

From Macro to Micro Management of Information in Indian Institute of Astrophysics Library



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Introduction

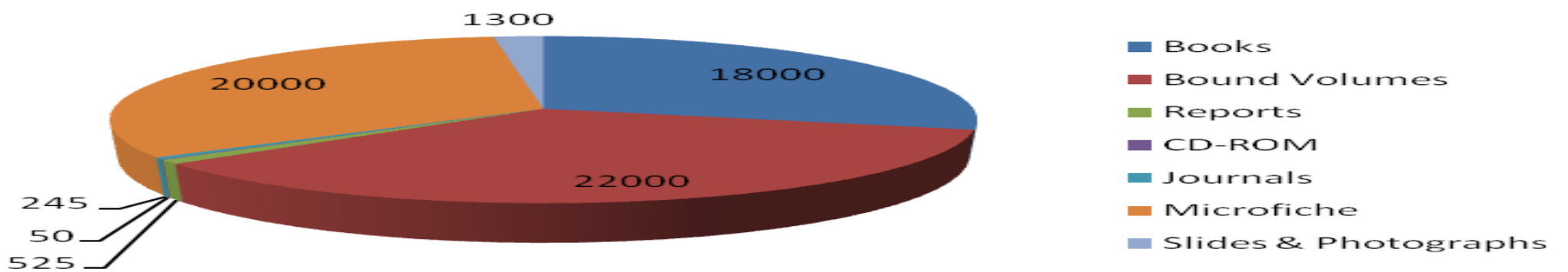
This poster presents an introduction to collections and services of IIA library and the libraries at field stations. It briefs about Open Access Repository, Archives, Bibliometrics & Scientometric studies and Future Programs of the library. The ability to access, share and use timely information is critically important to high performance. IIA library strives to fulfill this by integrating and managing all the diverse information and package it to suit the demands of research and development of the Institute. The Library has started the micro level management of Information through article delivery service and access to e-articles from most of the electronic journals and online databases, thus towards creating the Digital Library of IIA

Indian Institute of Astrophysics Library

The library of Indian Institute of Astrophysics is more than two hundred years old. 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. Our library provides the Indian Institute of Astrophysics faculty, students and visiting scholars from around the globe with ready access to complete collections of print and online astronomy resources.

- Well balanced core collection in Astronomy, Astrophysics and related physics etc
- Meets the information needs of academic & technical staff of IIA Bangalore, CREST Campus at Hosakote, and other field stations VBO at Kavalur, Solar Observatory at Kodaikanal, IAO at Hanle, and Radio Observatory at Gauribidanur
- The library is fully automated using the library software LIBSYS
- In the micro level, the digital repository consisting of IIA publications is established which is available in the network online access

Collections in IIA



Information Services at IIA and Field Stations

- Reference Service
- Online Public Access Catalogue (Computerized catalogue of books & journals)
- Current Awareness Service (CAS)
- Selective Dissemination of Information (SDI)
- Content Alert Service
- Inter Library Loan
An exchange of information among the libraries in Bangalore through a well established network
- On-Line Databases
Facilitates the access to more and more on-line databases in all the locations
- E-Journal Access
Multi-site license is being negotiated with all the leading publishers
- Document /Article Delivery Services:
IIA library has facilitated the access to 160 article and 32 books for our academic & technical staff from non-IIA collection during the period April 2007 to March 2008
- Photocopy Service
- Maintaining the dynamic IIA Library web page

Digital Library of Indian Institute of Astrophysics

Institutional Repository:

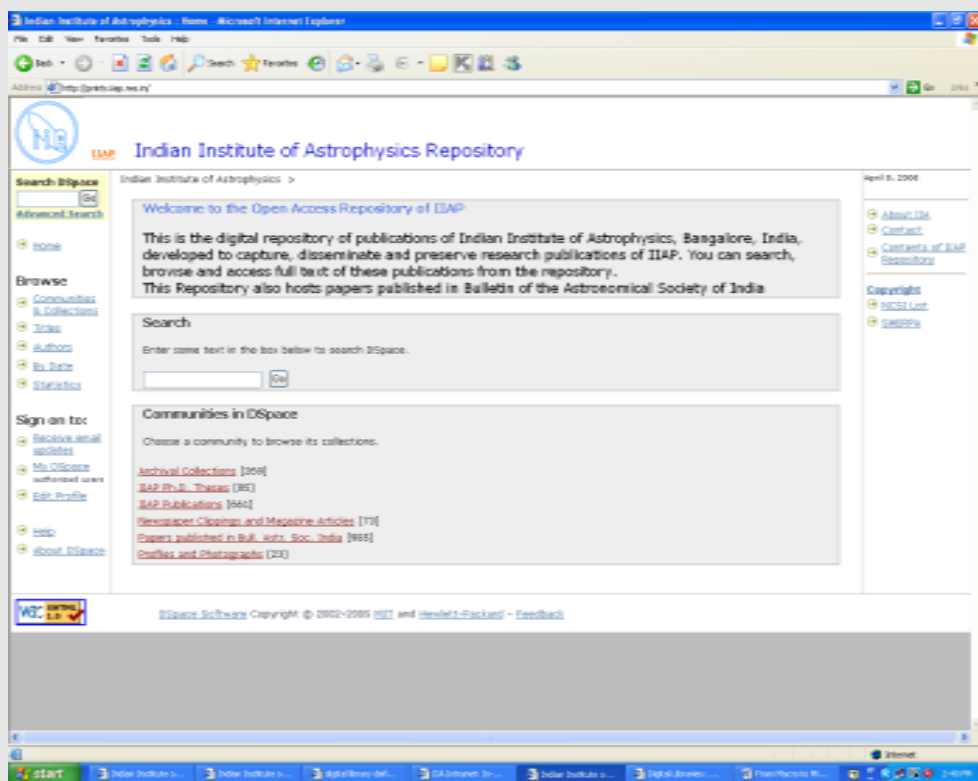
An Institutional Repository is an online locus for collecting, preserving, and disseminating -- in digital form -- the intellectual output of an institution, particularly a research institution.

The four main objectives for having an institutional repository are:

- To create global visibility for an institution's scholarly research
- To collect content in a single location
- To provide open access to institutional research output by self-archiving it
- To store and preserve other institutional digital assets, including unpublished or otherwise easily lost ("grey") literature (e.g., theses or technical reports)

Open Access Institutional Repository of IIA:

To archive the research publications of IIA Open Access it was started in the year 2004 in the institute. It took 15 months to make it open to the public from its inception. We have selected the open source digital library software called "Dspace" which is more appropriate to archive our contents (<http://www.dspace.org>). We have classified the contents as communities and sub-communities like Archival Collections, IAP Ph.D. Theses, IAP Publications, Newspaper Clippings and Magazine Articles, Papers published in Bull. Of Astr. Soc. Of India, and Profiles and Photographs. Each and every sub-communities is subdivided into collections. We have successfully uploaded the full-text of articles and currently the repository has 2050 items. (<http://prints.iap.res.in>)



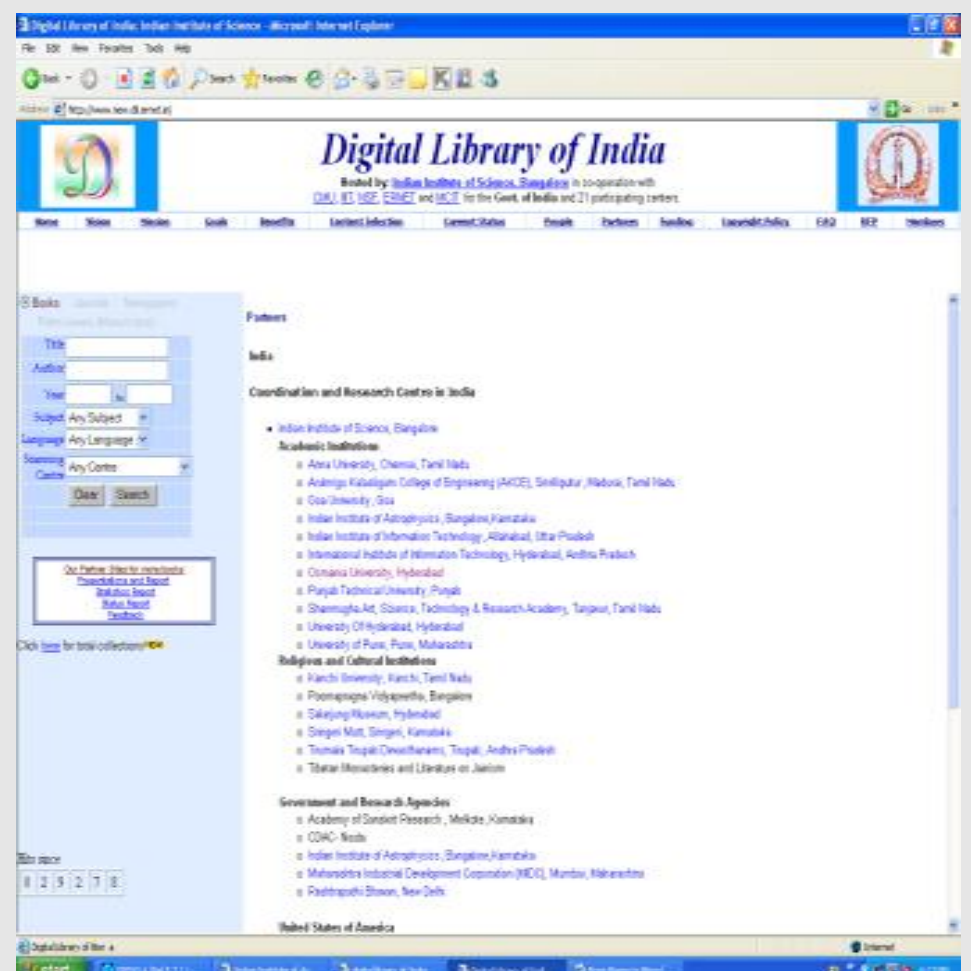
Statistics of Indian Institute of Astrophysics Repository on Prints:

Dspace has an in-built mechanism of collecting the statistics about IIA repository, like General Overview, Archive Information, Items Viewed, All Actions Performed, User Login, Words Searched etc.

IIA Library as a Partner in the Digital Library of India Project:

Digital Library of India Project is hosted by Indian Institute of Science, Bangalore in Co-operation with CMU(Carnegie Mellon University, Pittsburgh), IIT(International Institute of Information Technology, Hyderabad), (National Science Foundation's, Arlington), ERNET(Education & Research Network, New Delhi), TDIL(Technology Development for Indian Languages, New Delhi). For the first time in history, the Digital Library of India is digitizing all the significant literary, artistic, and scientific works of mankind and making them freely available, in every corner of the world, for our education, study and appreciation and for all our future generations.

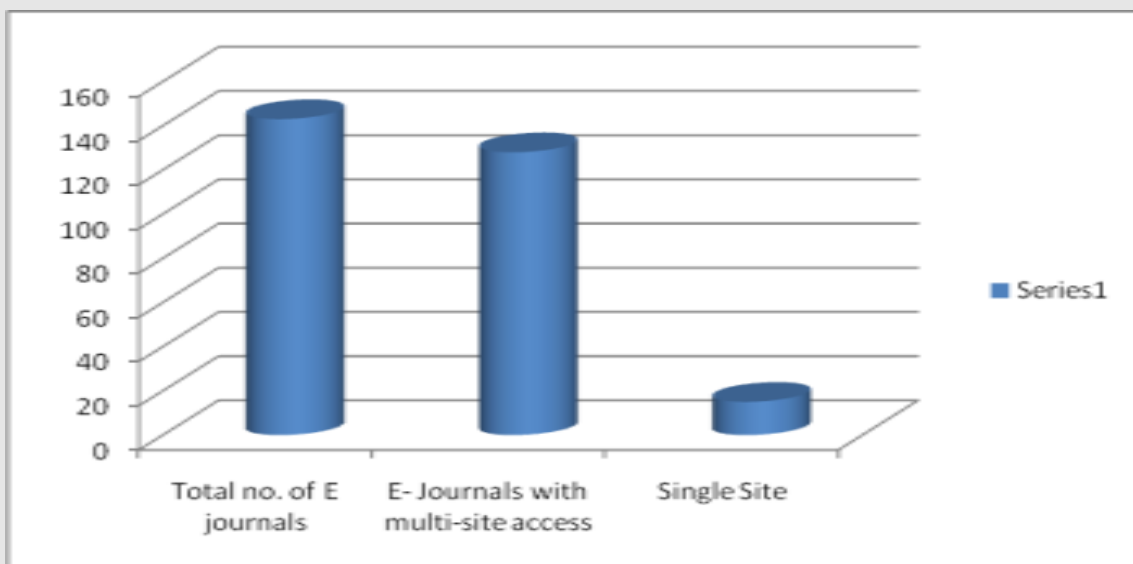
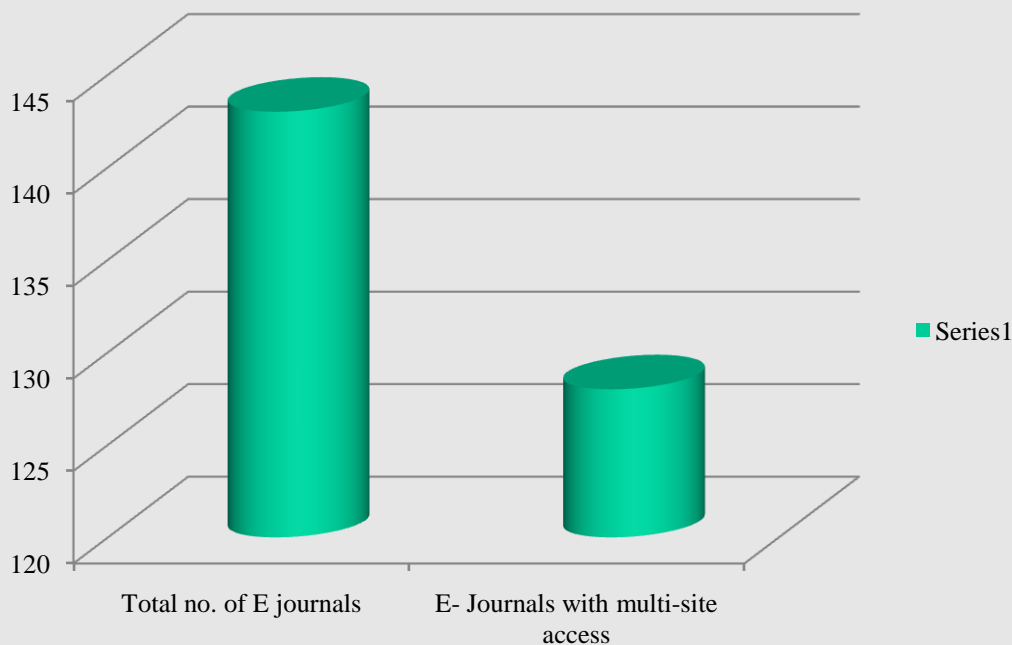
Our Institute is one of the participating centers with the Digital Library of India, Million Book Project. (<http://www.new.dli.ernet.in>). IIA library has contributed 1500 books in digitized form towards this joint project. Care has been taken to digitize only those books which are out of copyright.



Electronic Journals

IIA library subscribes to 245 journals out of which 139 titles can be accessed electronically. The electronic access is enabled through the IPs of the machine available in all the centres and field stations of the Institute.

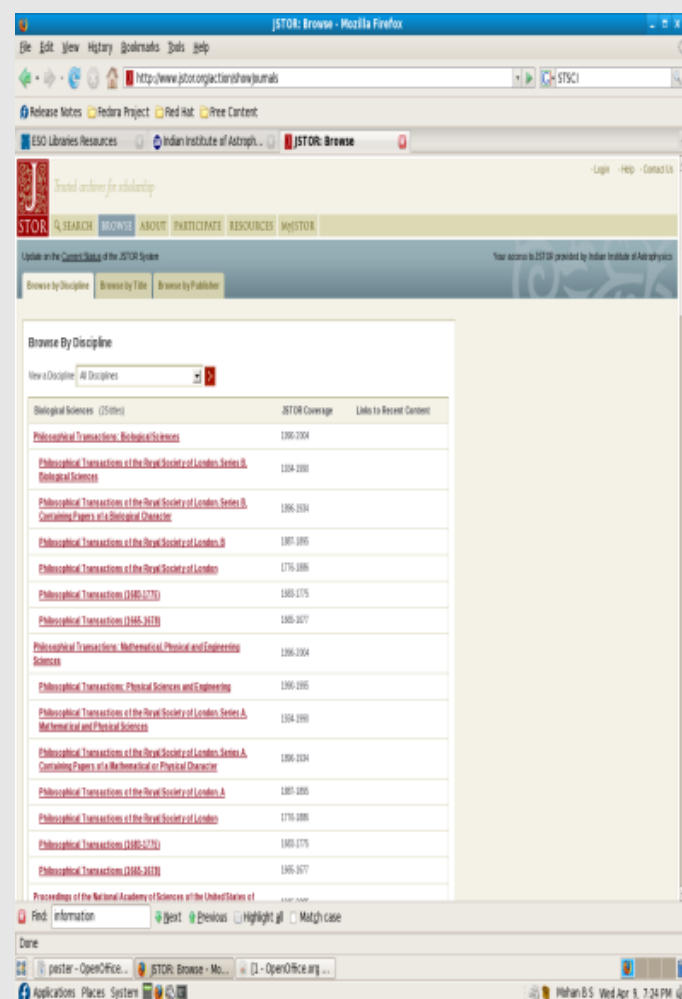
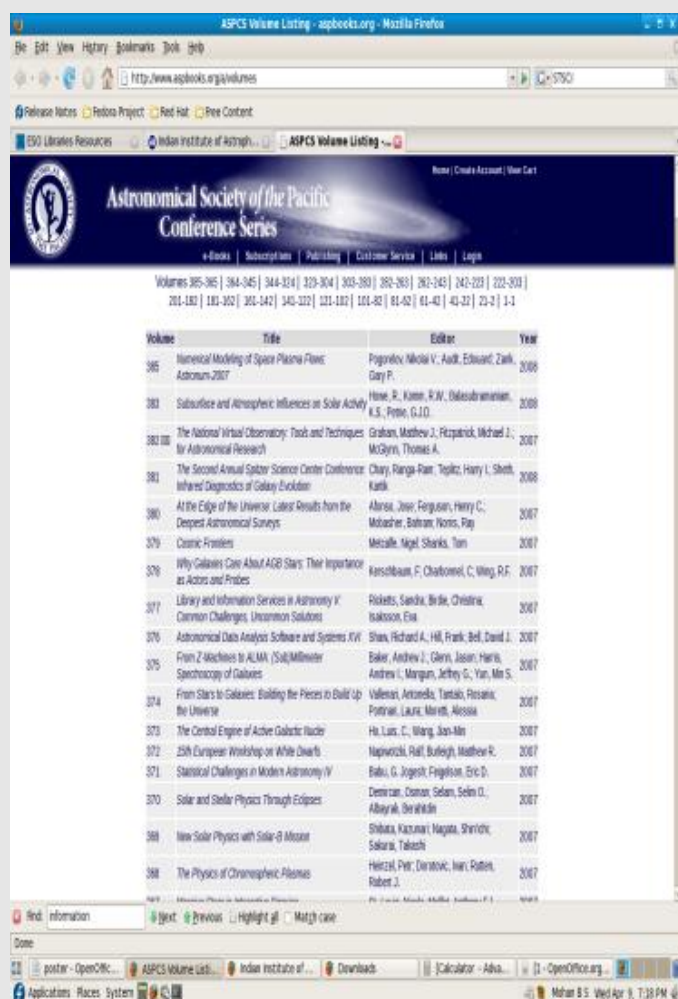
E-Journals are accessible from http://www.iiap.res.in/lib_journals.htm



On-line Databases

Currently IIA library subscribes to five databases on yearly renewal basis. More and more databases are being added to the collection every year as and when the archives of various journals are offered by the publishers.

On-line Databases are accessible from http://www.iiap.res.in/lib_online.htm



On-line Databases

The screenshot shows the EBSCOhost search results page for Scientific American. The search criteria are set to "Date of Publication from 200801". The results list 145 items, with the first seven displayed. Each entry includes the article title, author, journal name, volume, issue, page numbers, and a link to the PDF full text.

Rank	Title	Author	Journal	Volume	Issue	Page	Link
1	Cover	Staff Editor	Scientific American	April 2008	Vol. 298 Issue 4	p8, 1p	(JN 32413241) PDF Full Text (38K)
2	Table of Contents	Staff Editor	Scientific American	April 2008	Vol. 298 Issue 4	p8, 3p	(JN 32413242) PDF Full Text (78K)
3	From the Editor	Remie, John	Scientific American	April 2008	Vol. 298 Issue 4	p12, 1p	Abstract Future Facts [ABSTRACT FROM AUTHOR] (JN 32413243) PDF Full Text (37K)
4	Letters	Staff Editor	Scientific American	April 2008	Vol. 298 Issue 4	p14, 2p	Abstract The Semantic Web; Many Worlds; Emissions Trading [ABSTRACT FROM AUTHOR] (JN 32413244) PDF Full Text (37K)
5	No, Not and 150 Years Ago	Schieff, David C.	Scientific American	April 2008	Vol. 298 Issue 4	p20, 1p	Abstract Hoyle on Hitler; Our Readers?; Killing Beady [ABSTRACT FROM AUTHOR] (JN 32413245) PDF Full Text (38K)
6	Updates	Yan, Philip	Scientific American	April 2008	Vol. 298 Issue 4	p22, 1p	Abstract Nanobots; Offshore Wind Power; Synthetic Genome; Stress at Work [ABSTRACT FROM AUTHOR] (JN 32413246) PDF Full Text (38K)
7	Unlikely Gifts	Sin, Guy	Scientific American	April 2008	Vol. 298 Issue 4	p24, 2p	Abstract Recent economic growth in sub-Saharan Africa may not be sustainable [ABSTRACT FROM AUTHOR] (JN 32413247) PDF Full Text (38K)
8	Digital Diet	Elio, David	Scientific American	April 2008	Vol. 298 Issue 4	p25, 2p	Abstract Computing industry gets serious about energy conservation [ABSTRACT FROM AUTHOR] (JN 32413248) PDF Full Text (38K)

The screenshot shows the SpringerLink page for the "Lecture Notes in Physics" book series. It provides details about the series, including its focus on physics and related fields, and lists various titles available in the collection.

Title	Author	Year	Link
Magnetics: A Synchrotron Radiation Approach	Add to marked items
Quarks and Leptons From Unified Superstring	Add to marked items
Large-Coupling Systems	Add to marked items
Lenses and Mirrors	Add to marked items
Physics of Active Galactic Nuclei at all Scales	Add to marked items
Analytical and Numerical Approaches to Mathematical Relativity	Add to marked items

The screenshot shows the homepage of the SAO/NASA ADS Abstract Service. It provides information about the service, including the number of records and the types of journals and preprints included.

ADS Abstract Service

This site is hosted by the **Computational Facility at the Harvard-Smithsonian Center for Astrophysics**.

The SAO/NASA Astrophysics Data System Abstract Service provides a gateway to the online Astronomy and Physics literature. You can navigate this content using the following query interfaces:

- Basic Search**, which searches the entire body of literature (5,715,348 records) currently indexed in the ADS.
- Astronomy and Astrophysics Search**, an advanced interface which searches the 1,511,902 records currently in the Astronomy database, including 130,946 abstracts from Planetary Sciences and Solar Physics journals.
- Physics and Geophysics Search**, an advanced interface which searches the 4,299,689 records currently in the Physics database, including 426,688 abstracts from *APS* journals and 283,246 abstracts from *APS* conference proceedings.
- arXiv Preprint Search**, an advanced interface which searches the 470,048 records consisting of all the papers published in the *arXiv e-print archive*.
- Science Education Search**, a basic interface to the literature in Science Education Research and related publications (a selected subset of publications from the above databases).

Related Sites

Each database contains abstracts from articles and monographs published in the different disciplines. The databases cover all the major journals, major review journals, conference proceedings, several Observatory reports and newsletters, many NASA reports, and PhD theses.

The arXiv e-print database contains preprints submitted to the *arXiv e-print archive*. ADS maintains this database to allow searches on the latest literature being published, with links to the fulltext available from the arXiv.

The screenshot shows the homepage of the Physical Review Online Archive (PROLA). It features a navigation menu, a search bar, and a table of contents for various Physical Review journals.

Physical Review Online Archive (PROLA)

What's new in PROLA (Updated April 9, 2008)

The *Physical Review Online Archive (PROLA)* is the American Physical Society's online archive for *Physical Review Letters*, *Reviews of Modern Physics*, and *Physical Review A-E*. It contains all APS journal articles published from 1893-2004. Each January, another year is added to the archive. Searching and browsing abstracts are free, however, a **subscription** is needed to access the underlying articles. Please send questions or feedback to prola@aps.org.

	1958-1969	1970-1979	1980-1989	1990-2004	2005-Present*
Physical Review Letters (1958 - Present)	Vol. 1-23	Vol. 24-43	Vol. 44-64	Vol. 65-93	Vol. 94-100

	1970-1979	1980-1989	1990-2004	2005-Present*
Physical Review Series III (1970 - Present)	Vol. 1-20	Vol. 21-40	Vol. 41-70	Vol. 71-77
Phys. Rev. A	Vol. 1-20	Vol. 21-40	Vol. 41-70	Vol. 71-77
Phys. Rev. B	Vol. 1-20	Vol. 21-40	Vol. 41-70	Vol. 71-77
Phys. Rev. C	Vol. 1-20	Vol. 21-40	Vol. 41-70	Vol. 71-77
Phys. Rev. D	Vol. 1-20	Vol. 21-40	Vol. 41-70	Vol. 71-77
Phys. Rev. E	N/A	N/A	Vol. 47-70	Vol. 71-77

	1913-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969
Physical Review Series II (1913 - 1969)	Vol. 1-14	Vol. 15-34	Vol. 35-56	Vol. 57-76	Vol. 77-116	Vol. 117-188

	1893-1900	1901-1912
Physical Review Series I (1893 - 1912)	Vol. 1-11	Vol. 12-35

	1929-1949	1950-1969	1970-1989	1990-2004	2005-Present*
Reviews of Modern Physics (1929 - Present)	Vol. 1-21	Vol. 22-41	Vol. 42-61	Vol. 62-76	Vol. 77-80

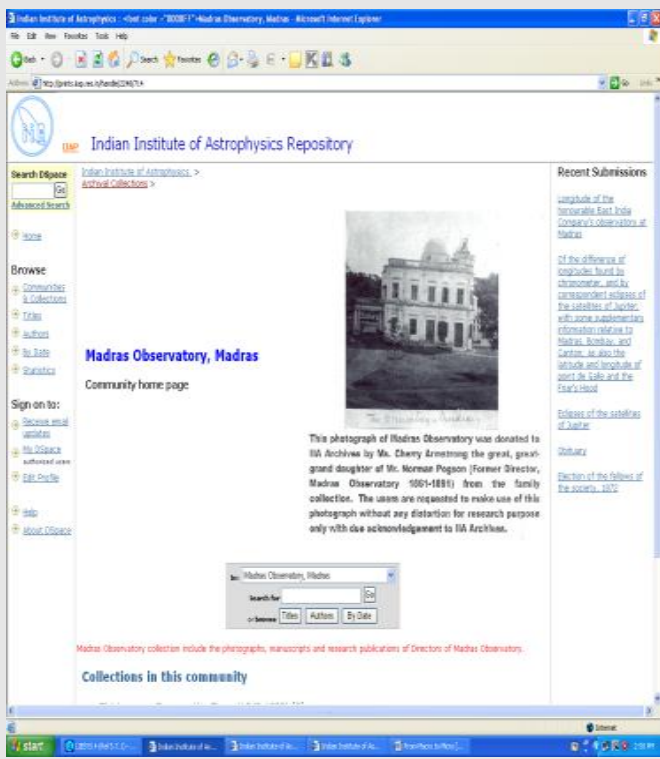
	1998-Present	2005-Present
Physical Review Special Topics	Vol. 1-11	Vol. 1-4
Phys. Rev. ST Accel. Beams	1998-Present	2005-Present
Phys. Rev. ST Physics Ed. Research	1998-Present	2005-Present

Preserving the Past for Future Use:

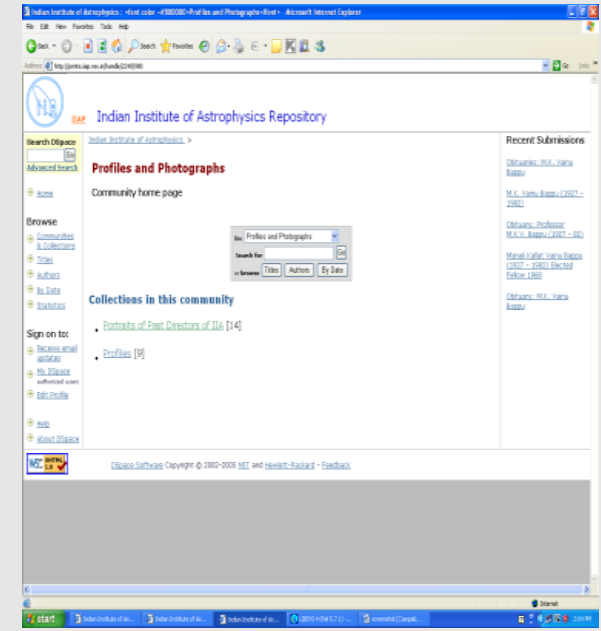
Virtual Archive

IIA Open Access Repository contains all the publications of IIA staff and then Ph.D theses. In addition to this IIA library has taken the responsibility to include the scientific contents of IIA which are of historical importance in the repository. Considerable effort has been put in during last two years for collecting, organizing and preserving and digitizing these materials. We have classified the old documents according to the location and period wise. In every community we have created sub-communities of individuals and their research work done in all observatories of the Institute.

IIA Open Access Repository



Also, the information published in the archival Newspapers and magazines articles are included as a separate community

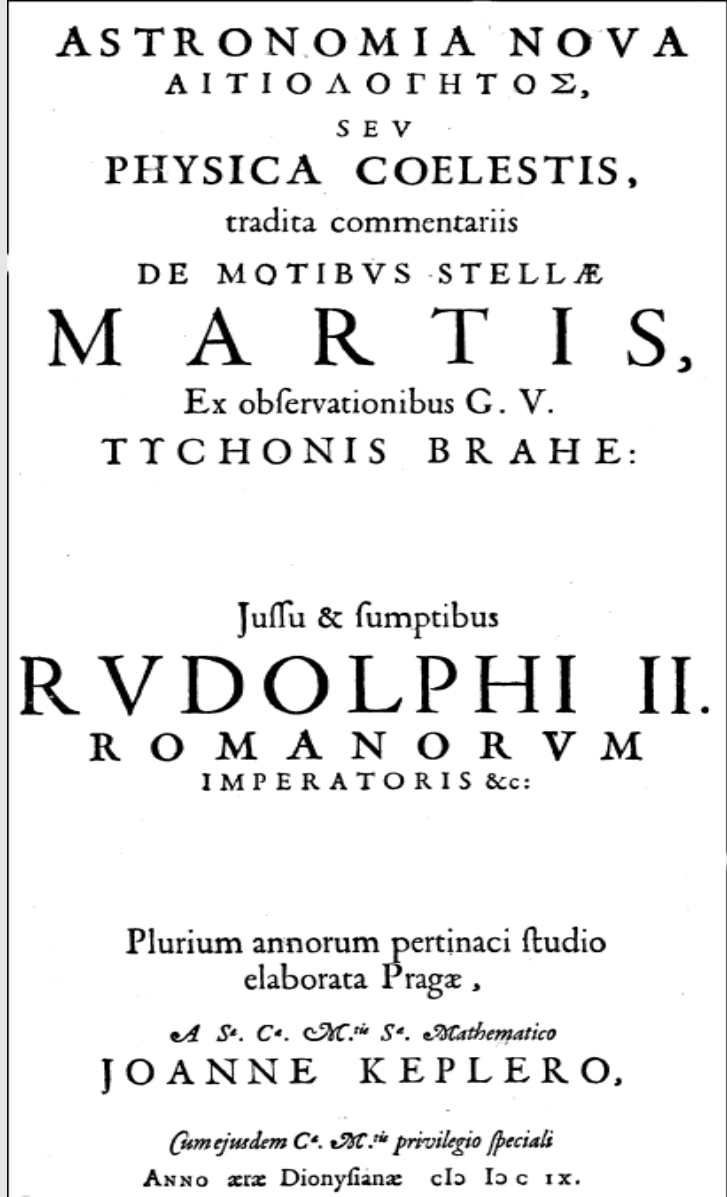


Physical Archives

Recently IIA library has established a physical archive with professional display of historical materials of the Institute.



1609 Kepler's Astronomia Nova – Oldest Book



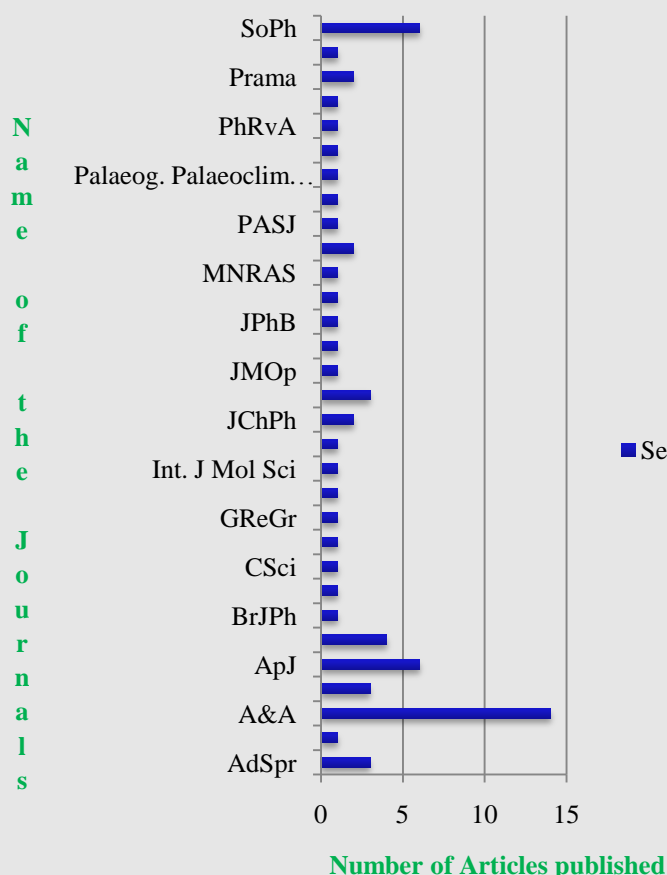
IIA Library provides the service of Bibliometric and Scientometric studies using the publication of IIA Scientists.

Publication patterns

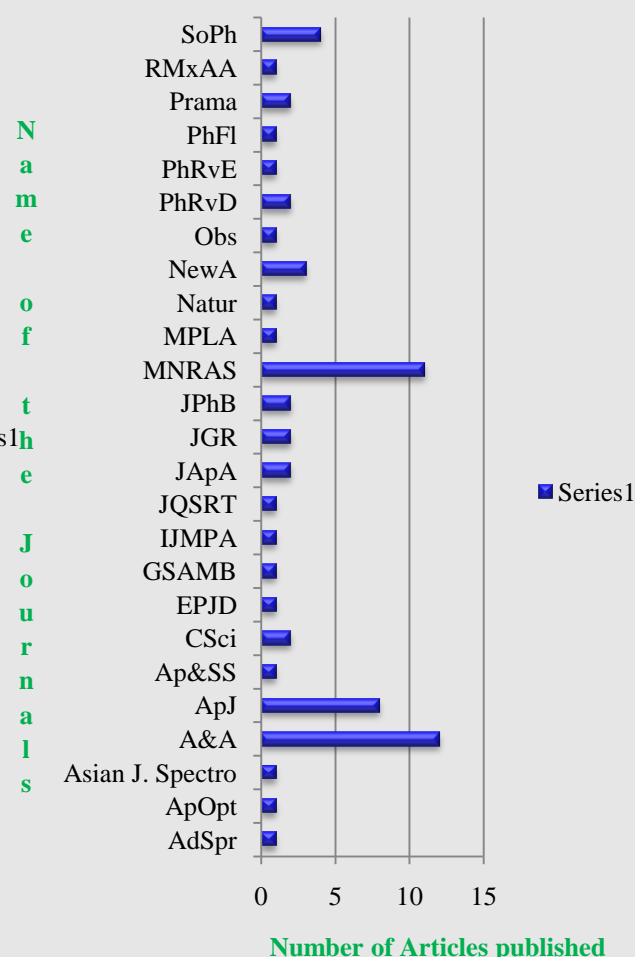
Studies of publication patterns, also known as bibliometric or quantitative studies are useful indicators of scientific productivity, trends, emphasis of research in various disciplines, and of researchers' preferences for publication outputs. Results of such studies may be very useful in decision making in research administration and planning, in collection development and use in libraries. These results further enable policy makers in different organisations and funding agencies to evaluate their decisions on the awarding of grants to individuals and institutions and also towards planning of the future projects.

The publication pattern of IIA academic and research scientists for a period of five years, 2004 – 08 is given below. The subject fields includes astronomy, astrophysics, geophysics, theoretical physics and optics.

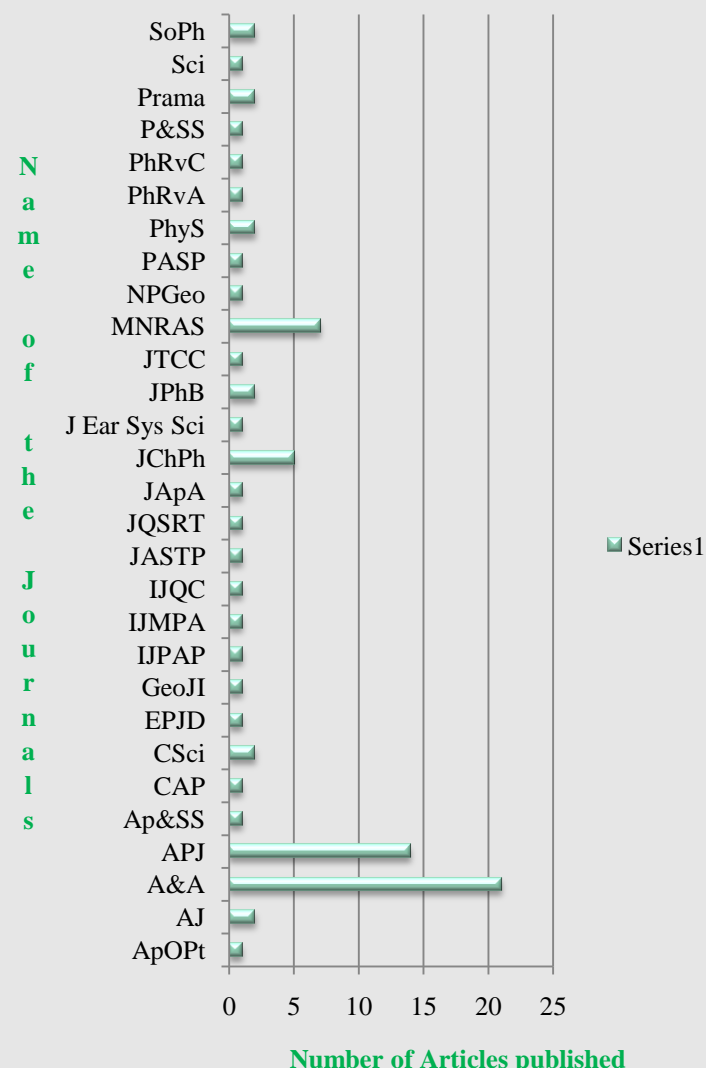
IIA Publications - 2004



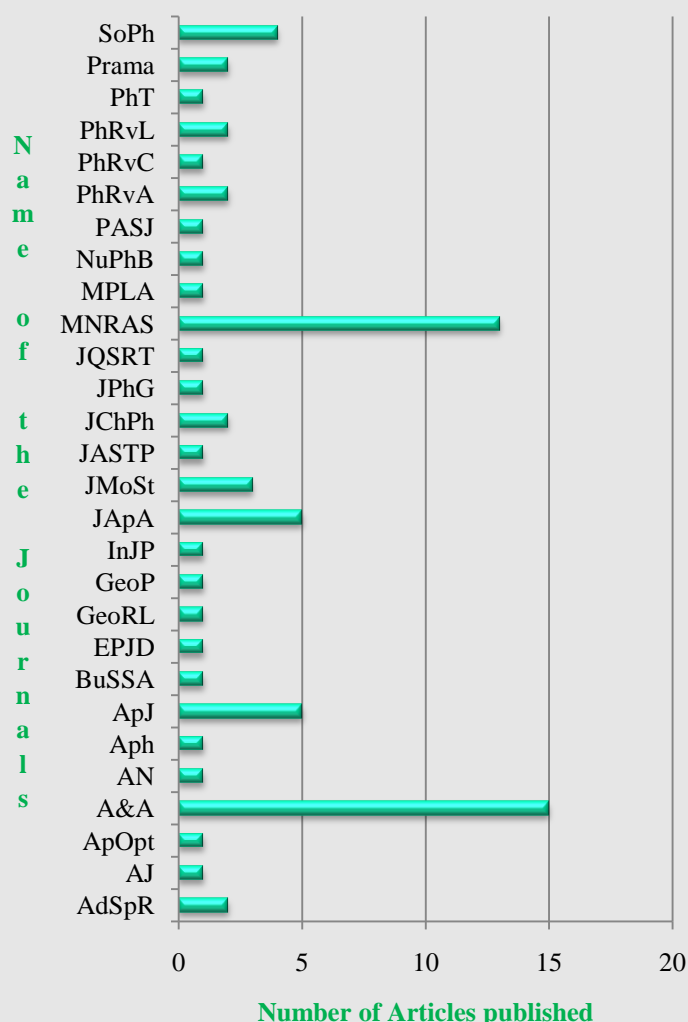
IIA Publications - 2005



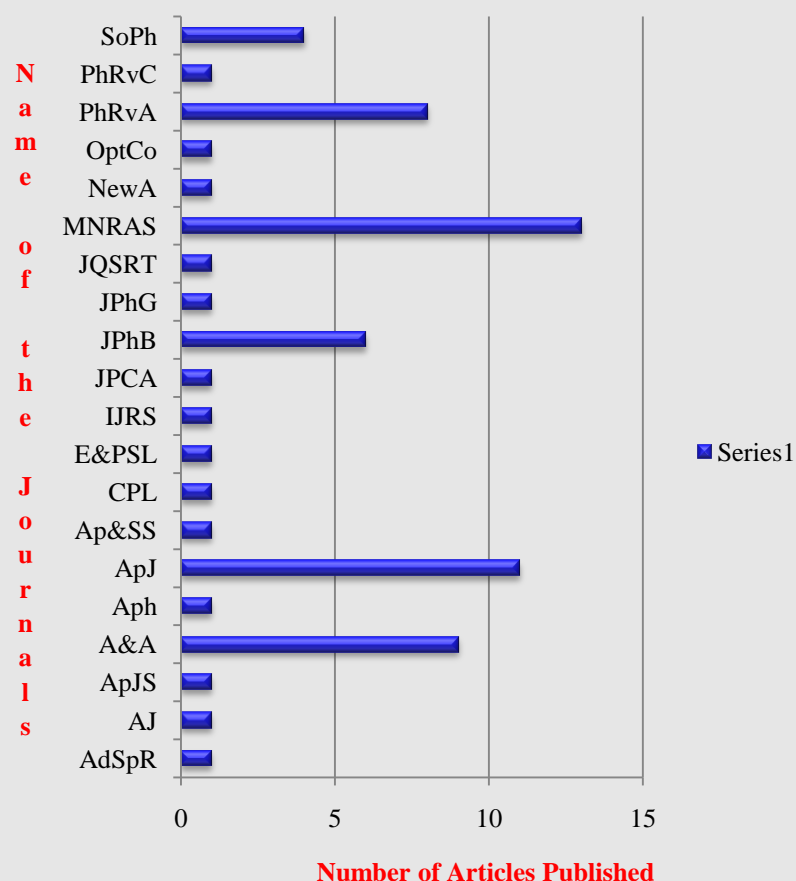
IIA Publications - 2006



IIA Publications - 2007



IIA Publications - 2008



Bibliometric & Scientometrics Studies

Calculation of Impact Factor (IF) of IIA publications

The *JCR (Journal Citation Report)* provides quantitative tools for ranking, evaluating, categorizing, and comparing journals. The impact factor is one of these; it is a measure of the frequency with which the "average article" in a journal has been cited in a particular year or period. The annual *JCR* impact factor is a ratio between citations and recent citable items published. Thus, the impact factor of a journal is calculated by dividing the number of current year citations to the source items published in that journal during the previous two years



Future Programmes

Multi site License:

Currently IIA library has initiated the e-access to many astronomy journals by negotiating Multi-site license with publishers. This has facilitated the e-access in all the centers & field station of IIA.

Access to e-books:

IIA library is negotiating with leading publishers for electronic access to e-books and conference proceedings in astronomy. This will enable the electronic access to many important astronomy books in multiple copies in the electronic form in all the locations.

Access to Web of Science/ SCOPUS:

IIA library is also exploring the possibility of accessing Web of Sciences or SCOPUS (Citation data-base) within the campus through consortium negotiation.

Preparing for the New Library Building:

We are in the planning stage of constructing a new library with more space and the state-of-the-art facilities within IIA Campus.

References:

1. Birdie, C & Vagiswari, A. 2007, ASP Conf. Ser. Vol. 377, in Proc. LISAV, Common Challenges & Uncommon Solutions, ed. S. Ricketts, C. Birdie & E. Isaksson., 128
2. http://en.wikipedia.org/wiki/Institutional_repository
3. www.new.dli.ernet.in/index.html.en