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MATHER LIBRARY AT THE GEOPHYSICAL INSTITUTE,
UNIVERSITY OF ALASKA AT FAIRBANKS
By Julia H. Triplehorn

The northernmost special library in
the United States is the Keith B. Mather
Library at the Geophysical Institute,
University of Alaska Fairbanks. The
Institute is the only American high-
latitude geophysical research facility
covering the areas of space physics,
permafrost, volcanology, seismology,
snow, ice, global change, remote sensing,
and the atmospheric sciences. This paper
will cover the unique aspects of this
library: history, organization, periodical
collection, book collection, special
collections, and patron services. The
library is open Monday-Friday, 8am to
5pm. A combination lock gives after-
hours access for faculty, staff, and
students.

HISTORY
An Act of Congress created the
Institute in 1946 primarily to study the
aurora and participate in the Inter-
national Geophysical Year. The legis-
lation stated that the new Institute
would have a director, secretary, and a
librarian; the library has played an
important role from the very inception
of the Institute. In the late 1960's solid
earth geophysics was added to the
research areas covered. More recently
the Alaska Earthquake Information
Center and the Alaska Volcano
Observatory have been established (in
conjunction with the U.S. Geological
Survey and the State geological survey).
The expansion of research is reflected in
the ongoing development of the library's
collection. In July 1995 a branch library
containing current periodicals and
technical reference materials was
established to serve the Poker Flat
Rocket Range.

This satellite library serves the
technical staff, engineers, and scientists
who visit the range to launch rockets
into the aurora and lower atmosphere.
This expansion is the first of two; the
second will be an optics library in a new
facility which is being built at the range.

ORGANIZATION
The library staff consists of one
librarian and 4 students who each work
20 hours a week. The librarian reports
directly to the Institute Director and has
a joint faculty appointment for teaching
at Rasmuson Library, University of
Alaska Fairbanks. The library is admin-
istered by the Institute and is not a
subsidiary of the Rasmuson Library, al-
though the librarian and her staff work
closely with them on collection development.

The library has an active library committee of eight faculty members, each representing a particular subject area, and one student. The committee assists with book selection and periodical review, library planning, and administration. Their participation has been a major contribution in the conspectus review of the collection and sequential book purchases.

**COLLECTION - PERIODICALS**

Periodicals are the most important part of any scientific collection, and this library is no exception. The library receives 325 current periodicals from around the world, but they are primarily English language. Almost all journals are bound and holdings begin with volume one. The library has no periodicals on microfiche or microfilm, which makes it a unique collection. Many visiting faculty wait to do their library research here because of this factor and the interdisciplinary nature of the collection. All periodical holdings are listed on the Western Library Network database.

The library maintains three storage areas for periodicals: Main Library - 5th Floor Elvey 1980-present; Basement - Elvey 1970-1980; Offsite - University Park School before 1970. Although having the collection scattered in this way is not an ideal situation, it has worked out well. Retrieval is made daily from the offsite storage-area while students and faculty retrieve their own items from the basement.

**COLLECTION - DATA**

The library has extensive paper data collections from various international stations which cover arctic climate, geomagnetism, ionospheric conditions, seismology, and solar phenomena. The most popular sets are those dealing with arctic climate (especially Alaska, Canada, Iceland, and Greenland). This data has become increasingly important as more attention is being shifted to the study of global change.

The library also has a number of unique data sets, including Synoptic Weather Charts of the Northern Hemisphere 1898-1972, Japan Meteorological Agency Weather Maps, European Meteorological Bulletin, and Army Meteorological Team Data for various Alaskan sites.

**COLLECTION - BOOKS**

The library book collection of approximately 13,000 titles supports the research areas of the Institute. Each year approximately 500-600 books are added. At one time the library was given extra funds to expand the collection into the fields of arctic exploration, the history and philosophy of science, physics of music, and educational philosophy—all to provide a greater breadth of intellectual inquiry. These surprising aspects of the collection have added considerable coverage for the researchers' interests.

All books are listed on the Western Library Network.
SPECIAL COLLECTIONS
Besides the periodical, book, and data collections the library has numerous other unique collections:

- **PDF Public Data Files** - Alaska Division of Geological and Geophysical Survey - open file publication from the state survey
- **U.S. Geological Survey Historical Alaska**
  - Geological Library - reference collection on Alaskan Geology
- **Conoco Alaska Collection**
- **John Mertie Collection** - Misc. Alaskan publications and mathematics books
- **Sidney Chapman Collection**
- **I.G.Y.**
- **Auroral Archival Collection**
- **U.S. Army Cold Regions Publications** - extensive collection
- **U.S. Army Meteorological Team Data** - meteorological data from various Alaskan sites
- **University of Alaska Theses** (M.S. and Ph.D) in Geology, and Geophysics
- **In-house Bibliographies** - ongoing
- **Arctic Atmospheric Sciences**
  - Alaskan Volcanoes
  - Alaskan Seismology
  - List of Publications from the Geophysical Institute
  - Alaska Climate Sources

Lectures and handouts on tracking information sources on remote sensing, glaciology, permafrost, atmospheric sciences, secretarial reference tools.

CD-Rom Products available for literature searching: Georef, Inspec - Physics, Arctic and Antarctic Regions, Meteorological and Geoastrophysical Abstracts, Laser catalog, World Meteorological Organization data, and numerous other data discs

CIRCULATION
Books are loaned for the entire semester. If a researcher needs a book, the librarian recalls it and works with the researchers and students so that only one copy is needed.

No periodicals circulate except when they are to be used for copying photographs of publications. Periodical articles are copied either by the user or library staff.

FUTURE
Plans are to break ground next summer for a new Geophysical Institute addition which will include an expanded library. This building is the first of three which will be adjacent to the present building. The new buildings will house the following agencies: Alaska Division of Geological and Geophysical Survey, NASA, Global Change Center, U. S. Geological Survey, National Weather Service, and the U.S. Geological Survey Map Distribution Office.

The new library facility will serve 450 people and will be almost triple the present size. Presently the library seats
8-10 patrons, whereas the new library will seat 125. With this new facility we hope to make the library a one-stop shopping place for arctic and alaskan geophysical information.

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