Physics and Astronomy
Collections Management Policy

Date created: February 2004
Revised: December 2006
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Subject librarian: Dan Sich

Purpose of the Collection

The physics and astronomy collection supports the research and teaching needs of the Department of Physics and Astronomy. The collection also reflects and bridges into multidisciplinary areas collaborating with the Department of Physics and Astronomy.

Principles of physics are of fundamental importance to all sciences. Most students require physics courses as part of their science education. Knowledge of physics is basic to advancement of engineering and technological achievements. Knowledge of physics and astronomy elucidate an understanding of the universe.

Scope of Coverage

1) LANGUAGE: English is the primary language of collection in physics and astronomy with other languages being considered upon request.

2) GEOGRAPHY: sources of publication are primarily Canada, the United States, Australia and Europe with the language restriction applied. Other regions are considered upon request and dependent upon funding availability.

3) CHRONOLOGY: Materials with a recent imprint date are preferred. Collection of older materials will be considered upon request but will be dependent upon funds as well as availability.

Type of Material Collected

In general acquisitions will include monographs, book series and journals. All theses and dissertations affiliated with the Department are also collected. Alternate formats such as CD-ROM, video, DVD, and microform are considered on an individual request basis. The focus of collecting is now shifting to resources available online and these are preferentially selected over their print counterparts especially in serials.

Exclusions
With the exception of individual requests and some selective acquisitions the following items are not actively pursued:

- popular literature
- conference and symposium proceedings,
- theses or dissertations from other institutions
- course textbooks.

**Material Transfer to Long Term Storage:**

Periodically it becomes necessary to analyze space availability in order to accommodate the growing collection. At these times, titles will be identified that can be transferred to our long term storage facilities. Criteria for transfer selection include but are not limited to the following:

1) Outdated or previous editions of titles
2) Medium to low use items
3) Material that is available in alternate formats, i.e. online
4) Materials that would benefit from storage in a more controlled environment.

**Physics and Astronomy Research Support**

The library supports research by collecting at a Research Level in areas of active research. Research Level is not the Comprehensive Level where all related materials worldwide are collected. Research Level can be defined as an extensive collection of general and specialized periodicals, monographs, bibliographic databases and reference works. Areas of research interest supported by the collection are given below.

**Research**

**Physics**

- Condensed Matter, Materials Science, and Nanotechnology – Experimental
- Condensed Matter, Materials Science, and Nanotechnology – Theoretical
- Medical Physics
- Planetary Science
Astronomy
- Extragalactic
- Instrumentation
- ISM & Circumstellar Material
- Solar System (Meteor Physics)
- Star Formation
- Stars
- Theory

Instructional Support

Graduate Programs

Graduate degrees are offered at the Master of Science and Ph.D. levels. Supervisors are assigned at the point of admission because of the associated financial support. Areas of research specialization are within the areas mentioned above.

Collecting is done at the Research Level for these areas of strong research specialties. Collecting is done at the advanced level of the Study or Instructional Support category with attention to the courses listed in the academic calendar which include:

Physics
- Graduate Seminar
- Quantum Mechanics
- Statistical Physics
- Radiological Physics
- Atmospheric Physics
- Classical Electrodynamics
- Mathematical Methods of Physics
- Condensed Matter Physics

Astronomy
- Solar System & Planetary Astronomy
- Galactic and Extragalactic IR Astronomy
- Classical Electrodynamics
- Computational Astrophysics
- Radiative Processes in Astrophysics
- Cosmology and the High-Z Universe

Planetary Science
- MSc Seminar
- PhD Seminar
- Planetary Image Interpretation
- Impact Cratering: Processes & Products
Collecting is also done at the advanced level of the Study or Instructional Support category in order to support general competence in the field outside the research specialty.

**Undergraduate Programs**

The Department offers a variety of programs leading to undergraduate degrees with specializations in Physics, Astrophysics, Medical Physics, Materials Science and Planetary Science. Minors are available in Physics, Conceptual Astronomy, Materials Science and Planetary Science.

Physics courses are fundamental for many science and applied sciences students across the campus. Collecting is done at the Study or Instructional Support Level with systematic attention to the courses listed in the academic calendar which include:

**Physics**
- Conceptual Physics for Non-Scientists
- Introductory Physics
- Physics for Engineering Students
- Physics for the Biological Sciences
- The Physics of Music and Sound
- The Science of the Sporting Environment
- Earth’s Atmosphere
- Medical Imaging
- Biophysics
- Medical Physics
- Planetary Atmospheres
- Materials Science
- Classical Mechanics
- Quantum Mechanics
- Electromagnetic Theory
- Optics and Photonics
- Thermal Physics
- Biological Materials
- Computer Simulations in Physics
- Elementary Particals
- Nuclear Magnetic Imaging
- Radiological Physics
- Electronic Materials & Devices
- Nanomaterials

**Astronomy**
- General Astronomy
- Search for Life in the Universe
- The Origin of the Universe
• The Solar System
• Sun, Earth, Planets
• Stars, Galaxies, Cosmology
• The Interstellar Medium
• Observational Astronomy
• Stellar Astrophysics
• Gravitational Astrophysics & Cosmology

Expository works are collected which help make the transition from the theoretical and background information to the applications and potential applications found in the workplaces of the graduates.

Support from Other Collections

The collection for physics and astronomy is further supplemented by collection activities in related fields such as applied mathematics, biology, chemistry, computer science, earth sciences, engineering, medical biophysics, planetary science and statistics.

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