

Brian Schwartz and Barry Casper demonstrating in Washington, DC, April 30, 1969. In recent months Schwartz has taken the lead, on behalf of the APS, in arranging symposiums of historians and physicists to accompany stagings of the play “Copenhagen” in New York and Washington, DC. AIP Emilio Segrè Visual Archives, Schwartz Collection.

Selection of Great American Physicists’ Papers on the Web

The Center for History of Physics has mounted a new Web exhibit with a selection of outstanding papers by great American physicists. The chosen papers are both important and readable—indeed most can be read without much physics knowledge. The aim is to give a convenient and intimate look into the variety, ingenuity and insight of physicists since the 18th century. Examples of the papers include Benjamin Franklin’s reports of experiments on electricity (with a charming account of an electrical “party of pleasure on the banks of the *Schuykil*”), Henry A. Rowland’s encyclopedia article “Screw” (explaining the methods he used in scribing his spectroscopic gratings) as well as his famous essay on “The Highest Aim of the Physicist,” and Arthur Holly Compton’s classic paper on X-ray scattering. The other physicists featured are Joseph Henry, Albert A. Michelson, Josiah Willard Gibbs, and Robert A. Millikan.

For each physicist the exhibit includes a direct reproduction of one or more classic papers, which can be read online or downloaded in PDF format. For each physicist there is also a brief introductory essay and a portrait. The exhibit is reproduced with little change from a book edited by Spencer Weart, *Selected Papers of Great American Physicists: The Bicentennial Commemorative Volume of The American Physical Society 1976*, published by the American Institute of Physics for the APS. The book was widely distributed as a US Bicentennial homage to the pioneers of American physics. Much appreciated by physicists, both for their own entertainment and for the instruction of students, the material is now presented to a still wider audience at www.aip.org/history/gap.

History of Observational Cosmology Exhibit Opens at National Air and Space Museum

by David DeVorkin, National Air and Space Museum

A major new gallery on modern observational cosmology opened at the National Air and Space Museum on September 21, 2001. All opening events and the usual pomp and circumstance were cancelled due to the events of September 11. But what is now in place as a permanent exhibition (to stand for a decade or more) marks a watershed moment in the museum world: we have gathered together in one place, for the first time ever, significant portions of the original instrumentation that was used to revolutionize our conception of the universe not once, not twice, not three, but at least four times. Another way to say it is that we have collected together in one room important parts of three of the four most significant astronomical telescopes in all history.

Much planning and debate underlay the process of deciding what we wanted visitors to see and read. A few museum staffers started talking about a new gallery on astronomy in 1988, just as Martin Harwit became installed as Director of the museum. The gallery then in place, “Stars,” opened in 1983. Although I had curated that one, it still left much to be desired in my mind, as well as for Harwit and our new exhibits chief, Nadya Makovenyi. Of course, we all envisioned different connects, as did the additional people brought into the project. Since 1988, at least three curatorial historians, four directors, six staff astronomers, two designers, a planetarium director, assorted educators, and about a dozen outside advisors debated. Hirings, firings, angioplasties, pregnancies, deaths, and countless other events tested our will.

Eventually a coalition emerged between the designer (Beatrice Mowry), scriptor (David Romanowski) and one of the surviving

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The Niels Bohr Library celebrates its 40th anniversary this spring!

At the celebration, the AIP Center for History of Physics launched *History that Matters, a campaign to preserve our heritage* with a goal of adding \$3 million to our Endowment Fund.

See the Friends of the Center supplement, following page 11.

(History of Observational Cosmology Exhibit continued from page 1)

curators (David DeVorkin), who formed a nuclear core that could not be torn apart. Coalition building within an ever-enlarging sphere of the museum staff (development, public affairs, administration), as well as sympathetic resources in the Smithsonian's Institutional Studies Division and in its Central Services' Office of Exhibits Central, resulted in a curatorial package that was presented formally in the mid-1990s for internal review. Once approved—and re-approved by succeeding directors—this package became the basis for fund raising, a step that had not been necessary in the early 1980s when “Stars” was built.

Contrary to (but not contradictory to) the experiences associated with exhibitions on the Washington Mall, we managed to create a patron base that was balanced enough so that most identifiable special interests were aired, evaluated and prioritized. Having both NASA and NSF as major sponsors helped to ensure a balance between ground-based and space-based astronomy, and in fact helped encourage a positive vision of a symbiotic, or better yet, synergistic relationship—which in fact, does exist. We then targeted those industries that we knew were directly interested in major elements of the story we had already crafted. Corning came through (telescope mirrors), as did TRW (Chandra and X-ray astronomy) and Kodak (the Hubble Space Telescope back-up mirror). Analytical Graphics was a perfect partner to explore orbital imagery simulations that would show our visitors how various satellite observatories work and what they look at. All patrons shared one goal: to improve educational outreach for astronomy. In order to do that, we incorporated a program of formal evaluations of the script, artifact and interactive displays.

Throughout the entire process, everyone bought into one basic fact: to do something right at the Smithsonian, one needs to assess strengths and deal from those strengths. The National Air and Space Museum has the world's largest and most com-

prehensive collection of scientific instruments for observing the universe from space, and the Smithsonian generally has one of the broadest, if not the most extensive, collection of historical astronomical hardware anywhere on Earth. Approximately one-sixth of the artifacts in the space collection itself are now displayed in the “Explore the Universe” exhibit. Additionally, the original 18th century Herschel 20-foot tube and the original 100-inch Newtonian Cage used by Edwin Hubble at Mount Wilson—parts of two of the most important telescopes in history—were generously loaned to the museum for the exhibition, as was an original Huygens-era aerial telescope lens dating from the 1660s. These artifacts have been arranged by the simple but powerful theme: that as new tools were developed to observe the universe, our conception of the universe changed in profound ways. This became our basic organizing principle.

The first section, “Exploring the Universe with the Naked Eye,” features visual instrumentation from an 11th century astrolabe to a full-scale replica of Tycho Brahe's ornate 16th century equatorial armillary sphere, arrayed around images of the geocentric universe. The next section, “Exploring the Universe with the Telescope” illustrates how the telescope revolutionized the way we see the universe. Featured artifacts include an interactive Galilean telescope to demonstrate how difficult it was to use such devices. William Herschel's original wooden 20-foot telescope tube concludes the section, illustrating how he observed to the end of the sidereal universe and then asked: what lies beyond? The third section, “Exploring the Universe with Photography,” centers on how Hubble answered Herschel's question over a century later, using the largest telescope in the world and the newly available technique of long-exposure photography.

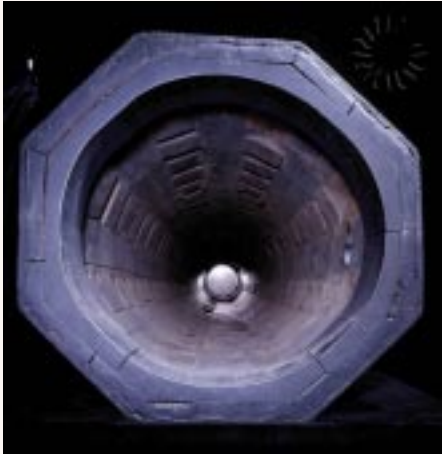
The fourth section introduces the use of the spectroscope into astronomy, with Hubble's confirmation that we live in an expanding universe of galaxies. “Exploring the Universe with Spectroscopy” demonstrates how the study of light reveals the compositions of stars and galaxies and their motions. Featured artifacts include an 1894 Brashear spectrograph from the Lick Observatory—the prototype instrument for high-accuracy photographic observations of radial velocity (the speed of motion in the line of sight)—as well as the original Prime Focus Spectrograph from the Hale telescope, an unbeatable combination of light-gathering power and sensitivity, which allowed Hubble's followers to revise and refine understanding of the rate of expansion of the universe.

The largest and final section, “Exploring the Universe in the Digital Age,” showcases how the advanced digital equipment of today has enhanced the power of earlier tools to portray a vastly larger and more complex universe. Featured artifacts include detectors capable of sensing portions of the entire known electromagnetic spectrum, the flight-ready backup mirror to the Hubble Space Telescope (HST) and instruments removed from the HST during servicing by astronauts, as well as instruments from COBE and more.

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Diorama housing the original Newtonian mirror cage from the 100-inch Mount Wilson reflector, on loan from the Carnegie Institution of Washington. Edwin Hubble is at the Newtonian focus. Eric Long photograph, National Air and Space Museum.



Soon after the original Herschel 20-foot tube arrived at the National Air and Space Museum on loan from the National Maritime Museum, staff photographer Eric Long took a series of documentation photographs. For this one, curators placed the original 18.5-inch speculum metal mirror at the

base of the tube, kept the access door open for illumination, and Eric photographed what an observer would see from the top end of the tube in "daylight," from what has become known as the Herschelian focus. Eric Long photograph, National Air and Space Museum.

Of special interest to readers of this *Newsletter* may be: George Gamow's YLEM bottle, Robert Dicke's CMBR radiometer, Victor Hess's cosmic-ray electrometer, Penzias and Wilson's pigeon trap, the image-tube spectrograph used by Vera Rubin and Kent Ford to detect dark matter, and an original photomultiplier element from Kamiokande in Japan that was part of the array that detected the first neutrino flux from a supernova (1987A). The message in this section is that the instruments, methods and techniques of physics are central to modern astronomical investigation. Many images in the gallery were obtained from the AIP.

The gallery also features more than two dozen interactive displays, including replicas of early astrolabes, quadrants, telescopes and telescopic optics; mechanical representations of orbits and galaxy motions; an infrared camera and monitor station; and several computer stations and video kiosks for expanded illustration of how the artifacts are used. The museum has produced three short videos for the gallery: the computer-animated adventures of "Priscilla the Proton," the artifact-appraising spoof "Museum Roadshow," and "Scott Hamilton Skates the Universe," in which the Olympic gold medalist and national champion zips through the cosmic rink to "Galaxy Song," from the Monty Python film "The Meaning of Life."

The "Explore the Universe" Web site (www.nasm.si.edu/exploretheuniverse) offers an extensive virtual tour of the gallery, a detailed look at artifacts, and links to scientific and academic resources. The National Geographic Society has published a companion volume to the exhibition, titled *Beyond Earth: Mapping the Universe*. It is a set of essays by noted historians and scientists, ranging from Owen Gingerich, Vera Rubin and Margaret Geller to Dave Wilkinson, Tony Tyson and Bob Wilson, heavily illustrated with images from the exhibition.

Newly Released Documents and Web Exhibits

When is a historical Web exhibit finished? Never! History is not static, for newly revealed documents and new concerns push us to take a fresh look at past events. Unlike a book, a presentation on the World-Wide Web can incorporate such changes. The Center for History of Physics makes a particular effort to keep its online exhibits current, for they are viewed every day by thousands of people, particularly students.

For example, there has been much interest and controversy recently about Werner Heisenberg's visit to Niels Bohr in Copenhagen in 1941 (see this *Newsletter*, Spring 2000 and Spring 2001). This February, the controversy led to the Bohr family's release of letters that Bohr drafted but never sent to Heisenberg (available at www.nbi.dk/NBA/papers/introduction.htm). Visitors to the Center's exhibit, *Heisenberg/Uncertainty* (www.aip.org/history/heisenberg) might well expect to see something about all this. The exhibit's author, Heisenberg biographer David Cassidy, kindly wrote a supplemental page, and this together with supplemental links has been added to the exhibit (www.aip.org/history/heisenberg/bohr-heisenberg-meeting.htm).

Another example came a few years back with the discovery of some Einstein letters, coming on top of other research and discussions. Changing times also contributed to greater frankness about the difficulties of Einstein's marital relationships. The result was a rephrasing of a few sentences in the Center's most popular exhibit, *Einstein: Image and Impact* (www.aip.org/history/einstein). The small but significant changes were worked out in discussions with leading Einstein scholars.

On a more minor note, when the transistor-radio pioneer Akio Morita died in 1999, we added the information to his thumbnail biography in the *Transistorized!* exhibit (www.pbs.org/transistor). The History Center produced this jointly with PBS and ScienCentral, and has taken responsibility for keeping it up to date. Other changes made from time to time include additions of new publications in bibliographies and, all too frequently, removal or redirection of links as other Web sites change their addresses or even their nature (one link, originally useful, took to selling T-shirts).

As our online offerings grow it becomes increasingly difficult to maintain currency and quality. We hope that users of the exhibits will alert us to changes worth making.

Providence has given us a torch which our forefathers did not possess, and has allowed us to discern fundamental causes in the history of the world which the obscurity of the past concealed from them.

—de Tocqueville

A Wider Audience for History of Science

Stephen G. Brush, University of Maryland, College Park,
from his response to the award of the Hazen Prize by the History of Science Society

Shortly after this award was announced, an education columnist in the *Washington Post* wrote that students should be given an idea of “of how the various disciplines fit together (the history of science, the mathematics of sport ...).” This reminded me once again of the great potential audience for our field. In an age when education seems to be dominated by relentless specialization and the testing of factual knowledge, many teachers, parents and other citizens are fascinated by the Big Questions: What is the origin and structure of the universe? Did humans evolve from simpler organisms? Why did European civilization come to dominate the world after the 15th century? Do science and society influence each other?

If historians of science don't give intelligible answers to these questions, someone else will. In fact, others already have done so. In the general science section of any comprehensive bookstore you will find many books that seem to use the history of science to tell fascinating stories about how we arrived at our present understanding of the world and the lively controversies along the way. Plays about physicists and mathematicians (*Copenhagen*, *QED*, *Proof*) have been popular. The authors of these works are often very good writers and some of them even read our publications. But few of them are historians of science in the modern sense. They repeat old myths and stereotypes about the history of science without making the effort to study original sources and do serious research in archives.

Historians of science write accounts often more accurate and interesting than the traditional stories, but their language should appeal to students and the public. For many years, historians of science were reluctant to write textbooks and popularizations, perhaps because they realized how much research needed to be done to get past the myths, or because they feared that addressing issues of current interest would legitimize the much-maligned “whig” interpretation of history. But recently there has been a revival of good expository writing for a wide audience: both comprehensive textbooks and short monographs, readable and reliable, are now available.

In science education, the historical approach can no longer be considered just a distraction that takes time away from learning “real science.” On the contrary, research done on the Project Physics course for high schools showed that this historically-oriented text,¹ in combination with simulations of the experiments done by Galileo and other great scientists, enhanced students' understanding of the nature of science, while preparing them to do as well on standardized tests of subject-matter as students taking a traditional course.

Nor is there any necessary conflict, for a historian of science, between research and educational activities. At least in my own case, the effort to present an intelligible and accurate view of science to students inspired me to undertake new research projects, and the results of those projects were directly incorporated into my teaching.

¹ Harvard Project Physics (Gerald Holton, F. James Rutherford, and Fletcher G. Watson), *Project Physics* (New York: Holt, Rinehart and Winston, 1975). See also Gerald Holton and Stephen G. Brush, *Physics, the human adventure : from Copernicus to Einstein and beyond* (New Brunswick, N.J.: Rutgers University Press, 3rd ed., 2001).

New Source of Reference to Nuclear Issues Available on the Web

The Alsos Digital Library for Nuclear Issues (<http://alsos.wlu.edu>) provides for a diverse audience reliable annotations of references to the origins, applications, and consequences of nuclear energy. It is a valuable resource for students and teachers from middle school through college and for the general public. The Alsos library covers historical and current issues across many disciplines with careful annotation and extensive indexing.

The library currently consists of approximately 350 annotations of books, articles, videos, CD-ROMs, and Web sites. According to Dr. Frank Settle, co-director of the project, “The strength of the library is the integration of material from different disciplines with current and historical issues involving nuclear energy.” The library provides references for a variety of disciplines ranging from physics to literature. The organization of the library and the user interface facilitate exploration

by both general users and specialists. By the end of 2002, the library will contain over 1000 vetted, indexed annotations.

Two Washington and Lee University computer science professors, Frank Settle and Tom Whaley, direct the project, funded by a grant from the National Science Foundation (NSF). Elizabeth Blackmer serves as editor and oversees the preparation of annotations. A fifteen-member national review board with expertise in the requisite disciplines review all annotations. The Alsos Library is a component of a larger project, the NSF's National Science, Mathematics, Engineering, and Technology Education Digital Library (NSDL), a \$40 million program (www.smete.org/nsdl/). The goal of this program is to create, organize, and install high-quality educational resources on the Internet. The projects in this program will provide anytime, anywhere access to a rich array of authoritative and reliable interactive materials and learning environments. Science societies and others are designing projects to incorporate information on science as well as its history. For more information on the Alsos digital library, contact Frank Settle at 540-463-8616 or settlef@wlu.edu.

Scientific Archives in the UK: Progress at the National Cataloguing Unit for the Archives of Contemporary Scientists

by Peter Harper, Director, NCUACS

Founded in 1973, the National Cataloguing Unit for the Archives of Contemporary Scientists (NCUACS) is now entering its thirtieth year of locating, cataloguing and finding repositories for the archives of contemporary British scientists and engineers. (See this *Newsletter*, May 1988) It is a small unit, based at the University of Bath since 1987. We work in association with the Royal Society and are funded by a great variety of scientific societies and charitable trusts and foundations. We see ourselves as intermediaries between scientists and their families who own the archives, and the repositories who will administer the archives and make them accessible to researchers, after processing at Bath. Although the idea of a processing center for scientific archives was quite an original one thirty years ago, it has proved very successful. Since 1973, 220 archives of British scientists have been catalogued for 49 national, institutional and university repositories throughout the United Kingdom. The scientists include 143 Fellows of the Royal Society and 20 Nobel Laureates.

Our remit ambitiously covers all the sciences, but physics and allied sciences have always been an important part of our work. They currently account for just over 20% of the archives processed. The scientists include Nobel Laureates **E.V. Appleton**, **Patrick Blackett**, **Cecil Powell**, **Abdus Salam** and **J.J. and G.P. Thomson**, and a distinguished group of theoreticians and experimentalists including **David Bohm**, **Otto Frisch**, **R.E. Peierls** and **R.V. Jones**, Churchill's scientific adviser during the Second World War. Current projects include the archives of **Kathleen Lonsdale**, the X-ray crystallographer who was the first woman to be elected to the Fellowship of the Royal Society in 1945 and the geophysicist **S.K. Runcorn**. Work on the Runcorn archives is partly funded by a much appreciated cataloguing grant from the Friends of the AIP Center for History of Physics. Future plans, subject to successful funding applications, include a program to catalog the archives of six University of Bristol physicists, including additional Cecil Powell papers recently discovered in the Physics Laboratory over thirty years after his death.

In recent years, Web access to information about the archives we process has become very important. However, as a small organization with limited resources, it is essential that we involve ourselves in

collaborative projects. We have been associated since its inception with the UK Higher Education Hub, which provides a national gateway to descriptions of archives in universities and colleges. Data about almost all the archives we have processed has been contributed to the database which can be searched at www.archiveshub.ac.uk. Missing from the database is the archive of **Abdus Salam**, which is deposited outside the UK at the ICTP, Trieste, Italy. An even more ambitious project is the national online archive for England, Access to Archives (A2A). We are part of a consortium of science institutions, including the Royal Society, which is contributing 27,000 catalog pages of the archives of leading nineteenth and twentieth century scientists to A2A. We are contributing over half the page total but, as a consequence of political devolution in the UK, our catalogs of archives deposited in Wales and Scotland (which includes the Appleton archive at Edinburgh) are not included. The Access to Archives database can be accessed at www.a2a.pro.gov.uk and the first of the science consortium's catalogs are expected to be added to the database shortly.

In our thirtieth year the demand for our services is as great as ever, and we know of many exceptional archival collections which could be brought into the public domain through our work. If we have a concern, it is that funding bodies properly excited by electronic archives and Web developments will discount the importance of the very considerable paper records of science of the second half of the last century which still require traditional processing.

For further information contact Peter Harper, Director, NCUACS, University Library, University of Bath, Bath, United Kingdom BA2 7AY, or e-mail lispbh@bath.ac.uk, www.bath.ac.uk/ncuacs.



Leading astronomers at IAU Symposium 80 in 1977; L-R: Charlotte Moore Sitterly, Cecilia Payne Gaposchkin, Margaret Russell Edmondson, Frank K. Edmondson, Richard J. Taylor. Edmondson's files as Treasurer of the American Astronomical Society were transferred to the Niels Bohr Library last year and have now been fully processed. Photograph by David DeVorkin, AIP Emilio Segrè Visual Archives.



E. Kidson and H. F. Johnston making atmospheric electricity observations on board the magnetic survey vessel Carnegie, spring 1911. Photo courtesy of the Department of Terrestrial Magnetism, Carnegie Institution of Washington.

Carnegie Institution of Washington Completes Archives Survey

by Shaun Hardy and John Strom, CIW

The Carnegie Institution of Washington (CIW), one of the first privately-funded scientific research organizations in the United States, is marking its 100th anniversary this year. As part of its centennial celebration, CIW contracted with History Associates, Inc. (HAI), an archival consulting and records management services firm based in Rockville, MD, to conduct Carnegie's first Institution-wide survey of archival records and practices. In spite of a wealth of historically-valuable material preserved at its facilities, CIW has until now lacked a systematic approach to archival preservation, control, and access.

HAI archivists conducted site visits to each of CIW's research centers and met with key scientific and administrative personnel. In reporting its findings to an inter-departmental archives task force, HAI cited the "rich and unique resources documenting the history of science in the 20th century" held by the Institution. The detailed recommendations and cost/time estimates in the HAI report have served as a blueprint for establishing a formal archives program.

CIW currently operates five research departments around the country, conducting advanced studies in the physical and biological sciences. History Associates recommended that most of the effort of the archives project target records generated by the Department of Terrestrial Magnetism (DTM) and the Geophysical Laboratory in Washington, DC, and the Carnegie Observatories, based in Pasadena, CA. The Department of Embryology and the Department of Plant Biology have fewer archival materials, requiring less processing.

Record types are diverse, including administrative and professional correspondence files, field and laboratory notebooks, logs

of research vessels, instrument specifications, observatory plans, and numerous series of geophysical, meteorological, and astronomical observations. Substantial collections of Carnegie-related material also reside in other repositories, such as the papers of Vannevar Bush and Merle Tuve at the Library of Congress, and the George Ellery Hale papers and Mt. Wilson Observatory collection at the Huntington Library in California. [See, for example, R. S. Brashear (p. 231) in *The Earth, the Heavens and the Carnegie Institution of Washington*, G. A. Good, ed., American Geophysical Union, Washington, DC, 1994.]

CIW is currently in the process of formulating an archives mission statement and collection policies. A guide to the administrative records at CIW headquarters, compiled by John Strom, has been placed online (www.carnegieinstitution.org/archives.pdf). The Observatories have started rehousing their historic astronomical plate collection in acid-free enclosures. DTM and the Geophysical Laboratory have begun planning a new storage facility for their 1000+ feet of archival records and 37,000-image photo collections. Over the next year, the Institution will seek to identify funding to enable full implementation of the work plans outlined in the HAI report, including hiring of a project archivist to coordinate processing activities at the various sites and the development of finding aids and resource databases. For more information, contact Shaun J. Hardy, DTM-Geophysical Laboratory Library, 5241 Broad Branch Road, N.W., Washington, DC 20015, hardy@dtm.ciw.edu, or John Strom, Carnegie Institution of Washington, 1530 P Street, N.W., Washington, DC 20005, jstrom@pst.ciw.edu.



R. C. Meyer with 2-meter Van de Graaff generator at the Department of Terrestrial Magnetism, April 16, 1936. Photo courtesy of the Department of Terrestrial Magnetism, Carnegie Institution of Washington.

Australian Science and Technology Heritage Centre: Networking Australia's Cultural Heritage

by Helen Morgan, Research and Development, Australian Science and Technology Heritage Centre

The Australian Science Archives Project (ASAP) has come a long way since its inception in 1985 (see this *Newsletter*, May 1986; Fall 1994). The project's origins were humble, consisting of one archivist (Gavan McCarthy), a teakettle, and a box-like room in the Department of the History and Philosophy of Science at the University of Melbourne.

Addressing the impermanency of "Project" in our name, and responding to the research direction we were moving in, the Australian Science and Technology Heritage Centre (Austehc) was formed in 1999 to continue ASAP's academic, research and heritage activities. The Centre is directed by Gavan McCarthy and employs three full-time staff at its office at the University of Melbourne and a part-time staff member based at the Australian Academy of Science in Canberra. Although the University provides accommodation, infrastructure and academic support, the day-to-day running costs, including most salaries, come from collaborative projects with government and industry groups, research grants and philanthropic trusts.

Austehc's mission still includes an active role in ensuring that valuable sets of scientific records and artifacts are documented and preserved. These include most recently the papers of the late **Herbert Bolton** (Professor of Theoretical Physics, Monash University, 1962-1986, and a long-term supporter of ASAP/Austehc) and the late **Peter Dunn** (a United Nations chemical and biological weapons inspector).

In this tradition of service to the community, the Centre has developed three significant Web-database tools. They are all designed to support the building of a sustainable integrated Web-based heritage information infrastructure and can be freely downloaded from the Austehc web-site.

At the heart of Austehc's web publications about the history of Australian science, technology and medicine are two authoritative historic registers: *Bright Sparcs* (www.asap.unimelb.edu.au/bsparcs) and *Australian Science at Work* (www.austehc.unimelb.edu.au/asaw). These resources provide a gateway to the stories and the archival records of the people and organizations of Australian science. One of these database tools, the Web Academic Resource Publisher (WARP), grew out of the experience of creating the online edition of the Australian Academy of Technological Sciences and Engineering book, *Technology in Australia 1788-1988* (www.austehc.unimelb.edu.au/tia). Rather than just promoting the online reproduction of texts, the WARP methodology creates a knowledge space where the narrative texts are tightly linked to supporting documentation in the historic registers. This systematic integration creates a research tool from



Dr Brian Tucker, Commonwealth Meteorology Research Centre, in a promotional photograph for Australia's involvement with the World Weather Watch program of the United Nations, September 1970. Image courtesy National Archives of Australia: A1200, L88779.

which new connections, insights and ideas can be discovered and explored. It also provides a broader contextual framework to aid in the selection, preservation and use of archival materials.

The publication of *Federation and Meteorology* (www.austehc.unimelb.edu.au/fam), was a major project completed in 2001. This was a collaboration between Austehc and the Commonwealth Bureau of Meteorology; it provided broad public access via the Web to more than 600,000 words of text and 300 images. It presents the rich and evocative story of meteorology in Australia, its emergence as a science and the formation of the Bureau in 1908, paralleling the story of the Australian Federation.

The Centre has an international profile which includes collaboration with Imperial College of Science, Technology and Medicine, London, through the use of the Austehc Heritage Documentation Management System (HDMS) in two major finding aid projects. The first dealing with the records of Thomas Henry Huxley (1825-1895) and the second covering the alchemical, theological and Mint records of Isaac Newton (1642-1727).

For more information see www.austehc.unimelb.edu.au or contact Austehc, The University of Melbourne, 203 Bouverie St, Carlton VIC 3053. E-mail gavan@ustehc.unimelb.edu.au.

SLAC Archives Exhibit Celebrates Anniversary of First U.S. Web Site

by Jean Marie Deken, Stanford Linear Accelerator Center

The Stanford Linear Accelerator Center (SLAC) Archives and History Office has recently mounted an online exhibit about the SLAC Web site, which celebrated its 10th anniversary on December 12, 2001. The exhibit features a chronology of the first few years of the first Web site in the United States and background information on the SLAC Web "Wizards," a group of volunteers at the lab who got the Web up and running in the U.S. The exhibit also features displays of five of the first pages mounted on the SLAC site ("small, ugly, and first" is what the BBC calls them!), and has links to general histories of the early Web and to publications and lectures about the history of the SLAC Web site.

The World Wide Web was invented in 1990 by physicist Tim Berners-Lee at CERN, the European Organization for Nuclear Research. Berners-Lee gave a demonstration of the Web to Paul Kunz, a SLAC physicist, while Paul was on a visit to CERN in the summer of 1991. Kunz brought word of the Web back to SLAC in September, and the SLAC site was born three months later.

Opened to coincide with a SLAC symposium celebrating the Web site's 10th anniversary, the SLAC Web history exhibit uses archival documentation gathered by the Ar-

chives and History Office over the past 6 years, and will be updated and expanded as processing of this Web archival documentation is completed. Much of the documentation in the SLAC Web collection has come from the personal files of the SLAC Web "Wizards" and their mentor, Paul Kunz. Particularly rich are the papers of Louise Addis and Joan Winters, who from the earliest days, saved records of Wizards meetings, correspondence, and actual Web page iterations. This documentation predates other known Web archives by about five years, and is of interest because of the unique glimpse it provides into the first, small and tentative stages of what has become a powerful and ubiquitous element of 21st century life. The exhibit can be viewed at www.slac.stanford.edu/history/earlyweb/pagesnotes.shtml and the SLAC Web Anniversary Symposium at www-project.slac.stanford.edu/webanniv.



Other News of Interest

The full text of all announcements and meetings, including those printed in the last newsletter (and not reprinted here) and those that did not make the publishing deadline, can be found on our Web site. Visit www.aip.org/history/announcements.htm.

■ Re-envisioning the Ph.D: This project at the University of Washington is dedicated to fostering national/international discussion and initiatives that address the question: How can we re-envision the Ph.D. to meet the societal needs of the 21st Century? E-mail: envision@u.washington.edu for more information.

■ This Spring, The Bakken Library and Museum published a new online bibliography of 760 secondary works that constitutes a major resource for scholars, entitled *Electricity in Life: A Bibliography of Secondary Literature on the History of Electricity and Magnetism in Medicine and the Life Sciences*. This valuable research tool provides access to the extensive literature on the histories of electrotherapeutics, electrophysiology, electrocardiology, bioelectricity, electrodiagnosis, electropuncture, galvanosurgery, and electroencephalography. While related to the subject of electricity in the life sciences, works dealing with radiotherapy, radiology, electron micros-

copy, and tomography were intentionally excluded. For more information, visit www.thebakken.org/research/bibliography-on-electricity-in-life.htm

MEETINGS

■ The Canadian Society for the History and Philosophy of Science (CSHPS) is holding its annual conference at the University of Toronto, **May 26-28, 2002**. For more information, visit: www.er.uqam.ca/nobel/r20430/schps_toronto_2002.

■ **Faces of Anti-Newtonianism** from 1672-1832, **May 27-28, 2002**, Center for History and Philosophy of Science, University of Paris-X (Nanterre), France. For more information, e-mail: PhilippeHamou@aol.com.

■ **Philosophy and History of Science** Meeting of the South Cone Ciguas de Lindia, Sao Paulo State, Brazil, **May 27-30, 2002**. Visit the web (www.ifi.unicamp.br/%7Eg8tc) for more information.

■ **History of Meteorology** - Needs and Opportunities, Washington, DC, **May 29-31, 2002**, by the **International Commission on History of Meteorology** (ICHM). This meeting will discuss needs and opportunities in the history of meteorology

in light of the recent founding and rapid growth of the International Commission on History of Meteorology. Meeting registration and membership in the ICHM are both free of charge. For more information, visit: www.colby.edu/ichm/callmeeting.htm.

■ Sixth International Conference on the **History of General Relativity, June 26 - 29, 2002**, Amsterdam. The subject of the meeting is "History of General Relativity" in the widest sense of the word. Visit: www.science.uva.nl/~kox/HGR6.html for more information.

■ Science and Beliefs - From **Natural History to Natural Science, September 12-13, 2002**, St. Johns College, University of Durham, UK. The objective is to explore the 'beliefs' in Britain that transformed eighteenth century natural philosophy into nineteenth century natural 'science' (1700-1900). Enlightenment and Victorian natural philosophy, theology and medicine will be discussed in relation to the developing disciplines of geology, chemistry and biology. Special focus will be paid to geochronology, monstrosity, scientific societies, the Darwinian paradigm and the language of chemistry and the role of physico-theology during this period. For more information, e-mail: M.D.Eddy@durham.ac.uk or visit: www.dur.ac.uk/m.d.eddy/Science&Beliefs.html.

■ The School of History Technology and Society, Georgia Institute of Technology, Atlanta will host JASHOPS 2002 (the **Joint Atlantic Seminar in the History of the Physical Sciences**) on **September 20-22, 2002**. For more information, please contact: Jahnvi Phalkey (jahnvi.phalkey@hts.gatech.edu) or Prof. John Krige (john.krige@hts.gatech.edu), or write to either at the School of History, Technology and Society, Georgia Institute of Technology, D. M. Smith Bldg., 685 Cherry Street, Atlanta, GA 30332-0345.

■ Second Conference on the **History and Heritage of Scientific and Technical Information Systems, November 15 - 17, 2002**, Chemical Heritage Foundation, Philadelphia, PA. Emphasis for this conference will be on the period from the Second World War up through the early 1990s, including the infrastructure created by digitization, the Internet, and the World Wide Web. Conference organizers are looking for in-depth historical analyses of these developments and how they have affected the practice of science both nationally and internationally. For more information, please visit: www.chemheritage.org

■ **Taming the Electrical Fire: A Conference on the History and Cultural Meaning of the Lightning Rod, November 3 - 6, 2002**, Minneapolis, Minnesota. The Bakken will host this conference during the 250th anniversary year of the experiment of Marly, France in 1752 that confirmed Franklin's theory of the electrical nature of lightning. For more information on the call for papers, visit www.thebakken.org/research/research.htm.

■ The **History of Science Society** will hold its 2002 Annual Meeting in Milwaukee, Wisconsin, **November 7-10, 2002**. For more information, write History of Science Society, Box 351330, University of Washington, Seattle, WA 98195-1330; phone: 206-543-9366; fax: 206-685-9544; e-mail: meeting@hssonline.org.

GRANTS & FELLOWSHIPS

Many grants occur regularly; please see our online listings for those: www.aip.org/history/grants.htm.

■ The AIP Center for History of Physics offers grants to archives and to individuals for the study of the history of modern physics and allied fields. This year's application deadline is **July 1, 2002**. For more information, visit www.aip.org/history/web-grnt.htm.

■ The American Association for the Advancement of Science (AAAS) Directorate for International Programs announces the Women's International Science Collaboration (WISC) Program for 2001-2003. This NSF-supported program aims to increase the participation of women in international scientific research by helping establish new research partnerships with colleagues in Central/Eastern Europe, Newly Independent States of the former Soviet Union, Near East, Middle East, Pacific, Africa, the Americas, and Asia. The next deadline is **July 15, 2002**. For further application information, please visit www.aaas.org/international/wiscnew.shtml.

■ Chemical Heritage Foundation- Beckman Center for the History of Chemistry offers travel grants for research at the



Martinus Veltman, his wife and daughter at their apartment in Geneva, 1962. Photograph by J. D. Jackson, courtesy AIP Emilio Segrè Visual Archives, Jackson Collection.

Beckman Center for the History of Chemistry. The next deadline is **August 1, 2002**, for grants used October-December, 2002. For a list of the different types of fellowship opportunities available, please see our Web site at www.chemheritage.org and click on "Grants and Awards", or e-mail fellowships@chemheritage.org, or call 215-925-2222 x 271. You can also write: CHF Travel Grants, Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

■ The American Philosophical Society offers grants for research. All information and all forms for all the Society's programs can

be downloaded from www.amphilsoc.org. Click on "Grants" on the homepage.

■ The Center for History of Science at the Royal Swedish Academy of Sciences announces that a new stipend will be offered to scholars interested in doing archival research in the historical archives of the Royal Swedish Academy of Sciences. For further information, contact the Center for History of Science, Kunsliga Betenskapsakadmiens, Box 50005, S-104 05 Stockholm, Sweden; e-mail: centrum@cfvh.kva.se.



W. Patrick McCray, the AIP Center's Postdoctoral Historian, in front of the 8.1-meter mirror of the new Gemini South telescope at Cerro Pachon, Chile. In January 2002 McCray attended the Gemini Observatory's dedication while doing interviews and other research for a forthcoming book on the history of large telescopes and postwar astronomy. Photo Courtesy W.P. McCray.

Recent Publications of Interest

Compiled by W. Patrick McCray

This is our usual compilation of some (by no means all) recently published articles on the history of modern physics, astronomy, geophysics and allied fields. Note that these bibliographies have been posted on our Web site since 1994, and you can search the full text of all of them (along with our annual book bibliography, recent Catalog of Sources entries, exhibit materials, etc.) by clicking on the "Search" icon on our Home page (www.aip.org/history). You can specify to search the entire AIP site or the History Center only.

American Journal of Physics, vol. **70**, no. 2 (February 2002) features Stephen G. Brush, "Cautious Revolutionaries: Maxwell, Planck, Hubble," 119-128.

Annual Review of Astronomy and Astrophysics, vol. **37** (1999) includes A.G.W. Cameron, "Adventures in Cosmogony," 1-36. Vol. **38** (2000) features Donald E. Osterbrock, "A Fortunate Life in Astronomy," 1-33. Vol. **39** (2001) has Victor M. Blanco, "Telescopes, Red Stars, and Chilean Skies," 1-18.

Annual Review of Nuclear and Particle Science, vol. **49** (1999) includes J. David Jackson, "Snapshots of a Physicist's Life," 1-34. Vol. **51** (2001) features G.E. Brown, "Fly with Eagles," 1-21.

Annual Review of Earth and Planetary Sciences, vol. **29**, (2001) includes G. Schubert, "Breakthroughs in Our Knowledge and Understanding of the Earth and Planets," 1-16.

Archives des Sciences, vol. **54**, no. 2 (September 2001) includes K. Von Meyenn, "Between Scylla and Charybdis: Wolfgang Pauli and the Transition from the Old to the New Quantum Theory," 117-128.

Centaurus, vol **43**, no. 3-4 (2001) has A.S. Jacobsen, "Spirit and Unity: Oersted's Fascination by Winterl's Chemistry," 184-218; O. Darrigol, "The Historian's Disagreement over the Meaning of Planck's Quantum," 219-239; D. Hoffman, "On the Experimental Context of Planck's Foundation of Quantum Theory," 240-259; R. Singh, "Born's Role in the Lattice Dynamic Controversy," 260-277; L. Gislen and J.C. Eade, "South East Asian Eclipse Calculations," 278-307.

CERN Courier, vol. **41**, no. 10 (December 2001) includes Helmut Rechenberg, "Werner Heisenberg: the Columbus of quantum mechanics," 18-20; "Bose-Einstein condensation revisited," 21-23; Heath B. O'Connell and Michael E. Peskin, "Database lists the top-cited physics papers," 27-29.

Isis, vol. **22**, no. 1 (March 2001) features Scott G. Knowles and Stuart W. Leslie "Industrial Versailles": Eero Saarinen's Corporate Campuses for GM, IBM, and ATT," 1-33. Vol. **22**, no. 3 (September 2001) has John Krige, "Distrust and Discovery: The Case of the Heavy Bosons at CERN," 517-540.

History of Science, vol. **39**, pt. 4 (December 2001) includes Yves Gingras, "What Did Mathematics Do to Physics," 383-416.

Journal for the History of Astronomy, vol. **32**, pt. 4 (August 2001) includes Sara Schechner, "The Material Culture of Astronomy in Daily Life: Sundials, Science, and Social Change," 189-222; Robert Westman, "Kepler's Early Physical-Astrological Problematic," 227-236; Joann Eisberg, "Making a Science of Observational Cosmology: The Cautious Optimism of Beatrice Tinsley," 263-278. Vol. **32**, pt. 4 (November 2001) features Bradley Schaefer, "The Transit of Venus and the Notorious Black Drop Effect," 325-336.

Minerva, vol. **39**, no. 2 (2001) includes Roy McLeod, "Women in Science: International Perspectives," 151-152; Sue Rabbitt Roff, "Nuclear Revisionism," 259-264. Vol. **39**, no. 3 has Ronald Rainger, "Constructing a Landscape for Postwar Science: Roger Revelle, the Scripps Institution, and the University of California, San Diego," 327-352. Vol. **39**, no. 4 (2001) includes several essays on the centennial of the Nobel Prize including John Jenkin, "A Unique Partnership: William and Lawrence Bragg and the 1915 Nobel Prize in Physics," 373-392; John Krige, "The 1984 Nobel Physics Prize for Heterogeneous Engineering," 425-443.

Notes and Records of the Royal Society of London, vol. **55**, no. 3 (2001) includes D.A.H. Wilson, "Sea Lions, Greasepaint, and U-boats: Admiralty Scientists Turn to the Music Hall in 1916," 425-454; U.W. Andt, "Instrumentation in X-ray Crystallography," 457-472; Sir Alan Cook, "Edmond Halley and the Magnetic Field of the Earth," 473-490.

Physics in Perspective, vol. **3**, no. 2 (September 2001) includes B. Pippard, "Dispersion in the Ether: Light over the Water," 258-270; J.R. Goodstein, "A Conversation with Franco Rasetti," 271-313; R.G. Arns, "Detecting the Neutrino," 314-334; E. Harper, "George Gamow: Scientific Amateur and Polymath," 335-372. Vol. **3**, no. 4 (November 2001) has David E. Rowe, "Einstein Meets Hilbert: At the Crossroads of Physics and Mathematics," 379-424; Alan Chalmers, "Maxwell, Mechanism, and the Nature of Electricity," 425-438; Xiang Chen, "Measuring Reflective Power with the Eye," 439-461; and Wolfgang L. Reiter, "Vienna: A Random Walk in Science."

Physics Today, vol. **54**, no. 12 (December 2001) includes Jessica Wang, "Edward Condon and the Cold War Politics of Loyalty," 35-41. Vol. **55**, no. 1 (January 2002) has Spencer Weart, "Preserving the Heritage of Discovery," 28-34.

Progress in Nuclear Energy, vol. **36**, no. 3 (2000) includes M.M. R. Williams, "The Development of Nuclear Reactor Theory in the Montreal Laboratory of the National Research Council of Canada (Division of Atomic Energy) 1943-1946," 239-321.

Reviews of Modern Physics, vol. **73**, no. 3 (July 2001) includes J.D. Jackson and L.B. Okun, "Historical Roots of Gauge Invariance," 663-680.

Sky & Telescope, Vol. **102**, no. 5 (November 2001) includes Leif J. Robinson, "Sixty Years of Hindsight," 30-37; Alan Hirshfield, "The Race to Measure the Cosmos," 38-47. Vol. **102**, no. 6 (December 2001) has Ken Croswell, "Wondering in the Dark," 44-51; Yuri Petrunin and Eduard Trigubov, "Dmitri Maksutov: The Man and His Telescopes," 52-62.

Social Studies of Science, vol. **31**, no. 5 (October 2001) features Wesley Shrum, Ivan Chompalov, and Joel Genuth, "Trust, Conflict, and Performance in Scientific Collaborations," 681-730.

Studies in History and Philosophy of Modern Physics, vol. **32B**, no. 3 (September 2001) featured Jos Uffink, "Bluff your Way in the Second Law of Thermodynamics," 305-394; Jordi Cat, "On Understanding: Maxwell on the Methods of Illustration and Scientific Metaphor," 395-442. Vol. **32B**, no. 4 (December 2001) is a special issue on the conceptual foundations of statistical physics and includes papers by Jeffrey Bub, "Maxwell's Demon and the Thermodynamics of Computation," 569-580; Craig Callender, "Taking Thermodynamics too Seriously," 539-554.

Technology and Culture, vol. **42**, no. 3 (July 2001) includes Gary L. Frost, "Inventing Schemes and Strategies: The Making and Selling of the Fessenden Oscillator," 462-488. Vol. **42**, no. 4 (October 2001) has Stephen Johnson, "Samuel Phillips and the Taming of Apollo," 685-709.



Norton Hintz, Harry Gove and Ben Mottleson in a "spin down state" after lectures at Brookhaven Summer School, 1965. Photo by Norton M. Hintz, courtesy AIP Emilio Segrè Visual Archives, Hintz Collection.

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 Nicolaas Bloembergen
 Robert D. Cowan
 Per F. and Eleanor Dahl
 Russell J. Donnelly
 John Fleckner
 Alex Harvey
 Lillian Hoddeson
 Martin Nisenoff
 Norman F. Ramsey
 John Rigden
 Daniel M. Siegel
 Megan Sniffin-Marinoff
 Eric Stusnick

Center Launches \$3M Endowment Campaign

The Executive Committee of the Friends of the Center for History of Physics has begun a major campaign to enlarge the Center's Endowment Fund. **History that Matters: A Campaign to Help Save Our Heritage** will be a three-year effort to raise the Fund from its current level of about \$4 million with the addition of another \$3 million.

Scientists are justly proud of their record. Within living memory, the sciences of physics, astronomy, geophysics and allied fields spectacularly increased our knowledge of the world and transformed daily life. Yet year by year, the record is slipping away. As pioneering scientists retire or die, we risk losing their unpublished notes and letters, and their irreplaceable recollections of our times. Without such information it will be hard to understand what drove the modern advance of science, and harder still to make this great human story live for students and the public. The Center has long taken the lead in addressing these problems. Mobilizing and coordinating scientists, archivists, historians and educators around the world for some four decades, the Center has pursued its unique mission: *to preserve and make known the history of physics and allied fields*. The pace of technology and the number and type of important records that should be preserved are increasing. Endowing significant parts of our preservation and outreach programs will make sure that irreplaceable documents and reminiscences are kept safe, so that they can be used to foster a better understanding of our heritage.

Your help will be needed to support the "History that Matters" campaign. We will be approaching our Friends later this year for donations and pledges. Still more, we hope our Friends will tell their colleagues and others who might be interested about the Center's goals, work, and needs. If you are not already a Friend, of course we hope you will join. You can write to us for a brochure explaining the campaign; information is also available on the Friends' Web pages, <http://www.aip.org/history/friends.htm>.

YOUR CONTRIBUTION TO "HISTORY THAT MATTERS" WILL:

- Expand the Center's highly regarded program of oral history interviewing,
- Support the preservation and on-line cataloging of collections of correspondence, notebooks and other unpublished papers, both in the Center's Niels Bohr Library and elsewhere,
- Extend the safety net that the Center has woven with libraries, universities, and other institutions to catch further important reminiscences and collections before they are lost forever,
- Strengthen activities that use materials in the Niels Bohr Library's collections, in alliance with other institutions, to inform not just grades "K through 12" but "K through Gray,"
- Create more on-line exhibits about the lives of scientists and their discoveries,
- Support a staff sufficient to meet new opportunities.

Campaign Inaugurated on 40th Anniversary of the Niels Bohr Library

The "History that Matters" campaign to help save our heritage by enlarging the Center's endowment was formally opened on April 5, 2002 at a reception at the American Center for Physics in College Park, MD. The reception was in celebration of the 40th anniversary of the founding of the Niels Bohr Library, which became an arm of the Center for History of Physics after the Center was created as a division of the American Institute of Physics.

"The enterprises which are now under way," said J. Robert Oppenheimer at the dedication ceremony for the new Library in 1962, "and for which this room will serve as hearth, should make it possible, if there are serious students of the human predicament in the future, to know very much more about what has befallen us than we who are acting and living in it." Since then the Library has become the world's premier repository for books, oral history interviews and many

other materials documenting the history of modern physics, astronomy and geophysics. Along with the Center's other programs for education, outreach and archival preservation, the Library has established a matchless reputation for service.

For more information on the Library and its history, see "Preserving the Heritage of Discovery," by Center Director Spencer Weart, *Physics Today* (January 2002), online at: www.aip.org/pt/vol-55/iss-1/p28.html



Presidential Science Adviser John Marburger, long a good Friend of the Center, speaking at the celebration.

Friends' Donations Reach New Height

Defying the national economic slowdown and other troubles, our Friends have continued the steady trend of rising donations supporting the Center for History of Physics. The regular annual membership donations for 2001 totalled \$127,000, as compared with 1998-\$74,000, 1999-\$90,000, and 2000-\$117,000. This rise together with economies in operations, and strong budgetary support by the American Institute of Physics, have built up the bank account holding these membership funds, so that this year a majority of the annual donations could be directed instead into the Endowment Fund. A strong endowment is essential for the Center's long-term survival.

In addition, one-time donations to the Endowment Fund totaled another \$546,000, more than double the average of previous years. The biggest parts of this were the second installment, one-third of a million dollars, of the Lounsbury Foundation's endowment gift, and the \$150,000 gift from Allan Sandage (reported in this *Newsletter*, Spring 2001). Sandage supplemented this with an additional generous year-end gift of \$10,000 and a pledge of the same in future years. John Armstrong also donated \$10,000 with a

pledge of future renewal. Also noteworthy was a \$20,000 gift to the Endowment Fund from Melba Phillips, after she found it would be advantageous in terms of taxes to give this as an advance on her pledged bequest. Many other valued gifts are recorded in the preceding pages. The big step up for the Endowment Fund gives a strong platform for launching our new \$3 million endowment campaign, "History that Matters."

Other Friends' activities included an invitation to join the Council of the Friends that was mailed to many leading scientists and historians of science. Most of those contacted agreed to lend their names, endorsing our goal of preserving and making known the record of the work of recent generations of scientists. Reaching beyond the physics community, where most of the Friends' activities have centered in the past few years, a reception was held jointly with the Historical Astronomy Division of the American Astronomical Society at the AAS's Washington meeting on January 6, 2002. This gave an opportunity to explain the Center's programs and show our history of astronomy Friends that they are part of a wider community of interest.

Leaving a lasting legacy.

PLEASE CONTACT ME REGARDING THE FOLLOWING:

- _____ I wish to make a pledge of support in 2002 to the Center.
- _____ I want to donate books, photographs, and other source materials to the Center.
- _____ I have expertise and time to give in assisting the Center's programs.
- _____ I wish to become part of the Legacy Circle with a planned gift.

Name: _____
Phone: _____
E-mail: _____

Address: _____

Mail to: Center for History of Physics
One Physics Ellipse
College Park, MD 20740

Call: 301-209-3006 and ask for
Natalie Quets, Development
E-mail: nquets@aip.org

Supporting something that I believe in.

The fine feeling of accomplishment.

Becoming a part of a group who are doing what needs to be done.

Sir Denys Wilkinson playing pinball during a Harvard Conference on Nuclear Physics held at Harwell, England, 1961. Photo by Norton M. Hintz, courtesy AIP Emilio Segrè Visual Archives, Hintz Collection.



Documentation Preserved

Compiled by Katherine A. Hayes

This is our regular survey of archives and other repositories that gives information on materials of interest to historians and others. Many of these are new deposits not yet processed, but we also include collections that were accessioned years ago but not previously reported here. Some have restricted access. Please contact the repository for further information.

Items published in this Newsletter since 1994 are posted on our Web site, where you can search the full text of all of them (along with our book and journal bibliographies, exhibit materials, etc.) by clicking on the “Search” icon on our Home page (www.aip.org/history). You can specify whether to search the entire AIP site or the History Center only.

MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN. ARCHIV ZUR GESCHICHTE DER MAX-PLANCK-GESELLSCHAFT. BOLTZMANNSTR. 14, 14195 BERLIN, GERMANY
[CONTACT: MARION KAZEMI]

Addition to the papers of **Heinz Bilz, 1926-**. German physicist, Max Planck Institute for Solid State Research. Includes biographical documents, correspondence, manuscripts. 1944-1986. .2 meters.

Addition to the papers of **Max von Laue, 1879-1960**. Major affiliations include: Friedrich-Wilhelms-Universität Berlin,

1905-1909, 1919-1943; Ludwig-Maximilians-Universität München; Universität Frankfurt-am-Main, 1914-1919; Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin, 1951-1960. Nobel Prize for Physics, 1914. Contains letters to his son Theodor in the U.S. with detailed reports including a diary. 1937-1960. 18 folders.

Papers of **Ernst-August Müller, 1925-2001**. Contains professional papers including his scientific correspondence, research materials and records relating to the Max Planck Institute for Flow Research (Strömungsforschung) and the University of Göttingen where he held the chair for physics, the German Research Foundation, etc. as well as some biographical documents. 1953-2000. 15.6 meters.

Papers of **Ernst Ruska, 1906-1988**. Physicist. Fritz Haber Institute of the Max Planck Society. Nobel prize in physics, 1986. Includes correspondence with colleagues and institutions, honors, research materials especially relating to the electron microscope, for which he won the Nobel Prize in 1986. 1928-1988. 11.75 meters.

Addition to the papers of **Walter Gustav Tollmien, 1900-1968**. Physicist at Aerodynamischen Versuchsanstalt, 1924-1930, Scientific member of Max-Planck-Institut für Strömungsforschung, 1950-1968. Includes biographical documents, correspondence, research papers, including secret reports of the institute and the Aerodynamische Versuchsanstalt Göttingen from World War II, papers of scientific institutions, among these the Max Planck Society and the Institute, manuscripts, etc. 1933-1969. 2.6 meters.

RUSSIAN ACADEMY OF SCIENCES. ARCHIVE. UL. 34 NOVOCHEREMUSHKINSKAIA, 117218 MOSCOW, RUSSIA (CONTACT: ARCHIVIST)

Scientific and other works, biographical documents, work-related documents of **Dmitrii Ivanovich Blokhintsev, 1908-1979**. Physicist; member of the Soviet Academy of Sciences. Beginning in 1935, he worked primarily at the P. N. Lebedev Physics Institute of the Soviet Academy of Sciences. He participated in war work before and during World War II. Starting in 1947 he participated in the development of nuclear technology. In 1956 he was elected director of the Joint Institute of Nuclear Research in Dubna. For the most part, the documents reflect the period when Blokhintsev served as the first director of the Joint Institute of Nuclear Research (Dubna, Russia) in 1956-1965. They include articles, reports, and speeches from the first 10 years of JINR's existence. The biographical section includes personal and autobiographical documents (1958-1978), a JINR report concerning the award of a JINR prize for a series of works on the physics of weak interactions (1961), nomination to full membership in the Soviet Academy of Sciences (1964), and other awards. Also citations by academicians, obituaries, recollections by colleagues and friends, and photographs. Documents concerning Blokhintsev's work include reports, speeches, etc. 1958-2000. 73 items.

Scientific and other works, biographical documents, work-related documents of **N. N. (Nikolai Nikolaevich) Bogoliubov, 1909-1992**. Fields include theoretical physics, mechanics, and mathematics. Performed research in statistical physics, the quantum theory of fields and elementary particles, and the theory of nonlinear oscillations. Bogoliubov's personal archives includes documents characterizing his life and work, the history of the scientific institutions where he worked, the policies of the Soviet government concerning fundamental science, and the scientific careers of colleagues. The scientific works is an account of the "Quantum theory of fields and its applications," the development of which Bogoliubov directed at the Division of Theoretical Physics at the Mathematics Institute of the Soviet Academy of Sciences in 1961. Also included are articles and speeches from his tenure as director of the Joint Institute of Nuclear Research in Dubna. They reflect the work performed at the Institute and the author's opinions on international collaboration in the uses of atomic energy for peaceful purposes. Biographical documents include an autobiography (1946), communications concerning the selection of Bogoliubov as director of JINR (1965), and promotion for his candidacy for deputy of the Supreme Soviet of the U.S.S.R. (1966), citations, descriptions of scientific work, recollections of joint work performed with many leading scientists such as: Kolmogorov, Krylov, Logunov, Sobolev, Sisakyan, Shirkov, and others. 1938-2000. 53 items.

Scientific works, biographical documents, work-related documents, correspondence of **V. I. (Vitalii Iosifovich) Goldanskii, 1923-2001**. Physicist and chemist. Member of Russian Academy of Sciences. The collection includes speeches, testimonials, manuscripts, autobiography, correspondence with foreign and domestic scientists, conference and symposia materials, student exchanges. Most of his work relates to nuclear physics and chemical physics. 1956-1999. 1.5 lin. meters.

Scientific works, biographical documents, work-related documents, correspondence of **Bruno Maksimovich Pontekorvo, 1913-1993**. Nuclear physicist. Born in Pisa, Pontecorvo studied in Rome; in 1940 he went to the United States, in 1948 to Great Britain, and in 1950 to the Soviet Union. The scientific works include primarily scientific and popular works concerning the significance of research on elementary particles, progress in study of elementary particles, and commemorations of colleagues and recollections. The biographical materials include autobiographical items written throughout 1958-1964, an autobiography (1964), communications regarding awards to Pontecorvo, and his election to full membership in the Soviet Academy of Sciences (1964), testimonials to his work by colleagues, articles, and photographs. Work-related documents include reports by Pontecorvo concerning scientific work performed during the period 1958-1961, correspondence concerning the Nobel Prize for P. L. Kapitsa in 1968, a letter to the Soviet Academy of Sciences concerning financial support for the operation of the Serpukhov elementary-particle accelerator (1969). 1958-2000. 40 items.

Scientific and other works, biographical documents, work-related documents of **Dmitrii Vladimirovich Skobeltsyn, 1892-1990**. Physicist. Pioneer of high-energy physics. The presence of secret subject matter in his research work unquestionably affected the size of the non-secret part of his personal archives. The collection includes articles, autobiographical materials and an autobiography written in 1950, testimonials and character references, information from the P. N. Lebedev Physics Institute (FIAN) of the Soviet Academy of Sciences, information on his many honors and awards, a speech by A. M. Baldin on the scientific and organizational work of Skobeltsyn. The work-related documents include reports on scientific work performed in 1946-1951, 1954, 1958, 1959; correspondence; documents concerning the participation in a symposium on radio electronics, and a conference on nucleon-nucleon and nucleon-pion interactions research; and documents concerning the financing of the first stage of a setup for studying elementary particle interactions at FIAN's high-mountain observatory in Tien-Shan (1958-1969). 1946-2000. 22 items.

Scientific works, research materials, biographical documents, correspondence of **Yakov Borisovich Zeldovich, 1914-1987**. Physicist. Collection includes working notebooks, drafts of scientific papers, lectures and correspondence. Zeldovich's idiosyncratic work style left its mark on his archives and its



Gertrude Scharff Goldhaber at the History of Nuclear Physics Symposium, University of Minnesota, May 18-24, 1979. Photo by Norton M. Hintz, courtesy AIP Emilio Segrè Visual Archives, Hintz Collection.



Norman Ramsey and family at Harvard Physics Picnic, Ipswich, MA, 1950. Photo by Norton M. Hintz, courtesy AIP Emilio Segrè Visual Archives, Hintz Collection.

organization, particularly the notebooks. He recorded his work (calculations, sketches, articles, reports, and lectures) not on individual sheets of paper, but in notebooks. These notebooks contain many subjects, often running together, overlapping, and with no headings or stopping points, few dates, etc. The same subject is often picked up again in a different notebook. The notebooks also contain works written with coauthors and the work of other authors. Collection also includes reprints of Zeldovich's works in Russian and English for 1934-1970; "Collections of Works by Academician Ya. B. Zeldovich," 1973-1976, consisting of 4 volumes compiled in 1989 by B. I. Khlebnikov. The correspondence contains letters from a number of foreign scientists. 1932-1984. Opened for research. 200 items.

AMERICAN PHILOSOPHICAL SOCIETY. LIBRARY. 105 SOUTH FIFTH STREET, PHILADELPHIA, PA 19106, USA (CONTACT: ROB COX)

Papers of Herbert Friedman, 1916-2000. Space scientist. A native of Brooklyn, Friedman went to Brooklyn College (BS, 1936) and Johns Hopkins University (Ph.D., 1940) before accepting a position with the Naval Research Laboratory. Friedman's interests ranged from applied x-ray spectroscopy early in his career to solar physics, upper atmospheric physics and x-ray astronomy. He retired from NRL in 1980, but continued as consultant and emeritus until his death. Correspondence, research notes, lectures, videotapes and photographs pertaining to the career of Herbert Friedman. The bulk of the collection relates to Friedman's later years. Ca. 1950-2000. Ca. 14 lin. ft.

Papers of Walter B. Goad, 1925-2000. Received his doctorate in physics from Duke University in 1954; entered the T-Division at Los Alamos laboratories, taking part in the development of thermonuclear weapons. In the 1960s turned to molecular biology, focusing his quantitative skills on the analysis of nucleic acid sequence data. He was among the founders of GenBank, the first important nucleic acid databank; a pioneer in the emerging field of bioinformatics. Died in Santa Fe,

NM. Planning documents, correspondence, working notes, and photographs relating primarily to Goad's burgeoning interest in the quantitative analysis of nucleic acid sequences and the early development of the field of bioinformatics. The bulk of the collection is comprised of materials relating to the founding of GenBank, the nucleic acid sequence clearinghouse, and to human genome data, but there is important information on Goad's defense of his Los Alamos colleague Wen Ho Lee, accused of releasing sensitive information about nuclear weapons research. 1955-2000. 6 lin. ft.

CALIFORNIA INSTITUTE OF TECHNOLOGY. INSTITUTE ARCHIVES. 1201 EAST CALIFORNIA BLVD. (MAIL CODE 015A-74), PASADENA, CA 91125, USA (CONTACT: JUDITH GOODSTEIN OR SHELLEY ERWIN)

Oral history interview with **Don Lynn Anderson**. Geophysicist. Professor of Geophysics at Caltech from 1963. He was the third director of Caltech's Seismological Laboratory. Topics covered include: early life, Caltech career, including history of the Seismological Laboratory, and reminiscences of seismology and geology at Caltech. Interview conducted by Shirley K. Cohen, 2001. Transcript: 83 pp.

Oral history interview with **Barry C. Barish, 1936-**. Physicist. Worked at California Institute of Technology from 1963. Topics include Barish's life and work at Caltech and other facilities, including his work at various cyclotrons and synchrotrons around the globe. The second half of the interview concentrates on his role as director of the Laser Interferometer Gravitational-Wave Observatory (LIGO) Laboratory. Interview conducted by Shirley K. Cohen in 2001 as part of the Laser Interferometer Gravitational-Wave Observatory Interview Series. Transcript: 66 pp.

Oral history interview with **Hans Albrecht Bethe, 1906-**. Physicist; Cornell University professor of physics; Nobel laureate. Interview covers Bethe's impressions and reminiscences of numerous well-known Caltech figures including Robert Bacher, Richard Feynman, William Fowler, Theodore von Kármán, Charles Lauritsen, Robert Millikan, Linus Pauling and others. He describes his first impressions of nuclear physics, the political climate in Italy in the 1930s, and the Rome school of physics. The second session focuses on Robert Bacher, Robert Oppenheimer, and Los Alamos. Interview sessions conducted by Judith Goodstein on February 17, 1982 and in 1993. Transcript: 47 pp. (2 sessions).

Oral history interview with **Felix Hans Boehm**. Professor of Physics, California Institute of Technology, 1958-1995. Interview covers Boehm's personal and professional life. His principal work has been in nuclear structure and the nature and behavior of subatomic particles. Interview conducted by Shirley K. Cohen, 1999. Transcript: 65 pp.

Supplement to papers of **Max Delbruck, 1906-1981**. Biologist (biophysics) at California Institute of Technology, from 1937. Includes personal correspondence, diaries, lab notebooks (2 from Cold Spring Harbor), and reprints. 3.5 lin. ft.

Microfilm of the papers of **Albert Einstein, 1879-1955**. Physicist. The collection includes several thousand items of correspondence with scientists (originals, copies, clippings from the published literature), from such figures as Niels Bohr, Erwin Schrödinger, Willem de Sitter, David Hilbert, Moritz Schlick, and Max von Laue, as well as more obscure or controversial people. There are many files of Einstein lecture notes, manuscripts (some unpublished) and pads of his calculations. In addition, there is much correspondence involving many of the major figures of the 20th century on subjects such as literature, music, politics, pacifism, arms control, philosophy, Zionism, the founding of Hebrew University, human rights, etc. In short, the collection is a kaleidoscope of a scientist's mind and influence, as well as the interactions of the science, politics and culture of the 20th century. Originals located at Hebrew University of Jerusalem, Department of Manuscripts and Archives, Jerusalem, Israel.

Oral history interview with **Donald V. (Donald Vincent) Helmberger, 1938-**. Geophysicist. Professor of Geophysics at Caltech from 1970. He was the fifth director of Caltech's Seismological Laboratory. Topics covered include: early life, Caltech career, including some history of the Seismological Laboratory, and reminiscences of seismology and geology, and planetary science at Caltech. His research centered on high-frequency modeling of earthquakes to determine details of orientation and rupture processes. Interview conducted by Shirley K. Cohen, 2001. Transcript: 49 pp.

Additions to the manuscript collection of the **Palomar Observatory**. Small collection of miscellaneous papers relating to Palomar telescope. Collection of original optical shop job record cards and miscellaneous files. 1936-1949.

Oral history interview with **Gary H. (Gary Hilton) Sanders, 1946-**. Physicist. Topics include Sanders' education in physics at Columbia and MIT (graduate work under S. C. C. Ting); brief teaching at Princeton; move to Los Alamos in 1978; recruitment to Caltech to work on Laser-Interferometer Gravitational-Wave Observatory (LIGO) team at Caltech in 1994. Involved in high-energy physics research at European and national accelerator laboratories, including DESY, CERN, Brookhaven, Fermilab, and finally Los Alamos. Joined the Laser-Interferometer Gravitational-Wave Observatory team at Caltech in 1994. Interview conducted by Shirley K. Cohen in 2001 as part of the Laser Interferometer Gravitational-Wave Observatory Interview Series. Transcript: 47 pp.

Oral history interview with **Alvin Virgil Tollestrup**. Interview covers Tollestrup's early life, education, and career as an ex-

John Tyndall (1820-1893). Many fine portraits of scientists like this are found in books in the Niels Bohr Library. From Tyndall's Forms of Water in Clouds & Rivers, Ice & Glaciers (New York: Appleton, 1881). Photo Courtesy AIP Emilio Segrè Visual Archives.



perimental physicist. Includes reminiscences of Caltech's physics division and professors, including R. A. Millikan, W. Smythe, W.A. Fowler, C. C. Lauritsen, M. Gell-Mann, and R. Feynman; also the synchrotron team of R. Langmuir, M. Sands, R. Walker, and B. Rule. Professor of Physics, California Institute of Technology, 1953-1977. Interview conducted by David A. Valone, 1994. Transcript: 49 pp.

Additions to the papers of **Fredrik Zachariasen, 1931-1999**. Physicist. Professor of Physics, California Institute of Technology from 1965-1999. Includes correspondence, technical notes, course notes, and materials on JASON. The collection is currently unprocessed. Contact repository for information. 8 lin. ft. (8 boxes).

CLARK UNIVERSITY. DEPARTMENT OF RARE BOOKS AND SPECIAL COLLECTIONS. UNIVERSITY ARCHIVES. GODDARD LIBRARY, 950 MAIN STREET, WORCESTER, MA 01610-11477, USA (CONTACT: LINN MOTT)

Papers of **Arthur Gordon Webster, 1863-1923**. Physicist (acoustics, mechanics). On the faculty at Harvard University, mathematics (1885-1886); and Clark University, physics, from 1890. Correspondence relating to research on sound vibration and gyroscopes, scientific notation, professional meetings and elections, appointments, travel, speeches, honorary degrees, and publications; includes scientific papers and calculations on mechanics, telegraphy, ballistics, notation, and steam whistles. Correspondents include William E. Ayrton, Joseph G. Coffin, Henry Crew, Samuel P. Langley, Anatole LeBrantz, Hendrik A. Lorentz, William E. Magie, Thomas C. Mendenhall, Ernest Merritt, Henry F. Osborn, Benjamin O. Peirce, Edward B. Rosa, Ernest Rutherford, and Robert S. Woodward. 1892-1920. 0.6 cu. ft.

Some of the best accounts of science tell of people as much as facts... Today, the teaching of science in schools, and its presentation to the public, focuses heavily on facts, leaving little room for inquiry or imagination. This does not reflect the reality of research, and ignores the most exciting part—the process of discovery itself.

—Nancy J. Rothwell

HOOVER INSTITUTION ON WAR, REVOLUTION AND PEACE. ARCHIVES.
STANFORD UNIVERSITY, STANFORD, CA 94305, USA (CONTACT:
ELENA DANIELSON)

Papers of **Paul J. Flory**. American chemist. Correspondence, statements, memoranda, bulletins, press releases, and clippings, relating to the civil rights of dissident scientists in various countries, especially the Soviet Union. Much of the material concerns the cases of Andrei Sakharov, Yuri Orlov and Anatoly Shcharansky. 1975-1986. 7 ms. boxes.

LEO BAECK INSTITUTE. ARCHIVES DIVISION. 129 EAST 73RD STREET,
NEW YORK, NY 10021, USA (CONTACT: FRANK MECKLENBURG)

Additions to the collection of **Felix Auerbach, 1856-1933**. German physicist, born in Breslau (now Wroclaw, Poland). Auerbach received a doctorate in physics at Heidelberg in 1875, and was named professor of physics at Jena in 1889, where he committed suicide in 1933, together with his wife. Includes sixteen volumes of diaries, 1876-1891, written in Gabelsberger shorthand, dealing with personal, political, and scientific topics; correspondence and personal and family memorabilia; letter by Elizabeth M. Lunau providing biographical information on Felix Auerbach and the fate of his family in the Third Reich; and other personal materials. 1876-1994.



Sir Lawrence Bragg (then Head of the Cavendish Laboratory) and Lady Bragg in their garden in Cambridge, England, October 1951. Photo by Norton M. Hintz, courtesy AIP Emilio Segrè Visual Archives, Hintz Collection.

Papers of **James Franck, 1882-1964**. Physicist, born in Hamburg. Won the Nobel prize in 1925. Died in Göttingen in 1964. Letters; genealogy; obituary. 6 items.

Samuel and Irene Goudsmit Collection. Physicist, born in The Hague in 1902. As a graduate student at the University of Leyden he discovered the electron's spin together with George E. Uhlenbeck in 1925. He came to the United States in 1927. After World War II it was disclosed that he had been scientific director of ALSOS, the secret wartime operation to learn of the Germans' development of an atomic bomb. He served as an editor for several influential physical journals. He died in Reno, Nevada. Correspondence regarding Nazi Germany's nuclear energy and atomic bomb research including seven letters from Goering to members of the Reichsforschungsrat (Dr. Gerlach and Dr. Mentzel), and three letters from Himmler (two addressed to Werner Heisenberg). Addenda to collection include an obituary; documents and correspondence concerning Dr. Curt Dietrich Bejach and his family; document confirming military service in World War I; clippings. 1862-1944. 4 folders.

Collection of **Gerhard Herzberg, 1904-1999**. Born in Hamburg, Germany, Herzberg studied physics at the Darmstadt Institute of Technology, where he also taught after receiving his doctor's degree in 1928. Relieved of his position in 1935 by the Nazis, he emigrated to Canada, where he taught at the University of Saskatchewan until 1945. After three years at the University of Chicago, he returned to Canada as head of the Division of Physics at the National Research Council, a position he held until his retirement in 1969. In 1971, he received the Nobel Prize in Chemistry for his work in the field of molecular spectroscopy. Clippings on the Nobel Prize; photographs. 1971. 4 items.

Elizabeth Jacob family papers. Family history documenting the emigration of Hermann Jakob, Pauline Hermann. Miscellaneous materials relating to Max Jakob, his wife Anna, and his children Elizabeth and Karl; various documents relating to the work of **Max Jakob (1879-1955)** as physicist including laudatios, official diplomas, lectures; copies of correspondence between Max Jakob and Albert Einstein as well as Max Planck; family trees; family correspondence and official correspondence relating to the emigration of Pauline and Hermann Jakob to Chicago from Ludwigshafen.

We Kept Our Heads by **Dodo Liebman, 1906-1976**. Born in Berlin; studied physics and completed a Ph.D. degree shortly after Hitler came to power. Married Gert Liebman in 1936, shortly before their emigration to England. Story of upbringing in Berlin Jewish middle-class family; primary and secondary education; university studies at Berlin and Heidelberg; member of Communist party in 1933; Ph.D. in 1934; work in factories; emigration to England in 1936; internment on Isle of Man during World War II; death of husband in 1956; compensation from Germany. 1976. 111 pp.

Memoirs of **Dan Porat, 1922-1996**. Physicist, born in Stanislawow; youth growing up in Poland, moving to Vienna;

anti-Semitism in Europe; Anschluss and emigration to Palestine in 1939; volunteers as engineer with British army, fighting in Africa and Italy. Family life; victim of Arab terrorist attacks. Post-war studies in physics at Manchester University in England; and moves to the U.S. to work as a nuclear physicist at Harvard and MIT. Works as physicist at Stanford for 26 years. 23 pp.

Collection of **Otto Stern, 1888-1967**. Physicist. Photographs; biographical notes. 3 items.

Siegfried Czapski, 1861-1907 Collection, compiled by Friedrich Stier. Physicist (optics); since 1905 director of Zeiss. Photos of Czapski and family; genealogy of his family. Manuscript by Friedrich Stier on his life, *Siegfried Czapski*, undated; in German, 26 pp; typed, photocopied. Biographical essay on the physicist who worked many years in the Zeiss optical establishment in Jena; focuses on his long collaboration with Ernst Abbe. 1861-1907. 1 folder.

LIBRARY OF CONGRESS. MANUSCRIPT DIVISION. JAMES MADISON MEMORIAL BUILDING, FIRST STREET AND INDEPENDENCE AVENUE, S. E., WASHINGTON, DC 20540, USA (CONTACT: LEONARD BRUNO)

Papers of **Philip Hauge Abelson**. Scientist and editor. Abelson spent most of his career at the Carnegie Institution, moving from assistant physicist (1939) to director of the Geophysical Lab to president (1971-1978). Correspondence, writings, reports, speeches, lectures, subject files, biographical material, appointment file, printed material, awards, photographs, and other papers on Abelson's work in nuclear physics and other scientific fields. 1939-2000. Unprocessed. Ca. 12,000 items.



Jorrit DeBoer tinkers with his motorbike at his home in Munich, November 1995. Photo by Norton M. Hintz, courtesy AIP Emilio Segrè Visual Archives, Hintz Collection.

The spectroscopist W. F. Meggers (1888-1966) working in his lab at the National Bureau of Standards. Meggers's extensive collection in the Niels Bohr Library's archives has been only partly processed. Staff have completed higher priority tasks such as AIP Member Society records, and have returned to work on this interesting collection. AIP Emilio Segrè Visual Archives, W. F. Meggers Collection.



Papers of **Vera C. Rubin, 1928-**. Astronomer. Correspondence, writings, speeches, subject files, research material, printed material, charts, graphs, photographs, and other papers primarily on Rubin's work as an astronomer. 1952-1993. Ca. 17,000 items.

Additions to papers of **Charles H. Townes**. Physicist at the University of California, Berkeley. Designed the first maser and was awarded the Nobel Prize for Physics in 1964. Writings, research notes, chronological files, student papers, audio and video recordings, and other papers. 1939-1992. Unprocessed. Ca. 11,000 items.

Addition to papers of **John Von Neumann, 1903-1957**. Mathematician, atomic energy commissioner, educator, and consultant. Correspondence, report, and clippings pertaining primarily to the problem concerning the Poiseuille-type laminar flow. 10 items.

STANFORD LINEAR ACCELERATOR CENTER. ARCHIVES AND HISTORY OFFICE. 2575 SAND HILL ROAD, MS 82, MENLO PARK, CA 94025, USA (CONTACT: JEAN DEKEN)

Papers of **Joseph Ballam, 1917-1997**. Ballam received his BS in physics from the University of Michigan in 1939. After one semester at MIT, he joined the war effort at the U.S. Navy's Bureau of Ships. Received his Ph.D. from the University of California, Berkeley, 1951 for studies on cosmic rays. Was Assistant Professor at Princeton; Senior Faculty at Michigan State University; in 1961 joined SLAC as an Associate Professor; was Associate Director of the SLAC Research Division 1963-1982. Correspondence, photographic slides, publications, reports, realia. Records dealing with SLAC's Positron Electron Project (PEP), Hydrogen Bubble Chamber (HBC) Program, and Experimental Program Advisory Committee (EPAC); as well as SLAC Collaborations, TACUP (Technical Advisory Committee & University Programs), and the U.S. High-Energy Physics Advisory Panel (HEPAP). 1972-1996. Papers are unprocessed. Collection number 00-069. Please contact the SLAC Archivist for more information regarding access. 17 cu. ft.

Papers of **Richard E. Taylor, 1929-** . B.Sc. 1950; M.Sc. 1952, University of Alberta, Edmonton, Canada. Ph.D. 1962, Stanford University. Physicist, Lawrence Berkeley Laboratory, Berkeley, California, 1961-1962. Experimental Physicist, SLAC, Stanford, 1962-1968. Associate Professor and Professor, SLAC, Stanford, 1968-present. Associate Director, Research Division, SLAC, Stanford, 1982-1986. Nobel Prize in Physics, 1990. Research areas: Experimental particle physics, electron scattering; engaged in the H1 experiment at the HERA electron-positron collider in Hamburg, Germany; gravitational wave research and space-based studies of x-ray and gamma-ray astronomy. Correspondence, publications, reports, logbooks, photographs, presentations, videotapes. Subjects include the design and construction of SLAC End Station A (ESA), Beam Switchyard and spectrometers, as well as development of SLAC Group A experiments. Lab books and experimental data for multiple projects including documentation on Elastic and Inelastic Scattering research performed at ESA, including part of the experimental program which resulted in the 1990 Nobel Prize. Records on the organization of the Lepton Photon Symposium held at SLAC August 1989. Records of the Superconducting Super Collider Site Committee. Correspondence and Reports of the KAON (Kaon, Antiproton, Other hadron and Neutrino) Factory in Vancouver, Canada. 1964-1992. Papers are unprocessed. Please contact the SLAC Archivist for more information regarding access. 43 cu. ft.



Mystery Photo Solved!

Thank you to one of our readers, Issachar Una, who contacted us with the identification of the people in the mystery photograph (Fall 2001 *Newsletter*). He consulted with Ze'ev Rosenkranz, curator of the Albert Einstein Archives at the Hebrew University of Jerusalem to verify the identity of some of the people. The occasion was the presentation of an Honorary Doctorate to

Einstein from the Hebrew University of Jerusalem, March 15, 1949. The photograph was taken at Einstein's home, and the people are:

Front row, L-R:

Professor Sokenik (discoverer of the Dead Sea scrolls); Israel S. Wechsler (Chairman of the American Friends of the Hebrew University); Einstein; Mrs. Tamar de-Sola Pool (President of the Hadassah Women Organisation); Professor L. A. Mayer (Orientalist, former Rector of Hebrew University).

Back row, L-R:

Mr. G. Wise (Board of Governors Chairman at Hebrew University); Mr. Mark Sugarman; Professor Gerschom Scholem (Jewish Mystics, Kabala); Mr. H. Salpeter; Mr. Sylvan Gotschel; Mr. Joe Mazer

They are all members of the American Friends of the Hebrew University.

Documentation Digitized

The following is a list of finding aids digitized and posted on the Physics History Finding Aids Web site since our previous report. All may be searched together at our site, www.aip.org/history/ead/findingaids.html. Links to each of the individual finding aids listed may be found there.

GEORGIA INSTITUTE OF TECHNOLOGY

Joseph Ford Papers, 1953-1995 (bulk 1980-1994)

UNIVERSITY OF PITTSBURGH

Allegheny Observatory Records, 1850-1967

(On a related note, the University of Pittsburgh Digital Research Library is digitizing 10 volumes of star parallax data and calculations collected and produced by researchers working at the Observatory. The digitized versions of the *Publications of the Allegheny Observatory* are still under production, but will be available this summer. To learn more, visit: www.library.pitt.edu/about/newsletter/issue10/).

WOODS HOLE OCEANOGRAPHIC INSTITUTION

Nicholas P. Fofonoff Papers, 1961-1994
John Brackett Hersey Papers, 1940-1989

Charles Davis Hollister Papers, 1967-1998
John M. Hunt Papers, 1962-1994
Columbus Iselin Papers, 1904-1971
Raymond B. Montgomery Papers, 1928-1988
William Sterling von Arx Papers, 1942-1977

ON OTHER WEB SITES:

CHARLES BABBAGE INSTITUTE

Oral History Database: <http://www.cbi.umn.edu/oh/>
Search or browse the abstracts (and some full-text contents) of 272 oral history transcripts in the history of computer science.

STANFORD LINEAR ACCELERATOR CENTER ARCHIVES AND HISTORY CENTER

Photo Index: <http://www.slac.stanford.edu/history/photos.shtml>. Search descriptions of the photographs in SLAC's photo archive.

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Spencer R. Weart, *Director*; R. Joseph Anderson, *Associate Director & Head, Niels Bohr Library*; Joan Warnow Blewett, *Archivist Emeritus*; Rachel Carter, *Senior Secretary*; Katherine A. Hayes, *Associate Archivist*; Sandra Johnson, *Associate Archivist*; Franklin Knoll, *Archivist Assistant*; Clay Redding, *Automation/Systems Archivist*; W. Patrick McCray, *Postdoctoral Historian*; Tammy Wong, *Assistant Librarian*, Barbara Allen, *Library Assistant*, Nancy Honeyford, *Library Assistant*; Heather Lindsay, *Photo Librarian*; Julie Gass, *Photo Archives Assistant*; Holly Russo, *Web/Publications Developer*; Niem Dang, *Web Assistant*.

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Center for History of Physics
American Institute of Physics
One Physics Ellipse
College Park, MD 20740-3843

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