

Ernest Orlando Lawrence Berkeley National Laboratory

Records Transmittal

Division	Department	Archives and Records Office Use Only
Information Technology		
Group		Filing Code
Archives & Records		ARO-6137
Location	69R0102	LBLN Accession Date
Transferee	Nelson, Karen	
Head of Department		FRC Accession No.
John Stoner		434 11

Records Title

Historical Records Of Accelerator And Cyclotron Development And Use

Inclusive Date of Records

1938 1984

No of Containers

2 FRC Box

Brief description of records

This is an artificial collection created from non-record material from the building 69 ARO shelves. Most of the material originates from the Accelerator and Fusion Research Division. Included are documents, photographs, drawings, reports, publications relating to the 60" Cyclotron, the 184" Cyclotron, the Bevatron, and the HILAC and the ALS. Scientists include: James (Jimmy) Vale, Kenneth Ehlers, Lynn Stevenson, William Brobeck. The thesis and logbook of William Gilbert was related to research using the LRL electron cyclotron.

Materials

Records Retention

- Historically Valuable Documents. Do not destroy. A detailed folder listing is included with the Records Transmittal
- Destroy/Review on a scheduled basis with a minimum retention of _____ years. Disposal/Review Date:

This is in accordance with:

- The National Archive General Retention Schedule. Citation
- The Department of Energy Retention Schedule. Citation

Disposal Authorization:

The legal retention of the records listed on this Records Transmittal has elapsed. Since I foresee no use of these records, I authorize their disposal.

Signature of Department Head

Date

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Container **Of**

- | | |
|--------|---|
| Folder | 1 Reaction Dynamics for Scanners Physics Notes #300, 6/16/1961, M.L. Stevenson [copy] |
| Folder | 2 The Elementary Particles as Seen in the Hydrogen Bubble Chamber Physics Notes #327, 8/28/1961, M.L. Stevenson [copy] |
| Folder | 3 Accelerator Construction at the University of California Radiation Laboratory 1945-1955, June 23, 1981, William Brobeck |
| Folder | 4 Medical Research Council Radiotherapeutic Research Unit Cyclotron Section Library No 533: Notes on a Tour of Americal Fixed Frequency Cyclotrons in the Autumn of 1950 by J.W. Gallop Hammersmith Hospital London W.12, Copy No. 53 [Mentions Berkeley] |
| Folder | 5 [Charles (Chuck) Corum sketches and cartoons related to the Crocker Cyclotron, c. ealry 1950s] |
| Folder | 6 [Radiation Laboratory Bulletin and The Magnet newsletter articles related to the 60-Inch Cyclotron, 1953-1966, 1977-1978, from the collection of Charles Corum] |
| Folder | 7 [Crocker Lab, 60-Inch Cyclotron Newsclippings 1957-1962, from the collection of Charles Corum] |
| Folder | 8 Cloud Chamber UCRL 66 Notes Nov. 1947 - Jan. 1948 n-p Scattering, W. Powell, E. Hayward, K. Brueckner [handwritten, copy] |
| Folder | 9 [Letter from Edwin McMillan to James Vale, invitation to the 25th Anniversary dinner reunion for the first deuteron beam at the 184-Inch Cyclotron, dated October 13, 1971; The Magnet newsletter dated Oct - Nov 1971 with related aticle] |
| Folder | 10 History of the Cyclotron M. Stanely Livingston and Edwin M. McMillan, Reprinted from Physics Today, Vol. 12, No. 10, pp. 18-34, October 1959 [from the collection of James Vale] |
| Folder | 11 Les Prix Nobel en 1951 The Evolution of the Cyclotron by E.O. Lawrence Stockholm 1952 [from the collection of James Vale] |
| Folder | 12 LRL Accelerators The 184-Inch Synchrocyclotron University of California Radiation Laboratory Berkeley Pub. No. 2D April 1960 [from the collection of James Vale] |
| Folder | 13 Operation of the 184-In. Cyclotron L.R. Henrich, D.C. Sewell and J.Vale August 19, 1949, Reprinted from the Review of Scientific Instruments, vol. 20, No. 12, 887-898, December 1949 [from the collection of James Vale] |
| Folder | 14 History of the 184-Inch Cyclotron by James Vale 1973 [from the collection of James Vale] |

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- Folder 15 Reference Book For Bevatron Experimenters Book No. 16, William W. Salsig 1961
- Folder 16 Heavy Ion Fusion Program Form #189 Project Descriptions 1976
- Folder 17 Ion Source Research K. Ehlers Administration Notes, Travel, Communication, Equipment 1958-1960 [includes sketches and drawings]
- Folder 18 184 Club Beam newsletter published monthly by the 184 Club, February 1952-December 1962
- Folder 19 184 Club Beam newsletter published monthly by the 184 Club, January 1963 - November 1969
- Folder 20 27-Inch Cyclotron Restoration Source Book No. 2, 1976 [relates to a full-scale model that was built]
- Folder 21 Deuteron Photodisintegration at High Energies, William Gilbert, Thesis Dec. 7, 1951
- Logbook 22 William Gilbert Thesis Logbook with photographs of equipment

Container **Of**

- Folder 1 Paul C. Aebersold, "The Cyclotron: A Nuclear Transformer", Radiology 39/5 (Nov. 1942) 513-540
- Folder 2 Dan Wilkes, "The Cyclotron", California Monthly, c. 1946-1947 [Includes interview with J. Robert Oppenheimer]
- Folder 3 Allen F. Reid, "Internal Cyclotron Targets", Atomic Energy Commission, Oak Ridge, Tennessee, Technical Information Branch (MDDC-730)
- Folder 4 "The Cyclotron" from Pollard and Davidson, Applied Nuclear Physics, 1942
- Folder 5 J.D. Stranathan, "Recent Production of Extremely High Energy Particles" in The "Particles" of Modern Physics, 1942
- Folder 6 W.M. Brobeck, "The Cyclotron", in Electrical Engineering, July 1942
- Folder 7 Robert R. Wilson, "The Theory of the Cyclotron", in Journal of Applied Physics, Dec. 1940
- Folder 8 Robert R. Wilson, "Magnetic and Electrostatic Focusing in the Cyclotron", Physical Review 53, March 1938
- Folder 9 M.E. Rose, "Focusing and Maximum Energy of Ions in the Cyclotron", Physical Review 53, March 1938

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- | | | |
|---------------------|----|---|
| Folder | 10 | M. Stanley Livingston, "The Cyclotron I" Journal of Applied Physics, 15, Feb. 1944 |
| Folder | 11 | M. Stanley Livingston, "The Cyclotron II" Journal of Applied Physics, 15, Feb. 1944 |
| Folder | 12 | 200 BeV Accelerator Design Study Summary, Lawrence Radiation Laboratory University of California UCRL-16000, June 1965 |
| Folder | 13 | 200 BeV Accelerator Design Study I, Lawrence Radiation Laboratory University of California UCRL-16000, June 1965 |
| Folder | 14 | 200 BeV Accelerator Design Study II, Lawrence Radiation Laboratory University of California UCRL-16000, June 1965 |
| Folder | 15 | Smithsonian Museum 340 MEV Synchrotron Exhibit, Sketches for Exhibit Installation Sept. 25, 1975, Rudin Johnson |
| Video Cassette Case | 16 | Bevatron, VHS 1993 Lawrence Berkeley Laboratory Program Length: 23:10, 2 copies |
| Video Cassette Case | 17 | Ken Ehlers Talk on History of Ion Source Development at LBL Part 1, 5/3/1984 VHS 0:59:23, DUB - 11/2/2001 |
| Video Cassette Case | 18 | Ken Ehlers Talk on History of Ion Source Development at LBL Part 2, 5/3/1984 VHS 0:50:00, DUB - 11/2/2001 |
| Folder | 19 | One phonograph disc 33 1/3rpm, 10 7/8" diameter of a narrator describing the 184" Cyclotron, c. 1945-1950. The narrator describes the equipment used, the dimensions, types of isotopes, how it worked and what it was capable of. The same recording is on both sides. Run time app. 10 minutes. |
| Folder | 20 | Drawing Diagram Side View of the 60 Inch Cyclotron, n.d. |
| Folder | 21 | Radiation Laboratory Accelerators Comparative Specifications 60-Inch Cyclotron, 184-Inch Cyclotron, Synchrotron, Bevatron, 4-Mev Van De Graaff, 40-Ft. Linear Accelerator October 1951 |
| Folder | 22 | Draft Proposal for the Advanced Light Source, ed. By Richard Sah July 28, 1982 AFRD LBL |
| Folder | 23 | Engineering Notes - Gap Mounted Flip Target MK VIII-T 7/7/59 |
| Folder | 24 | SSC - Superconducting Super Collider Central Design Group History J.D. Jackson Jan. 1999 |
| Folder | 25 | LRL 5-Year Plan - High Energy Physics, G. Goldhaber 1969 |
| Folder | 26 | Letter from Edwin McMillan to Ernest Lawrence re: accelerator development. Includes description of the Synchrotron and handwritten diagrams. July 4, 1945 |

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- Folder 27 Handwritten notes and calculations of Edwin McMillan
- Folder 28 Lawrence's Cyclotron, California Monthly May-June 1940