



LIBRARY
INDIAN INSTITUTE OF ASTROPHYSICS

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OF
ASTROPHYSICS



MAY 1992

Front Cover: *Library stack at Kodaikanal Library main hall*

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1. Library hours & Mail address

Library hours

9 am - 5.30 pm
Monday through Saturday
(except holidays)

The library can be used after the office hours
by prior arrangement with the librarian.

Bangalore

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Indian Institute of Astrophysics
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Kodaikanal

Indian Institute of Astrophysics
Kodaikanal Observatory
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2. Introduction

2.1 Foreword

The Library of the Indian Institute of Astrophysics is more than 200 years old as shown by a hand written catalogue for the years 1794-1812. Since then, the library has been continuously acquiring astronomical literature in the form of books, journals and catalogues, and today it can boast of housing the largest collection in Astronomy in the country. The library collection is distributed among the headquarters in Bangalore and the field stations in Kodaikanal, and Kavalur and the Main Library is located in the Bangalore Campus. A Collection of all the reference material is available at the Vainu Bappu Observatory in Kavalur for the resident as well as the visiting scientists. The library at the Kodaikanal Observatory has books on solar physics and geophysics, since much of the observational work in solar physics continues to be done there. Many old volumes of journals like the Philosophical Magazine,

Nature and Philosophical Transactions are also stored in this library.

IIA Library Provides:

- a comprehensive collection of astronomy and astrophysics literature
- essential literature in other related subjects like, Physics, Mathematics, Electronics and Computer Sciences
- photocopies of publications and other materials held by the library

2.2 Library Committee

The Library Committee, appointed by the Director every two years, functions in an advisory capacity, establishes policies, proposes acquisition of books and journals and provides guidelines for long-range planning. The committee has five members including a Chairman, and the librarian is an ex-officio member.



Bangalore Library : an inside View

3. Collection

3.1 Collection Before 1900

The two hand written catalogues available in the library show that the library came in to existence along with the Madras Observatory at the close of the 18th century. About 100 years later, the Madras Observatory and the library shifted to Kodaikanal. In 1971 during the directorship of Prof. Vainu Bappu, the Kodaikanal Observatory became an autonomous body & was renamed as Indian Institute of Astrophysics. The Institute headquarters was shifted to Bangalore in 1976.

The first catalogue for the years 1794-1812 written by calligraphers, lists 102 books and journal volumes and 52 manuscripts.

The oldest book, *Stellae Martis* by Kepler is available in the library. The library has twenty books published in the 18th century, including three volumes of Flamsteed's *Historiae* (1725), an account of astronomical observations made by W. Wales during the course of his attempted voyage to the South Pole (1725) and a *History of the Royal Society* by Sprat (1734). The oldest journal volume is the *Philosophical Transactions* of 1794, and the oldest almanac available is for the year

1767. The library also has *Greenwich Astronomical Observations made since 1765*. Another valuable collection is the *Annual Report of the Madras Observatory for the year 1792*.

The second library catalogue prepared in 1893, is an improvement on the earlier catalogue. In this, entries were made according to a dictionary format giving each book an entry both by its author and subject, and sometimes also under the name of the observatory from where it was published. Much care was taken in the preparation of this catalogue giving appropriate cross-references wherever necessary. 440 books and astronomical catalogues are listed in this catalogue. A receipt of 105 observatory publications and 31 journals through exchange and subscription is also recorded. This substantially represented the core of all the observatory publications and journals published at that time.

Continuous runs of many astronomical journals like the *Monthly Notices of the Royal Astronomical Society*, the *Astrophysical Journal*, *Publication of the Astronomical Society of the Pacific*, and the *Observatory* are available from volume 1. Some interesting publications of the 19th century include *Goldingham's Astronomical Observations made at the Madras Observatory*, volumes III and IV, *Taylor's General Catalogues of Stars*, *Pogson's catalogues of variable stars*, *Laplace's Mecanique Celeste* in 6 volumes, *Lockyer's works* including his *Recent and Coming Eclipses* and *History of Astronomy* by *Narrien*.

3.2 Books

The major collection of the Library is in the field of Astronomy & Astrophysics.

Catalogue
of Books in the Library of the
Madras Observatory.
1893.

However, there are a number of books on Physics, Mathematics, Geophysics, Electronics, Photography, Computers and Biographies. Books are classified and arranged on the shelves according to the UDC classification scheme. The Library follows an open access system and a stack guide which gives a broad subject area of the books located in that shelf is displayed at the entrance to the stacks. After referring to books, journals and any other material in the Library, the readers are asked not to reshelve or refile anything, but leave the material on a table near the book stacks. The Library staff replaces the items.

The library catalogue is still in the card format placed in card cabinets. This will be replaced with the on-line catalogue which makes it easier to search by the author, title, series title and subject. Subject headings have been provided using Astronomy and Astrophysics Thesaurus.

The new arrivals are displayed for 2 weeks on the counter and their list is posted on the Notice Board. Users can reserve for the new books which become available for lending after the display period.

3.3 Journals

The Library subscribes to 120 Journals and has 17,000 bound Journals at present. Nature, ApJ, MNRAS and Electronics are received by air mail. The current journal issues are displayed in the display racks alphabetically. The bound volumes of journal are shelved alphabetically by title. The loose issues of journals are stored in boxes and kept with the corresponding bound volumes. Specific articles appearing in journals not subscribed by the Library may be requested through the Inter-Library Loan Service.

A catalogue of the entire journal collection is available in the circulation counter.



3.4 Observatory Publications, Annual Reports, Newsletters, Reprints & Preprints

In addition to the subscribed journals the Library receives observatory publications from 73 Institutes, and Observatories, Newsletters from 29 Institutes and Annual Reports from 15 organisations from all over the world. The Library also has a good preprint collection. It receives preprints from 47 institutions. These preprints are stored in boxes and selectively weeded out once a year. However those, which do not find a way into journals are available with the library. Only 5 observatories continue to send their reprints.

3.5 Reference Works

A small collection of books are marked as "reference". They include the Encyclopaedias, Dictionaries and Atlases and are to be used only in the library. The best source for Astronomy & Astrophysics literature is the Astronomy and Astrophysics Abstracts published by Rechen Institute, Heidelberg and the library has all the volumes from 1968. Physics Abstracts earlier titled Science Abstracts are also available from 1929 to 1981. Annual Review of Astronomy and Astrophysics volumes are for reference only. One copy of all the important text books, used mostly by the students and a few of the star catalogues are also marked as "reference".

3.6 Atlases and Catalogues

The Library has a large collection of astronomical atlases and catalogues. The atlases have been shelved separately and are easily accessible. Special wooden cabinets have been designed to store Palomar Sky Survey atlas. Subject cards in the catalogue

give an entire list of atlases and catalogues available in the Library.

3.7 Microfiche Collection

The Microfiche collection of about 2000 is stored in a wooden cabinet. Many star catalogues including the IRAS catalogue are in Microfiche form. The collection also includes Microfiches which come along with journals like MNRAS, ApJ Supplement, and Astr. & Astrophys. supplement. Hardcopies of these microfiches can be made using the microfiche reader-printer.

3.8 Slides and Photographs

The Library has a good collection of slides and photographs. There are about 600 slides of astronomical objects, of diagrams used as teaching aids, and of the Institute etc. The slides are placed in slide cabinets and are catalogued under broad subject headings. They may be borrowed by the staff of the Institute for colloquia, lectures and slide shows.

The photographs relate to important events in the history of IIA. Some pictures taken during the former director John Evershed's time were donated by Ms Evershed during her visit to the Institute. The Library also keeps pictures of astronomical objects, IIA buildings, instruments and garden.

3.9 Vainu Bappu Collection

The Library has a special collection of books of Prof. Vainu Bappu donated by Mrs Yemuna Bappu to the Library in 1983. A total number of 795 volumes of books and bound volumes of Journals were given which have been shelved and catalogued separately.



3.10 Kodaikanal Library

The Library at Kodaikanal is situated in a separate building. It has a lecture hall and a stack room. The lecture hall has shelves reaching the roof, and the major collection of older observatory publications and journals are stacked here. The Hall has been used as a lecture hall for National Workshops and Symposia.

3.11 Kavalur Library

The Kavalur library is located in the Vainu Bappu Observatory annexe. The library is easily accessible to all the observers. It has a small collection of books in Astronomy, Astrophysics and a few books in Physics and Mathematics. Second copies of all the

← Vainu Bappu Collection



Kodaikanal Library.



Kavalur Library

important star catalogues and atlases, including one set of Palomar Sky Survey Charts are stacked in this library. It also receives 20 important journals including, ApJ, ApJ Supplement, MNRAS, PASP, Astronomy & Astrophysics, and Mercury.

4. Library Services & Facilities

4.1 Lending policy

The library has a liberal lending policy for its staff, the only condition being that the books should be available in the campus when required. Once in 3 months books are recalled. Members can reserve books on a card when new books are displayed.

4.2 Inter-Library Loan

The literature not available in-house, can be obtained either from local libraries or from other astronomical institutes. Many of the astronomy institutes are a part of FORSA (Forum for resource sharing in Astronomy & Astrophysics) and inter-library loan requests are handled very fast. Institutes which form FORSA are, TIFR Bombay, PRL Ahmedabad, IUCAA Pune, RRI Bangalore, Astronomy Dept., Osmania University, Hyderabad, U.P. State Observatory, Nainital, GMRT, Pune and the TIFR Radio Astronomy Centre, and most of them are connected on E.Mail.

In Bangalore, the Indian Institute of Science and the Raman Research Institute libraries are extensively used. A number of Journals are borrowed from RRI and TIFR Centre, for display. The contents pages of some of the journals are also received. In turn the IIA Library loans a few journals to RRI for display. The recently formed Bangalore Science Libraries Group includes all the important libraries in the city and has helped in promoting resource sharing among science libraries.

4.3 Search Services

Recently the IIA Library became a member of the Easynet through the help of Videsh

Sanchar Nigam Ltd., Bombay. Easynet is a gateway by which one can access hundreds of databases on-line all over the world. It analyses our requests, selects the databases, enters the correct term and then presents the results. There are nearly 900 databases which we can search. These include the Science Citation Index, Physics Abstracts, and the Biographies of Men and Women in Science and much more. The information is acquired in a matter of a few minutes. The system allows us to opt for menu search, helpful for beginners, where Easynet makes all the decisions and presents the results, while the command search is a little more complicated and the user needs to get acquainted with various commands and acquire some knowledge of the database features. The latter method is less expensive. IIA Library has already made a few searches using this facility.

Since the Astronomy and Astrophysics Abstracts are part of a database host called STN (Scientific and Technical Information Network) and STN is not included in Easynet, a separate subscription has been made for this. STN has a Physics database where Astronomy and Astrophysics Abstracts from 1968 are included. This database is very useful to us especially since the printed version usually lags behind by one year, whereas STN gives us access to information as recent as one month. The Library has also acquired a password for SIMBAD of the Stellar Data Centre at Strasbourg. SIMBAD (Set of Identification, Measurements and Bibliography for the Astronomical Data) was created by merging CSI (Catalogue of Stellar Identification) and BSI (Bibliographic Star Index). Later the database was expanded by the addition of source data from many catalogues connected to CSI and by new

literature references. Today SIMBAD has data on 600,000 stars, and 100,000 non-stellar objects. For each object it gives the basic data, cross-identifications, observational data and general bibliography, including full references. The bibliography is complete since 1950 for the stars and since 1983 for all non-stellar objects.

The IIA Library is also making use of E-Mail to get the IAU circulars from the Central Bureau of Astronomical Telegrams. The Library has also requested for the membership of National Extragalactic Database (NED) at NASA.

4.4 Translations

The Library provides a translation service. Translation of articles in foreign languages like French, German & Russian are arranged through the Foreign Languages Division of the Indian Institute of Science and the Indian National Science Documentation Centre.

4.5 Alerting Services

Library has two alerting services

a) Recent Research in Astronomy & Astrophysics

This lists the titles of papers published in unconventional journals. It excludes all journals listed in Current Contents and is circulated to several institutions and individuals in the country.

b) IIA preprint list

The IIA preprint list includes the titles of the papers sent for publication by the IIA staff. This is a quarterly list and is mailed to 150 addresses. Xerox copies of the articles are provided by the Library on request.

4.6 On-line catalogue

The IIA Library on-line catalogue is a major new facility for the users. The database of books is being built up everyday, and now it is possible to get information about holdings not only at IIA, Bangalore, but at other locations like Kavalur and Kodaikanal as well. It also incorporates many other details like the price, the physical format etc in addition to what the card catalogue contains. The software package called CDS/ISIS, supplied by the UNESCO, is being used in creating the database. It is a powerful information retrieval software, also menu driven and user friendly. The entire database will be accessible on-line shortly.

Efforts are also being made to link the database to the circulation control process. When the linking is effected, the library will start the check-in and check-out of library materials to the users on PC.

The list of the entire journal collection subscribed by the library and the day to day arrivals will be accessible through the Serials Control System.

4.7 Microfiche Reader Printer

The library has a well equipped reprographic unit including a microfiche reader/printer which can make hard copies of microfiche/microfilm on plain paper.

4.8 Photocopying

The library has a photocopying machine, and the photocopying service is extended to all the staff members of IIA. It is encouraged to photocopy only the essential materials. The requisition form for the Photocopying is available in the Library counter.

5. Printing & Publishing

5.1 Printing Section

The library has a small off-set machine and some of the library requirements like the bookcards, and covers for library publications are printed here.

5.2 Kodaikanal Observatory Bulletins

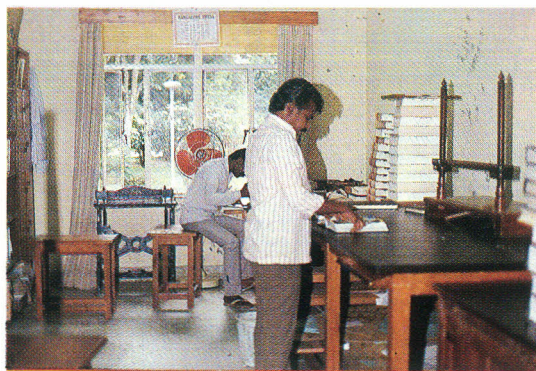
The two publications of the Institute namely the Kodaikanal Observatory Bulletins and IIA Technical Reports are handled by the Library. Kodaikanal Observatory Bulletins were started in 1905 and many important papers including Evershed's paper on solar prominences were published in these bulletins. From Bulletin No. 177 the KOB split into series A, B, C. Series A, was research papers, Series B, published Solar data and Series C, the Magnetic & ionospheric data. After Bulletin Number 210 the format was changed again and the new series started in 1977 which had only research papers. Series B&C were discontinued. The current volume in the new series is Vol.11. The Director, IIA is the ex-officio editor for both the Bulletin and the Technical Report. Both accept papers from the IIA staff, except in the case of Proceedings of conferences held under the auspices of IIA, where papers from other scientists are also printed. Some special issues of the Bulletin include, Proceedings of the Colloquium held in commemoration of the 75th anniversary of the discovery of the Evershed Effect (KOB Vol. 4) Proceedings of the National Workshop

on Solar Physics, (KOB Vol. 6), Proceedings of the Second National Workshop on Solar physics (KOB Vol. 9) and Proceedings of the National Workshop on Supernova 1987A, (KOB Vol. 10). The current Vol. 11 of KOB is the Proceedings of the 18th Optical Society of India Symposium, held in IIA in 1990.

KOB volumes are posted to 150 organisations. IIA Technical Reports accept mainly papers on instrumentation. Kodaikanal Observatory Memoirs were started in 1909. Only numbers 1 & 2 of vol. 1 were published.

5.3 Binding Section

Library is attached with a fullfledged Binding Section. The Binding Section has been in operation since 1901 and has



maintained a very high standard in binding since then. While binding, care is taken to use quality materials and same colours for a particular journal title for maintaining its identity.

6 Library Projects

6.1 Bibliography on Solar Eclipses

The 1980 totality band of the Solar Eclipse passed through India. In this connection the library compiled a complete bibliography of the published papers on solar eclipses. This list is classified according to the various aspects of the solar eclipse phenomenon. Since IIA Library does not have abstracts of work prior to the publication of the *Astronomy & Astrophysics Abstracts*, the library at Nizamiah Observatory, Hyderabad, sent the xerox copies of listings from *Astronomische Jahresbericht*, which helped in the compilation of the bibliography.

6.2 Special Publications

The Library is more than 200 years old and its archival collection is brought out as special publications.

Special publication No.1 is a catalogue of all the books published before the 20th century and which are available in the Library. The list is arranged in an alphabetical order.

Special publication No.2 is a catalogue of observatory publications and it was compiled with the intention of listing all the publications before the 20th century available in the Library. There are many titles which were received regularly by the Kokaikanal Observatory. However there are some not so regular. The irregular publications though in few volumes are also listed for record purposes.

The 2nd part of this catalogue contains the titles of Journals published before the 20th century and these journals are listed alphabetically title wise. Most of these titles are still being received in the library.

6.3 Lecture notes

Library published two volumes in the Lecture note series :

(1) Dynamics of stellar systems by Prof. S.M. Alladin, 1977

(2) Lecture notes on Radiative transfer in stellar envelopes by Prof. A. Peraiah, 1991. Both the volumes have been circulated by the library.

6.4 Supernova 1987A

To commemorate the 1st anniversary of Supernova 1987A, a workshop was organised at IIA. To help the participants of the workshop the Library staff collected and compiled a list of preprints and reprints on Supernova 1987A. Library keeps updating this list.

6.5 Astronomy and Astrophysics Thesaurus

IAU Commission No.5 came out with the proposal of compilation of a Thesaurus on Astronomy and Astrophysics, in 1987. This project was designed to be a joint venture among library professionals of 8 Astronomy Libraries all over the world. The IIA Library is one of the 8 libraries participating in this project. The version 2 draft of the thesaurus was submitted during the IAU General Assembly in 1991. The final version of the thesaurus will be prepared using a software called LEXICON. The Librarian of the Anglo-Australian Observatory at Australia is the co-ordinator and chairman of the project, who is getting the thesaurus compiled on a computer. This thesaurus is seen as a valuable reference tool for librarians and as standard for use in the indexing & abstracting of astronomical papers and other publications.

7. Library Staff

1. A VAGISWARI
2. H.N. MANJUNATH
3. CHRISTINA LOUIS
4. SANDRA RAJEEVA

Librarian
Technical Associate (library)
Asst. Librarian
Documentation Associate

Technical & administrative staff

1. R. KRISHNAMURTHY
2. K. REVATHI
3. A. VERONICA
4. D. KANAGARAJ
5. P. POSE
6. M. SUBRAMANI
7. Y. YARAPPA
8. P.N. PRABHAKARA
9. M. VENKATESHA