

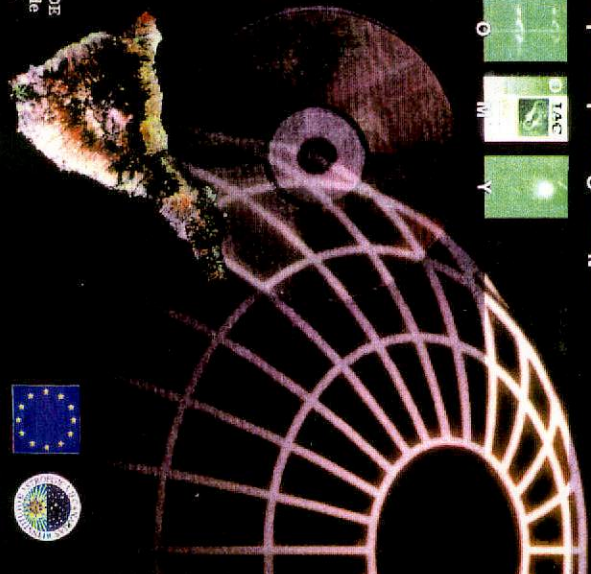
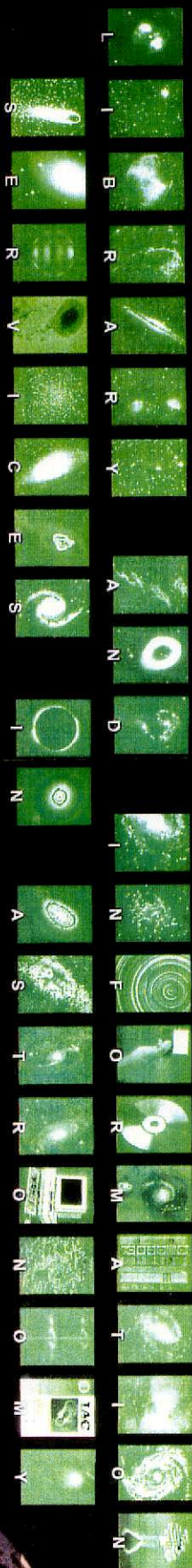
EUROCONFERENCE

LISA III

MANAGING CHANGE GRACEFULLY

april 21st-24th, 1998
Puerto de la Cruz
Tenerife, Spain

Scientific Organizing Committee: UVA GROTHKOPF (co-chair, Germany), PETER BOYCE (co-chair, USA), HEINZ ANDERWACH (México), MONIQUE GÓMEZ (Spain), PETER HINGLETY (UK), ETHELÉN LASTOVICA (South Africa), FIONN MURRICH (N. Ireland), ALICIA RODAS (Argentina), SARAH STEVENS-RAWBURN (USA), MAREK WOLFF (Czech Republic), JOSÉ CARLOS DEL TORO INIESTA (Spain), Local Organizing Committee: JOSÉ CARLOS DEL TORO INIESTA (co-chair), MONIQUE GÓMEZ (co-chair), MÓNICA MURPHY, JUDITH DE ARACÓ, ANTONIO BACALLADO, LOURDES ABELLÁN, JESÚS DURGOS. Contact: Postal address: Mónica Murphy, Instituto de Astrofísica de Canarias, Vía Lactina s/n, 38200, La Laguna, Tenerife, Spain. Fax: +34-22-605210. E-mail: lisai3@lliac.es; <http://www.llac.es/physics/lisa>



EUROCONFERENCE

**LIBRARY
AND
INFORMATION SERVICES
IN ASTRONOMY III**

-

LISA III CONFERENCE
MANAGING CHANGE GRACEFULLY

Puerto de la Cruz, Tenerife, Spain.
April 21st – 24th, 1998

FINAL PROGRAMME AND ABSTRACT BOOKLET

Organized by: **Instituto de Astrofísica de Canarias (IAC)**

Sponsored by: **European Union – TMR Programme**
Instituto de Astrofísica de Canarias (IAC)

Scientific Organising Committee

- P. Boyce (Co-Chair)
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- **PATRONATO DE TURISMO DEL CABILDO INSULAR**

1. Conference Programme

Monday, April 20th (Arrival)

17:00 - 20:00 Opening of registration desk

17:00 - 20:00 Welcome Reception

Tuesday, April 21st, 1998

08:30 Opening of registration desk

09:00 Welcome address

09:15 - 09:30 Conference overview U. Grothkopf, ESO, Germany

09:30 - 10:15 A. Okerson (Yale Univ., USA)
In Today's E-Information Marketplace: Am I A Swan Or Ungainly Duckling?
(Keynote)

10:15 - 10:45 Coffee / Posters

Session

US AND THEM: SO WHAT DO YOU WANT?

(Moderator - M. Cummins, Univ. Toronto, Canada)

10:45 - 11:15 M. Cummins (Univ. Toronto, Canada)
The symbiotic relationship: assessing user needs

11:15 - 11:45 H. Andernach (Univ. Guanajuato, Mexico)
User requirements: an astronomer's wishlist

11:45 - 12:15 V. Vasylyev (Inst. Radio Astron., Ukraine)
Following the road to effective sharing of information: an end-user's view

12:15 - 12:45 B. Corbin (USNO, USA)
Helping the astronomer stay up-to-date

12:45 - 14:15 Lunch / Posters

Session

"ROBOTS R US": AUTOMATED INFORMATION DISCOVERY

(Moderator - R. Albrecht, ST-ECF, Germany)

- 14:15 - 14:45 F. Murtagh (Univ. Ulster, Northern Ireland)
Toolsets for handling online literature
- 14:45 - 15:15 S. Lesteven (Obs. Astron. Strasbourg, France)
Information extraction: New developments in astronomical information
retrieval for electronic publication
- 15:15 - 15:45 J. Mothe (Univ. Toulouse, France)
Information mining in astronomical literature with TETRALOGIE
- 15:45 - 16:15 Coffee / Posters
- 16:15 - 16:45 D. Dubin (Univ. Illinois, USA)
Addressing the heterogeneity of subject indexing in the ADS databases
- 16:45 - 17:15 R. Albrecht (ST-ECF, Germany)
Knowledge discovery in literature databases
- 17:15 - 17:45 M. Cummins (Univ. Toronto, Canada)
The Astronomy Thesaurus and UDC -- present and future
(Group discussion for users and potential users)

Wednesday, April 22nd, 1998

Session

ELECTRONIC PUBLICATIONS: THE FUTURE IS NOW? (OR VAPORWARE)

(Moderator - S. Stevens-Rayburn, ST ScI, USA)

- 09:00 - 09:30 P. Boyce (AAS, USA)
The Urania coalition, a discipline-wide interconnected resource
- 09:30 - 10:00 G. Youngen (Univ. Illinois, USA)
Citation patterns of electronic preprints in the astrophysics literature
- 10:00 - 10:30 R. Hanisch (ST ScI, USA)
Incorporating electronic preprints into an effective publishing system
- 10:30 - 11:00 Coffee / Posters

Session

ELECTRONIC PUBLICATIONS: REALITY CHECK

(Moderator - B. Corbin, USNO, USA)

- 11:00 - 11:30 U. Grothkopf (ESO, Germany)
Electronic publications and libraries -- issues to consider
- 11:30 - 12:00 A. Okerson (Yale Univ., USA)
Licensing Electronic Content In Today's Marketplace
- 12:00 - 12:30 E. Owens (Univ. Chicago Press, USA)
Archiving electronic journals
- 12:30 - 14:00 Lunch / Posters

Session

ELECTRONIC PUBLICATIONS: TOOLS FOR UNLOCKING THE INTERNET

(Moderator - H. Andernach, Univ. Guanajuato, Mexico)

- 14:00 - 14:30 D. Rusch-Feja (Max Planck Institute for Human Development, Germany)
Metadata -- standards for retrieving WWW documents
- 14:30 - 15:00 P. Poincot (Obs. Astron. Strasbourg, France)
Comparison of two "document similarity search engines"
- 15:00 - 15:30 Coffee

Session

ELECTRONIC PUBLICATIONS: COHABITATION OF CITATIONS AND FULL-TEXT?

(Moderator - P. Boyce, AAS, USA)

- 15:30 - 17:30 Linking References and Citations: Secondary Services Facilitate
Interoperability of Electronic Resources. Panel discussion
Panelists: A. Dixon (IoP, USA), G. Eichhorn (ADS, USA) and E. Owens (Univ.
Chicago Press, USA)
- 17:30 - 18:00 Poster Session
- 20:15 Aperitif
- 20:30 Conference banquet

Thursday, April 23^d, 1998

Session

USE AND ABUSE OF INFORMATION RESOURCES

(Moderator - U. Grothkopf, ESO, Germany)

- 09:00 - 09:30 S. Stevens-Rayburn (ST ScI, USA) & E. Bouton (NRAO, USA)
"If it's not on the Web, it doesn't exist at all". Electronic
information resources -- myth and reality
- 09:30 - 10:00 V. Mata-Acosta (Inst. Astron., UNAM, Mexico)
Bibliometric behavior of the *Revista Mexicana de Astronomia y
Astrofisica* (1989-1995)
- 10:00 - 10:30 W. Claspy (Case Western Reserve Univ., USA)
Information use in astronomy
- 10:30 - 11:00 J. Holmquist (Princeton Univ., USA)
Survey on use of electronic journals at Princeton (1997)
- 11:00 - 11:30 Coffee / Posters

Session

WHO NEEDS ALL THIS OLD STUFF?

(Moderator- P. Hingley, RAS, UK)

- 11:30 - 11:55 Dr M. A. Hoskin (Churchill College, Cambridge; Editor, *Jnl for the History of
Astronomy*)
Archives for the History of Astronomy
- 12:00 -12:10 P.D. Hingley (Royal Astronomical Society, London)
Science from the Archives; an Overview
- 12:15 - 12:25 J. E. Beckman (Instituto de Astrofisica de Canarias)
The Maunder Minimum; a Case Study in the Scientific Use of Archives
- 12:30 - 12:40 T. J. C Mahoney (Instituto de Astrofisica de Canarias)
Historical Astrolxicography; the Use of Rare Books in preparation of an
Etymological Dictionary of Astronomy
- 12:45 -12:55 P. D. Hingley (Royal Astronomical Society, London)
Archives and Rare Books for Popularisation and Education; Achievements and
Potential
- 13:00 -14:30 Lunch / Posters

Session

WHAT HAVE YOU GOT THAT I CAN USE?

(Moderator - E. Lastovica, SAAO, South Africa)

- 14:30 - 15:00 K. Robertson (Univ. Hawaii, USA)
A clearinghouse for astronomy librarians: the PAM Web site
- 15:00 - 15:30 I. Sens (State and Univ. Lib. Lower Saxony, Germany)
The SSG-S project - document delivery service for astronomy, astrophysics
and space research: a function of a Sondersammelgebiet (special collection)
- 15:30 - 16:00 M. Vallet & A. Accary (Obs. Paris-Meudon, France)
CADIST astronomie: acquisition and distribution of scientific and technical
information in astronomy in France
- 16:00 - 16:15 Coffee
- 16:15 - 16:45 A. Vagiswari (Indian Inst. Astrophys., India)
Networking of astronomy libraries and resource sharing in India
- 16:45 - 17:30 J. Regan (MSSSO, Australia) & S. Laloe (Obs. Astron. Strasbourg, France)
Open Forum on "Optimizing communication amongst astronomy librarians in
the digital age"
- 17:30 Closing
- 20:30 Concert (Tenerife Symphony Orchestra)
Sala Teobaldo Power (La Orotava)

Friday, April 24th, 1998

Full-day trip to the Observatorio del Teide

Saturday, April 25th, 1998

Full-day trip to the Observatorio del Roque de los Muchachos, La Palma

2. Invited Lectures and Oral Contributions

List of Speakers and Titles *(in order of presentation)*

1. **A. Okerson:** *In Today's E-Information Marketplace: Am I A Swan Or Ungainly Duckling?*

Us And Them: So What Do You Want?

2. **M. Cummins:** *The symbiotic relationship: assessing user needs.*
3. **H. Andernach:** *User requirements: an astronomer's wishlist*
4. **V. Vasylyev:** *Following the road to effective sharing of information: an end-user's view*
5. **B. Corbin:** *Helping the astronomer stay up-to-date*

"Robots R Us": Automated Information Discovery

6. **F. Murtagh:** *Toolsets for handling online literature*
7. **S. Lesteven:** *Information extraction: New developments in astronomical information retrieval for electronic publication*
8. **J. Mothe:** *Information mining in astronomical literature with TETRALOGIE*
9. **D. Dubin:** *Addressing the heterogeneity of subject indexing in the ADS databases*
10. **R. Albrecht:** *Knowledge discovery in literature databases*
11. **M. Cummins:** *The Astronomy Thesaurus and UDC -- present and future (Group discussion for users and potential users)*

Electronic Publications: The Future Is Now? (Or Vaporware)

12. **P. Boyce:** *The Urania coalition, a discipline-wide interconnected resource*
13. **G. Youngen:** *Citation patterns of electronic preprints in the astrophysics literature*

14. **R. Hanisch:** *Incorporating electronic preprints into an effective publishing system*

Electronic Publications: Reality Check

15. **U. Grothkopf:** *Electronic publications and libraries -- issues to consider*
16. **A. Okerson:** *Licensing Electronic Content In Today's Marketplace*
17. **E. Owens:** *Archiving electronic journals*

Electronic Publications: Tools For Unlocking The INTERNET

18. **D. Rusch-Feja:** *Metadata -- standards for retrieving WWW documents*
19. **P. Poincot:** *Comparison of two "document similarity search engines"*

Electronic Publications: Cohabitation Of Citations And Full-Text?

20. **P. Boyce:** *Linking References and Citations: Secondary Services Facilitate Interoperability of Electronic Resources*
21. **A. Dixon:** *Distributed Publishing and HyperCite*
22. **G. Eichhorn:** *Information Linking with the ADS*
23. **E. Owens:**

Use And Abuse Of Information Resources

24. **S. Stevens-Rayburn & E. Bouton:** *"If it's not on the Web, it doesn't exist at all". Electronic information resources -- myth and reality*
25. **V. Mata-Acosta:** *Bibliometric behavior of the Revista Mexico de Astronomia y Astrofisica (1989-1995)*
26. **W. Claspy:** *Information use in astronomy*
27. **J. Holmquist:** *Survey on use of electronic journals at Princeton (1997)*

Who Needs All This Old Stuff?

28. **M. Hoskin:** *Archives for the History of Astronomy*

29. **P. D. Hingley.** *Science from the Archives; an Overview*
30. **J. E. Beckman:** *The Maunder Minimum; a Case Study in the Scientific Use of Archives*
31. **J. C Mahoney:** *Historical Astrolxicography; the Use of Rare Books in preparation of an Etymological Dictionary of Astronomy*
32. **P. D. Hingley:** Archives and Rare Books for Popularisation and Education; Achievements and Potential

What Have You Got That I Can Use?

33. **K. Robertson:** *A clearinghouse for astronomy librarians: the PAM Web site*
34. **I. Sens.** *The SSG-S project - document delivery service for astronomy, astrophysics and space research: a function of a Sondersammelgebiet (special collection)*
35. **M. Vallet:** *CADIST astronomie: acquisition and distribution of scientific and technical information in astronomy in France*
36. **A. Vagiswari:** *Networking of astronomy libraries and resource sharing in India*
37. **J. Regan & S. Laloe.** *Open Forum on "Optimizing communication amongst astronomy librarians in the digital age"*

Abstracts

Opening Session

1.

In Today's E-Information Marketplace: Am I A Swan Or Ungainly Duckling?

A. Okerson

Yale University, USA

Abstract

The various electronic media transform the way in which authors create their works and readers read and use them in their study, research and publication. Those profound changes are mirrored by immense changes in the back rooms of librarians and information specialists who now deal with a radically different environment for decision-making and access choices.

This opening talk will review characteristics of the "new" marketplace, including:

- The immense growth of electronic resources of all sorts
- The shift from national copyright law to individually negotiated institutional license as the regime that governs use of electronic resources
- The move of publishers to sell information in "aggregated" bundles, even though customers may not ask for this
- The development of aggressive groups of libraries buying together as consortia and changing the marketplace

Most of the talk will be given to reviewing and expanding on the above points. Floating gracefully requires being well informed, developing new skills as collaborators and negotiators, and maintaining an open, flexible approach to the way in which library work is managed.

Us And Them: So What Do You Want?

2.

The symbiotic relationship: assessing user needs

M. Cummins

Univ. Toronto, Canada

Abstract

Assessing user needs in this era of increasing options and decreasing resources is more important than ever. There are many ways of assessing user needs, from individual conversations through focus groups and surveys. Preparation and follow-through are very important elements of this aspect of planning library services.

3.

User requirements: an astronomer's wishlist

Heinz Andernach

Depto. de Astronomia, IFUG, Univ. Guanajuato, Mexico

Abstract

The author first summarizes his experience made during many years at various research departments which counted neither with an adequately complete astronomy library, nor with a professional astronomy librarian. I review some of the past and current practical methods for literature and information retrieval (or "survival without library and librarian") which I learnt on the way. Finally I present a wish list for improvements for (a) electronic information systems, (b) a user-friendly arrangement of the physical library, and (c) useful tasks for those librarians with time or stimulus left over...

4.

Following the Road to Effective International Sharing of Astronomical Information: An End-User's View

Viktor P. Vasylyev

Institute of Radio Astronomy, National Academy of Sciences of Ukraine

Abstract

According to Prof. O. Struve, one of the most prominent astronomers of the first half of this century, all astronomers, who achieve success (and therefore, in the first place, need an active library service), can roughly fall under three main categories. To the first belong the researchers, who develop new instruments and methods and work with more powerful telescopes. The second category includes the theorists, who exert effectively all their knowledge in mathematics and theoretical physics, and the third one - the intuitive interpreters producing new ideas to explain the nature of phenomena and objects in space. However, living in a rapidly changing information environment, they are often thought to be poor searchers in digital library (with the exception of those operating computers most closely), despite the fact that only they understand fairly well which information is needed for them and evaluate its importance. In addition, all this is determined by region-specific problems, connected for instance, with the worse technical and communication facilities in less-developed countries. This report carries the author's 30-year research experience in different fields of astronomy (solar physics, planetary atmospheres, atmosphereless solar system bodies, cosmic ray physics, large telescope developing) and discusses some of the main practical problems for the end-users from the FSU countries with the aim to improve the effectiveness of the library service and development of international information resource sharing. The interaction scheme "information -- librarian -- end-user", as well as possible ways for its improvement are also described and analyzed. Some ideas on developing the subject classification of astronomical information with the use of basic principles of international patent classification are suggested.

5.

Keeping The Astronomer up to date

Brenda G. Corbin

U.S. Naval Observatory, USA

Abstract

The presentation will cover some of the sources of current astronomical information which both astronomers and librarians use. Some of the subjects included are preprints, electronic journals, astronomical objects, directories and printed bibliographies. Much of the information that the astronomer uses will be found on the internet, but not all sources.

"Robots R Us": Automated Information Discovery

6.

Distributed Information Search and Retrieval for Astronomical Resource Discovery and Data Mining

Fionn Murtagh (1) and Damien Guillaume (2)

(1) Faculty of Informatics, University of Ulster

(2) Université Louis Pasteur, Strasbourg

Abstract

Information search and retrieval has become by nature a distributed task. We look at tools and techniques which are of importance in this area. Current technological evolution can be summarized as the growing stability and cohesiveness of distributed architectures of searchable objects. The objects themselves are more often than not multimedia, including published articles or grey literature reports, yellow page services, image data, catalogs, presentation and online display materials, "operations" information such as scheduling and publicly accessible proposal information, and so on. The evolution towards distributed architectures, protocols and formats, and the direction of our own work, will be the main focus of this paper.

7.

Information extraction: New developments in astronomical information retrieval for electronic publications

Soizick Lesteven, F. Bonnarel, P. Dubois, D. Egret, P. Fernique, F. Genova, F. Murtagh, F. Ocshenbein, M. Wenger

CDS - Observatoire Astronomique, 11, rue de l'Université 67000 Strasbourg -France

Abstract

The explosion of on-line services and the rapid evolution in information technology, with the advent of the WWW, give its full dimension to the electronic publication. Electronic publication has to be conceived with links to external resources (databases, specific services) and with intelligent information retrieval tools.

To provide links you need to extract relevant information from a document, and connect this information towards the proper distributed resource. Information extraction can be relatively straightforward when the information is tagged in the text or corresponds to a standard format (tables, bibcodes), but it can be more complex when the data is heterogeneous (astronomical object names).

Recognition is the first step, the whole procedure may include the validation by an expert for correctness and completeness, the addition of dynamic links to the distributed services. Furthermore, one may have to build procedures to take into consideration the fact these services can evolve later on. Publication in electronic form permits new methods to access published information.

In this context, the CDS has already taken a large place :

- it develops and maintains links between distributed services (CDS services with electronic publications and the ADS) ;
- it develops and maintains services which give access to published information (the VizieR catalog browser for published tables or SIMBAD which tracks object citations in paper) ;
- it develops information retrieval tools (the bibliographical maps or tools to automatically recognize object names in a text).

All these developments require close connections with the distributed services (editors, database managers, service managers, ...). A few examples will be presented.

8.

Information Mining in Astronomical Literature with TETRALOGIE

Josiane Mothe (1,3), Daniel Egret (2), Taoufiq Dkaki (1,2), Bernard Dousset (1)

(1) IRIT, Université Paul Sabatier, TOULOUSE, France

(2) CDS, Observatoire astronomique de Strasbourg, France

(3) IUFM, Institut Universitaire de Formation des Maîtres de Toulouse

Abstract

The development of databases of electronic abstracts and electronic full publications, covering a wide range of the astronomical literature, provides an interesting ground for performing systematic bibliometric studies. Such studies can benefit from the wealth of information contained in such databases, about covered topics, collaborative works, or short-term evolution trends.

In a first paper, presented at the ADASS VII Conference, we have shown how the TETRALOGIE system (<http://atlas.irit.fr>), based on data analysis methods, can be used to mine astronomical information. We analysed a sample of abstracts of the astronomical literature and showed some results of its analysis through the study of the collaborative work around some large observational projects.

In this paper, we report a deeper study of a larger subset of the ADS database (Astrophysics Data System) of astronomy abstracts. More precisely, some data analysis mining functions, such as the Principal Component Analysis or the classifications methods, are used to discover the most significant combinations of keywords, clusters of similar papers or outliers presenting extreme characteristics in the analysis. The feature discovering is an interactive process which takes advantage from a friendly graphical interface: all the results are graphically displayed.

In addition to allow us to discover global dependencies between the document contents, the applied methods allow one to discover features of the short-term evolution of topics along the years covered by the dataset: what are the growing fields, the emerging centres of interest, and those which gradually become "out of fashion". In a similar way, it allows one to discover the evolution of the collaboration between the several teams involved in projects during the covered period.

9.

Addressing the Heterogeneity of Subject Indexing in the ADS Databases

David Dubin

Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign, USA

Abstract

The Astronomy and Astrophysics Abstract Service of the NASA-funded Astrophysics Data System (ADS) serves some 10,000 active astronomers worldwide.

ADS provides access via the Worldwide Web to over a million abstracts in the areas of astronomy and astrophysics, instrumentation, and physics and geophysics.

Users of the abstract service can search by title, author, publication date, SIMBAD/NED/LPI object name, and the texts of the abstracts themselves. Over 40,000 of the abstracts include links to scanned images of the full journal articles.

One drawback of the current document representation scheme in ADS is its heterogeneous subject indexing. NASA's Scientific and Technical Information group provided ADS with abstracts for many articles published between 1975 and 1995. Those abstracts had index terms assigned from the NASA Thesaurus. Since mid-1995, ADS has received the majority of abstracts directly from journals. Abstracts received from journals have author-assigned keywords from one of several related but inconsistent sets of headings. This inconsistent subject indexing prompted the ADS administrators to disable subject descriptor searching, and to merge the indexes for the key words and index terms with those of the text of the abstracts. A method for unifying or reconciling the indexing systems could improve subject access to the ADS documents.

Over the past 30 years several methods of merging subject thesauri have been proposed and implemented experimentally. These methods have employed analysis of jointly indexed documents, or algorithms for navigation of syndetic structure, each possibly in combination with some kind of lexical matching. Specific techniques for achieving unification might involve term clustering, factor analysis, a spreading activation model, or some ad hoc algorithm. Whatever method is chosen, the following questions must be answered:

- 1) What is the overall impact of the merging? How many descriptors and documents are affected? To what extent does the method reduce the size of the indexing vocabulary?
- 2) Are the merges interpretable and do they seem correct? Is it possible to distinguish correct merges from errors?
- 3) What effect is there on the success of actual searches? What is the relative impact on search success in light of the solution's expense and complexity?

We present the results of pilot experiments to begin to answer those questions. A simple lexical matching method was adopted, based on reported success in earlier thesaurus merging experiments. This conceptually and computationally simple method may serve as a basis of comparison for more subtle techniques. Using the matching method alone on the Astronomy/Astrophysics database:

- 1) Approximately one descriptor in six maps to some other descriptor. This includes the mapping of descriptors to mistyped versions of themselves.
- 2) In estimating impact, we assume a search on a single term with the highest postings of any matching term. Under this conservative assumption, expanding the search to all matching terms will increase the number of retrieved documents by anywhere from a negligible amount up to a factor of 3. The median impact measure is 1.2 (i.e. an increase of 20% over the most common variant). In absolute terms, this increase represents anywhere from 1 to several hundred additional documents, but is typically exactly 1 or 2 additional documents.
- 3) The descriptor merges are interpretable, and can be corrected if in error. The distributions of impact measures can direct analysts to those merges which, if in error, will have the most adverse effect on search precision. They can also suggest which merges may represent the correction of human error from the indexing or data entry stages.

The lexical matching method can map on only one of several important term relationships (exact correspondence). Nevertheless, these pilot experiments provide evidence of how the heterogeneity of indexing would affect descriptor searching alone (were such searching enabled on ADS). It provides a basis of comparison for the success of more complex and subtle unification strategies. Results must also be interpreted in light of factors specific to ADS, such as its fairly narrow subject domains, and the contrast between a broadly-scoped, syndetically rich structure of index terms (NASA/STI) and subject headings with little or no syndetic structure .

10.

Knowledge Discovery in Literature Data Bases

R. Albrecht (1,2,3), M. Albrecht (2), B. Pirenne (2,3)

(1) European Space Agency, Astrophysics Division

(2) European Southern Observatory

(3) Space Telescope European Coordinating Facility

Abstract

The concept of knowledge discovery as defined through “establishing previously unknown and unsuspected relations of features in a data base” is, cum grano salis, relatively easy to implement for a data bases containig numerical data.

Increasingly we find at our disposal data bases containing scientific literature. Computer assisted detection of unknown relations of features in such data bases would be extremely valuable and would lead to new scientific insights. However, the current representation of scientific knowledge in such data bases is not conducive to computer processing. Any correlation of features still has to be done by the human reader, a process which is plagued by ineffectiveness and incompleteness.

On the other hand we note that considerable progress is being made in an area where reading all available material is totally prohibitive: the World Wide Web.

Robots and web crawlers mine the Web continuously and construct data bases which allow the identification of pages of interest in near real time. Currently this search is mainly based on text strings, but generalisation should be possible. Ideas and concepts will be presented.

Electronic Publications: The Future Is Now? (Or Vaporware)

11.

The Astronomy Thesaurus and UDC -- present and future (Group discussion for users and potential users)

M. Cummins

Univ. Toronto, Canada

12.

The Urania Coalition, a discipline-wide interconnected resource

Peter B. Boyce

American Astronomical Society, USA

Abstract

Interlinking of electronic journal articles and data through reference and citation lists has been one of the prime features of the astronomical literature for the past three years. Facilitated by the infrastructure already in use by the astronomical data centers and the Astrophysics Data System, and spurred on by the development of the electronic journals by the AAS, the astronomical community has worked together to develop a distributed, electronic information resource which has been the envy of most other disciplines. This electronic collection encompasses the scanned page images of the last twenty years of the major important journals in astronomy, half the new peer reviewed astronomy serials, and the published data tables in machine readable format. The full set of interconnected resources is known unofficially as "Urania."

Formed by a loose coalition of electronic information providers, the Urania Resource is an example of the new methods of providing journal articles, data and other information directly to the desks of researchers and students. The new electronic environment, in which researchers and students can access materials directly, is changing the role of libraries, information providers and end users alike. Each segment in the information chain is facing a major readjustment in their traditional role.

Libraries have to adjust to the fact that they can no longer "acquire and own" the complete set of information resources directly. Users, on the other hand, are convinced that if information does not exist in electronic form, it is not worth considering in their research. Finally, the information providers can no longer serve their clientele effectively if they do not become cooperating partners in the information distribution and maintenance process.

The Urania Collaboration is one example of how information dissemination can be accomplished in the electronic era. Through a responsible approach and excellent cooperation along the whole chain of interested parties from authors to readers, we are beginning to redefine the roles and contributions of each of the links in the information chain.

13.

Citation patterns of electronic preprints in the Astrophysics literature

Gregory K. Youngen

University of Illinois at Urbana-Champaign, USA

Abstract

The explosive growth in the number of citations to electronic preprints (eprints) in the astrophysics literature is documented in this paper. Eprints are the electronic versions of papers that have been submitted for: a) comment and review among peers; b) for publication in journals; or c) made publicly available prior to presentation at conferences. With the advent of Internet-accessible eprint servers, everyone now has unlimited free access to these publications long before they appear in print in journals or in conference proceedings. Because of the timeliness of these papers, as well as the increasing demand for current research, astronomers and physicists alike have found it necessary to cite these eprints in their research articles rather than wait until they appear in print.

This paper documents the increasing reliance on eprints in the journal literature and in conference proceedings by tracking the citations to eprints in articles and papers over the past five years. Along with identifying and documenting the trend, issues for concern over the growing number of citations to eprints, as well as areas for further study are presented.

14.

Incorporating electronic preprints into an effective publishing system

R. Hanisch (1), H. Payne (1), E. Huizinga (1), S. Stevens-Rayburn (1), E. Bouton (2), G. Eichhorn (3) P. Boyce (4)

(1) STScI, USA, (2) NRAO, USA, (3) SAO, USA ,(4) AAS

Abstract

Preprints continue to play an important role in the astronomical literature, both for rapid dissemination of new results and for establishing institutional benchmarks for quality and productivity. Electronic preprint services have become a popular alternative to paper preprint distribution, however, being centralized services they ignore the importance of preprints in defining an organization's scientific profile. Moreover, the existing electronic preprint services are far from comprehensive in content (relying totally on author contributions), and there is no systematic tracking of the preprint into the refereed literature. With the support of NASA's Applied Information Systems Research Program, we are now implementing a distributed electronic preprint service. This service will provide a common index to preprint databases located at separate astronomy institutions. Because maintenance of the preprint databases is distributed, our expectation is that the contents will be much more complete than is the case for the existing services. A key element of our approach is to assign unique identifiers to preprints as they are entered into the system, and to use these identifiers to track the preprint into the refereed literature. Once a preprint is published users of the preprint database will be directed to the published version, with the preprint version deleted from the system. We are also developing simple, portable tools for maintaining a local preprint database. Both these tools and the distributed preprint system infrastructure will be extensible to other "gray literature" documents, such as observatory and instrumentation manuals and technical reports.

Electronic Publications: Reality Check

15.

Electronic Publications and Libraries -- Issues to Consider

Uta Grothkopf

European Southern Observatory, Garching, Germany

Abstract

Electronic publications change vastly how documents are obtained, processed, archived and used in libraries. Many of the implications the electronic format will have on current and future access to information are not yet known or are easily overlooked. This paper gives an overview over the issues librarians should consider when handling electronic publications.

16.

Licensing Electronic Content In Today's Marketplace

Ann Okerson

Yale University, USA

Abstract

This short session will develop topics such as: what is a license, what is a shrinkwrap license and is it binding, how do licenses or contracts relate to national copyright laws, what is a good negotiating stance, what to look for in a license (key issues), and where to look for more information. The session will be outlined by a series of overheads that can help to guide the library professional who needs to work through these matters during the course of negotiating for electronic information content.

17.

Archiving electronic journals

E. Owens

Univ. Chicago Press

Abstract

The archiving of digital documents is perhaps the most important problem created by the revolution in electronic publishing. This paper examines the issues involved in the archiving of electronic journals, one particular genre of digital documents, from the point of view of the creator of digital content: the publisher rather than the librarian or archivist. How can a responsible publisher create digital content in such a way that it archives well? In particular, the role of SGML (and/or XML) in journal production and archiving and the feasibility of abstracting content from presentation format are discussed.

Electronic Publications: Tools For Unlocking The INTERNET

18.

Metadata -- standards for retrieving WWW documents

Diann Rusch-Feja

Library and Research Documentation Max Planck Institute for Human Development and Education

Abstract

Metadata are seen as the prime method of indexing digital and nondigital resources in the networked environment. After a brief overview of the various kinds of metadata, more attention will be paid to the major metadata sets (TEI, GILS, Dublin Core) with a greater emphasis on Dublin Core - its development, its implementation and the various sites in the Internet using this metadata. Examples of various documents and relationships between resources using metadata for discovery precision, filtering of search results and information quality will be presented. The status of the Dublin Core as a standard for resource description and the latest developments within the Dublin Core working groups will demonstrate its usefulness as a viable indexing method for the information age.

19.

Comparison of two "document similarity search engines"

Philippe Poincot (1), Soizick Lesteven (1) and Fionn Murtagh (1, 2)

(1) Observatoire Astronomique de STRASBOURG, FRANCE

(2) University of Ulster, Magee College, Northern Ireland, U.K.

Abstract

We have developed and used the "CDS document map" based on neural network Kohonen maps (<http://simbad.u-strasbg.fr/A+A/map.pl>). In this self-organizing map, documents are gradually clustered by subject themes. The tool is based on keywords associated with the documents. For one selected document, we locate it on the CDS document map and retrieve articles clustered in the same area.

The second search engine, used by ADS, is the capability to find all similar abstracts in their database, with "keywords request" (<http://cdsads.u-strasbg.fr> ; <http://adswwww.harvard.edu> ; <http://ads.nao.ac.jp/>).

We have compared the results of the document similarity search engines, using the same set of documents. Different examples will be described and results will be discussed.

Electronic Publications: Cohabitation Of Citations And Full-Text?

20.

Linking References and Citations: Secondary Services Facilitate Interoperability of Electronic Resources.

P. Boyce

American Astronomical Society, USA

Abstract

The AAS electronic journals have been linking to abstracts and full texts of references for three years. The Astrophysics Data System has provided a set of searchable abstracts for the core journals as well as full text for many of the important journals in astronomy. The ability to link to the references and citations is appreciated by the individual researchers. As publishers seek to link to articles produced by other publishers the ADS and other providers of secondary services are providing the means by which such links can be accomplished.

The ADS is very discipline-specific, concentrating on astronomy and astrophysics. The real power of the electronic environment will come into play as links are made to relevant information which exists outside the traditional discipline boundaries, and including non-printable material.

The speakers in this session will describe current methods for linking, problems with completeness, methods of automating the process of incorporating links, questions of longevity and what is implied by the need to link across discipline boundaries. Along the way questions of the changing roles of libraries, primary information providers and secondary services will be discussed. There will be ample time set aside for a vigorous discussion of these and other issues which we see arising in the near future.

21.

Distributed Publishing and HyperCite

Anne Dixon

Institute of Physics Publishing

Abstract

No one publisher or content owner can ever hope to service all of a given user's information needs. Thus a distributed system of publishing, whereby each publisher ensures that each **knowledge pointer** in their content links to and from all the other important knowledge pointers in given subject areas, ensure that users can go on **information trails**. These trails become a voyage of discovery and the junction points on these trails can often be databases, which aim to provide some comprehensive cover of a subject.

I shall describe Institute of Physics Publishing's efforts in this area, including our HyperCite technology, which allows users to roam the literature, backwards and forwards in time, and to experience fascinating information trails.

22.

Information Linking with the ADS

Guenther Eichhorn

Smithsonian Astrophysical Observatory, Cambridge, MA, USA

Abstract

The ADS provides a search system for the astronomical literature, including planetary sciences and space instrumentation literature. One of the most important features in the ADS system is the collection of links that is returned with each reference. These links point to various other information sources, both within the ADS and at other information providers. The search capability, together with the links allows a user to easily and quickly find relevant literature references and to continue from the retrieved references to retrieve the abstract of the selected article, to download the full article, to find and download data associated with the article, to get the reference list of that article and the list of articles that cite it. Other links point to the list of objects discussed in the article or to a document delivery service that can provide articles that are not available on-line.

This extensive system of links can be utilized by other on-line information providers to enable their users to quickly gather additional information relevant to their work. The on-line journals for instance link to the ADS abstracts from their reference sections. This provide their users the capability to quickly follow references and to gather additional information relevant to the article that they are reading.

These links thus benefit both the users by letting them find and access relevant information, and the information providers by making their on-line information more widely known, and by relieving them from the task of gathering and maintaining similar link information that their users may need.

Usage statistics for March, 1998: ADS users: 17,000 References retrieved: 6 million Abstracts retrieved: 300,000 Articles accessed: 56,000 Citation lists retrieved: 4,000 Reference lists retrieved: 2,300 Object lists retrieved: 2,500.

23.

Evan Owens

Univ. Chicago Press, USA

Use And Abuse Of Information Resources

24.

"If it's not on the Web, it doesn't exist at all". Electronic information resources -- myth and reality

Sarah Stevens-Rayburn (1) and Ellen Bouton (2)

(1) STScI, USA and (2) NRAO, USA

Abstract

In this paper, we will review the current status of astronomical research via electronic means, with an eye towards separating the hype from the hypothetical in hopes of revealing the actual state of affairs. We will review both anecdotal and scholarly work aimed at documenting the state of research using the World Wide Web and demonstrate that although there is enormous potential in electronic research, most of that potential is as yet unrealized. In addition, especially in astronomy, a significant amount of material is not (yet) available electronically and likely will never be. Finally, we will point out the potential danger of a looming paradigm shift in the way astronomers conduct research and the possible consequences thereof.

25.

Bibliometric Behavior of the Revista Mexicana de Astronomía y Astrofísica (1989-1995)

V. Mata-Acosta (1), M.E. Jimenez-Fragozo (2) and S. Gorbea-Portal (3)

(1) Instituto de Astronomía, UNAM, Mexico

(2) Instituto de Astronomía, UNAM, Observatorio Astronómico Nacional, Mexico

(3) Centro Universitario de Investigaciones Bibliotecológicas, UNAM

Abstract

The bibliometric behavior of the REVISTA MEXICANA DE ASTRONOMIA Y ASTROFISICA (1989-1995) and its impact on the specialized scientific community are studied by means of the scientific production published in this Journal. As sources, besides the Journal itself, The Science Citation Index and The Journal Citation Report were used, as well as scientific information diffusion and obsolescence indicators such as: The Impact Factor, The Immediacy Index and the Half-Life. This allows us to identify the frequency in which the scientific production of this Journal is cited, as well as the aging grade that is present in relation to active literature the Journal uses.

Other indicators are also used, such as: The name of the institutions of the authors who publish in this Journal, as well as those of the authors who cite it, together with geographic preferences, subjects, and the language in which the works are published. All this helps to identify the scientific collaboration and communication between the specialists and the institutions carrying out research on Astronomy and Astrophysics whose results are published in the Journal.

26.

Information Use in Astronomy Case Western Reserve University

William Claspy

Reference Department-Kelvin Smith Library, Case Western Reserve University, USA

Abstract

Research in the field of astronomy is, like research in all scientific fields, dependent on the record of previous work on which it can then build. Astronomy libraries are relied upon to provide and maintain collections of this published information so that scientists can make reference to the work that has already been done in their field. This study seeks to examine scientists' use of their literature through a citation analysis of a very current sub-section of scientific literature in the field. The paper specifically analyzes currency of references, types of sources, format of sources, and cross-disciplinary sources. Research published in refereed journals is the most frequently cited material among astronomers, making up nearly eighty percent of the total number of references. Of these, the majority are references to literature from the core journals in the field. Also, currency is of relative importance to researchers in the field, as nearly fifty six percent of all references were to materials published in the last seven years, and nearly ninety percent to that published since 1980. Only four percent were to materials published before 1970. It is hoped that this evaluation of information use will be valuable for both librarians in the field of astronomy as well as scientists.

27.

Survey on the Use of Electronic Journals at Princeton (1997)

Jane E. Holmquist

Astrophysics Library, Princeton University, U.S.A.

Abstract

In April 1997 the Electronic Journals Committee of the Princeton University Library conducted a campus-wide survey on the use of electronic journals at Princeton. Three hundred questionnaires were sent to random samples of the following groups: 1) undergraduate students, 2) graduate students, 3) faculty, 4) administration, 5) office, clerical and library staffs, and 6) professional librarians and technical research staff. The responses given in 470 returned questionnaires were entered into a Microsoft Access database and Excel spreadsheets to facilitate analysis of the results. This paper will discuss not only the findings and conclusions of our study, but will also discuss survey research methods in general, including the stages of questionnaire construction and pretesting, data collection, and finally, the analysis and reporting of the results.

Who Needs All This Old Stuff?

28.

Archives for the History of Astronomy

M. Hoskin

Churchill College, Cambridge, UK; Editor, Journal for the History of Astronomy

29.

Science from the Archives; an Overview

Peter D. Hingley

Royal Astronomical Society

Abstract

The intention of the session is to provide fellow librarians with the information and arguments they may require to argue with non historically orientated authorities, for the preservation, conservation, acquisition and accessibility of archival and rare book collections.

Dr Hoskin will describe the importance of information derived from archival sources from his standpoint as an active astronomical historian and editor of one of the foremost journals in the field. He will describe four specific cases where information derived from archival sources has been vital to the interpretation of historical events.

The speaker will review, and provide a bibliography of, articles and books in which information from archival sources has been used, wholly or with other data, to produce serious scientific results.

30.

The Maunder Minimum and climate change: Have historical records aided current research?

John E. Beckman and Terry J. Mahoney

Instituto de Astrofísica de Canarias, Spain

Abstract

We discuss how, in the 1970's Eddy took clues from the historical researches of Spoerer and Maunder in the C19th, to draw the attention of modern researchers to a period of virtual absence of sunspot activity between 1645 and 1715. This "Maunder minimum" is not only of interest to solar physicists in the context of the theory of solar magnetic activity, and to stellar astrophysicists working on the properties of cool stars, but may be a vital clue to the influence of the variability of the sun's power output on terrestrial climate. Without the availability of the historical documentary records the long-term variability of the Sun implied by the Maunder minimum would not have come to light, and the consequent advances in stellar physics and in paleoclimatology would not have been possible.

31.

Historical Astrolexicography using rare books and journals

Terry J. Mahoney

Instituto de Astrofísica de Canarias, Spain

Abstract

The English astronomical lexicon reaches back to the XII Century, with some terms dating even further back into Anglo-Saxon times. It is the task of astrolexicography to provide a full description of the changes in English astronomical vocabulary from these earliest times up to the present. To achieve this aim, access to the widest possible range of texts, from the earliest works of English literature to the latest research journals and works of popularization, is of fundamental importance. The application of the techniques of historical lexicography to astronomy is discussed in terms of astronomical library resources. While online databases are recognized as invaluable search tools, it is stressed that, for astrolexicographical purposes, all illustrative quotations used for astrolexicographical purposes must be checked against original sources. The traditional specialist library, such as those of the Royal Society and the Royal Astronomical Society, are treasurehouses of the English astronomical heritage and are a priceless resource for historians of astronomy and astrolexicographers.

32.

Archives and Rare Books for Popularisation and Education; Achievements and Potential

Peter D. Hingley

Royal Astronomical Society, UK

Abstract

The speaker will expound his belief that the aesthetic attractiveness of Rare Books, relics, old instruments, and some archival material, if possible allied with attractive stories, has considerable potential, allied with the aesthetic attraction of the heavens themselves, for stimulating the interest of those who are not at present concerned with the subject.

What Have You Got That I Can Use?

33.

A clearinghouse for astronomy librarians: the PAM Web site

Kathleen Robertson

Institute for Astronomy Library, University of Hawaii, USA

Abstract

Webster's Third New International Dictionary (1967) defines a clearinghouse as "...an agency for collection, classification and distribution especially of information..." The advent of the World Wide Web has enabled librarians to create and publish web sites that function as specialized reference tools, virtual clearinghouses. This paper will review how the PAM web site has evolved, and survey current developments in information architecture and web applications that may provide future site enhancements.

34.

The project SSG-S

Irina Sens

State and Univ. Library Lower Saxonia, Goettingen

Abstract

For nearly fifty years the Deutsche Forschungsgemeinschaft has given to a series of German libraries considerable financial support for the acquisition of research literature in various areas. Particular stress was put on the acquisition of special research literature in addition to the standard material as found in many collections.

The project SSG-S aims at making these collected resources as comprehensively and easily as possible available to institutions of higher education, research and private enterprise alike. This does not only include a rapid document delivery service, but also aims at recording and making accessible all relevant material including electronic documents.

35.

CADIST astronomie : acquisition and distribution of scientific and technical information in astronomy in France

Marylène Vallet

Observatoire de Paris, section de Meudon, France

Abstract

The CADIST system was initiated in 1980 by the Ministry of Higher Education and Research of France. The objectives were twofold : to rationalize acquisitions all over academic libraries and to lower costs. It dispatches thirty significant subjects all over twenty key libraries. Paris Observatory library was chosen as a "bibliothèque-support" for astronomy and astrophysics. Its mission was to cover academic literature on the subject as exhaustively as possible, and to diffuse this literature through an interlibrary loan system. We describe the implementation of the system, its difficulties, the influence of new computerized means on its organization, and the future prospects. In spite of its being old the CADIST system keeps pace with new technologies and is still efficient.

36.

Networking of Astronomy Libraries & Resource Sharing in India

A.Vagiswari and C. Louis

Indian Institute of Astrophysics, Bangalore 560034, India

Abstract

The concept of networking among Astronomy libraries is to promote the development of Library and Information services, nationwide and also a better Resource sharing through this link. India is a developing country, so the joint effort for a optimum usage of the resources is very essential. The ultimate goal is to provide easy access to information and rapid delivery of library materials across the country, especially among FORSA Libraries (Forum for Resource Sharing in Astronomy).In this paper, we have explained three models to setup the Network. (1) All the member libraries of FORSA can be linked through Internet via their independent WEB pages.(2) Since the collection of all the libraries together currently does not require more than 1GBstorage space, there is a possibility to merge the collections, and keep them in an exclusive server interconnected by all the member libraries.(3) Using search engine architecture (like HARVEST) to gather, abstract, organise and search the relevant information from databases and offer an answer to a query, instead of merging the different databases.

37.

Open Forum on "Optimizing communication amongst astronomy librarians in the digital age"

Jeanette Regan (1) and Suzanne Laloe (2)

(1) Australian National University, Astronomy Branch Library, MSSSO

(2) CDS, Observatoire de Strasbourg, France

Abstract

Conferences are held to enhance communication between colleagues. This final session of LISA III will be THE opportunity for all participants, as well as those unable to attend, to express their concerns, make comments or suggestions regarding future communication between astronomy librarians/publishers/researchers.

A list of statements/questions will be distributed on the evening of 20 April 1998 (GMT) to act as a catalyst for discussion topics. Conference participants will receive their copies with the conference package and the list will also be posted on Astrolib at this time.

Those unable to attend the conference should respond to the conference organisers' either by Fax: (+34 22 605210) or email: (lisa3@iac.es) very quickly, if possible within 24 hours of receipt. Responses will then be compiled and noted both in the proceedings and at the forum.

3. List of Posters *(in alphabetical order of first author)*

1. **R. Albrecht, M. Albrecht, M. Dolensky, A. Micol, B. Pirenne, A. Wicenec:** *The VLT/HST Archive Research Facility*
2. **G. Alvito, F. Denotti, I. Porceddu, L. Mureddu:** *Documentation facilities at the Cagliari Observatory*
3. **M. Demleitner, G. Burkhardt, H. Hefele, L. Heinrich, L.D. Schmadel, R. Wielen:** *The on-line bibliographical data base ARIBIB for astronomical references*
4. **T. N. Dorokhova:** *The Comments on UDC 52 Revisions*
5. **T. N. Dorokhova:** *The Development of Astronomy in Odessa and its Reflection in Publications of Astronomical Observatory, Odessa State University.*
6. **G. Eichhorn, A. Accomazzi, C.S. Grant, M.J. Kurtz, S.S. Murray:** *The ADS Abstract Service*
7. **G. Eichhorn, M. J. Kurtz:** *Plans for Future On-line Access to the Historical Astronomical Literature through the Astrophysics Data System.*
8. **Giorgia Foderà Serio and Donatella Randazzo:** *The origin of the Palermo Astronomical Library: Giuseppe Piazzi's (1746-1826) personal library*
9. **Antonella Gasperini and Francesca Martines:** *Acquisition Policy and Collection Increase in Astronomical Libraries in Italy: Two Test Cases*
10. **Uta Grothkopf:** *Astronomy Librarians and Libraries Addresses*
11. **Zhang Jian, Yuan Cuilan:** *The Document Resources in PMO* Library*
12. **Natalia Markova:** *Organization of Rehabilitation Work in the Library of Pulkovo Observatory after the fire on February, 1997*
13. **Simon Mitton and Lavinia Mitton:** *Publication costs of astronomical research: economic considerations*
14. **L. Mureddu, G. Alvito, F. Denotti, I. Porceddu:** *Interface between CDS/ISIS and the WEB at the library of the Cagliari Observatory*
15. **Laura Peperoni and Marina Zuccoli:** *The Bologna historical archives on the WEB.*
16. **Elena Potter:** *The Library of Pulkovo Observatory in Emergencies.*

17. **M. Schmitz:** *The NASA/IPAC Extragalactic Database*
18. **George A. Wilkins:** *The revision of UDC 52 and of 'The Astronomy Thesaurus'*

Abstracts of Posters

1.

The VLT/HST Archive Research Facility

R. Albrecht (1,2,3), M. Albrecht (2), M. Dolensky (1,2,3), A. Micol(1,2,3), B. Pirenne (2,3), A. Wicenec (2)

(1) European Space Agency, Astrophysics Division (1)

(2)European Southern Observatory

(3) Space Telescope European Coordinating Facility

Abstract

The European HST science data archive has been combined with the VLT science data archive. The facility will provide all the archive services which users have come to expect in a uniform and user friendly manner.

At the same time the archive facility will be optimised for knowledge discovery through data mining. During the data ingest procedure features and parameters which characterize the data will be extracted and made available in a rapid-access data base. Related information from other data bases and catalogues will be merged into the data base. In this manner previously unknown and unsuspected correlations can be discovered and assessed as to their astrophysical significance.

2.

Documentation facilities at the Cagliari Observatory

G. Alvito, F. Denotti, I. Porceddu, L. Mureddu

Cagliari Observatory Library, Italy

Abstract

The main scientific activities of the Cagliari Observatory are described, together with the computer network, the library and the documentation center.

3.

The on-line bibliographical data base ARIBIB for astronomical references

M. Demleitner, G. Burkhardt, H. Hefele, I. Heinrich, L.D. Schmadel, R. Wielen

Astronomisches Rechen-Institut Heidelberg, Germany

Abstract

The ARIBIB is an on-line bibliographical data base for astronomical references. The ARIBIB is based on the information given in the printed bibliography 'Astronomy and Astrophysics Abstracts' (AAA). The bibliography AAA is produced and published by the Astronomisches Rechen-Institut (ARI) Heidelberg in collaboration with the Fachinformationszentrum Karlsruhe (FIZ) and the Institution of Electrical Engineers (IEE). The ARIBIB gives the bibliographical information in the 'reference format'. This reference format contains the author(s) or editor(s), title, bibliographic data for the source, keywords, and the AAA reference number.

Not included are the abstracts of the papers. The abstracts can be found either in the printed volumes of AAA or in the on-line data bases INSPEC or INSPHYS.

At present, the ARIBIB contains references to the literature from 1983 until now. Information on the older literature (1982 and earlier) is presently not available to us in a machine-readable format. The ARI intends, however, to include the older literature into the ARIBIB by scanning the corresponding volumes of AAA and of the bibliography 'Astronomischer Jahresbericht', and to translate these scans into a text format appropriate for the use in the ARIBIB. The ARIBIB would then be a tool which is especially valuable for the on-line search in the older literature.

Since the end of 1997, the staff members of the ARI are able to test a preliminary version of the ARIBIB. As soon as some technical and organisational problems are solved, we intend to make the ARIBIB freely available on the Internet to subscribers of the printed bibliography AAA.

4.

The Comments On UDC 52 Revisions.

T.N. Dorokhova

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Abstract

The Universal Decimal Classification (UDC) reflects all branches of human knowledge and has spacious applications. The classification created at the end of 19th century improves and develops permanently. The UDC Consortium (the Hague) and British Standards Institution carry out the revision of UDC and rely on the support of users in many countries. The class UDC 52 including "Astronomy. Astrophysics. Space research. Geodesy." was not revised from 1977. At the LISA II meeting in Garching G.A. Wilkins (UK) and R.M. Shobbrook (Australia) presented an introduction to the revision project of UDC 52 and called for collaboration the Friends of UDC 52. We forwarded the suggestions concerning UDC 52 revision to George Wilkins during 1995-1997 years. In this paper the more detailed discussion on the revision project and our suggestions and comments, particularly for subdivision 522.(Theoretical astrophysics) and 524.(Stars. Stellar systems. The Universe) are presented. The program in Turbo Pascal was made by us for visualization of UDC 52, useful presentation and transparencies of the subdivisions in the schedules and auxiliary tables. We show the possibilities of the program.

5.

The Development of Astronomy in Odessa and Its Reflection in Publications of Astronomical Observatory, Odessa State University.

T.N. Dorokhova

Department of Astronomy, Odessa State University, Odessa 270014 Ukraine

Abstract

Dramatical, concentrated by events history of Odessa Astronomical Observatory during 127 years of its existing is reflected to a certain extent in the publications of Astronomical Observatory and Odessa State University. These publications were not regular and numerous for different reasons. But nevertheless these do indicate landmarks of the base directions of the development of astronomy in Odessa. Why are some branches flourished and followed up the success, but another "compressed" and even disappeared? Where was fulfilled common and natural influence of the development of the science and human knowledge, and where did personal tastes or career's pretensions show themselves? How do the political events in the country affect on the development of the science, even so dissimilar with politic as astronomy? Are the scientific contacts within the observatories very important? We tried to answer these questions in the small paper as we could.

6.

The ADS Abstract Service

G . Eichhorn, A. Accomazzi, C.S. Grant, M.J. Kurtz, S.S. Murray

Smithsonian Astrophysical Observatory 60 Garden Street Cambridge, MA 02138 USA

Abstract

The ADS Abstract Service provides access to references from the astronomical literature. Currently the ADS contains over 1 million references in 4 databases (Astronomy: 400,000, Instrumentation: 470,000, Physics: 285,000, Los Alamos Preprints: 2,100). The database contains journal references, conference proceedings, NASA technical reports, PhD Theses, and more.

The ADS project is funded by NASA. The ADS services are available over the World Wide Web (WWW) at no cost world-wide to anybody. The search system can be accessed over the WWW at:
http://adsabs.harvard.edu/ads_abstracts.html

The abstracts can be searched by author name, astronomical object name, title and text words. The search system allows the user to specify various methods of combining results from multiple search terms ('AND', 'OR', and various combinations).

The second data set in the ADS are the scanned journals. In collaboration with many astronomical publishers we have scanned most of the recent astronomical literature and provide access to the scanned page images. The journals were scanned at a resolution of 600 dpi. The resulting prints of retrieved pages have a quality that is better than conventional photocopies.

A very important part of the ADS are the links to other information services. In cooperation with the astronomical publishers and data centers we provide links from the references in the ADS to associated information at other sites. For instance all references to articles that appear in the journals of the American Astronomical Society for which on-line electronic versions are available have direct links to these on-line articles.

The ADS is used world-wide by over 12,000 users per month. They execute over 300,000 queries and retrieve over 5 million references per month. Over 300,000 pages are retrieved from the Article Service per month.

To provide better access to this service, we have set up two mirror sites, one at the CDS in Strasbourg, France, and one at NAO in Tokyo, Japan. The mirror site in France provides access to the Abstract Service, the Japanese mirror also provides access to the scanned articles.

For questions about the ADS please contact the first author at: gei@cfa.harvard.edu

7.

Plans for Future On-line Access to the Historical Astronomical Literature through the Astrophysics Data System.

G. Eichhorn, M. J. Kurtz

Smithsonian Astrophysical Observatory, Cambridge, MA, USA

Abstract

The Astrophysics Data System at <http://adswww.harvard.edu> is in the process of scanning the historical astronomical literature and making it available through the World Wide Web. We have scanned several volumes from the early 1800's of the "Astronomische Nachrichten", and the "Monthly Notices of the Royal Astronomical Society", the two oldest astronomical journals. We also have several of the early volumes of the "Astrophysical Journal" and the "Astronomical Journal" available. For all the journals that we cover, we have scanned volume 1. These early volumes can be accessed on a page-by-page basis.

As far as complete runs are concerned, we have currently the Astronomical Journal online back to 1944 and Meteoritics back to volume 1 from 1953. All volumes that can be fed automatically through the scanning machine should be scanned and put on-line within the next 12 months. The scanning of volumes that are too brittle will take some more time to accomplish.

In order to get the historical observatory literature on-line, we have started discussions with the preservation group at the Harvard University Library. Harvard University Library, together with the Library at the Center for Astrophysics is in the process of microfilming their collection of observatory publications. We are working together with this project to prepare for scanning the microfilms and make these scans available through the ADS.

We will now investigate the possibility of converting the scanned images to text through Optical Character Recognition. We plan to index the text from this OCRing so the old literature can be searched. We will also make this text available to qualified researchers with the understanding that the OCR text will not be 100% correct and that the use of this text has to take that fact into account.

In order to cover more of the astronomical literature, we need donations of astronomical literature. We have a web page that lists the volumes that we need so we can scan them. If you have any of these journals (or other astronomical literature), please contact us. the web page is at:

http://adshome.harvard.edu/pubs/missing_journals.html

We would appreciate any contributions, even smaller sets, since it will be more and more difficult to find complete sets.

8.

The origin of the Palermo Astronomical Library: Giuseppe Piazzi's (1746-1826) personal library

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Abstract

The Library of the Palermo Astronomical Observatory originated from the personal library of Giuseppe Piazzi, the founder of the Observatory (1790) and its first Director, library which he bequested to the Observatory on his death. Rich of some 1500 volumes, it mainly includes books on Astronomy, Physics and Mathematics, as well as Natural Sciences, Philosophy, Religion and Literature classics (e.g. G.L. Buffon's *Histoire Naturelle des Oiseaux*, *Collection complete des Oeuvres de M. de Voltaire*, M.T.Cicerone's *Orationes*) printed between the XVIII and the early XIX century, as well as XVI and XVII titles and a collection of the leading scientific journals of the period. Some of the volumes bear Piazzi's own ex-libris and/or stamps of previous owners, as well as personal dedications from the authors. Based on a manuscript entitled "*Catalogo dei Libri dal P. Piazzi lasciati all'Osservatorio*", which is certainly both incomplete and carelessly compiled, we have started a reconstruction of his library and made a preliminary short-title catalogue.

9.

Acquisition Policy and Collection Increase in Astronomical Libraries in Italy: Two Test Cases

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Abstract

It is very important to organise a correct management of acquisitions in a library and to determine the criteria on which the collections increase should depend, especially in subjects like astronomy and astrophysics and related fields, in which there is a continuous updating. We have analysed the situation of two Italian astronomical libraries, similar in typology, but geographically distant: the first one is the library of the Arcetri Astrophysical Observatory, in Florence, and the second one is the library of the Palermo Astronomical Observatory. We first summarized the characteristics and amount of stock of each of them and defined a set of publications common to both libraries. We then identified the specific profiles and needs of their parent institutions and the influence of these elements on the acquisition policy. Finally we compared data about past and current trends in acquisition policy and collection increase from the late 1970's up to the early 1990's, and from then up to the present time. In this comparison we took into account the amount of funds available and the role played by the librarian(s) and/or the astronomer(s) in charge. We also looked at the impact of the new technologies, especially electronic publishing, in recent years.

10.

Astronomy Librarians and Libraries Addresses

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Abstract

The poster will present the main characteristics of the astronomy librarians and libraries address list which is available on the World Wide Web. Typical data provided, search features and the address submission form will be explained. It will be stressed that submission of new names and addresses as well as correction of out-of-date information are extremely welcome in order to provide correct data.

11.

The Document Resources in PMO* Library

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Abstract

This article includes a general overview of the Purple Mountain Observatory followed by a description of the document resources held in the Observatory Library.

The paper finishes with a discussion of the major role the Library has played in assisting Chinese astronomical research since 1935, and the methods used to achieve this level of assistance.

12.

Organization of Rehabilitation Work in the Library of Pulkovo Observatory after the fire on February, 1997

Natalia Markova

Pulkovo Observatory Library

Abstract

The problem of rehabilitation work after the fire is discussed. Description of the damaged collection, data on losses caused by the fire, water and high temperatures.

13.

Publication costs of astronomical research: economic considerations

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Abstract

We examine the costs of dissemination of new knowledge in astronomy. We first summarise the differing systems for meeting research publication in North America and Europe. Then we analyse the challenges and costs to researchers, publishers and librarians set by new electronic information systems. Finally we propose that costs to the astronomical community globally should be met by the originators of new knowledge (researchers) rather than consumers (libraries and their users).

14.

Interface between CDS/ISIS and the WEB at the library of the Cagliari Observatory

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Abstract

The library catalog of the Cagliari Observatory was digitized some years ago, by using CDS/ISIS with a practical format named "ASTCA" derived from the well-known "TECA". The database was put on-line in local area and in the academic network by means of a UNIX version of CDS/ISIS with a search-only format. Recently the observatory has put some effort in the creation and maintenance of a WEB site; in that occasion the library database has been interfaced to the WEB server by means of the software WWWISIS and a self-made search form. Both books and journals can be searched by the remote users. For the books the search can be made by authors, titles or keywords.

15.

The Bologna Historical Archives on the WEB.

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Abstract

The historical archives of the Department of Astronomy of the University of Bologna collect papers from 1696 to 1958. The documents refer to the scientific activity of local astronomers, including letters, drawings, projects and manuscripts of their works. Our article describes the re-organization of the archives and its inventory, together with the project of availability on the WEB. In fact, since the archives are often attended by foreign scholars, due to the wide-range relationships of the Bolognese astronomers throughout times, the best solution for an electronic availability seems to be the Internet. The project includes both string queries and sequence approach to the archives, together with hypertext links to the local museum and some astronomical iconography.

16.

The Library of Pulkovo Observatory in Emergencies.

Elena Potter

Pulkovo Observatory Library

Abstract

The information about soiling with the mercury in the library on May, 1996. The rehabilitation work after it. The fire in the library on February, 1997. The causes of the fire, the fire itself, the saving of the inqunabules and rarest books, the rehabilitation work in the first days after the fire.

17.

The NASA/IPAC Extragalactic Database

M. Schmitz

Abstract

The NASA/IPAC Extragalactic Database (NED) has been providing computer-network access to a broad range of published extragalactic data since June 1990.

NED offers (1) an X-Windows Graphical User Interface (GUI) with point-and-click, mouse-driven menus, as well as graphics and image-display capabilities, (2) a VT100 ASCII-character menu, (3) a server mode, and (4) a batch mode, and (5) a WWW-based version. The GUI interface provides greater functionality and display capabilities, but its speed is critically dependent upon the network bandwidth; the VT100 mode and the WWW-based versions are generally faster. NED is supporting several thousand interactive sessions, in addition to some 70,000 server-mode connections, and over 200,000 Web 'hits' to its service every month.

18.

The revision of UDC 52 and of 'The Astronomy Thesaurus'

George A. Wilkins

Abstract

There is an urgent need for the revision of the Universal Decimal Classification for Astronomy in UDC 52 for use in libraries and information retrieval systems. The author has drafted a revised and much extended schedule for UDC 52 with the aim of making it compatible with 'The Astronomy Thesaurus', which now also needs updating. Further assistance from astronomers and astronomy librarians is, however, required if the revision of UDC 52 and the consequential updating of the Thesaurus is to be completed satisfactorily without further undue delay. It is hoped that the discussion at LISA 3 will lead to the setting up of a task group whose members will participate in this endeavour.

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5. List of Abbreviations

AAS	American Astronomical Society
ADS	Astrophysics Data System
ESO	European Southern Observatory
IAC	Instituto de Astrofisica de Canarias
IoP	Institute of Physics Publishing
ISI	Institute for Scientific Information
MSSSO	Mount Stromlo and Siding Spring Observatories
NRAO	National Radio Astronomy Observatory
RAS	Royal Astronomical Society
SAAO	South African Astronomical Observatory
ST-ECF	Space Telescope - European Coordinating Facility
ST ScI	Space Telescope Science Institute
USNO	U.S. Naval Observatory