EX-Ls
EX-PRESS
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The EX-Ls Board of Directors and members gratefully acknowledge the
Lawrence Berkeley National Laboratory Administration
for their continuing support.
Welcome to the second decade of the 21\textsuperscript{st} Century! And to another year of quarterly EX-Ls luncheons and, with some luck and expressions of interest on your part, a possible EX-Ls outing. We did have a small, but enthusiastic band of EX-Ls members tour the Blackhawk Museum in Danville this past year. Stay tuned and we’ll let you know about a possible outing for which you can sign up. [See the note on possible EX-peditions on page 18.]

As you know, the new year also brings with it a new set of officers for the EX-Ls Board of Directors – well, sort of new. The usual ‘line of succession’ is that the previous 2\textsuperscript{nd} Vice President (Rollie Otto) moves up to 1\textsuperscript{st} VP, the previous 1\textsuperscript{st} VP (Rich Sextro) becomes President and the past President (Don Grether) joins other past presidents as a continuing member of the board. Rollie recruited Joe Jaklevic to become the new 2\textsuperscript{nd} VP – welcome Joe. This succession, along with the continuation of Vicky Jared as Activities Coordinator (think lunches!), Karen Springsteen as Secretary, and Suzanne Stroh as Treasurer/Membership, was approved by you at our November luncheon.

As President, I first want to thank Don for the work he did as President – in particular his shepherding of the revisions of the EX-Ls Bylaws to completion and approval. He also worked with Patrick Cullinane, Director of the UC Berkeley Retirement Center, to secure LBNL support for the Center to continue their programs and supporting activities for UCB retired faculty and staff (which includes us). I also want to thank the unsung heroes of the board, Vicky, Karen, Suzanne, and our two appointed officers, Dave Stevens, the newsletter editor and Dick Baker, the EX-Ls Webmaster, for all the work they do for the organization. Vicky has had the unenviable task over the past year – and likely into this year – of negotiating to keep the luncheon costs the same while maintaining the menu choices. We’re not sure how much longer we’ll be able to keep our present luncheon prices. In the meantime, Suzanne reports that membership renewals are ‘rolling in’, including a number of folks opting for lifetime memberships. We’re always looking for new members to join us, so if you know of new (or not so new) retirees from LBNL, encourage them to join us for lunch – after all, the first calendar year of membership is free (although the lunches aren’t)!

Rollie Otto, the new 1\textsuperscript{st} Vice President, has proposed an excellent line-up of luncheon speakers, the first of whom is Roger Falcone, Associate Director at LBNL and Advanced Light Source Division Director, who will speak at our Feb. 18\textsuperscript{th} luncheon. Joe, in the meantime, has started his search for his successor – so if you have aspirations for ‘higher office’ or have possible nominees in mind, I’m sure Joe would like to hear from you (jmjaklevic@lbl.gov). [President’s message continues on page 6.]
Date:        Thursday, February 18, 2010

Where:      Spenger’s  ←←←NOTE: WE’RE AT SPENGER’S THIS MONTH
            1919 Fourth Street
            Berkeley

Time:        No-host Bar: 11:30 AM
             Lunch Served: 12:00 PM

Speaker:     Roger Falcone, ALS

Subject:     A Next Generation X-Ray Light Source for LBNL

Menu:        Salad / Parmesan crusted sole with lemon butter & capers
             Clam chowder / Shrimp Louie
             Vegetarian selection

Cost:        $25 per person (PREPAID)

Reservations: Please make checks payable to EX-Ls. Send to
              Vicky Jared
              4849 John Muir Road
              Martinez, CA 94553

              For regular mail, the reservation slip is on page 19. You may
              also reserve via e-mail to jaredrv01@aol.com, or telephone at
              925-228-2145.

              It is imperative that Vicky receive your reservations
              by February 15, 2010.
From our November Lunch

Reported by Rich Sextro: The luncheon speaker for November was Steve Greenberg, a staff scientist in the Environmental Energy Technology Division at LBNL and the self-titled ‘operator of the Ordway Solar Power Plant’. Steve gave an illustrative talk – with just the right amount of self-deprecating humor – about the quest he and his wife Liz have pursued to shrink their environmental footprint. As Steve pointed out, even following the California energy efficiency model, where the per capita residential electricity consumption has remained almost constant since 1974 (up 14%, compared with an almost 70% increase for the US as a whole), will be insufficient to reduce long-term global temperature increases. The key is to reduce global carbon emissions – primarily carbon dioxide, which is a major contributor to increased atmospheric warming.

Adopting the mantra think globally, act locally, Steve and Liz set out to reduce their energy and water impacts. In addition to installing photovoltaic systems on their home, over several years they improved the energy efficiency of their house through wall and ceiling insulation, window and door retrofits, fluorescent lighting, Energy Star appliances and solar heating for domestic hot water. The first photovoltaic (PV) array (dubbed Ordway Solar Power Plant Unit 1) was installed on the garage in 2001. This ~ 2.5 KW system provided more than enough electricity to satisfy the household demand. The ‘excess’ electricity or net generation flows to PG&E through the grid connection, but until this year, utilities were not required to pay for any excess generation, above and beyond the point where generation and grid-supplied electricity were balanced out (this has now changed as of January 2010). One means of using the ‘excess’ electricity is to supply power for recharging an electric vehicle, so Steve and Liz purchased a 2004 Toyota RAV4 electric car (saved from the car crusher, which is another story…). This car greatly reduced the household gasoline usage (~80%), but also wiped out the surplus PV electricity. So a second, similarly sized PV system (called, naturally, Ordway Solar Power Plant Unit 2) was installed on the house roof.

As you would expect from a lab scientist, Steve has lots of monitoring data to show how well the PV systems are performing and how well his energy efficiency measures are doing. Over the past two years, the Ordway Solar Power Plant has provided more than 4000 KWH/year to the grid as net generation (i.e., after domestic electricity use – including charging the car – has already been accounted for). Steve also reported that one of the positive ‘unintended consequences’ of this installation has been the proliferation of solar systems in his north-Berkeley neighborhood; 32 PV systems and 12 domestic hot water systems, at last count.

So what about the carbon footprint? In terms of domestic energy use, Steve and Liz had a positive effect – that is a negative carbon (calculated as pounds of carbon dioxide equivalent) contribution of (-) 4000 pounds. However, about 10,000 miles of air travel more than compensated for this savings, so their total carbon footprint was estimated to be 9000 pounds. This can be compared with the typical US household annual carbon footprint, estimated to be 38,000 pounds. If you are so inclined, there are a number of ‘carbon calculators’ available; Steve used one supplied by the Bonneville Environmental Foundation, at http://www.b-e-f.org/calc.
Steve ended his talk by describing some of the energy and water-saving ideas and plans they have for the future, including more use of collected rainwater and gray water, additional insulation (e.g., floor) and some engineering ideas for drain water heat recovery. He also provided the audience with ideas about how to implement some of these easy-to-implement (and other) examples for their own homes and domestic activities, such as compact fluorescent lighting, turning off/unplugging energy ‘vampires’ when not in use (chargers, etc.), low-flow showerheads, drip irrigation, etc. If you are considering ‘going solar’, there are a number of folks at LBNL, including Steve, who might be willing to discuss their experiences.

Luncheon Attendees:
Dick Baker
Winnie Baker
Josephine Barrera
Tom & Marcia Beales
Gene & Myrna Binnall
Bob Birge & guest Barbara Borowiak
Igor Blake
Kay Bristol
Jerry Bucher
Geores Buttner
Paul Corrado
Donald & Patricia Cowles
Patrick Cullinane
Per & Eleanor Dahl
Janis & Ned Dairiki
Andy DuBois
Ben & Mary Feinberg
Harvey Gould
Don (speaker) & Becky Grether
Connie & Ed Grondona
Herman Grunder
Jim Haley
Paul Henrickson
Egon & Annette McCoubery-Hoyer
Nancy Huppler
Joe Jacklevic
Vicky & Richard Jared
Rita Jones
John & Ann Kadyk
Joseph Katz
Gudrun Kleist
Richard LaPierre
William Lawrence
John & Barbara Lax
Branko Leskovar
Katherine Lucas
Bob Miller
Ken Mirk
Gerry Moore
Mack & Ann Morgan
Marty Morimoto & guest Mako Nakae
Bob Mortiboy
Charles Odgen
Catherine Parrott-Hawkins
Fred Perry
Conway Peterson
Patricia Powers-Risius
Mike Press
Jan Pusina
William Rankin
Stephanie Roth
Clay Sealy
Andy Sessler
Rich Sextro
George & Irene Shalimoff
Starr Shulman
Betsy Smith & guest Gina Moreno
Mary & Robbie Smits
Karen Springsteen
Dave & Sally Stevens &
guest Brod Haskell
Suzanne Stroh
Jack Tanabe
Clyde Taylor
William Turner
Louise Vogelsberg
Dick Wolgast
Allan Zalkin
Steve Greenberg (speaker)

Editor’s Note
There are two new features in this issue: The first is the initial segment of an occasional series entitled Members at Play; I encourage you all to send me notes about what you enjoy doing or your observations of things, events, or places that have piqued your interest. The second is the inclusion of the web address of the EX-Ls photosite in the masthead material on the back cover. (See also Web news, on page 12.) The April Board meeting will be in 54-130B (see the calendar on the back cover). If you have comments on the newsletter in general, or suggestions for
President’s Message (continued)

To return to a couple of topics mentioned earlier, the Bylaws you approved in November are now available on the EX-Ls website – thanks to Dick Baker – and by the time you read this, the two board-adopted policies should also be available. An easy way to get to our website (http://www.lbl.gov/EX-Ls/) is from the A-Z Index on the top banner of the Lab’s home page. Scroll down to the bottom of the listings on the ‘E’ page and click on EX-Ls. In addition to the Bylaws – and probably more interesting – you’ll find a link to the EX-Ls photosite, which includes pictures from some recent EX-Ls luncheons, the Blackhawk Museum tour, the EX-Ls 25th Anniversary luncheon (11/07) and pictures, videos and text from the Farewell-to-the-Bevatron event held last November. The board appointed Ned Dairiki as ‘editor’ of the EX-Ls photosite. I should also note that Today at Berkeley Lab (TABL) – the electronic ‘news sheet’ from the lab that has supplanted the older (and now defunct) printed Currents and The View, is also available from the Lab’s homepage banner. This may be of interest to those of you who no longer have active LBNL email accounts but still want to keep informed about activities at the Lab.

All of you who have not explicitly requested removal from UCBRC’s distribution list should be receiving the CenterPiece, the newsletter for the UC Berkeley Retirement Center (UCBRC). As many of you already know, LBNL retirees have access to the Center and its programs. The CenterPiece, which is produced quarterly, lists a number of activities and programs for retirees, including discounts for (or free access to) Cal Connection activities. To take advantage of these activities, you’ll need a free retiree ID card, issued by the Center. The Center is located on Walnut Street, almost directly across Walnut Street from the parking lot of the University (ACE) Hardware store on University Avenue, in Berkeley.

Finally, the Board typically makes a charitable contribution to one or more organizations each year. At our January 2010 meeting, which was two days after the devastating earthquake in Haiti, the Board unanimously agreed to make this year’s donation to the American Red Cross, in support of their relief efforts in Haiti. I hope our EX-Ls contribution will encourage you to contribute to Haiti relief as well, if you haven’t already done so.

News of our members

Photos wanted: Dick Baker maintains a rogues’ gallery of photos of past EX-Ls presidents on our website, and he is missing four luminaries: Virginia Cherniak, Ethyl Skrydlinski Thompson, Ted Bowers, and Paul Hernandez. If you have a photo of, or that includes, any of these people, please contact Dick (510-620-0448; xrobaker@comcast.net). Photos can be black-and-white or color, portrait view (i.e., taller than wide), and at least 2 x 3 inches in size. A scanned digital image is acceptable. He says it would prefer high-resolution, but will take what he can get.

Geores Buttner had some thoughts on the Bay Bridge before our November luncheon:
The old Bay Bridge is falling down, falling down, falling down,
All the cars are gonna drown, gonna drown, gonna drown,
All the sharks are swimmin’ roun’, swimmin’ roun’, swimmin roun’,
While we’re on our way to town, way to town, way to town.
They don’t make a single soun’, single soun’, single soun’....
Jus’ waitin’ for that crackin’ soun’, crackin’ soun’, crackin’ soun’
My fair lady.

Suzanne Stroh’s love affair with automobiles was featured in the Chronicle a while back; you can find the original version of her story below, as the first offering in a new occasional column, Members at Play.

Lost Members: We are now maintaining a list of lost members near the back of each issue (page 18 in this one). If you have a valid current address for any of them, please let our membership coordinator know: Suzanne Stroh, 530 Curtis St., Albany 94706, 510-524-1953, scstroh@gmail.com.

Members at Play
(This is a new, sporadic, and possibly temporary series providing reports from the membership about activities that are rather more than simply “keeping up” and rather less than major travel or other expository articles.)

My Ride: 2004 Nissan 350Z
Suzanne Stroh

I trace my fascination with cars back to when I was four years old playing with Dinky toy cars out in the dirt with the neighborhood boys. I also remember that my family had a succession of somewhat unusual cars: a mint green Edsel, a pointy-nosed Studebaker, a nifty two-tone Belair Chevy, and a Crosley station wagon so tiny that four brawny boys could pick it up. I didn’t know anything about how any of these cars worked - I just liked how they looked, how they sounded, how they smelled, and how they felt.

I spent most of my adult life driving Porsches, and over the course of 30 years I had just about every street-model Porsche. Then one day in 2004, my last Porsche just became too mechanically cranky, so after exhausting the options for getting another Porsche, I did what any modern car buyer does; I went online.

That is when I first laid eyes on the Nissan 350Z. I would never have thought of it as a possibility if it hadn’t popped up there, and I would have missed out on a fabulous car. I decided to go and look at one - just look. Do you know that song lyric “Just one look, and I fell so hard, hard, hard, in love with you”? Well, that about sums it up. This car had the loveliest and most unusual curves since my Porsche 944, Barbarella (I have always named my cars). And the color, a sort of burnt orange/bronze called Le Mans Sunset, was outrageously assertive. But how would it drive? I slid into the butterscotch leather seat to find out, and could hardly believe that the handling was so sensitive and quick and that there was plenty of power. This car was a worthy peer of the Porsches I had owned, and it could as happily tool around town as roar around a
mountain road or cruise on the freeway. I had found the answer to my dilemma. Little did I know the delight that would follow.

The 350Z came in five models, and the car I chose was one step below the out-and-out track model. Having spent so many years driving in car club competition events, I was delighted with its competency and assurance in every kind of driving. All right - I admit that I loved that it goes really fast too! In addition, the car is simply outrageous with its sculpted lines and sinuous curves. This is a car that turns heads (and I never lose it in a parking lot)!

Every time I slip into the driver’s seat I breathe in the earthy smell of the leather seats. I feel the immediate response of the engine practically as soon as I think about where I want to go, and I hear the leonine purr of the engine deepen to a roar. I can drive this car all day with a grin on my face.

Naming this car was easy. “Zena, Warrior Princess” was the obvious choice for a 350Z with so much attitude. I always drive Zena when I go out to the Blackhawk Automotive Museum in Danville, where I am a volunteer docent. It seems fitting that I drive this example of fine body styling, engineering excellence, and overall driving joy to the job I have always wanted to do, which is to share my passion for cars with others, particularly children. Perhaps I can inspire some little ones to go out and play with today’s version of Dinky toys and ignite in them a lifelong interest like mine.

**Walking on history?**

**Dave Stevens**

(I actually started this piece – and was even going to call it *history underfoot* – before the Chronicle did its *History Underfoot* article in November, but since that one seemed more concerned with metal objects – manhole covers, fire hydrants, and the like – while this is concerned with concrete work, the duplication is not excessive.)

During occasional walks along Evelyn and Talbot Streets, between the Plaza and Solano Avenue, I happened to notice that in the old days, sidewalk contractors used to sign their work. Most of the sidewalk on the east side of Evelyn (and a fair amount on the west side) was paved in 1913, about half of it in September and October of that year by Jepson Brothers; other sidewalk installers who have signed their work include Ed Doty, O. Schubert, Brown, P. Schnoor, Parks, Spring, Rickon, F. Velasco, G. T. Werner, L. E. Parker, A. Fedeli, L. P. Freeman, C. F. Daniels, Griset, Anthony Anaclerio, and C. (or G.) Rafelli. (I think these last two are much more recent than Jepson and Daniels.) Because the contractors used to leave their signatures at the ends of the strips they laid at any one time, it is probable that some of the signatures have been eliminated by the installation of accessible corners at the ends of blocks. Many of the anonymous strips employ the Jepson style, which consists of a wide, smooth central panel, with narrower textured panels on the lengthwise edges. (Many of the newer stretches preserve the three-panel approach, but forgo the texturing.)
A few driveways were put in by the WPA in 1939/40. There are only a few signed stretches left along Solano itself, including a Jepson, and a Bennett, and there is at least one stretch on lower Marin that was done by Jepson in 1912.

Most of the many small access ports (for PGE, EBMUD, PacBell, and other utilities) are signed by Christy, Brooks, or Forni; a few older ones – for Bell System ports – are signed by Keystone. One contractor, who left no signature but used a very distinctive 2004 date stamp, seems to have been limited to work associated with upgrading the sewer system, and in general, except for the access ports and the occasional scratched-in Ed or Sophia or Wanda or Billie, modern concrete contractors don’t seem to sign their work.

**Keeping Up with the Lab**


**Bye-bye Bevatron**: The farewell ceremony for the Bevatron was held on November 6, 2009. A summary of the ceremony, including a brief slide show and a somewhat jumpy (at least on my computer) YouTube video, is the Feature Story for November 11 at the LBNL Newscenter (url given above). (A reprint of Andy Sessler’s remarks at the ceremony follows this section.)

The appointment of Paul Alivasatos as Director of Berkeley Lab was announced by UCOP on November 19.

**Music of the universe**: Listen to supernovae via a feature story from Jan 25.

The Lab’s Wellness Fair is scheduled for Thursday, June 3, and, as usual, the EX-Ls will have a table encouraging employees to remember us when they become eligible for membership. Vicky Jared will be among those manning the table; if you would like to help, please contact her directly. (Contact information for Vicky may be found on pages 3 and 19 of this newsletter.)

>>For these and other stories about the Lab, go to the archives at the LBNL Newscenter.<<

**Bebatron Ceremony: Remarks by Andrew Sessler, Nov 6, 2009**

All farewells are painful – just look around in an airport or in a train station. Final farewells are particularly painful—think of the loss of a loved member of your family or a funeral of a dear friend. Today, we are gathered to say a final farewell to the Bevatron and to remember those who were associated with it, and it is – for most of us – a poignant experience.

For many years the Bevatron, and later the Bevalac, was the centerpiece of the Laboratory, and although that honor was passed on in February, 1993, as long as the Bevatron was here, it caused memories for me, every day, as I drove by. Somehow, for me, the Bevatron remained the center of the Lab, at least in spirit, if not in reality.

The Bevatron dominated science for almost 40 years – different areas of science at different times – an incredibly long time for a scientific instrument and a tribute to the accelerator scientists who continually improved, modified, and significantly enhanced its capabilities, and, of course, also a tribute to the many fine scientists who designed wonderful experiments. It is the
genius and capability of members of these two groups to which we can ascribe the long and ever-so-fruitful life of the Bevatron. In this talk I will briefly review those wonderful years.

The first beam was brought in, in January 1954, by Ed Lofgren and his people: besides Lawrence I can think of Lloyd Smith, Luis Alvarez, Bill Brobeck, Duane Shell, and Ed McMillan; there were many others. The first planning was in 1948 and actual construction, costing a mere $9M, started in 1951. Completion was delayed by about a year – and so the Cosmotron at Brookhaven preceded the Bevatron – due to people being pulled off to work on the Material Testing Accelerator (MTA). Well, the less said about the MTA the better.

I now turn to the science done at the Bevatron and, later, the Bevalac. I was helped in this regard, by Herb Steiner, Art Poskanzer, and Bill Chu. First, we think of High-Energy Physics.

The Bevatron was built to discover the anti-proton. (It was not at all obvious that a heavy – and, as we now know, composite – particle had an anti-particle. It was okay for an electron to have an anti-particle, that was already established by a cosmic ray picture in 1932, but a proton is a very different sort of thing.) The first runs were in August 1955, interrupted by a break-down from August 29 to September 5, but then first observations of the anti-proton were made, on September 21, by Nobelists Segre and Chamberlain, with significant contributions by Clyde Wiegand and Tom Ypsilantis. None of those people are with us any more.

At almost the same time, there were lead glass Cerenkov observations by the Lofgren-Moyer Group, including Bruce Cork and Bill Wenzel, and emulsion observations by the Segre-Chamberlain Group, including Gerson Goldhaber, Warren Chupp and a whole crew in Rome under Edwardo Amaldi. And, also, there were annihilation studies by the Barkas-Lofgren Group including, amongst others, Bob Birge, Warren Chupp, Shula and Gerson Goldhaber, Harry Heckman, Gosta Ekspong, and Jack Sandweiss. Then there followed the observation of antineutrons by Cork, Wentzel, Glen Lambertson and Oreste Piccione.

These were all great scientists, living in exciting times; and “doing their thing”, and doing it very well. Great scientists. A magician might well conjure with these names for they are magical.

High-energy physics continued at the Bevatron for many years. Most of those mentioned continued to be involved, but also many others, such as those in the George Trilling-Goldhaber group, and from the Lofgren Group, which included some already mentioned, plus Dennis Keefe, Walt Hartsough, Jack Peterson, Leroy Kerth, and Tommy Elioff. There was, also, the propane bubble chamber work of the Powell-Birge Group, the polarized target work by the Chamberlain-Herb Steiner Group, studies of rare decay modes by the Lofgren Group, pion–nucleon scattering studies by the Moyer-Helmholtz and the Segre-Chamberlain Groups. And many other studies far too numerous for me to mention.

In addition there was an increasing number of scientists from other institutions, and even from other countries. I think of Oreste Piccioni, Shoji Nagamiya, and many others. Finally, we remember the many students, most of whom went on to illustrious careers at other institutions.

As many of us have come to expect, it was for a completely unexpected reason that the Bevatron made its major contribution to the science of high-energy physics. I refer, of course, to the
discovery of many resonances; i.e., new strange particles. This study was led by Luis Alvarez using the 72 inch, later 80 inch, bubble chamber built upon Don Glaser’s idea, and with the construction led by Paul Hernandez and Don Gow. It resulted in the Nobel Prize in 1968. I think of the members of Group A: Lyn Stevenson, Lena Galtieri, Bob Tripp, Frank Solmitz, Art Rosenfeld, Morris Pripstein, Phillipe Eberhard, and some wonderful graduate students such as Stan Flatté.

Let me now turn to the conversion of the Bevatron to the Bevalac. Al Ghiorso and Bob Main had built the Hilac, which by the 70’s had become the Super Hilac. Ghiorso had the great idea to connect it to the Bevatron. Much of the impetus for this development actually came from radiation biology, space radiation biology, and cancer treatment. As early as August, 1971, prior to the connection, light ions were accelerated in the Bevatron, and immediately put to good use. The connection of the two machines was made by Herman Grunder et al and completed on August 1974. This now allowed the Bevatron to accelerate all the ions in the periodic table to relativistic energies; i.e., to become the Bevalac. This opened up two exciting areas of science: relativistic nuclear physics (nuclear science) and ion beam biology and medicine.

In nuclear science there were a number of important accomplishments, but the most important was establishing the field of relativistic nuclear collisions. This work was carried on later at CERN, and resulted, of course, in the RHIC Facility at Brookhaven, the FAIR Facility in Germany, and even plans for the LHC at CERN. We all remember the Plastic Ball, which was the first electronic 4-pi detector in nuclear physics, conceived and built by Hans Gutbrod, Art Poskanzer, Hans Georg Ritter, and more than 20 others. And we remember the excitement of the discovery of the collective flow of nuclear matter by Ritter, Poskanzer, and those working with them. The Heckman Group, Doug Greiner and Harry Heckman, made extensive studies of particle fragmentation, and James Symons, Isao Tanihata, and Gary Westfall used this phenomenon to discover new isotopes. The target could also fragment, and Poskanzer and Earl Hyde used this to discover different new isotopes. In short, the nuclear scientists using the Bevalac, most particularly, Poskanzer and Jean Gosset, established the field of relativistic nuclear collisions.

Let me now turn to biology and medicine. It was biologists and therapists who established the fields of space radiation biology and external ion beam therapy for cancer. I think of Cornelius Tobias, Max Boone, Ellie Blakely, Joe Castro, Jacob Fabrikant, Tom Budinger, Alok Chatterjee, Bill Chu, and Mark Nyman. Surely, there were others also.

The very first space radiation biology was Cornelius Tobias’s prediction in 1952 that astronauts would, because of ions passing through their eyes, see flashes. This prediction was confirmed with neon ions accelerated in the Bevatron (actually before the Bevalac) and, of course, by the astronauts themselves. That work led to work at the 88-inch cyclotron and a rather extensive NASA Facility at Brookhaven.

The major impact of the group, however, was the establishment of ion beam external therapy. Working with many different ions and studying their effect on cells, small animals, and then on humans, took many years and a great deal of effort. Very heavy ions were discarded because of
fragmentation, but it was established that ions in the range up to carbon produced beams that, compared even to protons or X-rays were far more appropriate for therapy. In particular, they undergo decreased lateral spreading due to Coulomb scattering, and are more effective than protons in dealing with tumors that have become radiation-resistant through anoxia caused by the tumor outrunning its blood supply.

The group also pioneered ion beam scanning for patient treatment. In addition, accelerated radioactive ion beams were used to image the stopping regions of ions in a patient’s body; this has the potential use of treatment verification and real-time imaging. Finally, it was established that in many situations shorter treatment courses are possible.

In order to actually treat patients – and two beam lines were developed for that purpose – the beam lines had to be designed to function perfectly each time and, most importantly, no matter what malfunctions arose, ensure that the patient was not given an excessive dose. In sum, 1,314 patients were treated at the Bevalac – many lives were saved and much suffering eliminated – but the truly major accomplishment was the establishment of ion beam therapy. As a result, facilities have been built around the world. At the last count there were 5 in Japan, and many in Europe; surprisingly, there are none in the US, including even the Bay Area – where it all started. We are trying to change that situation!

I don’t have time to go more deeply into the science of the Bevatron/Bevalac. But despite its accomplishments, we have not come here, today, to honor and remember a machine. A machine, after all, is only steel and concrete. We are here today to honor and remember the science done with the machine, although even that will fade away. We are really here to honor and remember the people involved: the accelerator scientists, engineers, and technicians who designed, built, kept in operation, and significantly improved the machine, and the scientists who used the machine in such clever experiments. I have mentioned some of these people, but there were many more. Some of these individuals are still here, but many – too many – are no longer with us. It is memories of these people, those getting on in years, and those who have passed beyond, that makes this day so poignant.

Yet, we remember those great times, filled with wondrous accomplishments and discoveries. Those of us who lived through that special period were most fortunate; we will forever be thankful for the opportunity, and we will forever remember those great times.

Thank you.

Web news

EX-Ls Photo Site: Thanks to Ned Dairiki we now have a web site for the photos Vicky, Ned, and others have been taking at the occasional luncheon or outing. The site is accessible through www.picasaweb.google.com/EXLpics; no ID or password is necessary. The photos you will see are the portals to the different albums on the site; clicking on one will bring up the entire album. If you have photos that you believe are sufficiently relevant to the EX-Ls to be posted on the site, please check with Ned (510-525-9563) about uploading them to the site.
New direct web address: The EX-Ls website now has its proper url: www.lbl.gov/EX-Ls.

New postings: The current bylaws and Board policy statements are now posted on the EX-Ls website.

Updates on activities relevant to retirees

- The initiative to increase taxes on pension distributions has been withdrawn for lack of signatures.
- UCOP Post-Employment Benefits Task Force: The Task Force has completed its local listening sessions; a report by Don Grether on one of the campus sessions follows this note. It is expected that there will another set of sessions in April to present possible options. Your best source for timely information on these – or any other – future sessions is the Berkeley Retirement Center (see the BRC article below).

- Health matters: A website for general information about health policy, including the reform bill(s): www.kaiserhealthnews.org

Comments on the Listening Forum on Post Employment Benefits
Don Grether [November 11, 2009]

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCRS</td>
<td>The University of California Retirement System that includes pensions and health care benefits</td>
</tr>
<tr>
<td>UCRP</td>
<td>Just the pension part of UCRS</td>
</tr>
<tr>
<td>PERS or CalPERS</td>
<td>California Public Employees Retirement System</td>
</tr>
<tr>
<td>CUCRA</td>
<td>Council of UC Retiree Associations (retired Staff); EX-Ls is a member.</td>
</tr>
<tr>
<td>CUCEA</td>
<td>Council of UC Emeriti Associations (retired faculty)</td>
</tr>
</tbody>
</table>

I attended the Forum for Staff on November 10 held in Sibley Auditorium on campus. As was easily predictable the place was way too small for the number of people who wanted to attend. There were people sitting on the steps, standing along the perimeter, and others standing in the hallway by the open doors. At some point a representative of the fire marshal showed up. He did not shut down the meeting but gave us instructions on how to exit safely in the case of an emergency.

There is background information at http://www.universityofcalifornia.edu/news/ucrpfuture, and a copy of the opening PowerPoint presentation is posted at http://hrweb.berkeley.edu. [Once at the hrweb site, click on the entry for “Post-retirement Benefits Listening Forums on 11/10/09” in the Important News menu on the right, then click on the link to the PDF of the presentation. There are also audio recordings of the sessions available by clicking on one of the forum entries under “Audio webcasts”, and then clicking on the speaker icon. The audios are long, so don’t get impatient while they are downloading.] General information about the Task Force on Post Employment Benefits is at http://atyourservice.ucop.edu/news/general/0906-postw_emp_task_force.html. Of the listed Task Force members, the ones on the panel at the forum were Marian Gade (CUCRA), Bob Anderson (Academic Senate), Charlie Hess (CUCEA), Debora Obley (UCOP budget office), and Randy Scott (UCOP HR). Also present were Gary Schlimgen (UCOP Director, HR - Retirement Programs Policy) and a Paul whose name I could not quite
read but was something like Ruobli. Dwaine Duckett (Vice President, Human Resources) was scheduled to be on the panel but did not show for whatever reason. The presentation was given by Schlingmen. In the Q&A session he and Scott did most of the responding.

Basically, both the pension system and the retiree health care system are in financial trouble. One thing UC will not change is the pensions of those already retired. Also, they will not have retirees pay into the pension system (which would amount to a cut in retirees’ pensions.) Current employees will not lose the pension benefits that they have already earned. [Implied but not stated directly was that current employees could have reduced benefits from future earnings.] The health care premiums for retirees will increase soon, a decision made independent of any Task Force recommendations. The University has been covering part of the cost of health care from its operating funds. There is the possibility that the University may reduce or stop this practice, which could significantly increase the cost to employees and retirees.

As has been pointed out many times, neither the employees nor the employers have paid into the pension system for 19 years. In 1990 the fund was 40% overfunded, the state was having a financial crisis, and the University didn’t feel it could justify asking the state to continue paying into the fund. That situation has changed as the fund is now significantly underfunded. Last year’s state budget originally had funding for the pension fund, but it was cut out at the last minute. However, the State budget has continued to fund PERS and some other pension funds. The state provides only 1/3 of UC’s funding, with the other 2/3 coming from funding agencies such as DOE. If the state doesn’t pay into the fund then neither will the funding agencies. Even if the state, the funding agencies, and the employees start paying into the fund at the levels discussed at the forum (about a total of 7% of salaries) the pension fund will continue going downhill, but at a slower rate.

As is often the case, there were many redundancies during the Q&A session. Here are some stylized Q&A’s that try to capture the spirit of the session. A “C” refers to a comment rather than a question, and an “R” to the response (if any)

Q. You people (referring to the UCOP folks) are paid high salaries to do smart things. Why didn’t you see this problem coming years ago?

A. There was no real answer but Obley did say that in retrospect stopping the employee and employer contributions back in 1990 was probably a mistake.

Q. Isn’t the Task Force just going to ratify a predetermined outcome?

A. The Task Force is going to make an honest effort to explore options and make recommendations to President Yudof. He will then make recommendations to the Regents.

Q. Why aren’t you presenting us with options so that we can comment on them?

A. The purpose of this particular series of forums is to hear from faculty and staff early in the process. There will be another series of forums in the spring where options will be presented.

Q. Is one of the options having new employees on a Defined Contributions (DC) Plan like a 403B rather than the present Defined Benefits Plan?
A. (Gade) there are many options. There could be a combination of a DC and DB plan.  
(Anderson) A DC plan is not a good idea because it would leave the pension fund an orphan and just make the underfunding worse.

C. The Regents are mostly wealthy business people who are trying to corporatize the University and they hired Yudof to make it happen.

R. The panel members did not comment on the Regents and Yudof but said that they (the panel members) very much favored keeping UC a public institution and would work towards that end.

C. When the University managed the pension fund it was overfunded. The Regents turned management of the fund over to the private sector 10 years ago and it has been going downhill ever since and performing worse than PERS, which is managed by a public board.

R. The University has stated that UCRP has been performing better than PERS. [There seems to be no agreement on this point, and it may depend on the time frame. One of the speakers had a handout that showed UCRP doing better than PERS over the period 1990 –1999, and worse than PERS over the period 2000 – 2008.]

C. The unions are having no voice. They are brought in when the decisions have been made.

R. The presentation was made to the Council of Unions before any of the Listening Forums were held and asked how they would like to participate. To date UCOP has received no responses. There was a comment that was not stated very well but I took it to mean that union members could not serve on the Task Force.

Q. The House recently passed a health care reform bill and one may pass in the Senate. Has the University being paying attention since health care reform could impact the University’s health care system?

R. (Scott) The University has been tracking the health care reform process very carefully. There a link on the UCOP website that states UC’s position. [I couldn’t find it.[Nor could I // ed].]

Q. In its projections into future years UC is assuming an average rate of return on investments of 7.5%. That is unrealistic. Why don’t you use something more realistic, like maybe 3% or 4%?

A. Our financial people feel that 7.5% is indeed realistic. If we use a lower percentage then it makes the projected underfunding worse.

From the Berkeley Retirement Center
Patrick Cullinane

OLLI: The publication schedule of the EX-Press does not mesh well with the advance information that is available from Osher Lifelong Learning Institute at Berkeley. If you wish to keep aware of their offerings, you should ensure that you are on their mail or e-mail distribution list so that you receive program information directly from OLLI in a timely fashion. You can check them out at www.олli.berkeley.edu.

CenterPiece: You should soon be receiving the spring issue of CenterPiece, the Center’s quarterly newsletter. It has the line-up for Learning in Retirement courses for
February through May, plus news about other classes, workshops, tours, and campus events.

Health Insurance Counseling: Retirement Center constituents are eligible to make an appointment with a HICAP counselor for a personalized session at the Center. (HICAP, the Health Insurance and Counseling Advocacy Program, is part of a legal assistance program for seniors in Alameda County; it provides free quality assistance to people with questions or problems relating to Medicare.) You can call HICAP at 510-839-0393 to make an appointment at the Center. Additional information on HICAP is available online at http://lashicap.org/services/health-insurance-counseling-and-advocacy-program.

Financial Resources for UC Berkeley Employees and Retirees: Several classes and workshops dealing with financial management are available to constituents of the Center. More information and hotlinks to class and workshop descriptions is available at http://hrweb.berkeley.edu/resources/financialeducation.htm. Some of the classes described there are open only to current UC employees, but others are accessible either through the Center or with a CalNet ID, which the center can help you obtain. Note that one of the classes is Planning Today for Your Fiscal Tomorrow (to be held on Wednesday, March 10), an earlier edition of which was attended by Tom Beales, who reviewed it in the April, 2009, newsletter.

Website: More information on Retirement Center programs can be found at http://thecenter.berkeley.edu.

The Luncheon Saga Continues

As in the past couple of years, the February and August luncheons will be at Spenger’s and the May and November luncheons at the Berkeley Yacht Club. We are experiencing great difficulty in holding the line at $25/person, but can assure you that the decision to increase the cost, when it comes, will not be taken lightly. You will note one consequence of our efforts to keep the price down at the February luncheon: We have been reduced to two non-vegetarian entrée choices. Please let us know if keeping the price down or keeping the number of choices up is the more important.

Trip Prereport

(No – that’s not a typo. The following is adapted from a letter from CUCRA Secretary Rosemary Norling)

The four CUCRA-sponsored trips for 2011 are Alaska Discovery, Australia/New Zealand – From the Outback to the Glaciers, Legendary Waterways of Europe, and Costa Rica: A World of Nature. We had 42 people go on the Australia/New Zealand trip when it was offered before with many requests to have it repeated. It is too early to schedule dates and fees, but will be providing more details by spring 2010.

There has been a lot of interest for our published 2010 tours: Southern Charm – March 7th – 13th; Spectacular South Africa, Culture & Nature in Harmony – April 8th – 20th; Canada’s Atlantic Coast – July 22nd – 31st; and Italian Vistas – November 6th – 18th. If you would like
more information for any of these trips, you may contact Rosemary directly (but please identify yourself as a member of the EX-Ls) at Rnorling001@san.rr.com.

Collette Vacations [who operates the tours] is going to offer a webinar on February 2, 2010 for the *Italian Vistas* tour. Participants who sign up will have an opportunity to pose questions to the presenter and hear real time commentary. This is all taking place from the comfort of their own computer. All they need is an internet and phone connection.

The Webinar Registration Link: [https://www2.gotomeeting.com/register/756645010](https://www2.gotomeeting.com/register/756645010)


If the webinar is successful, we will be offering it for all of our subsequent tours and we can do away with most, if not all, trip information brochures because all information can be accessed online.

**Recent Travellers**

![Recent Travellers](image)

The purpose of this column is simply to provide the names of recent (covering only the last calendar year and this one) travellers, so that those who are considering these same destinations might have a potential source of useful information and helpful hints. (Not all of these have been previously reported in the EX-Press.) Please let me know if you think this is a useful addition to the EX-Press. Also, please let me know if you have taken an interesting trip in the last year or so.

<table>
<thead>
<tr>
<th>Destination</th>
<th>Year</th>
<th>Traveller(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>2009</td>
<td>Vicky &amp; Richard Jared</td>
</tr>
<tr>
<td>China</td>
<td>2009</td>
<td>Bill &amp; Mabry Benson; Janis &amp; Ned Dairiki</td>
</tr>
<tr>
<td>Colorado</td>
<td>2009</td>
<td>Edward &amp; Mildred Bennett; John &amp; Ann Kadyk</td>
</tr>
<tr>
<td>Egypt &amp; Jordan</td>
<td>2009</td>
<td>James Bettencourt</td>
</tr>
<tr>
<td>Great Britain &amp; Ireland</td>
<td>2009</td>
<td>Dave &amp; Sally Stevens</td>
</tr>
<tr>
<td>Maryland</td>
<td>2010</td>
<td>Dave &amp; Sally Stevens</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>2009</td>
<td>Igor Blake</td>
</tr>
<tr>
<td>Oregon</td>
<td>2009</td>
<td>Dave &amp; Sally Stevens</td>
</tr>
<tr>
<td>Patagonia</td>
<td>2009</td>
<td>Bill &amp; Mabry Benson</td>
</tr>
<tr>
<td>Philadelphia and environs</td>
<td>2009/10</td>
<td>Dave &amp; Sally Stevens; Brenda Shank &amp; Bud Larsh</td>
</tr>
<tr>
<td>Portugal</td>
<td>2009</td>
<td>Bud Larsh &amp; Brenda Shank</td>
</tr>
</tbody>
</table>
Here are two things in the works for those of you who would like to do something besides eat lunch together once a quarter:

-- We’re investigating possible dates and times for a cruise on the former presidential yacht *Potomac*; the cost for seniors is expected to be $40.

-- The East Bay Park District sponsors many guided walks in their parks. Some UC groups have joined the Wednesday Walks; there is also a selection of birding walks. A downloadable PDF Program Guide to many of the activities is available at http://www.ebparks.org/activities; click on the *Regional in Nature* link in the peach-colored menu bar on the right.

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Lost Members: Mail addressed to the following members has been returned, with no forwarding address. We would appreciate hearing from anyone who could provide the Membership Coordinator with a current address.

--Al Amon
--Shirley Ashley
--Esther Colwell
--Charles Garrett
--Donald Lundgren

Suzanne Stroh, 530 Curtis St., Albany 94706; 510-524-1953; scstroh@gmail.com
SEE YOU AT THE February 18 LUNCHEON

To: Vicky Jared
   4849 John Muir Road
   Martinez, CA 94553

Be sure to make reservations by February 15

From: ________________________________

I plan to attend the Ex-Ls luncheon >> $25pp << PREPAID

I will bring guest(s). Name(s) of guest(s): ___________________________________________

I ___ would like to carpool / ___ am willing to drive

___ Please seat me close to the speaker and screen

Menu: ____ Shrimp Louie ____ Sole

Please make check payable to EX-Ls

Total Enclosed:

In Memoriam
Barbara Amesbury Dick Burleigh
Woodie Clark William Emberlin
John Gilman Cedric Larson
Ken Lou Don Milberger
Carlo Perneco Wladyslaw Swiatecki
Bob Yancey

Welcome New Members
Jane Colman Herman Grunder
Janos Kirz Robert Schneider

Unless you are a new member as of 2010, if you have not sent in your annual dues, they are now overdue. If you wish to continue your membership, please send them (still only $12/year, or – new this year – $120 for life membership) to Suzanne Stroh, 530 Curtis St., Albany, CA 94706.
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Calendar of Board Meetings & Luncheons

L: February 18, 2010
B: April 8, 2010
B: July 8, 2010
B: October 14, 2010
B: January 13, 2011
L: May 20, 2010
L: Aug 19, 2010
L: November 18, 2010
L: February 17, 2011

Board meetings start at 3:00 on the dates listed above. The April 8 meeting will take place in 54-130B (that’s in the conference room addition to Perseverance Hall at the Cafeteria) at the Lab. We welcome attendance by interested members.

EX-Ls Honorary Life Members
Shirley Ashley
Inge Henle
Esther Colwell
Bud Larsh

Official Address
LBNL EX-Ls
530 Curtis Street
Albany, CA 94706

Photo site: www.picasaweb.google.com/EXLpics
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