W6ARA

PAARA NEWSLETTER VOLUME 66, NUMBER 8, August 2015

K6OTA

K6YQT

PAARAgraphs

The Official Newsletter of the

Palo Alto Amateur Radio Association, Inc.

Celebrating 78 years as an active amateur radio club—Since 1937

Professor W.E Moerner, WN6I, Nobel Laureate

"FM Radio at 560 THz Enables Single-Molecule Detection and Spectroscopy, Paving the Way to the Nobel Prize"

Prof. Moerner will talk about science in his youth, concentrate on the original experiment as a signal detection problem similar to FM in ham radio, and briefly mention some of the current work.

W.E. Moerner's early years as a ham in high school eventually led to the study of electrical engineering, physics, and mathematics in college and optical studies of vibrations of molecules in graduate school. All of these experiences built upon themselves throughout his career, eventually leading to the optical detection of a single molecule in a solid in 1989 at IBM Research. This was achieved with laser FM spectroscopy, which involves frequency modulating a visible light beam at low modulation index to detect narrow spectral features with quantum-limited sensitivity. Effectively, the single molecule acts as a de- • modulator of the FM signal, converting the FM to AM, much like good old FM radio, but at 560 THz. This was the beginning of single-molecule optical studies which are having a broad impact on imaging in chemistry, physics, and biology today.

Upcoming Events

August 7 PAARA General Meeting, 7:00 PM

Cubberly Community Center,

Room H-6

400 Middlefield Rd, Palo Alto

August 19 Board Meeting, 7:00 PM

Everyone welcome! Round Table

Pizza Parlor in Menlo Park

Aug 30 Nile Canyon Train Ride and BBQ

President's Corner

August 2015

It's August already. Can you believe that? It seems like 2015 just started. Our Sun, the heating system, seems to be slumbering yet again. Unfortunately I will be missing the August meeting to speak in Albuquerque. I will be back, though, to ride the caboose through Niles Canyon with everyone.

The year is just flying by as we head into the latter

part of the summer. The days are already getting shorter, little by little, and that means propagation will be increasingly shifting as the weeks go by. Those long periods of sunshine around the summer solstice serve to pump a large quantity of ultraviolet and X-ray photons



into the ionosphere Those photons serve to separate electrons from their nuclei in the upper atmosphere, creating a charged plasma. This is, of course, re-

(President — Continued on page 4)

The Queen Mary

About 6 months ago I sent an email to John Rogers (KF6TTR) requesting a couple hours in the radio room of the Queen Mary. I was contacted a few hours later with an email asking me the date time and how long I wanted to operate. I wanted to say, "ALL day! Are you crazy? It's the QUEEN MARY!" My email stated time and date and a few hours of radio time.

This past Friday 3/13/15 from 11:15 to 12:30, I was allowed to be the amateur radio operator aboard the Queen Mary. They let me use their Yaesu FT 1000 and the antenna was a Hy-Gain - 88 vertical.

It was a day I'll never forget. Although I thought it might be difficult using a different call sign, it wasn't. The first time I said," W6RO the Queen Mary" it felt so right. Then I realized for the next hour I was the voice of the Queen Mary.at that moment I felt so humble and an honor to speak these words.

"CQ, CQ CQ This is W6RO The Queen Mary calling, CQ, CQ, CQ. I made seven contacts throughout the mid-west states, they will get QSL cards from the Queen Mary.

Established in 1979, W6RO was the first permanent amateur radio station to be installed aboard a museum ship. This was the vision of founding manager Nate Brightman, K6OSC, who went on to serve as station manager for 34 vears until his recent retirement. The Wireless Room is generally staffed every day from 9:00am to 5:00pm local time, volunteer availability permitting. We currently have some vacancies available, and local hams are invited to inquire about joining us as regular crew members. Also, visiting hams may be permitted to operate the station for a brief period (generally no more than an hour, at the discretion of the Control Operator on duty) and qualify for our Guest Operator certificate. Inquiries may be directed to John Rogers, KF6TTR: greyghost1934@yahoo.com



Joe McVeigh
AG6ZC

"Finding Time to Study Ham Radio with an already Busy Schedule"

Most people already have a busy schedule and studying for an upgrade for those whose time may be full or unstructured is challenging. Yes there are the cram classes but, the club membership would benefit if there was a short series of extra classes for anyone who wants to learn, even the ones who have the license who want to review. Group effort most of the time is less effort then individual time and working together the Club gain more extras faster. As for the writer goes, he needs better then perfect time management just to complete the week.

Maybe that might work.

Walter McVeigh KK6GTU >< It may be a corny call sign but, it fits me to a TEA

P.S. Thank you for sitting at the table and sharing some conversation.

July 15, 2015 Board Meeting

The July Board Meeting was held at the Menlo Park 'Round Table Pizza Parlor, commencing at 7:41 PM on July 15th, 2015. In attendance were Kristen McIntyre, K6WX (President), Marty Wayne, W6NEV (V.P.), Jim Thielemann, K6SV (Secretary/Membership), Darryl Presley, KI6LDM (Dir), Larry Rebarchik, N6DB (Dir), Rob Riley, KI6INR (Dir), and non-Board Member, Gerry Tucker, N6NV (Property Manager). A quorum was present.

President's Report: Kristen, K6WX, made note that the meeting last month rivaled a December meeting with respect to the number of attendees. She counted 106 people at the meeting when the talk started. During the main part of the meeting, 18 visitors came up to introduce themselves. That's the most anyone can remember in recent history. Paul Wesling, KM6LH, provided all with an enlightening evening of education with a talk entitled, "The Origins of Silicon Valley: Roots in Ham Radio". A key take away from the meeting was the number of people that heard about the talk from sources other than N6NFI.

Kristen also reported that she and the board are still looking for a member or members to represent PAARA at ASVARO board meetings and possibly sit on their board. Here is a great opportunity to represent PAARA at ASVARO and assist in the single largest money making event for the club. Contact Kristen or any board member if you're interested in this important opportunity.

Kristen indicated her reserve of stories is reasonable but always in need. Have you committed to a story but not submitted it, do you have any projects, Field Day experiences, technical articles, hints n kinks, DX, setting up your station or antenna, on the air experiences that might be of interest? It's time to put pen to paper or exorcise the demons out of your word processing program and get one submitted to Kristen.

Vice President's Report: Marty, W6NEV, re-

ported that the speaker for August is Professor W.E. Moerner, WN6I, Nobel Laureate. His talk is entitled "FM Radio at 560 THz Enables Single-Molecule Detection and Spectroscopy, Paving the Way to the Nobel Prize". Thanks go to Rebar, N6DB, for the speaker suggestion and assistance in setting up the date. Marty is still looking for speakers for the rest of the year. If you have any ideas, let him know.

Marty also mentioned that about ½ of the seats for the Niles Canyon Railway trip have been sold. So if you want to go on the August 30th field trip and ride the railway, don't delay and go to our web site to learn more and pay/signup using PayPal.

Secretary's report: Jim, K6SV, reported that currently there are 162 PAARA members. The total of PayPal renewals and other sales now totals 142. "There are quite a few people using PayPal to pay for items other than dues, like field trips", he said. He also reported as there wasn't a board meeting in June, there wasn't the opportunity to report on new or rejoined members. Thus the report for this month includes June and July. As Ron, W6AZ, is otherwise occupied, Jim mentioned that he and Rebar, N6DB, are quickly getting closer to having all the documents together to submit the Field Day results to ARRL.

Treasurer's Report: Ron, W6AZ, wasn't able to make the meeting as he's madly preparing to move. He did however have a chance to advise the board that we did make money at the June Flea Market, though not as much in some years.

Under Old Business, Rebar, N6DB, mentioned that the clubs PE-95 generator is still for sale. He's looking for someone who is interested in purchasing it. Let Rebar know if you know of anyone who might be interested. After a short discussion, the board agreed to list it for sale in PAARAgraphs.

Gerry, N6NV, reported on the Club Repeater shack progress. The walls are affixed to the

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(President — Continued from page 1)

sponsible for RF ionospheric refraction, or bending, that we are so familiar with on the HF bands. As the days get shorter, we in the Northern Hemisphere receive fewer photons per day, and so the ionosphere is not as charged as it is at the solstice. At the same time, though, gasses lower in the atmosphere that when charged attenuate RF at HF frequencies aren't charged as much either. The gas molecules at the lower levels are more dense, and so the charged particles - electrons and nuclei - will recombine more quickly to negate the attenuation effect. This lower layer is called the D-layer, while the upper layers are called F-layers. As we move toward less sunlight during the day, the F-layer is not as charged, but the D-layer dissipates quickly. If the F-layer stays relatively charged and the D-layer dissipates more quickly, it can make for better propagation toward evening, particularly on the upper-mid portion of the HF spectrum. Keep an ear peeled for this effect as the summer wears on.

Beyond the usual seasonal effects, our Sun has not been making a lot of sunspots. As I write this, the sunspot numbers are below 100, with a mean under 50, and the Solar Flux Index weekly moving average is below 100. Even given that we are significantly past the peak of solar cycle 24, these numbers are low. It would be nice to see more activity, as is typical of the downslope of a more average solar cycle. Some of those who study solar activity are not only noting the weakness of this cycle, but are making predictions of a more diminished cycle 25. Personally I think they might be going too far out on a limb with such a prediction, not that I'm predicting

the opposite. The solar plasma is a very large complex fluid dynamics problem, and one which we do not have full observational data to describe. Systems like this have properties and behavior that are not easily modeled. While we observe certain oscillatory behavior in the overall behavior of the Sun's surface (like the 11 year solar cycle), I think that trying to predict other meta-cycles years in advance is beyond our current understanding and model accuracy. Of course, since I'm not predicting anything except that predictions are hard, I'm bound to be right:). Regardless, time will tell.

Sadly I will miss our August meeting with the great speaker Marty, W6NEV, has planned. I committed to speak at the Duke City Hamfest in Albuquerque back in February, so there's no getting out of it. I'm sure it's going to be a great time, though. I'll be leaving the day of the meeting, and returning midweek the following week. I'm going to spend a few days in Santa Fe, where I haven't been in a long time, enjoying the food and culture of Northern New Mexico. I hope you all enjoy the meeting. I'll probably bring a QRP rig with me.

I hope to see many of you before the September meeting, though, when we ride the Niles Canyon Railway through the lovely canyons of Sunol and Fremont. There will be a great BBQ following the ride too at Lake Elizabeth in Fremont. Don't miss it. Seats are going fast!

CU ON THE TRAIN DE K6WX

-Kristen (K6WX)



Standing room only at the July meeting to hear Paul Wesling, KM6LH, talk entitled, "The Origins of Silicon Valley: Roots in Ham Radio".

PAARA 7/10/15 Raffle Prize Winners

Left to right starting in the back row

2nd Prize / Mike Gavin / W6WZ / CountyComm GP-5/SSB Communications Monitor 3rd Prize / Walt Gyger / K6WGY / Daiwa CS201A 2-Position Coax Switch



7th Prize / Daniel Rahamim / KI6SEE / ARRL Minilog

4th Prize / Joe McVeigh / AG6ZC / World Atlas Map Book

6th Prize / Red WB7EC / Bongo Ties

1st Prize / Rob Fenn / KC6TYD / Kenwood TM281A / 2m Mobile Transceiver

5th Prize / Kristen McIntyre / K6WX / ARRL Repeater Directory (not shown)

August PAARATrip



Whoo, Whoo. She'll be coming 'round the mountain when she comes!

August 30, 10:30 AM, join us for a ride on the Niles Canyon Railway through beautiful Niles Canyon in a private caboose. There will be a picnic and BBQ at the Fremont Central Park/Elisabeth Lake after the ride.

The cost is \$25 per person. The caboose capacity is 28. Reserve your seat early or you may miss out. If you do miss the train ride, join us for the BBQ at Lake Elisabeth. Cost is \$5 per person. You can pay using PayPal on the PAARA.ORG web site.

This is a drive yourself tour. There appears to be plenty of parking at the Sunol depot but carpool if you can. Much more fun that way.

(Continued from page 3)

floor. He hopes to get the roof on in the next couple of weeks.

Under New Business, Gerry, N6NV, reported he's collected several radios and other PAARA property that has been stored at Ron's, W6AZ, house for quite some time. As Ron is moving into a smaller place, Gerry collected the stored radios and equipment. The board also agreed that many of the items should be put up for sale in PAARAgraphs 1st so club members had the 1st opportunity to purchase the equipment. See the ad in this issue.

Marty, W6NEV, and the board are looking for a member to step up and take over the coffee & snack setup/cleanup and making sure to have all the necessary coffee supplies for every meeting. The job isn't hard but it an important part of every meeting. Please contact Marty or

Jim, K6SV, for information or to volunteer.

The Board meeting was adjourned at 9:00.

Jim Thielemann Secretary/membership K6SV

June Rejoining member: Rod Stafford, W6ROD

June New members: Christopher Hoover, KK6TPC; Leo Blume, KK6TOC

July Rejoining members: Steve Stearns, K6OIK w/Summer Beasley KI6JGF

July New members: Red Cranefield WB7EC; Leroy Higgins, KI6MES (ARRL VC & EC001); David Heine KK6TOZ; Ralph Kugler, KC6YDH

Random images from Field Day 2015





















June Raffle Prizes

1st Kenwood TM281A / 2m Mobile Trans-

ceiver

High Power 65W Output

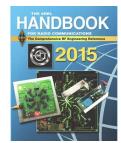
Large Front Speaker

Vivid Amber LCD Display with 32-

step brightness control

200 Memory Channels, plus one call channel

2nd



HANDBOOK 2015 ARRL Handbook

3rd WA4MNT Dummy Load

4th



POCKET Pocket Reference

5th Anderson Power Poles (10 sets)

6th Coax Wrap

•7th Bongo Ties

Celebrating 78 years as an active ham radio club—Since 1937

Palo Alto Amateur Radio Association, Inc.			
PO Box 911 Menio Park, CA 94026			
President		510-703-4942	
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Secretary		408-839-6815	
Treasurer	thielem@pacbell.net .Ron Chester, w6Az ron@taxhelp.com	408-243 2221	
Director ('15-'16)		408-369-1913	
Director ('14-'15)	N6uob@arrl.net .Rob Riley, kı6ınR	650 799-1607	
Director ('15)	ki6inr@arrl.net	650 465-8210	
	n6db@arrl.net		
Director ('15)	.Darryl Presley, кı6ьдм ki6ldm@arrl.net	650 255-2454	
Appointed Positions			
Membership	.Vic Black, AB6SO ab6So@smrn.com	650-366 0636	
Database		408-839-6815	
Chaplain	. Rick Melrose K6RDM	408-341-9070	
Public AffairsPosition Vacant			
Station Trustee w6otx, k Station Trustee k6ota		ucker, N6NV	
Property Manager			
Fund Raising Coordinator	bob@rgktechsales.com	408 396 4745	
Badge Coordinator	dteter@wcwi.com	650-367-6200	
Historian Position			
Raffle Coordinator		650-851-2274	
Ticket Master	. Marty Wayne, W6NEV	408-246-7531	
Field Day Coordinator ASVARO Rep		650-367-6200 650-856-2748	
·	n6nfi@arrl.net	050-050-2740	
Webmaster	webaron@gmail.com		
Technical Coordinator kd6w@arrl.net	.Joel Wilhite. KD6w	408-839-5948	
QSL Manager	(cell)	650 799-1607	
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Member Profiles Technical Tips	Position Vacant	650-366 0636	
Photographer	ab6so@smrn.com		
Ŭ,	jdsinger@sbcglobal.net		

VE Exams

Redwood City Main Library, Community Conference Room, 4th Saturday 10:30 am each month and De Anza Park, Sunnyvale, 2nd Saturday 10:30 am each month except November and December. See website for details and exceptions: http://amateur-radio.org or Contact Al. WB6IMX@att net

Electronics Flea Market

Sponsorship by A.S.V.A.R.O. — Association of Silicon Valley Amateur Radio Organizations Second Saturday of month, March-October, 6am-2pm Howard M. Krawetz, N6HM 650-856-9761

Contact: http://www.electronics

PAARA — Palo Alto Amateur Radio Association

Meets 1st Friday 7:00pm each month at Room H-6, Cubberley Community Center; Net 145.230 - PL 100Hz Mondays at 8:30. See our website at http://www.pa ra.org for more information or contact: Joel Wilhite KD6W, KD6W@ARRL.NET, 650-325-8239

FARS — Foothills Amateur Radio Society

Meets 4th Friday each month at 7:30pm

Contact: http:

NCDXC — Northern California DX Club

Meets 3rd Thursday 7:30pm each month,

Repeater for member info 147.360, Thursday 8:00PM

Contact: http://ncdxc.org or Mike Gavin W6WZ, (650) 851 8699

QCWA Chapter 11

Northern California Quarter Century Wireless Association

Meets third Wednesday monthly at Harry's Hofbrau in Redwood City @ 11:30 AM. Guests are welcome. Saturday morning net on 146.850 MHz, PL 114.8

50 MHz & Up Group

Meets 1st Thursday each month at 7pm in the Texas Instruments Building E conference room in Santa Clara.

Contact: http://50MhzandUp.org

SPECS

Southern Peninsula Emergency Communication System

Meets each Monday 8:00pm on Net 145.27, 440.80 MHz Contact: http://specsnet.org or Tom Cascone, KF6LWZ, 650-688-0441

SCARES

South County Amateur Radio Emergency Service

Meets 3rd Thursday 7:30pm each month, Belmont EOC, Belmont City Hall, One Twin Pines Lane, Belmont CA 94002. Net is on 146.445 [PL 114.8] & 444.50 (PL-100) 7:30 Monday evenings. Contact: President Gary D. Aden, K6GDA 650-743-1265 (D), 650-595-5590 (N) Web: http://k6mpn.org E-mail: pres@k6mpn.ord

SCCARA

Santa Clara County Amateur Radio Association

Operates W6UU & W6UU/R, repeater 146.985-pl Nets: 2m, 7:30pm Mon; 70cm, 442.425+ (pl 107.2) Thur. Meets 2nd Mon each month @ 7:30 PM.

cara or Clark Murphy KE6KXO 408-262-9334 Contact: http://www.gsl.net/s ARRL/VEC license testing contact 408-507-4698

SVECS — Silicon Valley Emergency Communications

Operates AA6BT repeater (146.115 MHz+)

contact: http://www.svecs.net or Lou Stierer WA6QYS 408 241 7999

TEARS — The Elmer Amateur Radio Society

Dedicated to operational training, knowledge building & FCC exam testing. KV6R repeater under construction.

Contact: AA6T@

Most members are Extra Class or VE's. See QRZ dot com/kv6r for class info

WVARA — West Valley Amateur Radio Association

 $\begin{tabular}{ll} W6PIY six-meter repeater on 52.58mHz. \begin{tabular}{ll} \textbf{Normally, six-meters is linked with 147 and 223,} \end{tabular}$ while 441 and 1286 repeaters are linked.

VHF: 52.58 (-500) 151.4 ctcss

147.39 (+600) 151.4 ctcss

441.35 (+5.0) 88.5 ctcss 1286.20 (-12m) 100.0 ctcss

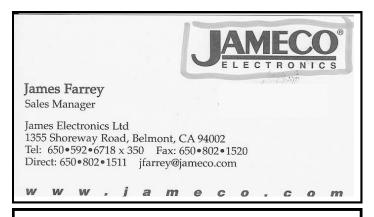
223.96 (+1.6) 156.7 ctcss
Meetings are 3rd Wednesday of every month.

Contact: http://wvara.org, Bill Ashby N6FFC, 408-267-3118, N6FFC@Juno.com, or N6FFC@ARRL.NET

American Red Cross, Santa Clara Valley Chapter

Contact: http://santaclaravalley.redcross.org or Scott Hensley KB6UOO, (408) 967 7924 fshenslev@Novell.com

(Please send changes to PAARAgraphs editor)



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Fax Ph: 650-369-7339,

KARL Cell Ph: 650-274-8155 General License KJ6GUK

Email: KARLDRESDEN@juno.com

Badges are ready for pickup.

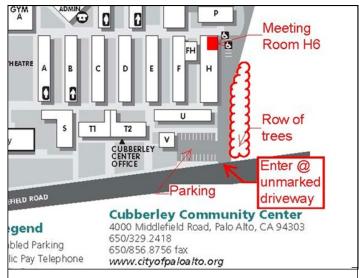
If you would like to order a badge, see **Doug Teter, KG6LWE**.

PAARA Weekly Radio Net

Info and Swap Session every Monday evening at 8:30pm on the N6NFI 145.230 MHz repeater

<u>Week</u>	Control Operator
1 st	Joel KD6W
2 nd	Doug - KG6LWE
3 rd	Jack - N1VSL
4 th	Marty - W6NEV
5 th	Rob KC6TYD

If you're interested in trying out at Net Control, Contact Doug, KG6LWE. It's good practice, and lots o' fun! Give it a try.



Meeting Location — Middlefield Road between San Antonio and Charleston in Palo Alto. 4000 Middlefield Road

http://www.foto.mail.ru/list/shkurkin

Vladimir Vladimirovich

SHKURKIN

Editing and Translation Services English-Russian-English

shkurkin@ix.netcom.com

Palo Alto Amateur Radio Association P.O. Box 911, Menlo Park California 94026-0911

Club meetings are on the first Friday of each month, 7:00pm at the Room H-6, Cubberley Community Center.

Radio NET & Swap Session every Monday evening, at 8:30pm, on the 145.230 –600 MHz repeater, PL 100Hz.

Membership in PAARA is \$20.00 per calendar year, which includes one subscription to PAARAgraphs \$6 for each additional family member (no newsletter).

Make payment to the

Palo Alto Amateur Radio Association, P.O. Box 911, Menlo Park, CA 94026-0911

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RADIO IN THE PARK

9:30am - 12:30pm Check Back In the Spring

QTH:

Agnews Historic Park 4030 Lafavette St. Santa Clara, CA 95050

37° 23.549 W 121° 57.297 Ilse Beck, E. A., KI6IBM



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Subscription Problems? Contact Database Manager: Jim Thielemann, K6SV, 408-839-6815, thielem@pacbell.net

PAARAgraphs Ad Rates

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PAARAgraphs accepts paid advertisements from non-members. (short personal ads remain free for members in good standing). All ad rates listed are per issue.

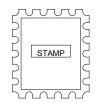
1. Not-for-profit ads by association members for ham-related items and wants. No cost for business card-size ads (additional space at \$2.50 per business card size per issue).

2. For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover per issue

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition to any existing rrangements with the association. The PAARAgraphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association. All fees payable in advance by the year with "scanner-ready" copy or text-only ads. Give payment and copy to Ron Chester, W6AZ

PAARAgraphs — August 2015

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Palo Alto Amateur Radio Association, Inc. PAARA*graphs* Newsletter P.O. Box 911 Menlo Park, California 94026

FIRST CLASS MAIL

