



THE PROPAGATOR

8 Donner St.
Holmdel, NJ 07733
Editor: Bob Buus, W2OD

JUNE 2008

GSARA MEETING WED. JUNE 7

The next regular meeting of the GSARA will be held on **Wednesday, June 4 at 8:00 PM** at the MARS building in Fort Monmouth.

You are encouraged to come early to enjoy the refreshments and the informal eyeball conversations. We look forward to seeing YOU at the meeting!

FORT MONMOUTH PASSES

If you have not yet renewed your Fort Monmouth pass, send Frank, W2XYZ the required data which will have to be entered into the Ft. Monmouth computer. It is only after the data is in the computer that you can pick up the pass at the Oceanport visitor center. The passes are good for six months.

THE GSARA WEBSITE NEEDS YOU

Bruce McLeod is getting tired after being the GSARA webmaster for ten years. He says he wants to let someone else have that pleasure. Just think – you can be your own boss and at the same time you can have the freedom to put your own creativity into action. You don't have to know HTML nor do you need sophisticated web page creation software. You can create pages in Microsoft Word and save them as HTML files. We already have an Internet Service Provider who gives us free space for our pages. Then you will need an FTP program to ship the pages off to the site; for this function Bruce uses a shareware program called WS_FTP. If you are interested in grabbing this opportunity or learning more about it, email Bruce at k2qwx@yahoo.com.

GSARA CALENDAR

<http://www.monmouth.com/~gsara/calendr.htm>

CQ FIELD DAY

Field Day is June 28-29 although GSARA will start setting up on Friday afternoon, June 27 at Dean Field (the baseball field just west of the MARS building). We are planning on erecting an 800 foot loop antenna up 60 or 70 feet and have two 100 watt stations (one SSB, the other CW) ready to share the antenna (only one station on at a time for our 1A status).

We encourage all members (and guests) to participate. Unfortunately, because of security restrictions, you must be registered to get on post that weekend. Bruce, K2QXW has agreed to coordinate the registration. To do that, he needs your first and last name plus your driver's license number (which you will have to use for ID to get in). If you are driving a car, the vehicle make and model as well as the license plate number and state are also needed. You may e-mail this information to Bruce at brucemcleod@verizon.net. The information must be submitted to Fort Monmouth before June 15 so get the information to Bruce ASAP.

We look forward to an enjoyable weekend. Your participation will add to the fun. Please plan to help wherever you can with setting up, operating, logging, and/or tearing down. And pray for nice weather!

JOHN HOLDEN, N2OWN MOVED

Former GSARA member John Holden, N2OWN has suffered a divorce from his wife, Jeri, and has moved to Texas. He can still be reached by his old e-mail address: n2own@aol.com

HUDSON DIVISION HOME PAGE

<http://www.hudson.arrl.org>

GSARA OFFICERS

President	N2LXM	Jeff Harshman	922-0816
Vice Pres.	W2FA	Kevin Wagner	279-0532
Secretary	W2OD	Bob Buus	946-8615
Treasurer	W2XYZ	Frank Wroblewski	942-7705
Engineer	W2HTS	Howard Suffill	460-1885
Trustees	KG2NV	Don Pingitore	229-2925
	W2OD	Bob Buus	946-8615
	WA2FVL	Jack Keating	264-7670

PROPAGATOR AVAILABLE BY E-MAIL

Would you like to help the finances of GSARA and at the same time get your issue of *The Propagator* a few days earlier? You can get every issue e-mailed to your computer every month by simply giving your e-mail address to Bruce McLeod, K2QXW and request *The Propagator* electronically. Bruce's e-mail address is <k2qxw@yahoo.com>

BADGES AND PATCHES

All new GSARA members get a name badge. However, you may order additional ones by getting a Badge Order Form from our Secretary, **Bob Buus, W2OD**, filling it out and turning it in to Bob with your \$5.00 payment.

We also now have patches available at all meetings and they cost \$3.

OUTGOING QSL CARDS

If any GSARA members wish to combine their QSL cards that are going through the outgoing ARRL Bureau, please bring them to the next GSARA meeting along with the label from a recent QST Magazine (you must be an ARRL member to participate in this program). We then send them as a group at no charge to GSARA members. It couldn't be much easier than that to QSL. You are registered at the W2 incoming bureau, aren't you?

PROPAGATOR NOW ON THE WEB

The *Propagator* is available as a PDF file at:

<http://www.monmouth.com/~gsara/prop.pdf>

It is installed on the web about two weeks after the direct mailing to members.

EDITOR'S NOTES

After an unusually cold month for most of May, summer seems to be on its way with nicer weather. My thoughts naturally turn to more outdoor activities such as antenna installation or repair and Field Day, which is approaching. Please plan to participate. To get in to Fort Monmouth that weekend, you must be registered on a list that will be with the guards. Bruce, K2QXW has volunteered to manage that list. He needs your name, driver's license number, car make and model, and car license plate number and state. Please get that information to him ASAP. See page 1.

How can you help on Field Day? We can always use more help in setting up and tearing down. Operators are also needed, especially in the wee hours of Sunday morning. If operating seems a bit intimidating to you, step up and offer to log. It's easy and fun. There is also a bit of a challenge (Murphy is always lurking about). I hope we have a large turnout.

My son, with his wife and new baby daughter, just moved to Indianapolis so we are driving out to see them and their new house right after the June GSARA meeting. We will be back in plenty of time for Field Day.

The story on pages 6 and 7 about the VWOA award to Jack Curtis, K6KU brought back many memories of my early tinkering with his keyer chips. I didn't realize that he is the inventor of Mode B keying. Whether it was worth the added confusion is still debatable but his work did encourage higher speed sending.

Remember if you change your e-mail address; please be sure to inform Bruce McLeod, K2QXW.

As always, I appreciate feedback or material for *The Propagator*. The deadline for the July issue is June 15.

73 de Bob, w2od@arrl.net

GSARA HOMEPAGE

<http://www.monmouth.com/~gsara>

MINUTES OF MAY 7 MEETING

By Bob Buus, W2OD, Secretary

President Jeff Harshman, N2LXM and Vice President Kevin Wagner, W2FA were both absent so the meeting was called to order at Fort Monmouth by Secretary Bob Buus, W2OD, at 8:10 PM. After the pledge to the flag, all members present introduced themselves. There were 19 members and three guests present. Guests were Josh Gluck from Middletown, Phyllis Torrance from Neptune, and Bennett, KC2SER from Bradley Beach (KC2Q's grandson).

Treasurer's Report

Treasurer Frank Wroblewski, W2XYZ presented his report for April. A motion was made by Joe, W2KQ and seconded by Mike, KC2Q to accept the report as read. The motion passed unanimously.

Secretary's Report

The minutes of the April 2008 meeting had been published in the May Propagator. A motion was made by Joe, W2KQ and seconded by Nena, N2WAY to accept the minutes as published. The motion passed unanimously.

A letter was received from George Hill (son of Les Hill, W2QHS-SK) asking that Les be taken off our mailing list.

Upgrade

Donna Wilkins, KC2GKQ has upgraded to General Class. Congratulations!

Field Day

Donna, KC2GKQ applied for and received approval to use Dean Field for our Field Day site. The approval was given to Jim, K2EI. Donna also had the form for field day participants to get access to Fort Monmouth on Field Day weekend. She subsequently e-mailed the form to Bob, W2OD who will coordinate getting it filled in and the completed list back to her by mid-June.

A list was circulated for members to sign up for time slots for the Field Day weekend. This list also included T-shirt size so Field Day shirts can be ordered for the participants.

Jim, K2EI has purchased an air cannon that can easily launch a tennis ball over the light stands at the ball field. This should permit us to erect our

Field Day antenna without the assistance of the Fort Monmouth Fire Department. Howard, W2HTS was advised to keep the Fire Department on standby, just in case we have problems with the tennis ball air cannon.

Public Service

The MS-170 bike-a-thon from Monmouth University to Cape May on May 17-18 could use a few more operators to ride in vehicles. See Jeff, N2LXM if you can help.

The Sheehan Run in Red Bank is on June 14. Volunteers are needed for this relatively short event. See Tom, N2VFK to volunteer.

Announcements

The Dayton Hamvention is coming up. Mike, KC2Q still has a few tickets for the bus trip.

Closing

The door prize was won by Joe, W2KQ. There being no further business, a motion was made by Nena, N2WAY and seconded by Peggy Struening to close the meeting which was adjourned at 8:56 PM.

HAROLD KUNTZ, W2QHT - SK

Harold R. Kuntz Sr., W2QHT died in Georgia on May 1 at the age of 89. He was formerly from Belmar. Harold served in the Army Air Corps as a PFC and radar repairman in the 689th Signal Aircraft Warning Company during World War II. He continued his civil service with the Department of the Army at Fort Monmouth as an electronic technician. He retired in 1993 after 52 years of dedicated service. During that time, he also ran his own TV repair business in Belmar, where he lived for more than 50 years.

Harold was a member of the Jersey Shore Audubon Society, the American Legion, and numerous camera clubs. He loved stamp collecting, reading, fishing, and amateur radio operating. His favorite hobby was photography, for which he won numerous awards. He was also known for his wide collection of tools and had the gift of being able to fix anything.

Surviving are his devoted wife, Ruby; his loving daughter, Dorita; his son, Reggie; eleven grandchildren and a great-grandson. Funeral arrangements were in Georgia.

RON PARISE, WA4SIR - SK

Dr Ronald A. Parise, PhD, WA4SIR, passed away Friday May 9, 2008 after a very long and courageous battle with cancer. He was 57. Parise flew as a payload specialist on two space shuttle missions: STS-35 on Columbia in December 1990 and STS-67 on the Endeavour in March 1995. These two missions, ASTRO-1 and ASTRO-2, respectively, carried out ultraviolet and x-ray astronomical observations, logging more than 614 hours and 10.6 million miles in space. Parise was one of the first astronomers to operate a telescope from space, making hundreds of observations during the mission. Amateur Radio on the International Space Station (ARISS) Chairman Frank H. Bauer, KA3HDO, said Parise's personal contributions to these two missions provided scientists with "an unprecedented view of our universe, expanding our understanding of the birth, life and death of stars and galaxies."

First licensed when he was 11, Parise kept Amateur Radio at the forefront of everything he did, including his operations from space. During his two shuttle flights, he spoke with hundreds of hams on the ground. He was instrumental in guiding the development of a simple ham radio system that could be used in multiple configurations on the space shuttle; as a result, his first flight on Columbia ushered in what Bauer called the "frequent flyer era" of the Shuttle Amateur Radio Experiment (SAREX) payload. He was the first ham in space to operate packet radio. "His flight pioneered the telebridge ground station concept to enable more schools to talk to shuttle crew members despite time and orbit constraints," Bauer said. "In his two shuttle flights, he inspired countless students to seek technical careers and he created memories at the schools and communities that will never be forgotten. Ron was also the ultimate ham radio operator -- in space and on the ground."

Bauer said that Parise's love for Amateur Radio and his love of inspiring students continued well beyond his two shuttle flights: "During the formation of the ARISS program, Ron was a tremendous resource to the newly forming international team. I know of many instances where Ron's wisdom and sage advice was instrumental in helping our international team resolve issues when we reached critical technical or

political roadblocks. He was a key volunteer in the development of the ham radio hardware systems that are now on-board ISS. The ARISS team is deeply indebted to WA4SIR for his leadership, technical advice and tremendous vision."

Parise worked hand-in-hand with the students at the US Naval Academy and Embry-Riddle Aeronautical University on the development of their student satellites. He helped develop Radio Jove, a student educational project to listen to the radio signals emanating from Jupiter <<http://radiojove.gsfc.nasa.gov/>>. Parise spoke at numerous schools over the years, inspiring students to pursue careers in science, math and technology.

"Ron Parise was--and continues to be--an inspiration to countless students, ham radio operators, and friends the world over. His accomplishments were many, including space explorer, pioneer, astrophysicist, pilot, ham radio operator, avionics and software expert, inspirational speaker and motivator, student satellite mentor, husband, father and friend. While he certainly did some truly extraordinary things in his lifetime, Ron Parise is best known and cherished for keeping family and friends first, and for this, we will miss him most," Bauer said.

In an effort to continue Parise's work to inspire the next generation, his family has set up a scholarship fund in Parise's honor for students pursuing technical degrees at Youngstown State University, Parise's alma mater. In lieu of flowers, those interested are welcome to send donations to the Dr Ronald A. Parise Scholarship Fund, Youngstown State University, One University Plaza, Youngstown, OH 44555. – Information provided by Goddard Amateur Radio Club, WA3NAN

From *The ARRL Letter*, No. 19, May 16, 2008

RICH KROHN, N2SMV TO BECOME SM

The ARRL Northern New Jersey Section is getting a new Section Manager starting on July 1. Richard Krohn, N2SMV, of Manalapan, will be taking over the reins from Bill Hudzik, W2UDT, who has served as Section manager since 2001. Congratulations to Rich for taking on this important assignment.

From *The ARRL Letter*, No. 20, May 23, 2008

NEW OSCAR SATELLITE

Bill Tynan, W3XO, has announced that Amateur Radio satellite Delfi C-3 <<http://www.delfic3.nl/>> has been issued an OSCAR number: Delfi-C3 OSCAR-64 or Dutch OSCAR-64. The shortened version of either of these two designations is DO-64. Delfi C-3 was successfully launched April, 28, 2008 from India aboard a Polar launch vehicle and was successfully commissioned, currently transmitting telemetry on the 2 meter amateur band. In addition to its 2 meter downlink, Delfi C-3 has an uplink on the 70 cm band. This newest amateur satellite was developed by a team of some 60 students and faculty members from various polytechnic schools in The Netherlands. Delfi C-3 carries two experiments: one involving thin film solar cells developed by Dutch Space, and an autonomous wireless Sun sensor from the Dutch Government Research Institute (TNO). According to Delfi C-3 Project Manager Wolter Jan Ubbels, Delfi C-3 has been duly coordinated through Region 1 IARU representative Graham Shirville, G3VZV, that the satellite meets all of the criteria necessary to be issued an OSCAR number. "AMSAT-NA is pleased to welcome DO-64 into the family of Amateur Radio satellites," Tynan said. "We are hopeful that it will fulfill its intended mission of furthering education and increasing interest in the Amateur Radio space program. We congratulate all of those responsible for designing, building, testing and launching this new Amateur Radio satellite and look forward to its long and productive life."

From *The ARRL Letter*, No. 20, May 23, 2008

AREA AMATEUR EXAM SESSIONS

Amateur radio exam sessions in this area are as follows but please contact the responsible person to be sure that the time and date are accurate.

Wall Township, Camp Evans Area on Marconi Road: Exams are held on the first Saturday of the even numbered months except for June (August 2, 2008) at 10 AM. The contact person is Pat Brannick, N2BZD at 732-267-0308 or e-mail to pbrannick@aol.com.

Middletown, Croyden Hall on Leonardo Road: Exams are on the second Tuesday of every month at 7 PM. The contact person is Mario Sellitti, N2PVP 732-787-7184 or e-mail to n2pvp@n2pvp.com.

Toms River, Riverview Park Recreation Building: Exams are held on the third Thursday of every month at 7:30 PM. The contact person is Ed Genoino, WA2NDA at 609-971-2792 or e-mail to wa2nda@aol.com.

Toms River, Holiday City South Clubhouse, Meeting Room #1, Mule Road at the corner of Santiago Drive on the second Saturday of the odd numbered months (July 12, 2008) at 10:00 AM. Pre-registration is required (no walk ins). The contact person is Bill Haldane, AC2F, 732-240-7064 or ac2f@earthlink.net.

In all cases, the fee is \$14 and you should bring the original and a copy of any amateur license presently held and original and one copy of any credit (CSCE) forms you have. Also bring 2 forms of ID with one being a picture ID.

W1HQ SNAKE GETS NAME & CALL

With more than 400 votes tallied, the W1HQ snake finally has a name. Sean Kutzko, KX9X, president of The Laird Campbell Memorial HQ Operators Club W1HQ, announced that the snake not only has a name, but a call sign, as well: "Members of the club met over lunch to discuss and vote on all the names that were sent in. The winning entry came from Charlie Liberto, W4MEC, of Hendersonville, North Carolina. He, along with former ARRL staffer R. Dean Straw, N6BV, submitted the name Hamaconda. Paul Trotter, AA4ZZ, of Charlotte, North Carolina, submitted HISS as a name. We liked the idea of the snake having a call sign, so the club decided, out of all the great names and call signs sent in, that Charlie's and Paul's submissions fit our mascot perfectly." Both Liberto and Trotter will receive a copy of "The ARRL Antenna Book."

Kutzko, the ARRL Contest Branch Manager, was voted in as president of the HQ club; ARRL Membership Manager Katie Breen, W1KRB, was selected as vice-president; ARRL Lab Manager and W1HQ Trustee Ed Hare, W1RFI, was selected as the club's technical officer, and ARRL MVP Associate/Production Assistant Carol Michaud, KB1QAW, was selected as club secretary.

From *The ARRL Letter*, No. 19, May 16, 2008

SLOT MACHINES: When you rearrange the letters: **CASH LOST IN ME.**

VWOA HONORS TWO HAMS

At their annual awards banquet on April 26 in New York City, the Veteran Wireless Operators Association (VWOA) <<http://www.vwoa.org>> honored two Amateur Radio operators with two of the association's top awards: Fritz Raab, W1FR, and John "Jack" Curtis, K6KU. Raab gave the keynote address at the banquet. "The dinner speech was a wonderful presentation of the Amateur Radio Experiment domestically and that which is happening internationally. He explored what may happen, if things go well for the museum stations on 500 kHz and for radio amateurs," said VWOA Chairman Francis Cassidy. "Ever since the emergence of the Global Marine Distress and Safety System, professional radio officers have discussed the prior use of 500 kHz. They know the attributes in the oceans of the world where ground wave transmissions on the oceans provided their primary informational experience of these transmissions."

Fritz Raab, W1FR, of Burlington, Vermont, received the VWOA's De Forest Audion Gold Medal, honoring his "technical achievements in 35 years of radio engineering." Raab serves as the experimental project manager for The 500 KC Experimental Group for Amateur Radio <<http://www.500kc.com>>. The ARRL 500 kHz experimental license, WD2XSH, was issued in September 2006 and has 20 active stations.

"I'm kind of excited to see how we can apply modern technology to a 'classic part' of the radio spectrum," Raab told ARRL in 2006 when the experimental license was issued. He pointed out that 500 kHz – the traditional maritime emergency frequency -- is roughly geometrically halfway between the 136 kHz experimental band and the 160 meter amateur allocation. "In contrast to 160 meters, 500 kHz is low enough to offer good ground wave propagation," Raab said, "but in contrast to 137 kHz, it is high enough to allow us to engage in real communication with realistic equipment."

Raab said he would eventually like to see at least a secondary 600 meter amateur allocation from 495 to 510 kHz. "Besides the opportunities for experimenting at low frequencies, that frequency is well suited to regional groundwave communication," Raab said. He said he envisions the eventual use of the spectrum to provide

Amateur Radio emergency communication via groundwave, without having to deal with the vagaries of the ionosphere or causing interference to any other services.

Additional information on the 500 KC Experimental Group for Amateur Radio can be found at the experiment's Web site and also in the July/August 2007 issue of QEX <<http://www.arrl.org/qex/2007/07/raab.pdf>>.

Raab said that it was "a real honor for me to receive an award named after one of the most important inventions in radio, and given by an organization whose members have included a number of the legends in the field. As a newcomer to 500 kHz through our experimental license, it is especially nice to be recognized by a group of people who have actually used 500 kHz for communication."

Raab is chief engineer and owner of Green Mountain Radio Research, a consulting firm that he founded in 1980. He received his BS, MS and PhD in electrical engineering from Iowa State University. Raab is co-author of "Solid State Radio Engineering" and author of more than 100 technical papers; he has been issued 12 patents. Raab's professional activities include RF power amplifiers, radio transmitters and radio-communication/navigation systems. He is a fellow of IEEE and a member of ARRL, Sigma Xi, Association of Old Crows, Armed Forces Communications and Electronics Association and the Radio Club of America.

Jack Curtis, K6KU, of Granite Bay, California, received the VWOA's Marconi Memorial Award Plaque "for his lifetime efforts of perfecting electronic circuits to generate Morse code as exemplified by the development of the Curtis Keyers."

In an article Brad Mitchell, N8YG, wrote for the ARRL Web site in 2002 <<http://www.arrl.org/news/features/2002/02/042/>>, he said, "Modern transceivers incorporate many features that not long ago were considered accessories: CW keyers and SWR meters come to mind. John Curtis, K6KU, created an electronic iambic-keyer circuit and subsequently offered an IC chip to do the job. He revolutionized keying, as we know it."

Mitchell wrote that Curtis, when studying for his Amateur Extra ticket, "decided to get a feel for the requirements of the Extra Class test by undertaking a circuit design project. John built a keyer circuit and learned about digital electronics." This keyer worked so well that Curtis's ham friends told him he should market it. Curtis followed the advice, and in 1969, he placed an ad in "Ham Radio Magazine" announcing the Curtis Electronic Devices EK-38. The -38 and its follow-up, the -39, became so successful that Curtis quit his day job and formed Curtis Electro Devices.

Curtis had established a lot of contacts while working at a semiconductor manufacturing company in the 1960s. These paid off for him when he decided that a keyer circuit could be implemented on a chip. He started with two designs: The 8043 and the 8044. "The 8043 was designed as a completely custom integrated circuit in CMOS," Mitchell wrote. "At the same time, International Microcircuits was looking for a chip in which to test their gate array technology. The first chip down the line was the 8044, produced for Curtis. The 8043 worked first try. It was limited to dit memory, and sold for \$7.95 in quantities of 50 or more in 1973. The 8044 also worked right off the bat. It offered dah memory in addition and sold for \$24.95 in 1975. The 8044M was introduced in 1980. M stood for meter. A meter could be hooked up to a pin of the 8044M to indicate sending speed."

In 1981 Curtis added mode B keying characteristics to his keyers. Mode B simply added an extra dit or dah when the operator stopped sending, depending on which was sent last. If a dit was sent last, an extra dah would be sent. If a dah were sent last, a dit followed. Curtis added this feature to his 8044B. He introduced several keyers incorporating his new full-featured ICs. The first was the EK430 incorporating the 8043 chip. Curtis also introduced a fully integrated keyboard chip called the 8045. In June 1982, Curtis Electro Devices produced its last keyer, the Lil' Bugger. Offered as the K5 or K5B, it incorporated the 8044 or the 8044B chip, respectively. Both models sold for \$39.95 and were quite popular.

In spring of 1986, Curtis introduced the 8044ABM chip. It incorporated selectable A or B modes and the speed meter, becoming an industry standard. In the 1980s, however, microcontrollers were making serious headway and Curtis chips

were no longer in demand. MFJ took over part of the line and Curtis Electro Devices ceased operations in April 2000.

The Veteran Wireless Operators Association was founded in 1925 to foster fellowship among wireless operators aboard ship, in the military, and in the shore stations. Through the years, the ranks of the VWOA have included most of the executives and innovators of the broadcasting and communication industry, as well as thousands of radio operators.

Today, in its 83rd year, the VWOA serves as both a link to the history of radio, as well as a bridge to the future. Its members have been, and continue to be, on the front lines of the development of radio and television broadcasting, satellite communications, and the entire digital revolution. Current membership is approximately 300 men and women. Members are concentrated along both US coasts, but members also reside in almost every state as well as Canada and several other countries. For more information on the VWOA, please visit the VWOA Web site <<http://www.vwoa.org>>.

From *The ARRL Letter*, No. 18, May 9, 2008

CHINESE OLYMPIC SPECIAL EVENT

Special Event stations for the 2008 Beijing Olympic Games began operating May 18, running through Wednesday, September 17. Five special calls, representing the five rings of the Olympic flag, will be on the air: BT1OB, BT1OJ, BT1OH, BT1OY and BT1ON. The last letter of the call sign corresponds to the color of each of the rings of the Olympic flag -- Beibei (Blue), Jingjing (Black), Huanhuan (Red), Yingying (Yellow) and Nini (Green). Zheng Feng, BA4EG, will be the QSL manager for all stations. QSLs can be sent either direct or via the bureau and will begin to be answered in October. A Web site for the Special Event stations will include an on line log search, QSL card received and sent status, as well as other information <<http://www.bj2008ses.com.cn/>>; award criteria will soon be posted on the site. -- Thanks to "The Daily DX" for this information

From *The ARRL Letter*, No. 20, May 23, 2008

A woman has the last word in any argument. Anything a man says after that is the beginning of a new argument.

NEW TOOL TO EXPLORE IONOSPHERE

Last week at the Space Weather Workshop in Boulder, Colorado, NASA released a 4D live model of the Earth's ionosphere <http://science.nasa.gov/headlines/y2008/30apr_4dionosphere.htm?list212589>. Without leaving home, anyone can fly through the layer of ionized gas that encircles Earth at the edge of space itself. All that is required is an Internet connection and a free copy of Google Earth <<http://earth.google.com/>>. NASA calls the ionosphere the "last wisp of Earth's atmosphere that astronauts leave behind when they enter space. The realm of the ionosphere stretches from 50 to 500 miles above Earth's surface where the atmosphere thins to near-vacuum and exposes itself to the fury of the sun. Solar ultraviolet radiation breaks apart molecules and atoms creating a globe-straddling haze of electrons and ions."

Using a Google Earth interface, users can fly above, around and through these regions getting a true 4D view of the situation. "The fourth dimension is time. This is a real-time system updated every 10 minutes," said W. Kent Tobiska, president of Space Environment Technologies and chief scientist of its Space Weather Division. The proper name of the system is CAPS, short for Communication Alert and Prediction System. Earth-orbiting satellites feed the system up-to-the-minute information on solar activity; the measurements are then converted to electron densities by physics-based computer codes. It is important to note, Tobiska said on the NASA Web site, that CAPS reveals the ionosphere not only as it is now, but also as it is going to be the near future.

According to propagation specialist Carl Luetzelschwab, K9LA, this model "can provide Amateur Radio operators a broad view of what the ionosphere is doing 'now.'" This broad view is due to the fact that the resolution in the color coding schemes only gives coarse estimates of the six parameters available." Luetzelschwab, former editor of "National Contest Journal" (NCJ) <<http://www.arrl.org/ncj/>>, writes a propagation column in NCJ and other publications.

"This is an exciting development," said NASA solar physicist Lika Guhathakurta on the NASA Web site. "The ionosphere is important to pilots, ham radio operators, earth scientists and even soldiers. Using this new 4D tool, they can monitor

and study the ionosphere as if they're actually inside it." Guhathakurta made his comments on the NASA Web site.

NASA understands that "[h]am radio operators know the ionosphere well. They can communicate over the horizon by bouncing their signals off of the ionosphere -- or communicate not at all when a solar flare blasts the ionosphere with X-rays and triggers a radio blackout." As radio amateurs, we use -- and depend on -- the ionosphere to make contacts.

Tobiska agrees: "For ham radio operators, this is a great application because it enables them to figure out what frequencies that are going to be available for communicating with any part of the world they want to communicate with at that moment in time. So ham radio operators who are in South Carolina want to talk to someone in Europe or Africa, they can know exactly what frequencies to turn to on their dial."

Luetzelschwab said he personally believes that "The importance of this new product is the fact that this is likely the first physical model of the ionosphere available to the widespread Amateur Radio community. This is in contrast to the model in our current propagation predictions -- such as VOACAP, W6ELProp and the like -- that is based on years of measured ionospheric data correlated to a proxy for the true solar ionizing radiation (the proxies being sunspots and 10.7 cm solar flux)."

NASA explained that it appears that this new physical model takes satellite measurements of solar radiation at extreme ultraviolet (EUV) wavelengths (the true ionizing radiation) and inputs this data, along with a geomagnetic field activity index, into a model of the atmosphere to determine electron densities. Luetzelschwab said "Yes, it only offers a broad view now -- but I think it is a sign of things to come."

More information on this tool for radio amateurs can be found on the ARRL Web site <<http://www.arrl.org/news/stories/2008/05/06/10081/>>

From *The ARRL Letter*, No. 18, May 9, 2008

LAW OF LOGICAL ARGUMENT

Anything is possible if you don't know what you are talking about.

NOTES ON CALENDAR (see reverse side)

Large call letters denote birthdays e.g., KY2S June 12. All times are in EDST. Contests are listed in the June QST, p. 84.

June 1 and every Sunday – **InfoAge Marconi Hotel** open from 1 to 4 PM on Marconi Road in Wall. Exhibits by QCWA, OMARC, Antique Radio, Broadcaster's Hall of Fame, etc. \$5 donation requested.

June 2 - **Monmouth County ARES Net** meets on 147.045 +600 at 7:30 PM.

June 3 – **Middletown Pancake House Luncheon** at noon at left rear table. All are welcome.

June 3 – **Old Barney ARC Meeting**, 7:30 PM at Ocean Acres Community Center in Manahawkin, NJ. See <http://www.obarc.org>

June 3 and every following Tuesday – **QCWA News Net** on 147.045 PL=67 at 9:00 PM.

June 4 – **GSARA Monthly Meeting** at Ft. Monmouth MARS station at 8 PM.

June 5 – **Holiday City ARC meeting** at 7 PM at Holiday City South Clubhouse in Toms River.

June 6 – **WIAW Qualifying Run** at 10 PM (10-35 wpm). See June QST, p. 84 and 102.

June 7-8 – **SEANET Contest** from 8 AM Saturday to 8 AM Sunday on all HF bands. See June QST, p. 84 or www.sabah.net.my/seanet/

June 7-8 – **IARU Region 1 Field Day** from 11 AM Saturday to 10:59 AM Sunday. See June QST, p. 84.

June 9 – **Monmouth County RACES** on 147.045 +600 at 7:30 PM. RACES members only.

June 10 – **VE Test Session** at Croyden Hall, Leonardo section of Middletown at 7:00 PM. For more information, contact Mario Sellitti, N2PVP at 732-787-7184 or n2pvp@n2pvp.com

June 12 – **Jersey Shore Amateur Radio Society (JSARS)** meeting in Riverview Park Recreation Building, Rt. 527 and Riverwood Drive in Toms River at 7:30 PM.

June 14 – **Sheehan Run** in Red Bank from 7 to 11 AM. Contact Jeff, N2LXM if you can help.

June 14 – **OMARC Meeting**, 9:00 AM at the Diana Site on Marconi Road, Wall, NJ.

June 14 – **Middletown Amateur Radio Club meeting** at 10 AM in Union Beach Police Annex (Municipal Building) on Poole Avenue.

June 14-15 – **ARRL VHF QSO Party** from 2 PM Saturday to 11 PM Sunday. See June QST, p. 84 or www.arrl.org/contests

June 16 - **Monmouth County ARES Net** meets on 147.045 +600 at 7:30 PM.

June 18 – **WIAW Qualifying Run** at 7 PM (10-35 wpm). See June QST, p. 84 and 102.

June 19 – **JSARS VE Test Session** at 7:30 PM Riverview Park Recreation Bldg., Rt. 527 and Riverwood Drive in Toms River. Contact Ed Genoio, WA2NDA at 609-971-2792 or wa2nda@comcast.net.

June 20-22 – **All-Asian CW DX Contest** from 8 PM Friday to 8 PM Sunday. See June QST, p. 84 or www.jarl.or.jp/English

June 21 – **Kid's Day** from 2 PM to 8 PM on all HF bands. See June QST, p. 84 or www.arrl.org/FandES/ead/kd-rules.htm

June 28 – **Neptune Amateur Radio Club Meeting** at 9 AM at Casey's Restaurant, Sylvania Ave. & Rte. 35, Neptune City.

June 28-29 – **ARRL Field Day** from 2 PM Saturday to 5 PM Sunday (2 PM if you set up in advance). See insert after p. 48 in June QST, p. 84 and insert after p. 48 or www.arrl.org/contests

June 30 – **Monmouth County RACES** on 147.045 +600 at 7:30 PM. RACES members only.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 InfoAge	2 ARES/RACES 7:30	3 Pancake House Old Barney ARC QCWA News 9 PM	4 GSARA Mtg	5 Hol. City Mtg.	6 CW Qual. Run	7 SEANET Contst IARU FD
8 SEANET Contst IARU FD InfoAge	9 RACES Net 7:30	10 Croyden VE 7 PM QCWA News 9 PM	11	12 KY2S JSARS Mtg.	13 KA2ZSI	14 OMARC Mtg. MARC Mtg Sheehan Run VHF QSO
15 W2HAM VHF QSO InfoAge	16 ARES/RACES 7:30	17 QCWA News 9 PM	18 CW Qual. Run	19 JSARS VE	20 Asian CW DX	21 WB2KCV Asian CW DX Kid's Day
22 Asian CW DX InfoAge	23 ARES/RACES 7:30	24 QCWA News 9 PM	25	26 KC2HWK N2LXM	27 W2HTS	28 Neptune Mtg Field Day
29 Field Day InfoAge	30 RACES Net 7:30					



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