



EX-LS

Retiree Newsletter

Lawrence Berkeley National Laboratory - July, 2018

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Save the Date

October 4, 2018 - LBNL RETIREMENT RECEPTION

EX-Ls BOARD OF DIRECTORS

President: Henry Rutkowski
1st Vice-President: Nancy Brown
2nd Vice-President: Bob Cahn
Secretary: Esther Schroeder
Treasurer: Howard Mattis
Membership: Patti Powers-Risius
Activities: Kathy Bjornstad
LBNL Liaison: Margaret Dick
CUCRA Representative: Janis Dairiki/Bob Cahn
UCBRC Advisory Board: Lee Schroeder, Henry Rutkowski
Editor EX-Ls Newsletter: Linda Rutkowski
UCBRC Director and Liaison Cary Sweeney

PAST PRESIDENTS

Lee Schroeder - 2017	
Cheryl Fragiadakis -- 2016	Per Dahl - 2001
Connie Grondona – 2015	Tom Beales - 2000
Trudy Forte – 2014	Ken Mirk - `1999
Joe Jaklevic – 2012-2013	Paul Hernandez – 1998
Rollie Otto – 2011	Clay Sealy - 1996-1998
Richard Sextro – 2010	Igor Blake - 1994-1996
Don Grether – 2009	Conway Peterson –1992-1994
Jose Alonso – 2008	Howard Browne – 1990-1992
Janis Dairiki – 2007	Ethel Skyrdlinski – 1989
John Kadyk – 2006	Al Amon - 1988
Gene Binnall – 2005	Ken Lou – 1987
Sig Rogers – 2004	Virginia Cherniak - 1986
Bob Fulton – 2003	Bill Bigelow – 1985
Bob Birge – 2002	Ted Bowers – 1981-1984

2018 CALENDAR OF BOARD MEETINGS & LUNCHEONS

Board: Meetings:

January 11, 2018 April 12, 2018
July 12, 2018 October 11, 2018

Board Meetings start at 3:00 p.m. and end at 5:00 p.m. usually held in LBNL Conference Room (54-130B). Location is subject to change at the last minute, so check with a Board member if you plan on attending. We welcome attendance by interested members.

Luncheons:

Thursday, Feb 15, 2018, Hs Lordships
Thursday, May 17, 2018, Hs Lordships
Thursday, Aug 16, 2018, DoubleTree by Hilton Berkeley Marina
Thursday, Nov 15, 2018, DoubleTree by Hilton Berkeley Marina

OFFICE ADDRESS:

Our mailing address is: LBNL EX-Ls
101 University Hall Berkeley, CA 94720-1550

Photo Site:

<https://get.google.com/albumarchive/108867583996319040696>

Photo Czar: Ned Dairiki

Website: <http://retirement.berkeley.edu/ex-ls>

Webmaster: Kris Thornton, UCBRC

EX-LS Honorary Life Members

Shirley Ashley Patrick Cullinane, Bud Larsh

Next Luncheon
August 16 , 2018

President's Message

The last President's Message was completely devoted to the very important issue of UC Retiree medical insurance funding. Just before publishing this issue of the Newsletter, I received the response to the Working Group's recommendations by UC President Napolitano. We are including the content of her letter immediately after this President's Message. There is considerable disagreement among experts on whether UC has a real financial problem that must be solved by cutting support for retiree health care. Although the deliberation on retiree health care insurance funding is extended for another year, the issue is not yet resolved. Those active in debating the options are concerned that retirees must continue to be involved in the debate even though the extreme urgency of the past 6 months has abated.

As you know, we have had to change the venue for our quarterly luncheons, because of the demise of Hs Lordships. We have committed to the Doubletree at the Berkeley Marina for the rest of 2018. In the fall, the presidents of UCRA (University of California Retiree Association Berkeley), PARRA (President and Regents Retiree Association), and the EX-Ls together with representatives of the UC Berkeley Retirement Center will approach the Doubletree to negotiate a deal for 2019 trying to minimize cost to members. For their October luncheon, PARRA, has committed to the Berkeley Country Club in El Cerrito (formerly the Mira Vista Country Club) because the Doubletree would not give them the same deal they gave the EX-Ls. Kathy Bjornstad will be investigating this option also for 2019. We all owe Kathy a big debt of gratitude for the tremendous effort she put into securing the Doubletree arrangements.

Looking to the future, remember that the Lab Retiree Reception will be held at the Cafeteria on October 4, 2018. Please contact your friends, especially those that may have disappeared for some time, to make sure they know about it and encourage them to come and reconnect. Parking will be available for those who need it.

Every three years the EX-Ls Bylaws require that we update the Bylaws. A committee composed of Joe Jacklevic, Trudy Forte, and Bob Cahn are drafting a set of changes to be voted on by the Board in October. The Board approved changes must then be voted on by the membership at the Annual Meeting at the November Luncheon. We will publish the proposed changes in the October Newsletter so you will know what you are voting on.

CUCRA (Council of UC Retiree Associations) and CUCEA (Council of UC Emeriti Associations) will be holding their joint meeting at the Doubletree in the Berkeley Marina on Oct 24-25, 2018. These two groups advise UCOP and advocate for retiree concerns. The meeting is being hosted by the 4 UC Berkeley Retiree associations and the UCB Retirement Center. LBNL is providing the bus transportation for an Advanced Light Source and a Lawrence Hall of Science tour. The meetings are public. For more details contact Janis Dairiki, the EX-Ls CUCRA rep, Bob Cahn, the EX-Ls alternate CUCRA rep, or Don Grether, the former EX-Ls CUCRA rep.

Our Newsletter is the main method for communication. If you have a story about some event or activity of general interest or perhaps a travel story of your own, please sent it to our Newsletter Editor, Linda Rutkowski (chamisa6@att.net). The deadline for material is the third Thursday of January, April, July, and October (one week after the quarterly Board Meeting).

Finally, in order to continue the EX-Ls and the EX-Ls activities, we need your help. Since we no longer charge dues, please consider contributing. We also need a candidate for Second Vice President at our Annual Meeting in November. If you want to know more about what the process is and the duties of the Officers, contact any Board Member.

Henry Rutkowski, President

Napolitano Letter

July 19, 2018

MEMBERS OF THE RETIREE HEALTH BENEFITS WORKING GROUP

Dear Colleagues:

Thank you for your report of July 3, and for your considerable time and effort exploring potential avenues for me to consider to ensure a strong retiree health benefits program.

The University invests heavily in high-quality health benefits, and I recognize that these benefits have significant value to faculty and staff and enable us to continue to express our support for our retirees.

I appreciate the Working Group's diligent research, thoughtful discussion, and consultation with and representation of stakeholders regarding this complex topic. After carefully reviewing your report, I support many of your recommendations and will proceed with the following:

- **No significant changes to the retiree health program for 2019.**

With your guidance in mind, I have directed Systemwide Human Resources to finalize UC's retiree health benefits offerings for 2019 details will be available during Open Enrollment. Given 2019 cost estimates for retiree health benefits, no significant changes in UC's contribution levels or plan design are anticipated for 2019.

- **Gradually reduce the UC contribution for eligible retirees aged 65 and older who are not coordinated with Medicare to adjust to levels comparable to Medicare-coordinated retirees.**

There are approximately 1,600 current retirees who either elected in 1976 not to coordinate with Social Security or are unable to coordinate with Social Security. For this subset of our retirees, the UC premium contribution is substantially higher than for other UC retirees who elected Medicare coverage. I accept the Working Group's recommendations to gradually reduce UC's contribution for this group only over the next three years (from 2019 through 2021) to ensure equity across all our retiree groups.

- **Continue to work with members of the Working Group through 2019.**

I hope that each of you will continue to serve as a member of a consultative body that will review ongoing options to ensure that UC offers competitive retiree benefits that are financially viable over the long term. This group's charge will also include active consultation with your respective constituent groups. Systemwide HR will continue to evaluate plan and program design strategies to sustain retiree health benefits, which will be shared with this consultative body.

I am committed to an iterative process and to sharing proposed changes to the retiree health benefits program with the broader UC community, and look forward to continuing this work.

Thank you for your continued service to the University of California.

Yours very truly,
Janet Napolitano, President

May Luncheon Speaker Recap

Dr. Vi Rapp, a Research Scientist, in LBNL's Environmental Impacts, Energy Analysis Division, Energy Technologies Area gave a talk entitled "Advancing energy technologies for a clean, renewable energy society."

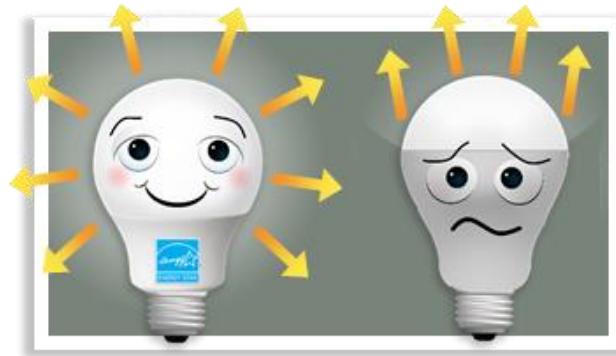


Rapp's research emphasizes minimizing combustion generated pollutants for biomass-burning stoves used in developing countries, with a special emphasis on particle mass that is less than 2.5 milli-microns (10^{-6} m). $PM_{2.5}$ is 20 times smaller than a human hair follicle. Especially dangerous are the smaller particles in this size range that are 50 nanometers (10^{-9} m), the so-called ultra-fines, that can penetrate deep into the lung and cause a myriad of cardiovascular maladies. $PM_{2.5}$ is responsible for more than 5.5 million premature deaths per year—and biomass burning is responsible for more deaths than Aids, malaria, and TB combined. Rapp's research is concerned with designing, building, and evaluating stove prototypes that reduce $PM_{2.5}$ while maintaining desired features that increase stove adoption. Rapp and colleagues explore a wide range of flow types, turbulence generation techniques, and design protocols for stove adaptation. Rapp and her colleagues found that measurements of particle mass must be accompanied by measurements of the particle size distribution so that the contributions of ultra-fines to the size distribution are minimized. They identified an air injection design that supports development of affordable and desirable cleaner stoves.

The second part of the talk focused on efficient, low-emissions energy technologies Rapp and colleagues are developing for on-demand water heaters using the LBNL low swirl burner concept. The low swirl burner was invented at the Laboratory and has previously been used for applications to combined heat and power systems and for industrial heaters. Its combustion is characterized as producing a very stable flame system that has very low emissions and is very fuel lean. Current research is directed toward applying the low swirl burner concept toward improving on-demand water heater burners to simplify their controls and increase their heat output ranges. This research involves designing burners that extend the water heater low operating range, simplify their controls, and that meets current design and emissions standards.

Million light bulb challenge

Submitted by Rich Sextro



The University of California, in collaboration with Cal State Universities and the California Department of General Services, has established a purchasing program for LED lighting for the benefit of current employees, students and retirees, here: <https://millionlightbulbchallenge.com/>

LED lighting has made rapid strides in the past decade and is now available in bulb shapes and sizes compatible with almost all current incandescent and fluorescent bulbs. The energy savings compared with incandescent bulbs is more than 90% - smaller when compared with most fluorescent fixtures. This purchasing program helps reduce the costs of LEDs, one of the barriers to their more rapid implementation.

Statewide, lighting accounts for about 22% of residential electrical energy consumption, which for the 'average' home is ~1300 kWh/year for lighting out of ~6000 kWh (appliances are a close second at ~20%). So switching to LED's can potentially save ~\$100 or more per year for a typical household. LEDs provide another advantage - with a typical lifetime of 30,000 to 50,000 hours of use - many of us will never need to replace lightbulbs again.



Jigsaw Puzzles are not only fun . . .



For lots of us working on a jigsaw puzzle keeps us busy, but does it do more?

First, it is a single mind consuming task. There are no distractions. It's just you and some pieces of colorful cardboard. The whirlwind of daily life is left behind. When we open the box and shuffle through the tiny pieces we can be overwhelmed. There is so much blue sky and blue water, how will we ever get the right piece in the right place? And then we say, I'll just start by looking for the edge pieces. With this simple decision, we are shifting our focus from confusion to problem resolution. We see how one of those pieces fit into the larger picture and at the same time, we see that a big problem is in reality composed of lots of little pieces. If we look at the picture on the box, we see that some of the sky pieces have a bit of a rooftop, or perhaps a few leaves. The left side of our brain is busily trying to connect the pieces to match the right brain's picture of the whole. This parallel activity is actually enhancing our mental capabilities. Jigsaw puzzles are like our lives, one part seems bigger, more important, but if we allow ourselves a little distance we can see that this huge piece is only a part of who we are.

So, Go to it! Spend a few dollars. Have fun and improve your mind.



Travel Notes

Winnie Baker and her husband enjoyed a 10-day Cruise to the Mexican Riviera in February on the Grand Princess.



Then they turned around a month later in March for a 15-day trip to Hawaii with her High School classmates to celebrate their 60th High School Reunion. The best part of cruising from San Francisco is not having to fly!

Henry and Linda Rutkowski celebrated their 50th Wedding Anniversary on a ten and a half hour flight from SFO to Copenhagen on June 29th. After a couple of days in Denmark they travelled overnight on a Ferry to Oslo, Norway. They travelled around Norway on buses, trains and ferries taking in the spectacular scenery and visiting various museums and a fish farm.



Rich Sextro -Chasing the Solar Eclipse 2017

When my wife Joan and I first considered where to go for our first solar (total) eclipse, it seemed like the whole west coast was going to descend on northern Oregon. We decided to look a little further east – opting for somewhere in central Idaho. We loaded up the car and headed for Boise, figuring that we'd explore local roads north of Boise (the center of the path of totality was about 60 miles north of Boise) on the day before the eclipse.

We set up shop at one of the local Marriott chains, which – like most of Boise – was abuzz with information about the eclipse. There was also a significant internet-based cottage industry with all sorts of information about the eclipse. After consulting various websites, Google Earth and the young person at the hotel front desk (who I don't think had ever been more than five miles from the Snake River...), we decided to drive straight north on Idaho state route 55, looking for a place labeled Smith's Ferry (population 75), which was right on the centerline of the path of totality.

Idaho 55 follows the North Fork of the Payette River, which flows south towards Boise and the Snake River – lots of white water, some of which was pretty serious, along with some equally serious kayakers. About 30 miles from Boise we began to see large electronic signs – courtesy, presumably, of the Highway Patrol, saying "Don't even think about parking along the highway during the eclipse...". Fortunately, the Payette forms a broad river valley in the vicinity of Smith's Ferry, so there were local and forest service roads that offered possible viewing locations.

Having made some tentative choices about where we might park the next day for our eclipse viewing, we stopped at the local (and only) eatery for lunch. The customers appeared to be a mix of river runners and eclipse chasers – one of whom struck up a conversation with us about what we had planned to do for eclipse watching the next day. It turned out that a local rural church had turned a large field into a carefully marked grid of parking stalls for eclipse watching and would we be interested in using his purchased-over-the-internet permit for one of the stalls. Since we hadn't seen 'the ideal spot' in our earlier search, we took him up on the offer and after lunch drove the quarter-mile to where the church 'eclipse camp' was set up. This was a highly organized, well-thought out set-up that probably accommodated several hundred eclipse chasers (including several large tourist buses). One feature of the excellent organization was the row of porta-potties stretching as far as the eye could see along one side of the field (a consideration that factored into the tentativeness of our earlier al fresco parking ideas).

After talking with some of the local folks, we planned to allow two to three hours for the drive from Boise to Smith's Ferry the next morning. So we got up at oh-dark-thirty, and hit the road at 5 am – thinking we'd be in a parade of cars driving up ID-55. It turned out that we were one of the leaders of the parade and it took an hour for the drive from Boise. Which meant we arrived at the Smith's Ferry 'field' before sunrise; Smith's Ferry is about 4500 ft in elevation so we hunkered down in our chairs with a blanket and the thermos of Peet's – along with an increasing number of fellow eclipse enthusiasts.

By the time of first contact – i.e., the start of the partial eclipse – at 10:11 am MDT all of the parking stalls were full. Many of our neighbors had come from considerable distances – the folks directly behind us were from Germany and a few stalls down from them was a group of amateur astronomers from Washington, DC. Walking around the area I developed a bad case of gear envy – all I had was a 10 power binocular and my digital SLR with a modest telephoto – and a Go-Pro camera sitting the roof of my car to record the passage of

the eclipse shadow on the ground. As can be seen in the first photo, there were some serious telescopes set up and lots of cameras. The second photo shows an image of the partial eclipse just after first contact – along with several prominent sunspots - projected onto a white cardboard screen by a Celestron ‘scope.

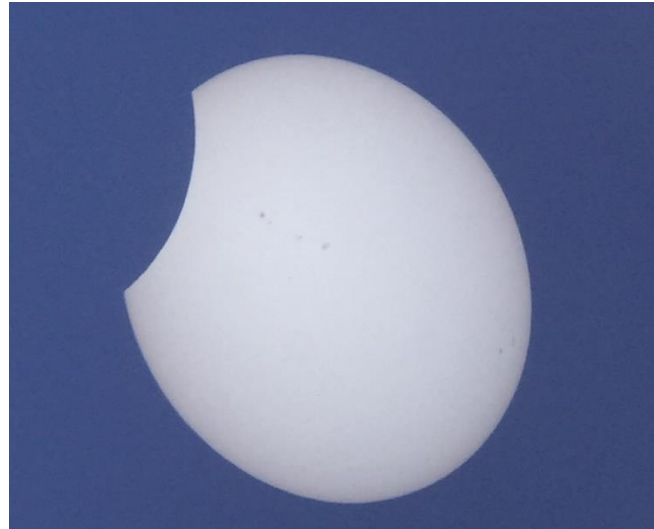


Photo 1: Sampling of the crowd and gear at Smith's Ferry Photo 2: Projected image of the start of the partial eclipse

Totality started at 11:26 am MDT and lasted for 2 min 12 seconds. I think many of us first time eclipse chasers were curious about how dark and cool it would get during totality. It was dark enough to see stars in the central part of the sky. The sky at the horizon did not get totally dark, so there was enough scattered light from the horizon to produce a deep twilight. The temperature change was a bit of a surprise, certainly noticeable, perhaps due in part to the elevation. Photo three shows the total eclipse, courtesy of my Nikon. I thought we'd get to see the edge of the moon's shadow on the earth move across the Payette River valley, but the shadow was moving at almost 2000 miles per hour so we did not see the effect.



In returning to Boise, traffic karma caught up with us – it took about 2.5 hours for the return. On our return trip to the Bay Area we drove to Ely, NV, to ride the Nevada Northern railroad and to drive on US highway 50 from Ely to Reno – the self-proclaimed “loneliest road in America”- and certainly one of the prettiest high-desert drives. Our eclipse-chasing trip was well-worthwhile – this was the first transcontinental eclipse since 1918 and the first total eclipse in the contiguous US since 1979. We won't have to wait as long for the next total eclipse – April 8, 2024 – with the path coming up from Mexico, across TX and exiting the US near the top of ME. We'll be ready.

In Memoriam

Carolyn Rose Adams



Carolyn Adams
Jan 31, 1938 - June 25, 2018
Martinez

Carolyn Rose Adams passed away peacefully on Monday evening. She embraced life and her loving nature and charismatic spirit touched all who knew her. Our dearest “Buddy” will be greatly missed.

She was born to Frank and Lola Todaro in Oakland, CA, and graduated from Berkeley High School. She resided in the East Bay Area throughout most of her life. Carolyn was married to her beloved husband Ronald Adams in 1959, until his untimely passing in 1991. She retired from UC Berkeley after a life long career as an administrative professional.

Carolyn was also a talented artist. After retirement she earned a Bachelor of Fine Arts - Printmaking, from California College of Arts and Crafts at the age of 70. She spent the next ten years producing and selling her work professionally.

Carolyn is survived by loving sons Ronald of Martinez, CA and Kevin (Shannon) of Ankeny, IA; grandchildren Holly Adams of Fortuna, CA, Amy Robertson of Panama City, FL, Taylor Adams of Ames, IA, and William Adams of Ankeny, IA. She is also survived by brother Ron (Marbry) Todaro of Atascadero, CA; and many relatives and lifelong friends. Friends and family are invited on Sunday, July 1 to visitation starting at 5pm with Rosary at 7pm at Hull’s Walnut Creek Chapel, 1139 Saranap Ave, Walnut Creek, CA.

Reprinted from East Bay Times

Eugene Haller



Eugene E. Haller, UC Berkeley professor emeritus in the Department of Materials Science and Engineering and founder of the Electronic Materials Program at Lawrence Berkeley National Laboratory (Berkeley Lab), died on Friday, June 22. He was 75.

Haller, who held the Liao-Cho Innovation Chair at UC Berkeley, was a highly regarded leader in the field of semiconductor materials. Haller's academic career spanned more than 30 years, and during that time, he emerged as one of the scientific pioneers redefining the field of materials science and engineering to include semiconductors, ultimately co-authoring a textbook on the subject.

Haller's research contributions were primarily in the area of the growth and applications of ultrapure — both chemically and isotopically — and doped semiconductors.

"Eugene is widely recognized for growing the most pure materials known to humankind," said Oscar Dubón, professor of materials science and engineering. "His ultrapure germanium crystals formed the basis for the development of highly sensitive radiation and light detectors."

Indeed, Haller's ultrapure germanium lies at the heart of one of the important devices in the Spitzer telescope: the Multiband Imaging Photometer for Spitzer detector. This infrared telescope launched into space in 2003 and is still used to study the formation of planets near distant stars. Haller was also known as a consummate teacher and mentor for students and young faculty alike.

"The welfare of his students was always his highest priority — he did all he could to ensure their success," said Daryl Chrzan, professor and department chair of materials science and engineering.

During his tenure, he directly supervised the research of approximately 50 doctoral students, guided numerous postdoctoral scholars and collaborated with many esteemed visitors. Many early-career researchers whom he mentored have achieved prominent positions within academia, national laboratories and industry.

Haller was born in 1943 in Basel, Switzerland. He earned his diploma in Nuclear Physics in 1967 and his Ph.D. in Solid State and Applied Physics in 1970, both from the University of Basel. In 1970, he joined Berkeley Lab, first as a postdoctoral fellow of the Swiss National Foundation, and then three years later as a staff scientist. In 1980, Haller was appointed associate professor in the Department of Materials Science and Mineral Engineering at UC Berkeley, becoming professor in 1982. Haller would remain on the faculty at UC Berkeley and as faculty senior scientist at Berkeley Lab through 2011.

In 1984, Haller founded the Electronic Materials Program (EMAT) at Berkeley Lab, which continues to this day. Though EMAT was not the first center at the Department of Energy (DOE) to be focused on semiconductors, it was established near the beginning of DOE's interest in semiconductor materials.

"Haller was one of the key scientists who pushed DOE to expand further into the area of semiconductor research, and his efforts helped to establish semiconductor materials as an important area of research for DOE," said Chrzan.

Haller was a major figure in the semiconductor defect community. He authored or co-authored well over 1,000 papers during his career. He also provided significant leadership for its most important series of meetings, The International Conferences on Defects in Semiconductors. He hosted and chaired the 20th meeting at UC Berkeley. He also served on the editorial advisory boards for major journals and on numerous advisory boards and panels throughout his career.

Among the many prestigious awards Haller earned throughout his career are the 1999 James C. McGroddy Prize for New Materials from the American Physical Society, the 2005 David Turnbull Lectureship from the Materials Research Society and the 2010 John Bardeen Award of the Minerals, Metals and Materials Society.

In 2010, Haller was elected into the National Academy of Engineering for "improvements in semiconductor performance through contributions to the synthesis of ultrapure and doped crystals." Election into the National Academy is among the highest of honors awarded to engineers in the United States.

When Haller was not teaching or performing cutting-edge research, he worked toward expanding his collection of antique radios and growing his extensive cacti garden. He also enjoyed working on his 1939 Talbot-Lago T123 vintage car — one of only twelve remaining vehicles of this model.

Those who knew Haller fondly recall his sharp mind, his unrivaled talent for conducting experiments, his incredible leadership skills, his fierce loyalty and his wry sense of humor. "He will be missed not only for his scientific contributions but also for his deeply caring and thoughtful nature," said Dubón. "We have lost a teacher, a mentor, a scholar and a friend."

Reprinted from TABL

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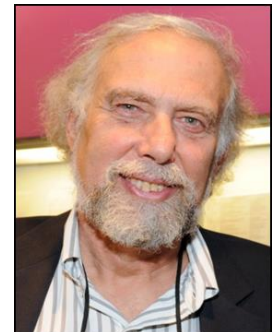
LUNCHEON SPEAKER: *Dr. Jay Marx*, Former Executive Director of LIGO, Caltech

TITLE OF TALK: THE DISCOVERY OF GRAVITATIONAL WAVES, A NEW WINDOW ON THE UNIVERSE

ABSTRACT: On February 11, 2016, front-page headlines around the world announced the discovery by LIGO (the Laser Interferometer Gravitational Wave Observatory) of gravitational waves from a merging pair of black holes, 1.3 billion light years away, confirming the most radical prediction of Einstein's theory of gravity. What is this all about? What are gravitational waves? Why is it so important? Since then gravitational wave signals from 5 other mergers of binary systems have been detected including one from a different type of source, a binary neutron star system. This talk will explain the excitement, what the discovery means, how it was made and why it has opened a new window on the universe, gravitational wave astronomy. The presentation is aimed at non-scientists with videos and photos and with only one equation, one that everyone will understand.

BIOGRAPHY: We are pleased to have *Dr. Jay Marx*, Former Executive Director of LIGO, Caltech as our distinguished speaker. Jay was the project manager of many important scientific instruments at Lawrence Berkeley National Laboratory (LBNL) including the ALS, STAR, and PEP-4. He will talk about LIGO which won last year's Nobel Prize in Physics.

Jay Marx was born in New York City in 1945. He was educated in the public schools in New York and received his undergraduate and graduate education at Columbia University leading to a PhD in physics in 1970. Following a period on the faculty at Yale University, he joined LBNL in 1975 where he was a Senior Scientist until 2006. In March 2006 he joined the California Institute of Technology as the Executive Director of the Laser Interferometer Gravitational Wave Observatory (LIGO). In 2011 he retired from his leadership role in LIGO and now serves in an advisory capacity with a number of big science experiments and projects including LIGO.



During his scientific career Jay's research has focused on high-energy physics. He has also been involved in major projects at LBNL including the Superconducting Super Collider and as Project Director for the successful design and construction of the Advanced Light Source, a world-class facility now operating at LBNL to provide intense beams of x-rays for basic and applied research in the studies of materials, chemistry and the life sciences, and for industrial applications. In 1993 he was awarded a U.S. Department of Energy Distinguished Associate Award for his leadership of the Advanced Light Source Project.

During the 1990's, Jay directed an international scientific and engineering team that designed and constructed a large experiment, STAR at the relativistic Heavy Ion collider to study the properties of matter under conditions that existed in the first microsecond after the big bang. During his time as LIGO Laboratory Executive director Jay oversaw the construction of Advanced LIGO, the instrument that made the historic first direct observation of gravitational waves in 2015. He also initiated the effort that led to the US-India project to build a third LIGO observatory site in India.

Jay is a Fellow of the American Physical Society, a Fellow of the American Association for the Advancement of Science and a member of Sigma X

EX-LS Luncheon

Date: **Thursday, August 16, 2018**

Where: **NEW LOCATION:** Easy access, Berkeley Marina

DoubleTree by Hilton

200 Marina Boulevard, Berkeley, CA. 94710

Location: **Berkeley Room, Building 5, North Conference**

Center, take ELEVATOR to 2nd FLOOR

Time: **11:30 AM – Lunch Served at 12:00, Talk 1:00 – Ends at 2:00 PM**

No-Host Bar Service: **Located in the Berkeley Room – opens at 11:30**

* * *

Luncheon Price: \$40 all inclusive of luncheon, tax, tip, fees, parking



Register using the Eventbrite Link below:

<https://ex-ls-aug18.eventbrite.com>

Lunch Service - Buffet: Garden Salad with two dressings, Sliced Seasonal Fruit, Baked Herb Chicken, Grilled Fresh Atlantic Salmon, Vegetarian Pasta, Roasted Potatoes, Fresh Seasonal Vegetables, Assorted Desserts. Rolls, butter, water, coffee, (hot tea on request) and iced tea.

REGISTRATION FORM

See you at the August 16th luncheon at DoubleTree by Hilton at the Berkeley Marina.

Be sure to make reservations by **Saturday, August 11th, 2018**

**Please mail form and check made out to EX-Ls to: Kathy Bjornstad, Activities Chair
4343 Arden Place, Oakland, CA. 94602**

Call, text or email if you have questions: (510) 220-1273 kathy.bjornstad73@gmail.com

I Plan to Attend (Name): _____

EX-Ls Board Member?: Current _____ Retired _____
First time attending? _____ LBNL Retiree? _____ UC Retiree? _____

Guest(s): _____ LBNL Retiree? _____ UC Retiree? _____

_____ LBNL Retiree? _____ UC Retiree? _____

Buffet Service - Advance choice is not required **\$40 per person – Check payable to: EX-Ls**

\$40 x _____ = _____
in your party

EX-Ls Voluntary \$15.00 Contribution: \$ _____

Total Enclosed: \$ _____

Willing to carpool: As Rider? _____ As Driver? _____

Need to Sit Closer to the Screen? _____ Buffet Assistance? _____ Other Needs? _____

We welcome new members to the LBNL Retirement Association the EX-Ls.

To be added to the LBNL EX-Ls Roster, please provide the following contact or updated information

Address _____

Email _____ Phone _____ Cell _____