

[← Collections Policy Statement Index](#)

Physical Sciences (Classes QB, QC, and selected portions of Z)

Contents

- I. Scope
- II. Research Strengths
- III. Collecting Policy
- IV. Acquisition Sources: Current and Future
- V. Collecting Levels

I. Scope

The Collections Policy Statement on Physical Sciences covers the subclasses of QB (Astronomy) and QC (Physics), as well as the corresponding subclasses of Class Z. The Library's collections in these two physical science areas encompass nearly 125,000 titles. In addition, some of the numerous abstracting and indexing services, catalogs of other scientific libraries, and specialized bibliographic finding aids for these fields are classed in Z. The QC (Physics) class also overlaps significantly with Chemistry (QD) and Engineering (TA).

II. Research Strengths

A. General

The Library's collecting strength in subclasses QB and QC is generally at the research level according to Research Libraries Group guidelines. The Library has long runs of many important serials such as *American Journal of Physics*, *Journal of Applied Physics*, *Journal of the British Astronomical Association*, and other publications of notable societies and associations, as well as the major abstracting and indexing services in physics and astronomy including *Science Abstracts. Series A*, *Physics Abstracts*, and its predecessors, and *Astronomischer Jahresbericht* and its successor, *Astronomy and Astrophysics Abstracts*. The Library's extensive general collections in physics and astronomy are further enhanced by the numerous technical reports held in the Technical Reports and Standards Section, and by specialized materials held by the Manuscript, Rare Book and Special Collections, Geography and Map, and Prints and Photographs Divisions. In addition, the Library's already comprehensive collection of U.S. astronomy and physics dissertations in microform is now supplemented by the digital dissertations archive from the *ProQuest Dissertations and Theses* database. The Library also provides readers with access to multiple electronic resources including *Academic Search Premier*, *ADS: NASA Astrophysics Data System*, *arXiv.org*, *CSA Technology Research Database*, *EiCompendex*, *INSPEC*, *JSTOR*, *NTIS*, and *Web of Science*.

B. Areas of Distinction

The Library has strong holdings of the serial publications of scientific societies and institutions in astronomy and physics worldwide for the nineteenth and first half of the twentieth century, when they were received via Smithsonian deposit. Many significant rarities are held in the Rare Book and Special Collections Division, some of which include, in astronomy, landmark works of Nicolaus Copernicus (1473-1543) and Johannes Kepler (1571-1630), and in physics those of Galileo Galilei (1564-1642), Isaac Newton (1642-1727), and James Clerk Maxwell (1831-1879). The Manuscript Division's collections include papers of a number of notable astronomers and physicists, such as A. D. (Alexander Dallas) Bache (1806-1867), Matthew Fontaine Maury (1806-1873), Asaph Hall (1829-1907), Simon Newcomb (1835-1909), T. J. J. (Thomas Jefferson Jackson) See (1866-1962), Vannevar Bush (1890-1974), I. I. (Isidor Isaac) Rabi (1898-1988), Merle Antony Tuve (1901-1982), Carl Eckart (1902-1973), George Gamow (1904-1968), and J. Robert Oppenheimer (1904-1967).

III. Collecting Policy

The Library acquires materials in the physical sciences primarily at a research level, including monographs, periodicals, conference proceedings, reference works, bibliographies, and abstracting and indexing services in all formats without regard to language, place of publication, date of publication, or chronological period. A great number of electronic journals and born digital materials in the physical sciences are acquired at a lower level, primarily because the current Copyright laws have not addressed the deposit of electronic media and because of the difficulties of keeping abreast of and archiving digital materials. College and university level textbooks in physics and astronomy published in the U.S. are generally acquired at a research level; laboratory manuals, instructors' manuals, foreign, elementary, and secondary school level textbooks are acquired on a selective basis. Juvenile texts are acquired on a selective basis as needed to support the Library's educational outreach programs. The Library holds a comprehensive collection of dissertations issued by UMI and strives to permanently acquire all doctoral dissertations accepted by universities in the United States; foreign dissertations are acquired selectively. Related Library policies include 'Best Edition' of Published Copyrighted Works for the Collections of the Library of Congress, Selection Guidelines for Electronic Resources, the Dissertations and Theses Collection Policy Statement, the Societies and Associations Collection Policy Statement, and the Web Capture & Archiving Policy Statement.

IV. Acquisition Sources: Current and Future

The Library currently receives the bulk of its astronomy and physics collection via the copyright deposit and CIP programs, with other material received through gift, purchase, and exchange. Some e-journals and born digital materials are acquired at a lower rate than their print counterparts, because current Copyright law does not address the deposit of electronic materials. Also some of the mechanics associated with the acquisition, storage and display of digital materials have not yet been resolved. As e-journals, e-prints, podcasts, webcasts, and new technologies for creating science material proliferate and the Copyright law includes these materials as depository items, they will be acquired at the same rate as their print counterparts, using the same criteria. The challenge for the Library of Congress is keeping up with the volume of publications in science, keeping current, capturing those publications that are born digital before they disappear, keeping track of print titles that suddenly turn digital, and acquiring e-journals that are not purchased through an aggregated database. As more publications are acquired digitally, the Library

must ensure that all important and appropriate information is added to the collections and that the data formats represented in the physical sciences collections are maintained to assure continued access to its digital information.

V. Collecting Levels

Astronomy

LC Class	Subject	Collecting Level	Comments
QB1-QB139	Astronomy (General)	4	Includes general reference works, history, biography, textbooks, extraterrestrial life, instruments, astronomical photography
QB140-QB237	Practical and Spherical Astronomy	4	Includes time, longitude, latitude
QB275-QB343	Geodesy	4	Includes geodetic surveying, gravity determinations
QB349-QB421	Theoretical Astronomy and Celestial Mechanics	4	Includes planetary theory, lunar theory, satellites, theory of tides
QB460-QB466	Astrophysics	4	
QB468-QB480	Non-optical Methods of Astronomy	4	
QB494.2-QB903	Descriptive Astronomy	4	Includes universe, solar system, interstellar matter, stars
QB980-QB991	Cosmogony and Cosmology	4	
Z5151-Z5156	Bibliography	4	Related classes include Z6000 (Geodesy)

Physics

LC Class	Subject	Collecting Level	Comments
QC1-QC75	Physics (General)	4	Includes general reference works, philosophy, history, biography, mathematical physics
QC81-QC114	Weights and Measures	4	
QC120-QC168.86	Descriptive and Experimental Mechanics	4	Includes dynamics (motion), velocity (speed), fluids (fluid mechanics)
QC170-QC197	Atomic Physics; Constitution and Properties of Matter	4	Includes molecular physics
QC221-QC246	Acoustics; Sound	4	
QC251-QC338.5	Heat	4	
QC350-QC467	Optics; Light	4	Includes spectroscopy
QC474-QC496.9	Radiation Physics (General)	4	Includes color
QC501-QC766	Electricity; Magnetism	4	
QC770-QC798	Nuclear and Particle Physics	4	
QC801-QC809	Geophysics; Cosmic Physics	4	
QC811-QC849	Geomagnetism	4	
QC851-QC999	Meteorology; Climatology	4	
Z7141-Z7145	Bibliography	4	Related classes include Z5160-Z5164 (Atomic Energy and Power; Nuclear Engineering); Z5831-Z835 (Electricity); Z6041-Z6045 (Geophysics); Z6681-Z6685 (Meteorology)

Revised November 2008