

A galvanometer at Cornell University. A century ago, the design of new laboratory buildings revolved around provisions for delicate electrical experiments, and training students in electrical instrumentation for industry was a major new source of employment for physics professors. From Edward L. Nichols, *The Galvanometer: a Series of Lectures* (1894). This is one of many old books in the Niels Bohr Library that have been checked this year for brittle paper. We are seeking funds to safeguard the most endangered books through microfilming.

Work of the "Cooperation on the Archives of Science in Europe" (CASE) Group

by Peter Harper

"Quelle coopération européenne pour les archives scientifiques contemporaines?" That was the title of a seminar hosted in Paris in February 1997 by Odile Welfel , Conservatrice en chef du Patrimoine at the French Centre National de la Recherche Scientifique. European members of the International Council on Archives' Universities and Research Institutions Section attended from Belgium, France, Italy, Sweden and the United Kingdom, and readily agreed on the necessity of creating a working group at the European level on contemporary scientific archives. The acronym CASE, which in its expanded form works equally well in English and French, was adopted for the proposed collaboration, and it was agreed to seek contact with other European colleagues willing to work cooperatively on scientific archives. A symposium on contemporary scientific archives held at the XXth

(continued on page 2)

Increased Funding for History of Science from NSF

Recent budgetary decisions at the National Science Foundation will increase the Fiscal Year 1999 base budget of the Science & Technology Studies Program — which supports research and training in history, philosophy, and social studies of science and technology — by nearly 7.5% over its FY98 base. (The modal increase experienced by other programs within the NSF Division of Social and Economic Sciences, in which the STS Program now finds itself, was under 2.0%.) Once all internal NSF budgetary adjustments have been made, the STS Program will make grants totaling more than \$3.4 million in this fiscal year.

The decision to raise the STS budget so significantly derived from several considerations. First, in recent years the Program experienced a major increase in the number of proposals submitted by STS researchers. Excluding dissertation and workshop proposals, supplement requests, and similar matters, these numbers rose from 80 in FY96 and 68 in FY97 to 107 in FY98. This increase led to a significant decline in the Program's "success rate," which went from 44% in FY96 and 53% in FY97 to 35% in FY98. Second, all involved in the review of these proposals agreed that the increased number came at the "upper end of the quality distribution," so that the number of otherwise fundable proposals that the Program could not support rose especially sharply. This major budget increase is designed to begin, at least, to address this problem.

The Program's fiscal year includes two "review cycles," with annual "target dates" of 1 February and 1 August. It thus hopes to receive an even greater number of proposals later this summer. The formal STS Program Announcement is most readily available on the World Wide Web, at <http://www.nsf.gov/sbe/sber/sts>. This Web site provides direct links to NSF's "Grant Proposal Guide" and other resources for potential applicants.

Since 1973, the STS Program and its predecessors have been overseen successively by Ronald J. Overmann (1973-1995) and Edward J. Hackett (1995-1998). The current STS Program Officer (who will serve through August 2000), Michael M. Sokal, may be reached at msokal@nsf.gov and (703) 306-1742.

The National Science Foundation invites applications for the position of Program Director for Science and Technology Studies (STS). See page 10 for details.



Edwin L. Goldwasser bicycling on the Fermilab grounds, October 1968. Fermilab, courtesy AIP Emilio Segrè Visual Archives.

AIP History Center Awards Grants to Eight Archives

The AIP History Center initiated a grants program last year to help archives at universities, government labs, corporations, and other facilities make significant collections in the history of physics and allied fields accessible to researchers. Eight grants totaling \$73,000 have now been awarded for 1999, and they will make a wide variety of resources fully available to scholars for the first time. The program is designed to increase the money available to organize and preserve original sources in our field, and applicants are required to provide matching funds. This year's recipients plan to contribute or raise over \$300,000 in matching money to complete the work that they will undertake.

The program is designed to increase the money available to organize and preserve original sources

The 1999 grants are supported jointly by the Richard Lounsbery Foundation and the Friends of the Center for History of Physics. They have been awarded to the following archives: California Institute of Technology (to process the papers of Robert Leighton and of Robert Walker), Niels Bohr Archive, Copenhagen (Aage Bohr and Allan Mackintosh papers), Princeton University (survey and organize physics collections), Smithsonian Institution Archives (Riccardo Giacconi papers), Stanford University (Burton Richter papers), University of Alaska (Sydney Chapman papers), University of California-Berkeley (Exploratorium records), and University of California-San Diego (Edward Allan Frieman papers).

The maximum amount of an individual grant is \$10,000. The deadline for next year's grant applications is July 1, 2000. For information on the program, check our Web site at <http://www.aip.org/history/grntann.htm> or contact the Center at chp@aip.org, phone (301) 209-3165.

(Work of the "Cooperation on the Archives of Science in Europe" (CASE) Group 1, continued from page 1)

International Congress of History of Science in Liège, July 1997 provided the occasion for the public launch of CASE. Over two years have now elapsed, so we may appropriately ask again: "What kind of European cooperation in contemporary scientific archives?". In the 1997 Paris meeting there was a double focus on making available information about institutional, regional, national and discipline-based scientific archives projects in Europe, including surveys and finding aids, and on participating in projects of archival (documentation) research in contemporary science at the European level. In practice, because of time and funding constraints it has been easier to pursue the exchange of information than to further the undertaking of research.

At the Paris meeting, I offered to host a CASE Web site in association with that of my own organization, the UK National Cataloguing Unit for the Archives of Contemporary Scientists (NCUACS) at the University of Bath. This site has developed to give access to the work of the group and its members and to provide links with other European sites, and has become an important gateway to scientific archives resources in Europe. Denmark and The Netherlands have now joined the original five European countries represented in CASE. It remains, however, an informal grouping of colleagues, often meeting on the back of other international meetings. For those of us in the UK the development of the Eurostar train service through the Channel Tunnel is a great boon to personal contact and European cooperation!

As the Web site is the most evident sign of CASE activity, a few details might be helpful. It is intended that it remain focused on archives of science and technology and not develop into another history of science site. At present it contains information about aims and objectives of CASE (in English and French), current membership, links to scientific archives sites in 10 European countries as well as Europe-wide sites (CERN and the Historical Archives of the European Communities), and the first three issues of a Web-mounted CASE Newsletter. The Newsletters serve the information exchange function of CASE and have already provided reports (to mention only those of physics-related interest) on the Hannes Alfvén project at the Royal Institute of Technology, Stockholm, the work of the Niels Bohr Archive in Copenhagen, current Web-based Italian scientific archives projects and the archives on the history of electricity in Italy, as well as providing French, Italian and British science archives bibliographies.

The Web site may be found at <http://www.bath.ac.uk/Centres/NCUACS/case.htm>. Inquiries about CASE are very welcome; address Peter Harper, Director, NCUACS, University of Bath, Bath BA2 7AY, UK; phone: +44 (0)1225 323522, e-mail: lispbh@bath.ac.uk.

Freeing the Wild Ducks: IBM's Commitment to the Historical Record

by Paul C. Lasewicz

One of IBM's most cherished cultural icons is the wild duck—symbolic of the internal struggle in successful technology companies to meld the sometimes chaotic characteristics of the creative process with the market-driven structure of a for-profit enterprise. A similar if slightly skewed wild duck analogy can be applied to IBM's efforts to preserve its historical records. Sometimes—like the beauty of a duck in flight—the company's Archives has been celebrated. Other times, like a duck in a shooting gallery, it has been targeted for restructuring. Today the IBM Corporate Archives is flying high once again, flourishing in the light of the company's impressive, even historic, resurgence.

The IBM Archives formally began in 1964 when the company hired a single archivist to manage its historical records, a collection which dated back to the turn of the century. A 1968 report on the preservation of the company's historical legacy by a business historian sparked a series of developments that led to the creation of a formal Archives department in the early 1970s. This busy shop of eight staffers energetically waded into the arrangement and description of the sizable collection, making significant preservation headway and improving access to the collection.

Over the next 20 years the Archives experienced fluctuating headcounts and frequent relocations. During the tough business climate of the early 1990s, for example, the Archives staff was reduced significantly, the bulk of the collection was moved to an offsite warehouse, and basic archival processes such as collecting and processing slowed considerably. Not surprisingly, the visibility of the department waned as a result. As IBM returns to a position of industry leadership, the Archives is regaining its luster. Last year the company made a significant commitment to preserve its historical records and make some of them available for research.



Exterior View, Advanced Systems Development Division (ASDD) Laboratory Annex, Oasis Motel, Monterey Road, San Jose. Two floors and 24 motel units have been converted into offices and laboratories. Photo courtesy of IBM Archives.



Voice Recognition Laboratory, Advanced Systems Development Division (ASDD) Laboratory Annex, Oasis Motel, Monterey Road, San Jose. Photo courtesy of IBM Archives.

As a first step in meeting this commitment, the Archives staff is focusing on improving physical and intellectual control over a multi-media collection consisting of 10,000 linear feet of paper-based records, 300,000 still images, over 5,000 moving image titles, and more than 2,000 business machines and components. Significant existing collections include the papers of IBM researchers, internal publications such as IBM technical reports and customer engineering manuals, and of course, the requisite volumes of product documentation. In addition, plans are underway to more closely align the Archives with the existing records management processes, to better document prominent researchers and research projects.

The keystone of future access to the collection is an internet-mounted Corporate Archives Web site

As the Archives forges ahead on the collecting front, it is making similar progress on the access front. The keystone of future access to the collection is an internet-mounted Corporate Archives Web site, currently under development and tentatively slated for an April rollout. While its final design has not yet been determined, future visitors to the site will likely be able to access folder-level descriptions of processed IBM archival records, summary materials, and a limited number of digitized items — all focusing on the role of IBM research and products in the history of science and information technology. A significant caveat, however, is that the revitalization of the Archives is very much a work in progress. Due to the large volume of material, at least three years of effort will be required before a meaningful portion of the collection's finding aid pertaining to science and technology records is online, and even longer before a significant body of digitized items can be mounted. Nonetheless, an important corner has been turned, and the IBM Corporate Archives is well on the way toward becoming a valuable and more accessible resource for researchers looking into the history of science and information technology. For further information contact Paul C. Lasewicz, IBM Corporate Archivist, e-mail lasewicp@us.ibm.com.

Center Leads Consortium to Create Web Database of Archival Finding Aids

The AIP History Center has received a grant from the National Endowment for the Humanities for a one-year project to create a searchable Web database of archival finding aids. Containing 76 finding aids describing collections in nine archives, the database will significantly improve access to important collections documenting 19th and 20th century American physics and allied fields. Over the course of the next year, Center staff will mark-up and mount on the Web some of the most useful finding aids from the Niels Bohr Library and eight other institutions: California Institute of Technology, Harvard University, Massachusetts Institute of Technology, Northwestern University, Rice University, University of Alaska, University of Illinois, and University of Texas.

The collections represented in the project date from the late 19th century forward. They cover the development of America's participation in the revolution in the physical sciences through 1940, and are especially strong for the years after the U.S. entered World War II. In addition to covering such broad areas as nuclear physics, geophysics, astrophysics and astronomy after 1945, they document the social and political aspects of modern science, including the mobilization of science for defense, the development of big science, science education, and the evolution of America's postwar science policy.

This work is a continuation and expansion of the Center's International Catalog of Sources for History of Physics and Allied Sciences (ICOS), which now contains over 7000 summary

records from approximately 600 repositories, describing archival collections in physics and allied fields. Typically, researchers first learn about collections of interest to them by checking guides or catalogs such as the ICOS. They then look at finding aids to obtain more detailed information on what is in the collection. Getting access to hard copies of finding aids, which are quite voluminous, can be cumbersome and time-consuming. The Web is changing this as more and more archives "publish" their finding aids electronically. The Center has been mounting finding aids from the Niels Bohr Library for some time (there are currently ten on the Center's Web site). The new project — creating a cross-searchable database of finding aids — is the next step beyond mounting HTML encoded finding aids on the Web as discrete documents. The end result will provide detailed and controlled access to information on collections.

In addition to the cross-searchable database, the project will expand on existing Web finding aids by fostering the free exchange of information over existing computing platforms creating a cross-searchable database covering the whole set. It will use a recently developed encoding standard for description of archival materials that has recently gained acceptance in the archives community: Standard Generalized Markup Language (SGML) Encoded Archival Description (EAD). Use of SGML EAD allows one to define the structure and content of a finding aid, going beyond the standard Web HTML which is simply a method of display. A group of SGML-tagged documents can be indexed according to predetermined criteria, and then searched as a group down to the most detailed level of description. Once the grant-funded project has created the core database, the AIP History Center plans to maintain and expand it on an ongoing basis, aided by user feedback.

History of Physics Development Committee



The Friends of the Center for History of Physics are pleased to announce another member of the **Physics Legacy Circle**, who wishes to remain anonymous. The Legacy Circle is made of people who, recognizing the importance of the center and wanting to take an important step to insure that its work continues beyond their own lifetimes, have generously made provisions to include the Center in their wills or other estate plans. Members are: Anonymous, Russell J. Donnelly, Clinton B. Ford*, Gerald Holton, Elmer and Rose Hutchinson*, Melba Phillips, Rosa Segrè *, Frederick Seitz, John S. Toll, Charles and Edna Tucker*, and John A. Wheeler. If you might be interested in joining the Physics Legacy Circle, please get in touch with us to discuss possible tax benefits and other arrangements.

(*deceased)

Encouraging gifts and bequests to the Friends of the Center for History of Physics is the mission of the History of Physics Development Committee, a group of distinguished volunteers. Shown here at a meeting last March in Cambridge, Mass., clockwise from front: Mark McDermott, John Toll (Chair), AIP Development Officer Dan Cooke, Center Assist. Director Joe Anderson, Robert Resnick, Gerald Holton, AIP CEO Marc Brodsky, and Center Director Spencer Weart; John Marburger also attended the meeting but is not shown in this photo.



The German Physical Society's building in Berlin. The Archive of the German Physical Society is located in the Magnus House in central Berlin (just opposite the famous Pergamon museum). Photo courtesy Dieter Hoffman.

The Archive of the German Physical Society

By R. Hahn and D. Hoffmann

The German Physical Society is one of the oldest associations for physicists. It was founded in Berlin in 1845 as a local organization of young scholars, most of them students of Gustav Magnus, who taught physics at the University of Berlin and trained his students in a private laboratory of his house. The Physical Society of Berlin was soon well established as an association for all physicists in Germany, and it was renamed the German Physical Society in 1899. The society played a central role for the organization of physics and the physics community in Germany, and there are many highlights in the history of the society which reflected the development of physics in general. In 1847, for instance, the young Hermann Helmholtz reported on the law of conservation of energy in a meeting of the society; similarly in the fall of 1900 Max Planck presented his famous radiation law, which founded the quantum theory; and in 1939 Otto Hahn announced the discovery of nuclear fission. After World War II the society was reorganized. In the western zones of occupation several local organizations quietly came into being and formed the Union of German Physical Societies (Verband Deutscher Physikalischer Gesellschaften) in 1950; in 1963 the VDGP was renamed as the German Physical Society. In East Germany the Physical Society of the German Democratic Republic was founded in 1952. After Germany's unification in 1990 the two societies were reunited to form today's German Physical Society.*

Despite the fact that the society has such a long and extensive history, there was no regular archive until recently. There were only some documents collected more or less at random by the managers of the society and the founder and longstanding editor of the *Physikalische Blätter*, Ernst Brüche (1900-1985).

This means that there are many gaps in the historical documentation of the society, especially for the early periods before 1945. The preserved documents have been cataloged in recent years and now form the archive of the German Physical Society. It is located in the old Magnus House right in the center of Berlin and is now accessible for research.

The archive's resources are structured as follows:

- 1) Records of the Physical Society of Berlin (701 folders covering the period from 1845 to 1994)
- 2) Records of the German Physical Society (1382 folders between 1919 and 1996)
- 3) Records of the Physical Society of the GDR (about 450 binders from 1952 to 1990)

— these constitute the largest and most consistent holdings in the collection

- 4) Records of several local Physical Societies (about 200 files from 1921 to 1973)
- 5) Varia
- 6) Audiovisual materials (more than 3,200 pictures and about 100 tape recordings and films)

The documents have been cataloged on a computer, so that the user can search them electronically. A supplementary printed guide of about 450 pages also exists. Although there are many gaps, particularly in the pre-1945 years, anyone who is dealing with the history of physics in Germany in the 19th and 20th centuries should look through these unique sources and is invited to use them. To gain access to the archive, it is necessary to write a letter to the Board of the German Physical Society (DPG-Geschäftsstelle, Hauptstraße 5, D-53604 Bad Honnef, Germany) with a short description of the research topic. The archivist of the Society, a voluntary position, will then prepare the relevant documents for use at the Magnus House in Berlin. He can be also reached directly by e-mail: RHahnn@aol.com.

*See Th. Mayer-Kuckuk, "150 Jahre Deutsche Physikalische Gesellschaft," *Physikalische Blätter* **51** (1995), 1.



Page from a Protokollbuch of the meetings of the German Physical Society with the minutes of Planck's famous talk on December 14th 1900, the "birthday" of the quantum theory.



Here are three of the many portraits that the Niels Bohr Library recently copied from the American Geophysical Union's collection of pictures of prizewinners and officers. The copying will provide improved access and preservation. Left to right: Mary K. Hudson, 1984 Macelwane Medalist, Harold Ulrik Sverdrup, 1951 Bowie Medalist, and Wallace S. Broecker, 1979 Ewing Medalist. American Geophysical Union, courtesy AIP Emilio Segrè Visual Archives.

Recent Acquisitions of the Niels Bohr Library

The following report describes the rich variety of historical materials preserved during the past year in the Niels Bohr Library. But this is not all that the AIP History Center helps to preserve, nor even the most important part. Center staff continually work to place records and papers of important scientists at their home institution's archives or another appropriate repository. Last year we opened fifty-nine new cases. Forty were for the papers of deceased scientists, seventeen were for prominent living individuals, and two were for the records of scientific organizations. Among scientists who died in late 1997-1998 whose papers we worked to place were Gertrude Goldhaber, David Schramm, Norris Bradbury, Shlomo Alexander, and Athelstan Spilhaus, Sr. We closed twenty-nine cases during the year—nearly all with success in preserving important materials for posterity.

Photographs

This year we have been working with AIP Member Societies to expand the Emilio Segrè Visual Archives. Most recently, we completed a project to acquire copies of nearly 200 important photos from the collection of the **American Geophysical Union**. These are portraits of AGU award winners that were not previously represented in the Visual Archives. We also made preservation photographic negatives to assure long-term persistence of the images. Earlier this year we acquired an even larger photo collection from the **American Vacuum Society**, of members at meetings and on other occasions. This collection will be processed in a similar manner.

Donations from scientists, their families and colleagues are what make the Emilio Segrè Visual Archives uniquely useful. We regularly request portraits from scientists identified as significant by prizes or our surveys, and nearly all respond generously. Photos also come from historians and others. We warmly thank

the following people and organizations from whom we've received photos during the last year: **Ian Barbour, Eva Bergmann, D. Allan Bromley, Bulletin of the Atomic Scientists, Abraham Clearfield, Robert D. Cowan, Russell J. Donnelly, Dan A. Hays, Colin O. Hines, Gerald Holton, Geoffrey Ibbott, Sue Kaufmann, Adrienne Kolb, Robert B. Laughlin, Andrew Lemard, Rudolph A. Marcus, James A. McLennan, Marcia McNutt, Maureen A. Rafferty, Norman F. Ramsey, Hans Reiche, Robert Resnick, John H. Reynolds, Werner Schreyer, Michael Shinagel, Horst Störmer, Gerard 'tHooft, George Tilton, Yvonne R. Towse, and Daniel C. Tsui.**

Oral History Interviews

A number of interviews were received by the Center. Some are now available for research but most are still being processed. AIP's Post-doctoral Historian, Alexei Kojevnikov, conducted an interview with **Philip Anderson**. Jean Yehle interviewed **William Hay** and **Cesare Emiliani** and **Donald Moore**. Spencer Weart interviewed **Jack Eddy**.

Interviews conducted with support of grants-in-aid, funded by the Endowment Fund of the Friends of the Center for History of Physics, include **Dan Bolef, Martin Brown, William C. Davidon, and Lincoln Wolfenstein**, interviewed by Patrick Catt; **Karl Hinz, Sir Anthony Laughton, and Xavier Le Pichon**, interviewed by Tanya Levin; and **Arnold Perlmutter** and **Leopold Halpern**, interviewed by Maria Rentetzi.

Book Donations

The Niels Bohr Library book collection continues to grow thanks to generous donations. This year we are especially grateful to have received copies of books from their authors. Such donations included: **Herbert Friedman's** *Astronomer's Universe and Sun and Earth*, **Norman Ramsey's** *Spectroscopy with Coherent Radiation*, and **Roland C. Hanson's** *The Galvanometer*. The

Library also received donations from the **American Chemical Society Library** (*Experimental Nuclear Physics*), several boxes of books from the **American Association of Physics Teachers**, six books from **Charles H. Holbrow**, and five books from **Alex Harvey**.

Manuscript Materials

The papers of **Homer Levi Dodge** were augmented by **Alice Dodge Wallace** and **Norton Dodge** with photographs, slides, manuscript and printed materials dating from 1905-1975 (8.25 linear feet). Emil Wolf donated 1.0 lin. ft. of lecture notebooks belonging to **Max Born** (1905-1937). We received this year's **Gravity Research Foundation Essay competition files**, including abstracts, winners, and a list of applicants from **George Rideout, Jr.** The records of the **Archives of British Men of Science project** (ca. 1970-1975) were sent to us by **Roy MacLeod** (15 lin. ft.). We received some papers of **Paul Rosenberg** (1916-1994) from **Gale Gross** (0.5 lin. ft.).

The **American Institute of Physics** added to the records of the **Office of the Director**, including materials on the Institute's move of its headquarters from New York City to Maryland, 1980-1993, 1.0 lin. ft. We also received an addition of 0.1 lin. ft. to the **American Institute of Physics, Office of the Director, William H. Koch** records from 1965-1981. We received 3.0 lin. ft. from the **Office of the Secretary, Records of Roderick Grant** from former AIP Secretary, **Rod Grant**.

The **American Physical Society's Centennial** produced the **Century of Physics Timeline Wall Chart**, copies of which are now in the Library's archives. **Brian Schwartz** added his papers to those of the **American Physical Society** collections with 2.0 lin. ft. of records (1967-1977) relating to the responses of physicists and professional organizations to social problems, the Vietnam War, the Cold War, and nuclear weapons, and the formation of the Forum on Physics and Society and the Subcommittee on Professional Concerns. **The American Astronomical Society, Historical Astronomy Division's** records grew by 0.5 lin. ft. with the addition of obituary materials published in the Society's Bulletin from 1997-1998, sent by **Virginia Trimble**. The records of the **American Vacuum Society** also grew with additions of 0.5 lin. ft. sent by **Yvonne R. Towse**, which included publications and photographs. We received 2.0 lin. ft. of **American Association of Physics Teachers, Office of the Secretary, Records of Roderick Grant** from **Rod Grant**.

There were also good additions to the Niels Bohr Library's small collections. **Hans Frauenfelder** surveyed sixty senior scientists on the **impact of immigration from Europe on U.S. physics** for a talk at the APS Centennial Conference, and sent us copies of his materials, including correspondence, e-mail, and overheads (1999, 84 pp.). A manuscript copy of **Fritz Reiche's "Propagation of plane electromagnetic waves through a conducting uniformly moving substance"** donated by his son **Hans Reiche** included personal reminiscences, notes and correspondence (1948-1972, 149 pp.).

Manuscript Biographies and Institutional Histories

Additional responses to the History of Geophysics survey begun in 1997 have been received during the last year. They include autobiographical materials from **Ralph B. Baldwin, Martin H.P. Bott, Jack G. Calvert, Konrad Krauskopf, Alexander R. McBirney, Harry Petschek, John H. Reynolds, Werner Schreyer, George R. Tilton, and Yushou Xie**.

A program with manuscript notes for the **Mark Zemansky Commemorative Session** of the AAPT 1982 Summer Meeting was donated by **Melba Phillips** (11 pp.). **Frederik W. Wiegel** sent us a brief summary of his memories of **Arnold J.F. Siegert** during the period they worked together at Northwestern University, written in 1998 (3 pp.). From **Ronald E. Mickens** we received an autobiography, vitae and publication list for **Nelson Fuson**, plus a program with photocopies of pictures and articles from the **25th Annual Fisk University Infrared Spectroscopy Institute** (1974-1997, 34 pp.). A copy of a senior thesis on **David Bohm** was donated by **Shawn Mullet**, a student at the University of Texas at Austin. We received additional files on the **Dannie Heineman Prize for Mathematical Physics Selection Committee** (1992-1996; 1 inch) from **C.W. Misner**.

Audio-Visual Materials

In the last year we have received some noteworthy additions to our videotape recordings. The **Department of Special Collections** at the **University of Massachusetts at Amherst** donated copies of six videotapes titled "**Conversations with David Inglis**"—other members of the department were also included in the interviews. We received two videotapes of oral history interviews done in 1984 with **Rudolf Peierls** and **Eugene Wigner** donated by **Patricia Rife** from her dissertation research. A videotape of **Steven Weinberg's** contribution to the first Dirac Memorial Lecture on Elementary Particles and the Laws of Physics, "**Towards the Final Laws of Physics**" in 1986, was sent to us by **J. Eric Slone**. **Robert Resnick** donated a copy of his videotape, "**So, You Want to Write a Textbook!**", a colloquium talk he gave in May 1999 on the history of the text and his response to winning the Oersted Medal in 1974. We now have a copy of the videotape of the **American Physical Society's** Nobel luncheon from their Centennial meeting titled "**Celebrate a Century of Physics**". From the **American Institute of Physics' Publication Division** we received a videotape copy of "**Today's Physicist: The Fire That Burns Within**" from the *Careers for Physicists* series (1997).

The library's collection of audio tape recordings now includes an **American Astronomical Society** donation of three audio tapes of **sessions recorded at their Centennial meeting**, including the Opening Remarks; Session 2, David DeVorkin, "Beyond the Observatory: Reflections on the Centennial"; Session 60, "My Most Memorable AAS Meeting"; and Session 95, "The Future of the AAS (and of Astronomy)".

Finding Aids

During the previous year, finding aids to the following collections were received: box list of the **M. King Hubbert papers** from the American Heritage Center at the University of Wyoming; records of the **Department of Physics, City College, City University of New York** sent by their Archives; from **Woods Hole Oceanographic Institution** we received finding aids to the papers of Henry Stommel; Office of the Director, Craig Emery Dorman; Office of the Director, John Hyssop Steele; Office of the Director, Paul M. Fye; Office of the Director, Admiral Edward Hanson Smith; Office of the Director, Columbus O'Donnell Iselin.

Recent Publications of Interest

Compiled by Steven Norton

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 Homepage (<http://www.aip.org/history>). You can specify to search the entire AIP site or the History Center only.

We report here the first volumes of two new and valuable journals in our field, *Physics in Perspective* and the *Journal of Astronomical History and Heritage*. The very complete bibliography compiled regularly by Ruth Freitag, "Recent Publications Relating to the History of Astronomy," may now be found in the *J. Astro. Hist. Heritage*, see vol. **1**, no. 1 (June 1998), 79-88, no. 2 (Dec. 1998), 135-154, vol. **2**, no. 1 (June 1999), 55-73, etc.

Annals of Science, vol. **56**, no. 2 (Apr. 1999) includes Robinson M. Yost, "Pondering the Imponderable: John Robinson and Magnetic Theory in Britain (c. 1775-1805)," 143-174. Vol. **56**, no. 3 (July 1999) includes Guido Tagliaferri and Pasquale Tucci, "Carlini and Plana on the Theory of the Moon and their Dispute with Laplace," 221-269.

Berichte zur Wissenschafts-Geschichte, vol. **22**, no. 1 (Mar. 1999) includes Dietrich Stoltzenberg, "Die Nachfolge von August Kundt und Hermann von Helmholtz im Spiegel der Korrespondenz zwischen Emil Fisher und Friedrich Kohlrausch," 9-18. Vol. **22**, no. 2-3 (Jul. 1999) includes Hartmut Hecht, "Neue Dimensionen wissenschaftlicher Reisen im 18. Jahrhundert. Maupertuis' Lapplandexpedition," 81-93; and Wolfgang J. Smoika, "Wissenschaftsförderung durch Reiseförderung. Reiseunterstützungen als Mittel der Forschungsförderung am Beispiel Bayerms im 19. Jahrhundert," 125-134.

British Journal for the History of Science, 32, part 1, no. 112 (Mar. 1999) includes Carroll Pursell, "Domesticating Modernity: The Electrical Association for Women, 1924-86," 47-67; and Mary Jo Nye, "Temptations of Theory, Strategies of Evidence: P. M. S. Blackett and the Earth's Magnetism, 1947-52," 69-92.

Bulletin of the American Meteorological Society, vol. **80**, no. 2 (Feb. 1999) includes M. A. Lazzara et. al., "The Man Computer Interactive Data Access System: 25 Years of Interactive Processing," 271-285. Vol. **80**, no. 3 (Mar. 1999) includes D. Bray and H. von Storch, "Climate Science: An Empirical Example of Postnormal Science," 439-455; and D. A. Randall et. al., "General Circulation Modeling: Past, Present, and Future," (Meeting Summary) 457-462. Vol. **80**, no. 7 (July 1999) includes G. K. Grice et. al., "The Golden Anniversary Celebration of the First Tornado Forecast," 1341-1348; and N. Phillips, "Sverre Pettersen's Autobiography," 1433.

Cern Courier, vol. **39**, no. 2 (March 1999) includes A. Bardard, "The Sun Sets on SATURNE," 33-34. Vol. **39**, no. 6 (1999) includes Mike Perricone, "How Martin Luther King Almost Came to Fermilab," 19-21.

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Historical Studies in the Physical and Biological Sciences, vol. 29, part 2 (1999) includes Alexei Kojevnikov, "Freedom, Collectivism, and Quasiparticles: Social Metaphors in Quantum Physics," 295-331; John Krige, "The Ford Foundation, European Physics and the Cold War," 333-361; and Ana Simoes and Kostas Gavroglu, "Quantum Chemistry qua Applied Mathematics. The Contributions of Charles Alfred Coulson (1910-1974)," 363-406.

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ISIS, vol. **90**, no. 1 (Mar. 1999) includes Abha Sur, "Aesthetics, Authority, and Control in an Indian Laboratory: The Raman-Born Controversy on Lattice Dynamics," 25-49; and Thomas L. Hankins, "Blood, Dirt, and Nomograms: A Particular History of Graphs," 50-80. Vol. **90**, no. 2 (June 1999) includes Michael F. Conlin, "The Popular and Scientific Reception of the Foucault Pendulum in the United States," 181-204.

Journal for the History of Astronomy, vol. **30**, part 1, no. 98 (Feb. 1999) includes Thomas J. Sherrill, "A Career of Contro-

versy: The Anomaly of T. J. J. See," 25-50. Vol. **30**, part 2, no. 99 (May 1999) includes Klaus Hentschel, "Photographic Mapping of the Solar Spectrum 1864-1900, Part I," 93-119. Vol. **30**, part 3, no. 100 (Aug. 1999) includes Klaus Hentschel, "Photographic Mapping of the Solar Spectrum 1864-1900, Part II," 201-224; and E. Zsoldos and ZS. Lévai, "'Novae' over Kiskartal," 225-230.

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Minerva, vol. **37**, no. 1 (Spring 1999) includes Brian Plane, "The 'Sputnik Myth' and the Dissent Over Scientific Policies Under the New Economic System in East Berlin, 1961-1964," 45-62; and David B. McLay, "Lise Meitner and Erwin Schrödinger: Biographies of Two Austrian Physicists of Noble Stature," 75-94. Vol. **37**, no. 2 (Summer 1999) includes Carsten P. Kruek and Jutta Borchers, "Science in Politics: A Comparison of Climate Modeling Centres," 105-123; and Jan Nolin, "Global Policy and National Research: The International Shaping of Climate Research in Four European Union Countries," 125-140.

Notes and Records of the Royal Society of London, vol. **53**, no. 1 (Jan. 1999) includes W. E. Burcham, "The Cavendish High-Voltage Laboratory 1935-39," 121-134; and Clifford Butler, "Reflections on Patrick Blackett (1945-1970)," 143-156. Vol. **53**, no. 2 (May 1999) includes Maria Yamalidou, "John Tyndall, the Rhetoricians of Molecularity. Part One. Crossing the Boundary Towards the Invisible," 231-242.

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Pais, "Robert Serber (1909-1997)," 105-109. Vol. **1**, no. 2 (June 1999) includes N. R. Ramsey, "Early History of Magnetic Resonance," 123-135; M. J. Nye, "A Physicist in the Corridors of Power: P. M. S. Blackett's Opposition to Atomic Weapons Following the War," 136-156; S. G. Brush, "Why was Relativity Accepted?" 184-214; and K. E. Johnson and D. C. Peckham, "Alfred Romer (1906-1998)," 215-218.

Physics Today, vol. **52**, no. 3 (March 1999) includes Charles H. Holbrow, "Archaeology of a Bookstack: Some Major Introductory Physics Texts of the Last 150 Years," 50-56. Vol. **52**, no. 9 (Sept. 1999) includes Gerald Holton, "I. I. Rabi as Educator and Science Warrior," 37-42.

Reviews of Modern Physics, vol. **71**, no. 1 (Jan. 1999) includes J. Eades and F. J. Hartmann, "Forty Years of Antiprotons," 373-419. Vol. **71**, no. 4 (July 1999) includes R. B. Laughlin's Nobel Lecture, "Fractional Quantization," 863-874; Horst L. Stormer's Nobel Lecture, "The Fractional Quantum Hall Effect," 875-889; and Daniel C. Tsui's Noble Lecture, "Interplay of Disorder and Interaction in Two-dimensional Electron Gas in Intense Magnetic Fields," 891-895.

Science in Russia, vol. **3**, no. 111 (1999) includes V. Vasilyev, "Russian Academy of Sciences—275th Anniversary" and "Academic Jubilee Publications," 42-46; and V. Boreiko, "Early Environmentalist in Russia," 59-61.

Sky & Telescope, vol. **97**, no. 6 (June 1999) includes William Sheehan and Thomas Dobbins, "Charles Boyer and the Clouds of Venus," 56-60; and Stephen James O'Meara, "The Lord of Braeside," 94-98.

Studies in the History and Philosophy of Modern Physics, vol. **30B**, no. 1 (1999) includes John Earman and John D. Norton, "EXORCIST XIV: The Wrath of Maxwell's Demon. Part II. From Szilard to Landauer and Beyond," 1-40; and B. Lautrup and H. Zinkernagel, "g - 2 and the Trust in Experimental Results," 85-110. Vol. **30B**, no. 2 (1999) includes Leo Corry, "From Mie's Electromagnetic Theory of Matter to Hilbert's Unified Foundations of Physics," 159-183; and John Earman and Jean Eisenstaedt, "Einstein and Singularities," 185-235.

Weather, vol. **54**, no. 2 (Feb. 1999) includes M. Crewe, "Pen Portraits of Presidents—George Robinson," 55-58. Vol. **54**, no. 4 (Apr. 1999) includes R. J. Ogden, "Meteorologist's Profile—Roy Murray," 126-129. Vol. **54**, no. 5 (May 1999) includes R. J. Ogden, "Meteorologist's Profile—Charles ('Wally') Wallington," 148-152. Vol. **54**, no. 6 (Jun. 1999) includes J. Kingston, "Meteorologist's Profile—William Clement Ley," 166-172.

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de Charles Lyell," **Revista de la Sociedad Española de las Ciencias y de las Técnicas**, vol. **21**, no. 42 (1999): 37-49; Donald D. Clayton, "Radiogenic Iron," **Meteoritics & Planetary Science**, vol. **34**, no. 4 Supplement (July 1999): A145-A160; H. W. Duerbeck, D. E. Osterbrock, L. H. Barrera S. and R. Leiva G., "Halfway from La Silla to Paranal—in 1909," **The Messenger / El Mensajero**, no. 95 (March 1999): 34-37; Herman Erlichson, "Ampère was not the Author of 'Ampère's Circuital Law'," **American Journal of Physics**, vol. **67**, no. 5 (May 1999): 448-450; Francisco Flores, "Einstein's Theory of Theories and Types of Theoretical Explanation," **International Studies in the Philosophy of Science**, vol. **13**, no. 2 (July 1999): 123-133; Jack Howlett, "The Atlas Computer Laboratory," **Annals of the History of Computing**, vol. **21**, no. 1, (Jan.-Mar. 1999) 17-23; Ryoichi Itagaki, "Einstein's 'Kyoto Lecture': The Michelson-Morley Experiment," **Science**, vol. **283** (5 March 1999): 1457-1458; Jennifer S. Light, "When Computers Were Women," **Technology and Culture**, vol. **40**, no. 3 (July 1999): 455-483; Eloina Peláez, "The Stored-Program Computer," **Social Studies of Science**, vol. **29**, no. 3 (June 1999): 359-389; **Science**, vol. **29**, no. 3 (June 1999): 359-389; Burghard Weiss, "Blitze für Kernphysik und Strahlentherapie. Die Stoßspannungsexperimente von Brasch und Lange am Monte Generoso und bei der AEG in Berlin 1925-1935," **Technikgeschichte**, vol. **66** (1999): 173-203; S. L. Wolff, "Leo Arons-Physiker und Sozialist," **Centaurus**, vol. **41**, no. 3 (1999): 183-212.

Other News of Interest

■ **History of Physics Syllabi on the Internet — Call for Syllabi.** As an aid to teaching and studying the history of physics, and as an introduction to the vast literature in the field, the AIP Center for History of Physics has put together a collection of syllabi. With the kind permission of their authors, sample syllabi are exhibited on the internet at <http://www.aip.org/history/syllabi/>. They feature courses taught at a variety of universities, including "Scientific Revolution," "History of Modern Physics," "Nuclear Age", "Science after WWII," and "Historical Experimentation." If you are teaching a course on the history of physics or a related science such as astronomy, please visit the site and send us your comments. And please send a copy of your syllabus or reading list, in paper or electronic format, to Alexei Kojevnikov and Spencer Weart, chp@aip.org.

■ **The National Science Foundation invites applications for the position of Program Director for Science and Technology Studies (STS)**, to begin preferably in August 2000. The present director, Michael Sokal, will leave after his 2-year term. The position may be filled on a 1 to 2-year visiting scientist/temporary basis or under the provisions of the Intergovernmental Personnel Act (IPA). The Program Director represents STS to colleagues in the NSF and other Federal science agencies and to the Administration. STS encompasses history, philosophy, and social science studies of science, engineering and technology. The Program Director provides intellectual leadership and is responsible for all aspects of program administration and development. He or she administers the review of research

proposals submitted to NSF in this field and is responsible for recommending and documenting actions on the proposals reviewed, for dealing with administrative matters relating to active NSF grants, and for maintaining regular contact with the relevant research communities and providing advice and consultation to persons requesting them. Please direct inquiries and expressions of interest to Mr. William P. Butz, Director of the Division of Social and Economic Sciences, phone: (703) 306-1760; e-mail: wbutz@nsf.gov; or Dr. Michael Sokal, Program Director, Science and Technology Studies, phone: (703) 306-1742, e-mail: msokal@nsf.gov; or Dr. Rachele D. Hollander, coordinator of the cluster housing the STS program, phone: (703) 306-1743, or e-mail: rholland@nsf.gov. All are located in Suite 995, National Science Foundation, 4201 Wilson Blvd., Arlington, VA 22230, Fax: (703) 306-0485.

MEETINGS

■ **The American Physical Society Forum on History of Physics** will as usual hold symposia of invited papers at the Society's upcoming meetings — **March 20-24, 2000** in Minneapolis, MN, and **April 24-2 May, 2000** in Long Beach, CA. In addition there will be contributed paper sessions on the history of physics at the April meeting. The leadership of the APS has recognized that historical work does not fit conveniently into the usual 10-minute contributed paper format, and they have allowed the Forum, as an experiment, to have 20-minute contributed papers. The deadline for submitting abstracts for the contributed paper sessions at the April meeting is January 7, 2000. See the APS page at <http://www.aps.org>.

■ **A Meeting to Celebrate the 150th Anniversary of the Royal Meteorological Society** will be held at the Society on **April 3-4, 2000**. Details from The History Group Hon Sec, Royal Meteorological Society, 104 Oxford Road, Reading, RG1 7LL, UK.

■ The First Circular and the registration form for the **XXI International Congress of History of Science** are available on the Congress WEB site: www.smhct.org.

■ **Science in the 19th-century Periodical: An Interdisciplinary Conference** will be held **April 10-12, 2000** at University of Leeds, UK. Details from Dr. J. R. Topham, School of Philosophy, University of Leeds, LS2 9JT, UK, j.r.topham@leeds.ac.uk.

■ Plans are underway for a joint **British Society for the History of Science/British Society for the History of Mathematics** meeting on the **History of Computing**, to be held in London **May 6-7, 2000**, some fifty years after the completion of the Pilot Automatic Computing Engine (ACE) designed by Alan Turing. Details from David Anderson (andersond@sis.port.ac.uk), Janet Delve (Janet.Delve@port.ac.uk), Jack Copeland (Jack.Copeland@compuserve.com).

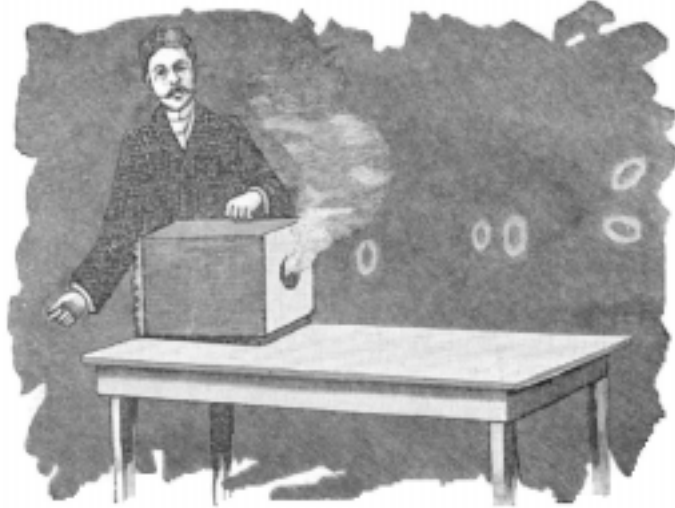
■ **"What is to be done? History of Science in the New Millennium,"** a conference in St. Louis on August 3-6, 2000, will be the **fourth British-North American joint meeting of**

the British Society for the History of Science, the Canadian Society for the History and Philosophy of Science, and the History of Science Society. Paper proposals are due by 15 December 1999. See <http://depts.washington.edu/hsexec/> or e-mail hsexec@u.washington.edu.

■ The **Society for the History of Technology** will meet in Munich, Germany **August 17-20, 2000**. Deadline for proposals for papers and sessions is 10 February 2000. Contact Dr. Michael Allen, SHOT Program Chair, Zentralinstitut für Geschichte der Technik, Deutsches Museum, D-80306 München, Germany, e-mail mike.allen@hts.gatech.edu

GRANTS AND FELLOWSHIPS

■ The **AIP Center for History of Physics** has a program of **grants-in-aid for research in the history of modern physics and allied sciences** (such as astronomy, geophysics, and optics) and the social interactions. Grants can be up to \$2500 each. They can be used only to reimburse direct expenses connected with the work. Preference will be given to those who need funds for travel and subsistence to use the resources of the Center's Niels Bohr Library (near Washington, DC), or to microfilm papers or to tape-record oral history interviews with a copy deposited in the Library. Applicants should name the persons they would interview or papers they would microfilm, or the collections at the Library they need to see; you can consult the online catalog at our web site, <http://www.aip.org/history>, and please feel free to make inquiries about the Library's holdings.



Generating vortex rings, an illustration in A.E. Dolbear, Modes of Motion, or Mechanical Conceptions of Physical Phenomena (Boston, 1897). "It is thought by some persons not improbable," wrote Prof. Dolbear, "that the atoms of matter are minute vortex rings of ether..." Vortices of air carry momentum and energy, move in straight lines, collide off one another or may join to form a single ring, etc. And in the universal, frictionless ether that some physicists at the turn of the century hypothesized, vortex rings would last indefinitely. "Such a conception makes the atoms of matter a form of motion of the ether." (pp. 28-32)

Applicants should either be working toward a graduate degree in the history of science (in which case they should include a letter of reference from their thesis adviser), or show a record of publication in the field. To apply, send vitae, a letter of no more than two pages describing your research project, and a brief budget showing the expenses for which support is requested to: Spencer Weart, Center for History of Physics, American Institute of Physics, One Physics Ellipse, College Park, MD 20740; phone: 301-209-3174, Fax: 301-209-0882 e-mail: sweart@aip.org. Deadlines for receipt of applications are **June 30 and December 31 of each year**.

■ The **American Institute of Physics** and the **American Physical Society** are accepting applications for their **2000-2001 Congressional Science Fellowship Programs**. Fellows serve one year on the staff of a Member of Congress or congressional committee, learning the legislative process while they lend scientific expertise to public policy issues. Qualifications include a Ph.D. or equivalent research experience in physics or a closely related field. Fellows are required to be U.S. citizens and, for the AIP Fellowship, members of 1 or more of the AIP Member Societies. A stipend of up to \$49,000 is offered, in addition to allowances for relocation, in-service travel, and health insurance premiums. Applications should consist of a letter of intent, a 2-page resume, and 3 letters of recommendation. Please see our Web sites (<http://www.aip.org/pubinfo> or http://www.aps.org/public_affairs/fellow.html) for detailed information on applying. If qualified, applicants will be considered for both programs. **All application materials must be postmarked by January 15, 2000, and sent to: APS/AIP Congressional Science Fellowship Programs, One Physics Ellipse, College Park, MD 20740-3843.**

■ The **Smithsonian Institution Libraries (SIL) Resident Scholar Programs** offer short-term study grants for 2000 with stipends of \$1,800/month for durations of one to three months. Three awards are in the Smithsonian Institution Libraries Dibner Library Resident Scholar Program supported by The Dibner Fund for research in the Dibner Library of the History of Science and Technology. Awards are also offered in the Special Collections Resident Scholar Program for research in SIL's special collections. A fourth is in the Smithsonian Institution Libraries Resident Scholar Program for research in other special collections of the Libraries. Historians, librarians, doctoral students and other scholars are invited to apply. Scholars are expected to be in residence at the Smithsonian Institution. **The Deadline for applications is December 1, 1999.** For applications and more information visit <http://www.sil.si.edu/Information-Files/dibner-fellowship.htm>. Applications are also available by writing to Smithsonian Institution Libraries Resident Scholar Programs, Smithsonian Institution Libraries, NHB 22, MRC 154, Washington, D.C. 20560-0154. Phone: (202) 357-2240, e-mail: libmail@sil.si.edu.

■ **California Institute of Technology-Biot Archives Research Funds.** The Maurice A. Biot Archives Fund and other funds provided by the Archives offer research assistance up to \$1000

Transistorized!

A major new Web exhibit, *Transistorized!*, describes the history of the transistor (<http://www.pbs.org/transistor>). Constructed by the AIP History Center and ScienCentral Inc., the exhibit accompanies a TV special that was first aired in early November on PBS. The online exhibit was made possible by a grant to AIP from the David and Lucille Packard Foundation. *Left to right: William Shockley, rock-climbing in his youth; the first junction transistor (courtesy Lucent); Walter Brattain at his crystal-pulling apparatus; and Sony founders Masaru Ibuka and Akio Morita (courtesy Sony).*



to use the collections of the Archives of the California Institute of Technology. Applications will be accepted from students working towards a graduate degree or from established scholars. Graduate students must have completed one year of study prior to receiving a grant-in-aid. For the Biot award, preference will be given to those working in the history of technology, especially in the fields of aeronautics, applied mechanics and geophysics. The grant-in-aid may be used for travel and living expenses, for photocopy or other photo-reproduction costs related to the research project, and for miscellaneous research expenses. Funds may not be used for the purchase of computer software or hardware. For further information on holdings and on-line resources, please consult the Archives' Web page: <http://www.caltech.edu/~archives>. Application guidelines may be obtained by writing to: Archivist, 015A-74, California Institute of Technology, Pasadena, CA 91125. The application **deadline is June 30 and December 31 of each year.**

■ **The Dibner Institute for the History of Science and Technology** invites applications to its two fellowship programs for the academic year 2000-2001: the Senior Fellows program and the Postdoctoral Fellows Program. There will be some twenty Fellows at the Institute each term. The Dibner Institute is an international center for advanced research in the history of science and technology. It draws on the resources of the Burndy Library, a major collection of both primary and secondary material in the history of science and technology, and enjoys the participation in its programs of faculty members and students from the Massachusetts Institute of Technology, its host institution; Boston University; Brandeis University; and Harvard University. The Institute's primary mission is to support advanced research in the history of science and technology, across a wide variety of areas and a broad spectrum of topics and methodologies. The Institute favors projects that address events dating back thirty years or more. *Senior Fellows Program:* Candidates for Senior

Fellowships should have advanced degrees in disciplines relevant to their research and show evidence of substantial scholarly accomplishment and professional experience. Scholars may apply to the Senior Fellows Program for the Fall (Term 1), the Spring (Term 2), or both. The Institute prefers, if possible, that senior fellows apply for a two-term residency. *Postdoctoral Fellows Program:* Fellowships are awarded to outstanding scholars of diverse countries of origin who have been awarded the Ph.D. or equivalent within the previous five years. Postdoctoral Fellowships run for one year, from September 1 through August 31, and may be extended for a second and final year at the discretion of the Dibner Institute. All Dibner Fellows are expected to reside in the Cambridge/Boston area during the terms of their grants. Fellowships provide office space, support facilities, and full privileges at the Burndy Library and at the libraries of consortium universities. Funds are available for housing, living expenses, and one round-trip fare for international fellows. Estimates of costs, as well as the average stipend awarded in 1999-2000, are provided with the application forms. The **deadline for receipt of applications is December 31, 1999.** Fellowship recipients will be announced in March 2000. Please send requests for further information and for application forms directly to: Trudy Kontoff, Program Coordinator, Dibner Institute for the History of Science and Technology, Dibner Building, MIT E56-100, 38 Memorial Drive, Cambridge, Massachusetts 02139, USA. Phone: 617-253-6989, fax: 617-253-9858, e-mail: dibner@mit.edu

■ **The Bakken Library and Museum in Minneapolis** offers visiting research fellowships for the purpose of facilitating research in its collection of books, journals, manuscripts, prints, and instruments. The focus of the Bakken's collections is on the history of electricity and magnetism and their applications in the life sciences and medicine. Related materials include mesmerism and animal magnetism, 19th-century ephemera concerning alternative electromedical therapies, miscellaneous scientists' letters,

and trade catalogues. The instruments include electrostatic generators, magneto-electric generators, induction coils, physiological instruments, recording devices, and accessories. The fellowship is a maximum of \$1,300 and is to be used for travel, subsistence, and other direct costs of conducting research at The Bakken. The minimum period of residence is one week. The grants are open to all researchers. **The application deadline is March 1, 2000.** For further information, please contact: David J. Rhees, Executive Director, The Bakken Library and Museum, 3537 Zenith Avenue South, Minneapolis, MN 55416, USA; phone: 612-927-6508; fax: 612-927-7265; e-mail: rhees@thebakken.org, or view the Web site at <http://www.thebakken.org>.

■ The **American Philosophical Society** offers a variety of grants, for research only. The Society makes no grants for study, travel to conferences, workshops or to consult with other scholars, for permanent equipment, or assistance with publication or translation. Applicants may be residents of the United States, American citizens on the staff of foreign institutions, or foreign nationals resident abroad, whose research can only be carried out in the United States. Grants are made to individuals; institutions are not eligible to apply. General Research grant program: Applicants are normally expected to have a doctorate, but applications are accepted from persons whose publications display equivalent scholarly achievement. Grants are rarely made to persons who have held the doctorate for less than one year, and never for pre-doctoral study or research. Research in history of science is one of the areas supported. Maximum award: \$6000. **Deadlines: March 1, October 1, December 1.** Slater Fellowship in the History of Modern Physical Sciences: Given for a doctoral dissertation in the history of physical sciences in the twentieth century. Candidates must have passed all qualifying examinations for the doctorate. Foreign nationals must expect to spend the year in association with an American university or research institution. The award is \$12,000 for one year only. **Deadline: December 1.** Library Resident Research Fellowships: Applicants must demonstrate a need to work in the Society's collections for a minimum of one month, and a maximum of three months. Applications are accepted from persons whose normal place of residence is farther away than a 75-mile radius of Philadelphia. Applicants do not need to hold the doctorate. Stipend: \$1900 per month, **Deadline: March 1.** For the Library Resident Fellowships, write for details to Library Resident Research Fellowships, American Philosophical Society Library, 105 South 5th Street, Philadelphia, PA 19106-3386. Telephone inquiries to 215-440-3400 must specify the Library Resident Research Fellowships. Further information and forms for all of the Society's programs can be downloaded from <http://www.amphilsoc.org> (click on "research grants" on the homepage). If forms cannot be downloaded from the Web site, they may be requested by mail; be sure to include: indication of eligibility for the program, nature of the research (e.g. archival, laboratory, fieldwork, etc.), proposed use of the funds (travel, purchase of microfilm, etc.); foreign nationals must state the objects of their research, available ONLY in the United States. For all programs except the Library Resident Research Fellow-

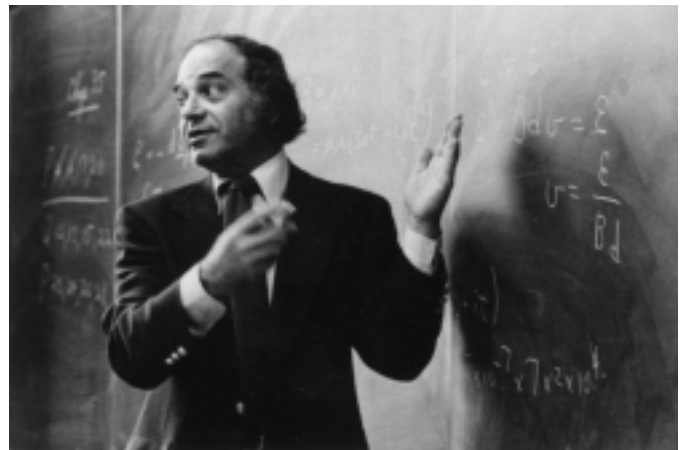
ship (see above), requests for forms and questions concerning the eligibility of a project or the use of funds are accepted by at, and address the Committee on Research, American Philosophical Society, 104 South 5th Street Philadelphia, PA 19106, USA; phone: (215) 440-3429, e-mail eroach@amphilsoc.org (include a postal address).

Documentation Preserved

This is our regular survey of archives and other repositories giving 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.

ACADÉMIE DES SCIENCES. 23 QUAI CONTI, 75006 PARIS, FRANCE

Papers of **Jules Janssen, 1824-1907.** Astrophysicist, member of the Académie des Sciences and the Bureau des Longitudes, Jules Janssen founded the Physical Astronomy Observatory of Meudon, France. His work was mainly with the application of spectroscopy and photography in astronomy. Diaries (scientific observations, travel notes, expenses), correspondence, notebooks, bibliography, etc. Papers concern scientific expeditions for the spectroscopic observation of solar eclipses, and transits of Venus; foundation of several observatories (the Physical Astronomy Observatory in Meudon and at the summits of the Pic-du-Midi, Pyrénées, and Mont-Blanc, France), and photography. Correspondents include: Babinet, Déherais, Desains, Dumas, Edison, Eiffel, Élie de Beaumont, Faye, Fizeau, Flammarion, Huggins, Lockyer, Sainte-Claire Deville, Warren de la Rue, etc. 1857-1907. 26 cu. ft. The Archives also have separate biographical files of Janssen including reprints of articles, biographical materials, and photographs; also many manuscripts, and letters from Janssen to Dumas (in particular relating to Venus Transit observations in Japan in 1874). 1863-1920. 1 file.



Robert Resnick lecturing at Rensselaer Polytechnic Institute, November 1987. AIP Emilio Segrè Visual Archives, Resnick Collection.



J. Robert Oppenheimer and Ernest Lawrence, 1932. Molly B. Lawrence, courtesy AIP Emilio Segrè Visual Archives.

Reports of **Conférence interalliée des académies scientifiques : Proceedings of the Inter-Allied Conference of Scientific Academies (November 26-29, 1918), Académie des Sciences (France)**. The goal of this meeting was to examine the future of post World War I scientific relationships between Allies and with former enemies. Attendees included: Borel, Painlevé, Schuster, Jeans, Hale, Volterra, Perrier, Lallemand, Bigourdan, Hurmuzeco, Picard, Massart, Fantoile, Dyson, Lacroix, Lecointe. This volume reproduces speeches and discussions concerning the role of science in war, international collaboration after the war between Allied countries and exclusion of the Central Empires (Germany, Austria, Bulgaria, Turkey), the establishment of the International Research Council, the Astronomical Union, and the International Geodesic Union. Also includes discussions about the organization of reference bibliographies and international laboratories. 1918. 1 vol.

Records of **Commission de la défense nationale, Académie des Sciences (France)**. The Commission de la défense nationale de l'Académie des Sciences was created in 1914 to give an impulse to scientific research of interest to the war effort, and to examine proposition submitted by the Ministry of War. Contains the articles, notes, reports, etc. examined by the Commission, proceedings of the meetings of the Physics and Chemistry Commissions (1915-1916), correspondence with the French Government and with the Allies (esp. Italy), and some studies undertaken by members of different Commissions. Physicists involved include: Amagat, Paul Appel, Arsène d'Arsonval, G. Bigourdan, André Blondel, Valentin Boussinesq, Edouard Branly, Georges Claude, Gaston Darboux, Henri Deslandres, Jacques Hadamard, Lallemand, Gabriel Lippmann, Paul Painlevé, Emile Picard, Victor Puiseux, and many more. Topics include: ballistics, chemical warfare, artillery spotting by means of sound, optics, spectroscopic analysis of flames produced by enemy explosions, submarine warfare, air warfare and aviation, etc. 1914-1919. 1 box.

Commission du passage de Vénus de l'Académie des Sciences (France). First put together in 1869, but disrupted by the

Franco-Prussian War of 1870-1871, the Commission du passage de Vénus de l'Académie des Sciences' objective was to study observations made during the transits of Venus in front of the Sun in 1874 and 1882 and to plan and oversee French expeditions. This collection includes papers generated by the Commission: notes and articles published in the Comptes rendus, proceedings of meetings, manuscripts of notes presented to the Commission, budgets, correspondence with foreign astronomers, the French government, and scientists in charge of expeditions. Topics include observational astronomy, celestial mechanics, spectroscopy, photography, meteorology, etc. Scientists involved include: Airy, André, Angot, Bouquet de la Grye, Delaunay, Dumas, Faye, Fizeau, Fleuriais, Hatt, Janssen, Jurien de la Gravière, Milne-Edwards, Mouchez, Puiseux, Rayet, Tisserand, Wolf, and Yvon Villarceau. One box (#1648) contains the papers of Victor Puiseux, astronomer at the Observatoire de Paris, who mainly worked in celestial mechanics; includes manuscripts of published and unpublished articles, copies of mathematical memoirs, some of his scientific correspondence, and several pages of computation and tables. 1869-1885. 6 boxes.

Commission de l'aéronautique, Académie des Sciences (France). Members of the Commission included Anatole Bouquet de la Grye, Jules Mayer, Maurice Lévy, Marcel Deprez, Henry Léauté, Jules Biolle, Louis Cailletet, Jules Janssen, Paul Appel, Paul Painlevé, Emile Picard, Prince Roland Bonaparte, Henri Deslandres, etc. Replaced by the Commission de la défense nationale at the outbreak of the war in 1914. Includes the proceedings of monthly meetings, articles submitted to the Commission by various inventors for their expertise, and reports from members of the Commission. Topics covered include hydrodynamics, fluid mechanics, aviation. 1902-1914. 1 box.

ARCHIVES NATIONALES DE FRANCE, 60 RUE DES FRANCS-BOURGEOIS,
75141 PARIS FRANCE

French government records concerning the **Services des Missions** (in charge of scientific expeditions during the 19th century). A government office, the Service des Missions was created in 1842. Among its extremely diverse responsibilities were astronomy, physics, chemistry, and oceanography. In 1935, the Service was included in the Caisse nationale des recherches scientifiques (ancestor of present-day CNRS). Accounting, budgets, credits, and expenses (1842-1947); annual reports; incoming and outgoing correspondence (1873-1889, 1901-1908, 1939); Venus transit (1866-1876); documents concerning international scientific societies (International Geodesic Association, 1889-1917, International Seismology Association, 1902-1921, International Geodesic and Geophysical Union, 1908-1914); expeditions to the Poles (1872-1933). Individual files (19th century) include Antoine d'Addadie (1888), Alluard (astronomy, 1871), Charles André (astronomy, 1874-1889), Alfred Angot (astronomy and meteorology, 1878), Bouquet de la Grye (experiment on gravitation, 1885), R. P. Alexis Bouruenoud (meteorology, 1864), A. Bravais (meteorology, terrestrial physics, Switzerland, 1844), Brunhes (study of Italian physics laboratories, 1900), Marcel Crouillebois (optics, in England, Germany

and Russia, 1871-1874), Henri Deslandres (astronomy 1896-1897), Paul Janet (study of industrial physics laboratories in Belgium and Switzerland, 1893), Gavarret (mission on medical physics in Belgium and Holland, 1872), Jules Janssen (astronomy, spectroscopy, 1857-1876), Aymat de La Baume-Pluvinel (solar eclipses, 1889-1890), Émile Lépissier (astronomy in China, 1866), Emmanuel Liais (solar eclipse, 1858), Gabriel Lippmann (electricity in Germany, 1872-1874), J. Lissajous (science teaching at the Vienna Exposition, 1873), Marié-Davy (astronomy, meteorology, magnetism, 1868-1875), E. Mascart (telegraphy in England, 1877), Henri Mormand (electricity at the Budapest Exposition, 1896), contreamiral E. Mouchez (hydrography, astronomy, 1876-1882), A Mouchot (experiments on solar heat, 1877), Jean Perrin (study of organization of laboratories in Holland and Germany, 1898), G. Qesneville (study of physics laboratories in Germany, 1880), R. Radau (study of the teaching of the mathematical sciences in Germany, 1870), Georges Rayet (study of Italian astronomical observatories, 1875), E. Renou (meteorology in France, Austria, Germany, and Switzerland, 1868-1869), Joseph Silbermann (meteorology and volcano eruptions, 1877), E. Stéphan (solar eclipse, 1868), Thollon (spectroscopy, 1879), J. Vallot (meteorological observation, Mont-Blanc, 1887), J. Violle (solar heat in Algeria, 1876). Individual files (for the 20th century) include Henri Becquerel and his son Jean (optical and magnetic research, Leyden, Holland, 1907), Henri Bénard (hydrodynamics, 1929-1935), Édouard Branly (subvention for his laboratory, 1921-1930), Henri Deslandres (astronomical research in California, 1910), N. Giacobini (double stars, 1932-1934), Maurice Hamy (representing France at a Solar Research Conference in California, 1910), Joseph Janin (research on spectroscopy, 1939), Jules Janssen (gas emission in volcanic eruption, Naples, 1904), comte Aymar de La Baume-Pluvinel (observations of diverse solar eclipses, 1893-1914), Lagrula (solar eclipse, 1914), Dr. Latteux (volcanic minerals, 1902 and 1909), comte Henri de Lavaud (solar eclipse, 1905), André Lebreton (mission to the USA to study France's scientific influence), Jean Mascart (Halley's comet, 1910), A. Minet (studies in physics and chemistry in Britain and Germany, 1907), Henri Poincaré (USA, 1904), Stefanik (astronomy, meteorology, 1913), Frédéric Viés (solar eclipse, 1912), R. Zauckermann (mission in England to study electronic diffraction methods). 1864-1945.

ECOLE DE PHYSIQUE ET CHIMIE. PARIS, FRANCE

Papers of **Georges Claude, 1870-1960**. Georges Claude, inventor, physicist, and businessman, founder of the Air Liquide Company. A staunch nationalist during the 1930s, member of the Action Française, candidate for legislative elections, he notoriously endorsed Hitler's Germany and was condemned to life imprisonment in 1945. Includes reprints and manuscripts of oral communications and papers; laboratory notebooks, experiments on gas fluorescence and luminescence; patents and brochures from the Claude-Paz & Sylva Company; and commercial brochures on liquid air, neon lighting, welding, and terrestrial thermal energy. Incoming correspondence concerning rare gases and fluorescent lighting from scientists and industrialists, including John McLennan and William Ramsay. 52 boxes.

Notebooks of **Hermann Minkowski, 1864-1909**. Mathematician (geometry of numbers, quadratic forms). On mathematics faculty of Universität Bonn, 1885-1894; Universität Zürich, 1896-1902; and Universität Göttingen, 1902-1909. The notebooks primarily contain notes and computations on quadratic forms, geometry of numbers, fluid mechanics, number theory, and algebraic functions. In addition, there are notes for lectures delivered by Minkowski while a mathematics professor which cover these topics as well as partial differential equations, hydrodynamics, mechanics, and potential theory. Also included in the notebooks are drafts of articles on the theory of algebraic numbers, the geometry of numbers, and an essay on the history of the theory of probability. Photocopies of these notebooks have been available to researchers in AIP's Niels Bohr Library and the University of California, Los Angeles for several years. 1882-1906. 4.3 linear ft. (147 notebooks and assorted folios).

ARCHIWUM POLSKIEJ AKADEMII NAUK. UL. NOWY DWIAT 72, 00-300
WARSAW, POLAND (CONTACT: ALICJA KULECKA).

Files of **Włodzimierz Kolos, 1928-1996**. Physical chemist (quantum chemistry and nuclear physics). Professor at Warsaw University (1962-1996), member of Polish Academy of Sciences, European Physical Society, International Academy of Quantum Molecular Sciences. Includes notes and computations. Correspondence with: T. Anderson, O. Bastiansen, L. Biermann, D. M. Bishop, A. D. Buckingham, J. L. Calasi, A. B. Callear, S. Carlton, A. Carrington, P. R. Certain, C. A. Coulson, A. Dalgarno, R. Daudel, J. T. Dowell, K. Fajans, S. Fraga, O. Hassel, D. Herschbach, G. Herzberg, S. Huzinaga, L. Jansen, B. Jerowska-Trzebiatowska, M. Karplus, W. R. Kenan, J. Los, J. Lindenberg, P. O. Löwdin, E. A. C. Lucken, J. Martinson, C. Moser, R. S. Mulliken, Y. Ohrm, W. Opechowski, E. W. Otten, B. Paczynski, R. S. la Paglia, R. G. Parr, B. Pullman, W. E. Palke, P. M. Parker, H. O. Putchard, N. F. Ramsey, T. W. Richards, C. C. J. Roothaan, T. E. Sharp, W. C. Stanley, H. S. Taylor, G. A. Victor, J. T. Vanderlice, G. Wagnière, M. Weissbluth, M. J. van der Wiel. 625 lin. cm.

Files of **Ludwik Wertenstein, 1887-1945**. Physicist (nuclear physics, popularization of science). Collaborator of M. Skłodowska-Curie, professor of Free Polish University, head of X-ray Laboratory of Warsaw Scientific Society. Includes notes, descriptions of experiments and a diary. Correspondents include: Cz. Bialobrazeski, M. de Broglie, J. Chadwick, J. D. Cockroft, K. Fajan, L. Infeld, P. Langevin, H. Niewodniczanski, S. Pienkowski, M. Planck, E. Rutherford, M. Skłodowska-Curie, A. Sommerfeld, W. Swietosloaski, J. Weyssenhoff, S. Ziemecki. 1908-1944. 64 units.

*DECLARE THE PAST, DIAGNOSE THE PRESENT,
FORETELL THE FUTURE. —HIPPOCRATES*

BIBLIOTEKA UNIWERSYTECKA W. WARSZAWIE DZIA» REKOPISOW.
UL. KRAKOWSKIE PRZEDMIEŃCIE 32, 00-927, WARSAW, POLAND
(CONTACT: ALICJA KULECKA).

Files of **Stefan Pienkowski, 1883-1953**. Physicist (experimental physics). Professor of Warsaw University, rector of Warsaw University (1925-1926, 1933-1936, 1945-1947), director of Institute of Physics of Polish Academy of Sciences (1953). Includes notes for publications and lectures, material on Warsaw University, and correspondence with: Cz. Bialobrzewski, H. Crew, Wl. Dziewulski, L. Infeld, M. Jezewski, F. Joliot-Curie, I. Joliot-Curie, L. P. Marchlewski, W. Natanson, J. Pniewski, J. Rotblat, W. Rubinowicz, R. Smoluchowski, S. Szczeniowski, W. Swietoslowski, M. Wolfke. 41 units.

ZENTRALBIBLIOTHEK ZÜRICH. HANDSCHRIFTENABTEILUNG. ZÜRICH,
SWITZERLAND (CONTACT: WOLFRAM LIMACHER).

Papers of **Gregor Wentzel, 1898-1978**. Physicist. Additions to papers from Wentzel's teaching career at the University of Zurich. Seven notebooks containing lecture notes on topics including optics, mathematical physics, particle theory, and relativity; also includes copies of exams. 1932-1968. Ca. 107 pp.

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

Additions to the papers of **Robert F. Bacher, 1905-**. Physicist (high-energy physics, nuclear energy). Chairman, Division of Physics, Math, and Astronomy, California Institute of Technology (1946-1962), professor (1949-1976), provost (1962-1970) and emeritus professor (1976-). As chairman of the Caltech Division of Physics, mathematics and astronomy, he shaped the program in high-energy physics (based on the new electron synchrotron). He was responsible for bringing many talented people to Caltech, particularly in elementary particle theory, including Richard Feynman and Murray Gell-Mann. Bacher also initiated the program in radio astronomy with the creation of the Owens Valley Radio Observatory. Papers, books, and photos. Unprocessed. 11 boxes.

Papers of **Harrison Brown, 1917-1986**. Harrison Brown positioned his life's work at the intersection of science and public policy. He received his PhD in nuclear chemistry from Johns

*TO FIND IN THE WORKS OF SCIENCE OF THE PAST,
THAT WHICH IS NOT AND CANNOT BE SUPERSEDED, IS
PERHAPS THE MOST IMPORTANT PART OF OUR QUEST.
A TRUE HUMANIST MUST KNOW THE LIFE OF SCI-
ENCE AS HE KNOWS THE LIFE OF ART AND THE LIFE
OF RELIGION.*

—GEORGE SARTON

Hopkins in 1941. After working in the Manhattan Project at the University of Chicago and Oak Ridge on the production of plutonium, Brown became an outspoken opponent of nuclear weapons. In 1947 he joined the Emergency Committee of Atomic Scientists and at the end of his life was the editor-in-chief of the *Bulletin of the Atomic Scientists*. He taught at the University of Chicago from 1946 to 1951, when he moved to Caltech, eventually holding a double appointment in the Geology and Humanities divisions. His early scientific studies on meteorites were continued along with work in mass spectroscopy, thermal diffusion, fluorine and plutonium chemistry, geochemistry and planetary structure. He served from 1962 to 1974 as foreign secretary of the National Academy of Sciences, as science adviser to the presidential campaigns of Adlai Stevenson and Robert Kennedy, and as delegate, advisor, and committee member for numerous government, political, and professional organizations. Includes books and printed materials. Unprocessed. 1.5 boxes.

Addition to papers of **Judith Gamora Cohen, 1946-**. Cohen received her PhD from Caltech in 1971. After a period as assistant astronomer at Kitt Peak Observatory, she was appointed associate professor at Caltech in 1979 and professor in 1988. Among other accomplishments, she was the designer and builder of the low-resolution spectrograph for the Keck Telescope. Includes one file on instrument building, book, and printed materials. 1.5 boxes.

Owens Valley Radio Observatory, records of the Director.

The Owens Valley Radio Observatory (OVRO) began operations in 1958 with the commissioning of two 90-foot radio telescopes built by Caltech. Since then, the site has grown to include a number of instruments to perform various kinds of interferometry, including the National Radio Astronomy Observatory's (NRAO) Very Long Baseline Array. Includes papers and photographs. Unprocessed. 2 boxes.

Papers of **Robert Phillip Sharp, 1911-**. Geologist (geomorphology). Chairman Division of Geological Sciences, California Institute of Technology (1952-1968), professor of geomorphology (1947-1979), emeritus professor of geology (1979). Sharp made significant contributions to the Department, especially in the introduction of programs in geochemistry and planetary science and in the building up of seismology. He also participated in the scientific mission of several of the Mariner Mars probes. Unprocessed. 23.5 boxes.

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

Papers of **Eileen Gail De Planque, 1945-**. Member, United States Nuclear Regulatory Commission, 1991-1995. Correspondence, speeches and writings, minutes and meeting materials, memoranda, reports, studies, and printed matter, relating to nuclear power plants in the United States and abroad, including issues of licensing, safety and waste management. 1990-1995. 210 ms. boxes.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY. INSTITUTE ARCHIVES. 77 MASSACHUSETTS AVENUE, CAMBRIDGE, MA 02139-4307, USA (CONTACT: MEGAN SNIFFIN-MARINOFF OR ELIZABETH ANDREWS).

Additions to papers of **Robley Evans, 1907-1995**. Physicist (medical physics). Massachusetts Institute of Technology, assistant professor (1934-1938), associate professor (1938-1945), professor (1945-). Unprocessed. 155 cu. ft.

Additions to papers of **Julius Stratton, 1901-1994**. Physicist; administrator. Massachusetts Institute of Technology, assistant professor to professor of physics (1930-1951), provost (1949-1956), chancellor (1956-1959), president (1959-1966). Partially processed. 42 cu. ft.

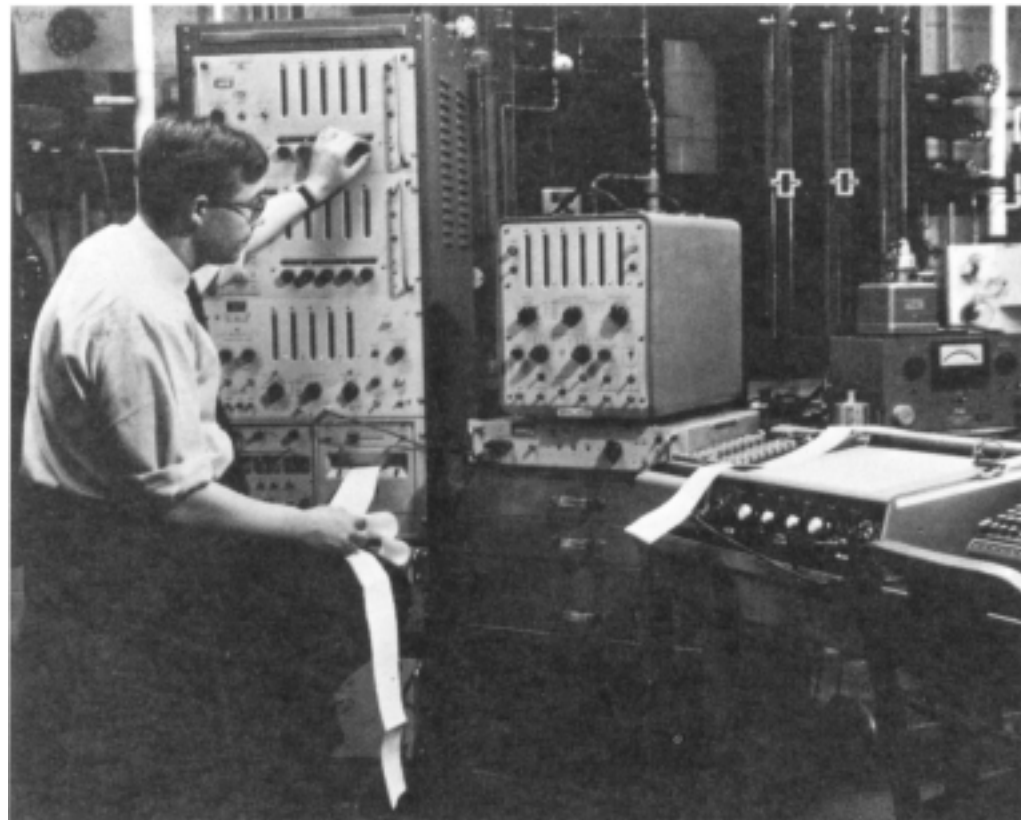
SMITHSONIAN INSTITUTION. NATIONAL AIR AND SPACE MUSEUM. ARCHIVES. WASHINGTON, D.C., 20560, USA (CONTACT: THOMAS SOAPES OR PATRICIA WILLIAMS).

Papers of **William E. Brunk, 1928-**. Astronomer. Served as a research scientist with National Aeronautics and Space Administration's Lewis Research Center and as planetary scientist with University Space Research Association, among other posts. He was active in the American Astronomical Society Division for Planetary Sciences and in projects advancing radio and infrared astronomy. Collection consists of publications and correspondence relating to Brunk's work with the AAS Division of Planetary Sciences, infrared telescope projects, planetary radio astronomy, and Mariner Mars projects.

Papers of **Charles Y. Johnson, 1920-**. Physicist. Began his service with the Naval Research Laboratory, Washington, D.C. in 1942. He served with the NRL for many years, first with the Rocket Sonde Branch, and later with the Upper Air Physics Branch, where he became head of the Aeronomy Section. The collection consists of a variety of material relating to experiments performed at NRL including cosmic ray physics, rocket instrumentation, and the Aerobee and Lagopedo projects. Included are reports, photographs, transparencies, rolled data and 167 glass slides.

Papers of **Ray L. Newburn, 1933-**. Astronomer and noted lunar and planetary scientist at the Jet Propulsion Laboratory, where he participated in the development of plans for lunar and planetary exploration and planetary models for mission design; served as JPL representative to National Aeronautics and Space Administration's Space Science Steering Committee's Astronomy Subcommittee; and helped establish the Table Mountain Observatory in 1962. Collection consists of publications and memoranda from the Jet Propulsion Laboratory relating to Newburn's work, as well as correspondence with colleagues, including Marcia Neugebauer and H.C. Urey.

Papers of **Malcolm D. Ross, 1919-1985**. Commander, U.S. Naval Reserve. Attended Purdue University and the University of Chicago where he studied physics and meteorology. In 1951, he was assigned to the Navy's plastic balloon research program. Subsequently, he was involved with Project Skyhook, Project Churchy, and was responsible for initiating the Strato-Lab program for upper atmosphere research. Collection documents Ross's accomplishments as a physicist and pioneer in modern scientific ballooning. It includes photographs, handwritten notes, correspondence, medical flight records, reports and articles. The Strato Lab program is perhaps the most well-represented of Ross's projects in this collection



Russell Donnelly in the laboratory, Chicago, 1962. AIP Emilio Segrè Visual Archives, gift of Dr. Donnelly.

Upper Atmosphere Rocket Research Panel (V-2 Panel)

Reports. The Upper Atmosphere Rocket Research Panel (V-2 Panel) formed in 1946 and oversaw aspects of a long series of experiments conducted after World War II utilizing captured German V-2 rockets. These experiments were designed to further our understanding of the upper atmosphere and the nature of solar radiation, as well as the technology of the V-2 itself. Panel members



Gerard 't Hooft and Chen Ning Yang, Tokyo, August 1995. AIP Emilio Segrè Visual Archives, gift of Dr. 't Hooft.

included: the Naval Research Laboratory, Applied Physics Laboratory, General Electric, Princeton University, Harvard University, University of Michigan, and the Army Signal Corps. This collection consists primarily of what are referred to as V-2 Reports, being the minutes of meetings held by the Upper Atmosphere Rocket Research Panel and others. These contain meeting agenda, reports of completed firings of V-2 rockets, statements of results and suggestions for future tests.

V-2 Panel Papers of the Naval Research Laboratory (U.S.). Rocket Sonde Research Section. The Rocket Sonde Research Section of the Naval Research Laboratory was established in 1946 and participated in the V-2 Panel (aka V-2 Upper Atmosphere Research Panel), which, using captured German V-2 rockets, conducted in the 1940s and the 1950s a long series of experiments aimed to increase our understanding of the technology utilized in the V-2. This collection contains primarily administrative memoranda of the portion of the V-2 Panel which represented the Rocket-Sonde Research Section of NRL. The thirty-four files from Rocket-Sonde members are roughly chronological and are followed by files from other entities such as the Ad Hoc Committee on Rocket, Satellite and Space Research. The material in this collection was gathered by David DeVorkin while he conducted research for his book, *Science with a Vengeance*.

SMITHSONIAN INSTITUTION ARCHIVES. A & I BUILDING, ROOM 2135, MRC 414, WASHINGTON, DC 20560, USA (CONTACT: EDIE HEDLIN).

Smithsonian Astrophysical Observatory, records of the Director Irwin I. Shapiro. The records principally document the administration of Irwin I. Shapiro (1929-), who became director of the Observatory on January 1, 1983. Materials include correspondence, memoranda, notes, publications, reports, project and program files, travel files, budget materials, paper reviews, calendars, prospectuses, directories, grant proposals, meeting minutes, and personnel files. Ca. 1964-1994.

UNIVERSITY OF CALIFORNIA, BERKELEY. BANCROFT LIBRARY. BERKELEY, CA 94720, USA (CONTACT: DAVID FARRELL).

Papers of **John W. Gofman, 1918-**. Physicist (medical physics).

University of California, Berkeley, assistant professor, then professor of medical physics (1947-1974), emeritus professor (1974-). Correspondence, research notes, manuscripts of writings and speeches primarily related to his extensive research on the hazards of radiation. Includes files of correspondence with various government agencies, as well as committee reports and transcripts of hearings related to radiation exposure and occupational hazards in the nuclear industry. Also includes audio and video tapes of interviews with Gofman. 1930-1970. 40 lin. ft.

Papers of **Emilio Segrè, 1905-1989.** Physicist (nuclear physics, particle physics). University of California, Berkeley, professor of physics (1946-1972), emeritus professor (1972-). Nobel laureate. Personal academic and professional papers; restricted until 2008. 40 lin. ft.

UNIVERSITY OF CALIFORNIA, SAN DIEGO. ARCHIVES OF THE SCRIPPS INSTITUTION OF OCEANOGRAPHY. UNIVERSITY OF CALIFORNIA, SAN DIEGO MAIL CODE C-075-C, LA JOLLA, CA 92093-0175, USA (CONTACT: DEBORAH DAY).

Records of the **Scripps Institution of Oceanography. Contracts and Grants Office.** Files contain funded and unfunded proposals, dated August 1960 through March 1996, letters of intent, and lists of active contracts and grants. These include proposals for one-time projects to multi-purpose projects for work conducted over a period of years, such as the Deep Sea Drilling Project. The collection is arranged into three series: Proposals without Numbers, University of California San Diego proposals, and Proposals by Other Institutions. The bulk of the proposals are in the UCSD series. Among the proposals are those generated by the Woods Hole Oceanographic Institution and the multi-institutional projects proposal for World Ocean Circulation Experiment (WOCE). 1959-1996. 75 boxes.

U.S. NAVAL OBSERVATORY. LIBRARY. 3450 MASSACHUSETTS AVE., N.W., WASHINGTON, D.C. 20392-5420, USA (CONTACT: BRENDA CORBIN, STEVEN DICK).

Oral history interviews with U.S. Naval Observatory employees and others connected with the institution. Interviews with Harold Ables, Jack Belzer, William Browne, James Christy, Raynor Duncombe and Julena Duncombe, Joseph Egan, John Hall, Ralph Haupt, Arthur Hoag, Alfred Mikesell, Ida Ray, Robert Rhynsburger, David Scott, Stewart Sharpless, Paul Sollenberger, Kaj Strand, John Watkins, Marvin Whitney, Gernot Winkler, and Margaret Woodward. 1983-1989. 20 interviews.

UNIVERSITY OF TENNESSEE AT KNOXVILLE. LIBRARY. SPECIAL COLLECTIONS. ARCHIVAL CENTER FOR RADIATION STUDIES. KNOXVILLE, TN 37996, USA (CONTACT: WILLIAM B. EIGELSBACH).

Papers of **Karl Ziegler Morgan, 1908-**. Physicist (health physics). Director of health physics at Oak Ridge National Laboratory. Founder of the Health Physics Society and first president from 1955-1957; founder of Journal of Health Physics and first editor (1958-1977). Unprocessed.

Woods Hole Oceanographic Institution. Office of the Director, records of Craig Emery Dorman. Dorman served as WHOI's sixth Director from 1989 to 1993. He earned a degree in physical oceanography through the MIT/WHOI Joint Graduate Education Program and, prior to his directorship, he served for 26 years in the U.S. Navy, retiring as a Rear Admiral. The collection consists of correspondence, minutes, news clippings, notes, publications, photographs. Includes materials relating to fund raising, symposia, the return of the Alvin and R/V Atlantis after the longest scientific voyage in history, collaborative efforts between WHOI scientists and international scientists, and the first international conference on "Radioactivity and Environmental Security in the Oceans," the Global Ocean Observing Systems (GOOS), and World Ocean Observing System (WOOS). 1989-1993. 43 lin. ft. (35 cartons).

Woods Hole Oceanographic Institution. Office of the Director, records of Paul M. Fye. Paul McDonald Fye (1913-1988) served nineteen years as the fourth director of the Woods Hole Oceanographic Institution from 1958-1977. He came to the Institution in 1942 as a chemist and helped to develop underwater explosives for the Navy. He served as research supervisor and then research director of the Underwater Explosives Research Laboratory. He served as deputy chief of Explosives Research from 1948-1956, and as associate director for Research from 1956-1958. Collection includes correspondence, documents, grants and contracts, reports, minutes, notes, manuscripts, and articles prepared in Fye's capacity as the Institution's director. Records from the 1950s overlap the directorships of his two predecessors, Edward Smith and Columbus Iselin. All the records from Iselin's brief second term from August 1956 to May 1958, were assimilated into the records of Fye's administration. Also, files at the end of Fye's administration include materials from the administration of his successor John Steele. The subjects covered in the records include: the growth of oceanographic research in the 1960s; the use of the airplane as a research vessel; collaborative research and the first International Oceanographic Congress, replacing the *Atlantis* ship with the new *Atlantis II*; the expansion of educational activities. 1942-1979 (bulk 1958-1977). 103 lin. ft. (84 cartons).

Woods Hole Oceanographic Institution. Office of the Director, records of Columbus O'Donnell Iselin. Iselin assumed the directorship of WHOI in 1940. He had been an assistant to Henry Bigelow and master of R/V Atlantis, a vessel he helped to design. He had been a physical oceanographer at WHOI from 1932 to 1940, and an associate professor of Oceanography at Harvard University, a trustee of the Bermuda Biological Station for Research, a lecturer at Massachusetts Institute of Technology, and chief scientist aboard the Atlantis. He served again in a temporary term as director of WHOI from 1956 to 1958. Correspondence, documents, reports, speeches, and articles prepared in his capacity as the Institution's director (many of them hand-

written). The subjects covered in the records include: war-time research in oceanography and marine biology; underwater explosives; temperature distribution in the surface layer of the North Atlantic; development of instruments to record and study sea and swell conditions in the ocean; air turbulence and convection over the ocean; underwater acoustics; seismic refraction measurement in shallow water; geophysics of continental shelves; marine meteorology; development of oceanographic instruments; tides; chemical oceanography; geophysics of the ocean bottom; topics in marine biology; and the general growth of the Institution. 1940-1950. 12 lin. ft. (10 boxes).

Woods Hole Oceanographic Institution. Office of the Director, records of Admiral Edward Hanson Smith. Rear Admiral Smith (1889-1961), United States Coast Guard, retired, became the third director of the Woods Hole Oceanographic Institution on July 1, 1950. He was a graduate of the Coast Guard Academy in 1913. The director's files of Smith date only up through 1953 and consist primarily of correspondence with some reports, contracts, manuscripts. Subsequent records for his tenure are included with the records of the Paul Fye directorship, which contains records dating from 1950 onward. Topics included in the records: the Institution's participation in a multiple ship survey of the Gulf Stream, submarine geology, marine biology, the institution's ships, ocean currents, fundraising and the establishment of the Corporate Membership Associates program, collaborative partnership with the U.S. Navy. 1950-1956. 5 lin. ft.

Woods Hole Oceanographic Institution. Office of the Director, records of John Hyssop Steele. Steele served as WHOI's fifth director from 1977 to 1989. Prior to his directorship, Steele served as deputy director of the Marine Laboratory of the Aberdeen Laboratory, Scotland from 1951 to 1977. The collection is primarily correspondence but also includes publications, photographs, news clippings, Senate testimonies, journal reviews. Subjects covered include: the study of climate where ocean dynamics were a central issue; use of satellites in studying oceans; research ships; founding of the Coastal Research Center in 1979; WHOI's involvement in multi-institutional and multi-disciplinary programs including the Transient Tracers in the Ocean program (TTO), WOCE, and the Coastal Dynamics Experiment (CODE). 1964-1989 (bulk 1977-1989). 25 lin. ft. (20 boxes).

WE HAVE MORE TO LEARN FROM THE VAST STORE OF WISDOM GATHERED BY HUMAN BEINGS OVER THE LONG SPAN OF RECORDED TIME THAN WE DO FROM YESTERDAY'S NEWSPAPERS. OUR ANCESTORS WERE GREAT ADVENTURERS AND DISCOVERERS, AND IN THEIR COMPANY WE ARE MORE LIKELY TO ENCOUNTER NEW THINGS THAN IN THAT OF THE FASHIONABLE AND THE MEMORYLESS.

—FREDERICK TURNER

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Volume XXXII, No. 2

Fall 1999

TABLE OF CONTENTS

Work of the "Cooperation on the Archives of Science in Europe" (CASE) Group.....	1
Increased Funding for History of Science from NSF.....	1
AIP History Center Awards Grants to Eight Archives.....	2
Freeing the Wild Ducks: IBM's Commitment to the Historical Record.....	3
Center Leads Consortium to Create Web Database of Archival Finding Aids.....	4
The Archive of the German Physical Society.....	5
Recent Acquisitions of the Niels Bohr Library.....	6
Recent Publications of Interest.....	8
Other News of Interest.....	10
Supplement: Bibliography.....	between pages 10 and 11
Documentation Preserved: Report from the International Catalog of Sources for History of Physics and Allied Sciences.....	13

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