycle, perhaps peaking around 2010.

Samsung Develops New Memory Chip

Samsung Electronics Co. on Monday unveiled a new type of memory chip that it said will allow digital devices to work faster by saving new data more quickly. The phase-change random access memory, or PRAM, chip is nonvolatile, meaning it will retain data even when an electronic device is turned off, and is about 30 times faster than conventional flash memory, Samsung said. It is expected to be available in 2008, Samsung said. A 512-megabit prototype PRAM device was unveiled at a news conference in Seoul on Monday. Currently, two types of nonvolatile flash memory chips _ NOR and NAND _ are widely used in electronic devices. NOR chips are suitable for running software directly, but are slower and are more expensive to manufacture, while NAND chips are easier to make in larger capacities but are more suitable for large data files, such as MP3 music. Samsung said the PRAM chips use vertical diodes and a three-dimensional transistor structure to create a small cell size. Unlike NOR and NAND chips, they don't need to first erase any old data in a separate step before storing any new data, it said. Samsung also unveiled on Monday a 32-gigabit NAND flash memory chip based on finer 40-nanometer process technology _ the size of the smallest circuit elements on the chip. A nanometer is one billionth of a meter. Currently, the bulk of Samsung's flash memory chips are produced using 70-nanometer process technology. Using finer process technology allows more to be fit on a semiconductor chip and reduces power requirements. Flash memory chips are used extensively in digital music devices, digital cameras and mobile phones. Samsung is the world's largest memory chip maker and a top producer of consumer electronics, including flat-screen televisions, mobile phones, MP3 players and laptop computers. The company, based in Suwon, South Korea, recorded a net profit of 7.64 trillion won ($8 billion) on sales of 57.46 trillion won ($60 billion) in 2005.

$299 will get you into the 'mile-high club'

One of the day s more unique stories comes from USA TODAY, where Kitty Bean Yancey sits down for a Q&A session with a Georgia corporate pilot who helps couples join the "mile-high club." Yancey writes that "for $299, he'll take a frisky twosome above 5,280 feet in a Piper Cherokee 6 fitted with a mattress. The hour-long flights out of Carrollton, Ga., have lured couples from as far as New York." The pilot, 51-year-old Bob Smith, says he s taken between 75 and 100 couples over the past five years who have ranged in age "from 18 and 19 up to their 60s." He also says that about 75% of those flights have been booked by women. "I've tried to figure that out, and I guess if the guy suggested it to a woman, he would be afraid she'd think he was some kind of pervert," Smith says. "But if the woman suggests it, the man thinks she's hot." In case you wanted to check it out, Smith's "Mile High Atlanta" service is on the Web.

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WA7BNM Contest Calendar

Sept 23-24
- CQ WW RTTY Contest
- Scand. Activity Contest, SSB
- Texas QSO Party
- AGCW VHF/UHF Contest
- UBA ON Contest, CW
- Fall QRP Homebrew Sprint

Sept 30-Oct 1
- CIS DX Contest
- Arkansas QSO Party
- FISTS Coast to Coast Contest

October 1
- UBA ON Contest, 6 meters
- RSGB 21/28 MHz Contest

October 3
- German Telegraphy Contest

Oct. 3-5
- YLRL Anniversary Party, CW

October 4
- 432 MHz Fall Sprint

October 5
- SARL 80m QSO Party

October 6
- TARA PSK Rumble Contest

Oct. 7-8
- Oceania DX Contest, Phone
- PRO CW Contest
- California QSO Party

October 14
- Microwave Fall Sprint
- EU Autumn Sprint, CW
- FISTS Fall Sprint

Oct. 14-15
- Pennsylvania QSO Party

October 15
- Asia-Pacific Fall Sprint, CW
- North American Sprint, RTTY
- UB ON Contest, 2 meters

Oct. 21-22
- JARTS WW RTTY Contest
- ARCI Fall QSO Party
- Worked All Germany Contest
- W/VE Islands QSO Party
- 50 MHz Fall Sprint
- Illinois QSO Party

Oct. 28-29
- CQ WW DX Contest, SSB
- eXtreme CW WW Challenge
- 10-10 Int'l Fall Contest, CW

ARRL DX Bulletin

SOUTH COOK ISLANDS, E5.
Victor, E51CG has been QRV on the Family Hour DX Net on 14245 kHz the past few days.

REPUBLIC OF KOREA, HL.
Kang, DS4DRE is QRV as DS4DRE/4 from Hong Island, IOTA AS-093, until the end of the year. Activity is on 80 to 10 meters using CW and SSB. QSL direct to home call.

SAUDI ARABIA, HZ.
Sulaiman, 7Z1SJ has been active using CW on 20 meters around 1600z. QSL via EA7FTR.

GUINEA, 3X.
UA6JR and RW3AZ will be QRV as 3XM6JR and 3XD2Z,respectively, beginning August 29 and continuing for several years. Activity will be on 160 to 6 meters using CW, SSB, RTTY, SSTV and PSK. They will use 3XY3AZ in contests. UA6JR plans to be QRV from islands AF-096 and AF-051. QSL direct via UA6JR.

BOTSWANA, A2.
A22VB continues to show up on 3503 kHz between 0100 and 0330Z. QSL via UA4WHX.

KYRGYZSTAN, EX.
EX15ID delighted prefix hunters on RTTY on 14085 kHz around 1630Z. QSL via EX8AB.

DJIBOUTI, J2.
Jean-Claude, J28JA was QRV on 18080 kHz around 1300Z. QSL via F5JFU.

SVALBARD, JW.
JW5E was in search of Japan on 14203 kHz at 1300Z. QSL via LA5NM.

LEBANON, OD.
Look for Hani, OD5TE on 14290 kHz between 1600 and 1700Z. QSL via K3IRV.

NAMIBIA, V5.
V55O was logged on 75 meter SSB around 2200Z. QSL via DJ4LK.

HONG KONG, VR2.
Look for VR2VAC and VR2XMT on 20 meter SSB between 1130 and 1300Z. Also, watch for VR2AJ, VR2MX and VR2UW on 20 meter CW.

BOTSWANA, A2.
Vlad, UA4WHX is QRV as A25VB. Activity is on all bands using CW and SSB. QSL to home call.

DJIBOUTI, J2.
Jean-Claude is QRV as J28JA for the next two years. He is usually active on 20 and 17 meters using CW and SSB. QSL via F5JFU.

LEBANON, OD.
Gabi, OD5NJ has been active on 30 meters around 2200z.Meanwhile, Maria, OD5QT has been active on 20 meters around 1830z.

UZBEKISTAN, UJ.
Station UM15UZ has been active on 40 to 15 metersusing CW. QSL via UK8AR.

KYRGYZSTAN, EX.
Bek, EX8AB is usually QRV using RTTY on 30 meters around 1700z.

OGASAWARA, JD1.
Operator JA1NAL/JD1 has been active on 15 meters from around 0000 to 0700z.

UZBEKISTAN, UK.
Mike, UK8AR is usually QRV on 20 meters using CW between 0100 and 0200z.

CHAGOS ISLAND, VQ9.
Jim, ND9M is QRV as VQ9JC from Diego Garcia,IOTA AF-006, for the next four months. QSL to home call.

INDIA, VU.
Kumar, VU2BGS is normally QRV on 160 meters around 2100z on Saturdays.

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Hamfests

Sunday, October 1 - W. Friendship, MD
CARAFest; Howard Co. Fairgrounds. (147.135/R, PL 156.7) . Dave, W8AJR, 410-552-2652

Sunday, October 15 - Sellersville, PA
RF Hill ARC (145.31/R PL 131.8) Fire Dept. Grounds, 100 N. Main St. 215-257-6368(d); 215-538-7458 (eve.)

Sunday,. Oct. 29 - Westminster, MD
Mason Dixon Hamfest. Carroll County Agricultural Center, Westminster. (145.41/R) Bill, W3STG, 301-829-8791

BARC VE EXAMS for 2006
BARC Clubhouse, 12360 Owings Mills Blvd, Owings Mills. Info: Rusty, N3WKE, 410-247-0578 Exams at 2 PM, walk-ins allowed.
Saturdays: November 4, December 2
Sundays: October 1

AERO VE EXAMS
$14 Fee, (ARRL VEC)
Sept 30 -- Northpoint Library, 1716 Merrit Blvd, Dundalk
Nov 18 -- White Marsh Library, 8133 Sandpiper Circle, White Marsh.
Register at 1 PM, exams begin at 1:30 PM
Frank, AC3P, Pat, AC3F, 410-687-7209

Other Club Exams
2nd Saturday, 1 PM, Davidsonville, by AARC. Register 12 noon. Bob, AA3RR, 410-437-8193
3rd Saturday, 9 AM, Laurel, by LARC, 384 Main St. John Creel, WB3GXW, 301-572-5124.
4th Tuesday, 6 PM, Linthicum. At Historical Electronics Museum. Harold, WB4OGP, 410-757-0493(h); 410-712-6829(w)

Don't Forget

Starting Tuesday, October 17, BRATS meetings move to Randallstown Library, 8604 Liberty Road at Old Court Road
3rd Tuesday of each month at 7:15 PM

milliwatt swap shop

ads are free and get results!

KA3PSZ Estate Sale:
Ameritron AL-811 linear amplifier $ 400
SWAN 350B 80 - 10 meter 350 watt transceiver $ 200
SWAN SWR 1A Power Meter (2) $ 15
Hallicrafters SX-77A Receiver (needs work) $25
Ringo 10 meter vertical
(must be remnoved from roof) $50
MFJ901 antenna tuner $40
All prices negotiable. Frank Stone AC3P 410-687-7209 email: ac3p@arrl.net

WANTED: Cushcraft Ringo AR6 6-mtr antenna or equivalent. Call Neil, W3ZQI, 410-765-8439, days, or e-mail: w3zqi@bratsatv.org

ATTENTION: If you do NOT want your ad to run again, please send an email to that effect! Thanks!
w3gxk@verizon.net

Need headphones for your next flight? That s the question asked by USA TODAY s Gene Sloan. If you are in search of headphones, you re in luck if traveling through Indianapolis. "A snazzy new vending machine unveiled this week at Indianapolis International Airport has them (headphones), along with digital cameras, batteries, memory sticks, MP3 players, CDs, DVDs and all manner of other entertainment gizmos," Sloan writes. "Dubbed Sony ACCESS, it's the brainchild of electronics maker Sony, which is experimenting with new ways to sell its goods." The feature also will be tested at Dallas/Fort Worth International Airport beginning this September and lasting through the end of the year. "Don't worry about not having enough quarters for the pricier items," Sloan says. "The machine takes only credit and debit cards." Says Sony's Chavonne Jones: "If the test is successful, we'll continue rolling out (more) in other venues, which may include grocers, more airports, malls and hotels."

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ads are free and get results!
Send ad to: BRATS, P.O. Box 5915
Baltimore, MD 21282-5915, or email
to w3gxk@verizon.net

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FOR SALE: ***Special!!!*** Rohn 48-foot free standing tower,TET 4-element tribander, tail twister rotor, You take down. No reasonable offer refused. Also, Alinco 110 2 mtr. Xcvr, can be used base or mobile, $100. ACI AC20, linear for 2 meters, $20. Heath HM 102 power meter with attached antenna selector, $40. All in good working order. Call Jerry, KB3AP, 443-618-0618.

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FOR SALE: Yaesu FT50R dual band (2 mtr / 440) H/T. Scans from 76 to 900 MHz (less cellular), Extra battery, CA 15 charger, ear/throat mike, Shoulder harness. Regularly $330, sell for $225, ***SPECIAL! Only $150!!!*** Contact Russ, N3YI at n3yi@yahoo.com

WANTED: Through-hole 440 mobile antenna. Scott, KB3JQQ,410-615-2434

FOR SALE: Special! ICOM BC-110A battery charger , 12vDC 200mA, for ICOM T8A or similar. Used only twice, misplaced, bought a new one. Found it after new one arrived. Cost $46, make me an offer. Mayer, W3GXK, 410-786-6839 or w3gxk@verizon.net

FOR SALE: Heathkit Security Sentinel GD-3810, $20. Kenwood MC520DM hand mike, back lit, numbers, $20. New 3-ton Olympia chain hoist, $75. WWII hi-power antenna tuner, VAC variables, roller inductor, $120. Azden DM headphones, new in box, $15. Telex C1320, $15. Bush Clevite, $15. Panasonic adapter BC1031C, $45. W2IHY 8-band Audio equalizer, noise gate, $175. Call Ted, W3OWN, 410-668-5580. Please leave message if you get answering machine.

ATTENTION: if you do NOT want your ad to run again, please send me an email to that effect.
Thanks! w3gxk@verizon.net

VTS - VIDEOTAPING SERVICE
Video/DVD duplications, video tape transferred to DVD. One source up to 2 hours, $30. Standards, conversions. Call VTS toll free at 1-877-891-1002. BRATS member Bob Shapiro, K2MYS
http://www.videotapingservice.com

JADE COMPUTERS, LLC
1009 Ingleside Ave, Baltimore, MD 21228. Phone 419-719-1246; Fax 410-719-9494. Your answer to custom built PC, office and home networking. Reseller for Net Integrity server, cable modem, DSL, webpage design and hosting POS and networking. We do CPR to your CPU. Kid tested, mother approved. Order PC on line: http://www.jadecomputers.net email: joed@jadecomputers.us

Antique Radio Repair, Restoration
Eric, WA3TAD, Audio-Visual Service / Retro Radio, 3401 Chestnut Avenue, Baltimore, MD 21211. 410-467-3620; wa3tad@comcast.net

Radio Consignment Shop at Overlea Hobbies
8411 Harford Road, Parkville, 410-665-3622. Home of fine trains, model kits, x-acto, cars, planes, ships, many radios. Yaesu FT101ZD, Kenwood TS 820S, 930S, Heathkit SB-102, National NC-183, more ... Dick, N3JWN, 410-488-2806

AUDIO CONVERSIONS.
Your records and cassettes converted to CD. High quality A-D conversions of your recordings to digital form. I can also make short run duplications of your CD's for your band or office projects. Call Scott, KB3JQQ at 410-615-2434 or via email at: KB3JQQ@yahoo.com Also, I do operating system reloads and virus/spyware removal. Computer repairs since 1986. A+ certified.
http://home.comcast.net/~convertrecords/

WANTED: AC Gilbert erector sets; old, new, large, small, need not be complete. CASH paid. Lewis, 410-296-4874

WANTED: Your ad for this space. Send copy to w3gxk@verizon.net

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The award-winning monthly publication of
The Baltimore Radio Amateur Television Society
P.O.Box 5915 Baltimore, MD 21282-5915

October 2006

BRATS Public Service

Sat. October 7 : America's Walk for Diabetes. Frank, AC3P, 410-687-7209
Sat. October 14 : Under Armour Running Festival (Baltimore Marathon) Ian, N3CVA, 410-303-1412

To join The BRATS or to renew, *please use the form below*! Thanks!

UTAH ATV

Lots of projects and links:
http://www.ussc.com/~uarc/utah_atv/utah_atv.html
(Thanks, Scott, KB3JQQ)

LOCAL ATV NETS

Tuesday, 11:45 AM
Informal Net, W3WVV
(Audio on 147.03/R)
Wednesday, 9 PM
CATS Net, rotating Net Control
(Audio on 145.13/R)
Thursday, 9 PM
BRATS Net, Rotating Net Control
(Audio on 147.03/R)
Sunday, 8 PM
MATS Net, KB3LNN Net Control
(BRATS ATV and Linked FM Repeaters)

Next BRATS Meetings

Randallstown Library, 8604 Liberty Rd at Old Court Rd
Tuesday, October 17: 7:15 PM
Tuesday, November 21: 7:15 PM

Other Radio Club Meetings

QCWA

Monday at Noon, Cactus Willie 7315 Ritchie Hwy, Glen Burnie
3rd Thursday, 1 PM: Old Country Buffet, Joppa Road at Satyr Hill
Last Wednesday, 1 PM: Denny's Bel Air Rd at Putty Hill

AARC

1st and 3rd Thursdays, 7:30 PM
Davidsonville Family Rec. Center, Queen Anne Bridge Rd, Wayson Rd (147.105R)

AMRAD

2nd Thursday, 7:30 PM,
Dolley Madison Library; 1244 Oak Ridge Ave. McLean, VA (147.21/R)

BARC

1st and 3rd Wednesday, 7:30 PM
12360 Owings Mills Blvd (near warehouse)
Owings Mills, MD (146.67R)

CARA

4th Tuesday,
Gateway Center, Rm 401, 6751 Gateway Dr.
Columbia South off Rt 175 (147.135/R)

BRATS Membership Renewal: Regular=$15; Retired/Disabled/Student $10; Family $20		
Name	Call Sign _____	BRATS No
Address	City/State/Zip	
Phone	Email	
MAIL TO: BRATS, P.O.Box 5915, Baltimore, MD 21282-5915		