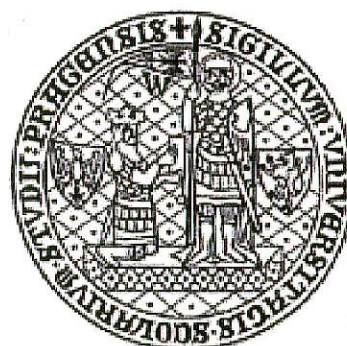


Book of Abstracts
Final Program
List of Participants



July 2 - 5, 2002
Prague, Czech Republic

LISA IV

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Wednesday, July 3, 2002

09:15 Opening address Prof. J. Plášek

I. CHANGES IN LIBRARIES AND LIBRARIANS' TASKS

I. A. Mastering new roles (Chair: F. Genova)

09:30 CFHT's Hawaiian starlight J.C. Cuillandre (*invited*)
10:00 The librarian as teacher: Instructing the next generation of information literate scientists at Case Western Reserve University. W. Claspy
10:20 Information dissemination: Exploring the librarian's role in public relations. V.M. Smith
10:40 *Coffee and poster break*

I. B. Panel: Physical vs. electronic libraries (Chair: M. Cummins)

11:10 What's the difference between a 'reading room' and a 'library' ? J. Holmquist
Astronomy library: An endangered species in a small country? E. Isaksson
The existence and development of the astronomical library in the digital age. J. Zhang
Proposal for a centralized astronomy and astrophysical facility for the universities: an endeavour of the IUCAA library, Pune, India N. Bawdekar
12:30 *Lunch*

II. THE ASTRONOMY INFORMATION NETWORK (Chair: U. Grothkopf)

II. A. Networking among astronomy librarians

14:00 Discovering the network and communicating amongst astronomy librarians: or finding my feet. M.D. Hurn

II. B. Virtual Observatory projects

14:20 The Virtual Observatory projects: Current status, developments and plans. P.J. Quinn (*invited*)
14:50 Networking of bibliographical information: Lessons learned for Virtual Observatory development. F. Genova
15:10 *Coffee and poster break*
16:10 The Russian Virtual Observatory O. B. Dluzhnevskaya, V.V. Vitkovskij et al.
16:30 VO - India; Information support for Remote users G. Sheshadri
16:50 *End of session*

Thursday, July 4, 2002

III. ELECTRONIC PUBLICATIONS: TRENDS, COLLABORATIONS AND MODELS

(Chair: P. Binfield)

- 09:00 Electronic journal publishing seven years on: Is the revolution over or just beginning? E. Owens (*invited*)
- 09:30 IoP publishing - Serving the physics community. T. O'Rourke
- 09:50 Mergers, Acquisitions and Access: STM Publishing Today. K. Robertson
- 10:10 *Coffee and poster break*
- 10:40 PASA - An electronic-only model for a small astronomy journal. M.C. Storey
- 11:00 Observatory publications - Quo vadis? A. Holl

IV. PRESERVATION AND HISTORY OF ASTRONOMY (Chair: B. Corbin)

- 11:20 Thoughts on preservation; The past in the present. P.D. Hingley
- 11:40 Digital history: Problem of creation of resources. Z. Uhlř
- 12:00 *Lunch*
- 14:00 Observatory publication preservation: Microfilm, digital scans, what's next? D.J. Coletti
- 14:20 Current and future holdings of the historical literature in the ADS. G. Eichhorn
- 14:40 YODA: Yerkes observatory digital archives. J.A. Bausch
- 15:00 Maria Mitchell's legacy to Vassar College and beyond: Fostering enthusiasm for astronomy at a small liberal arts college, among women in particular. F. Grabowska
- 15:20 *Poster review* F. Genova
- 15:50 *Coffee and poster break*

V. PANEL: DEVELOPING NATIONS (Chair: V. Alladi)

- 16:20 The Future of Consortia in Indian Libraries - FORSA consortium as Forerunner C. Birdie
- Access to the astronomical literature through the NASA Astrophysics Data System from developing countries. G. Eichhorn
- Offering more information to astronomers. Guo H.
- Astronomical information services: What can we do when problems become big problems? J.M. Sainz Ballesteros
- 18:00 *End of panel*

Friday, July 5, 2002

VI. NEW TOOLS AND PERSPECTIVES

VI. A. Bibliometrics (Chair: L. Bryson)

- 09:00 How to succeed in astronomy without having to use a telescope, or a librarian's guide to High Impact Papers. E. Bouton
- 09:20 Towards an automated retrieval of publications based on telescope observations. U. Grothkopf
- 09:40 A web accessible observatory publications database. D. Crabtree
- 10:00 Bibliometric investigations in Special Astrophysical Observatory. E. Filippova
- 10:20 *Coffee and poster break*
- 10:50 A citation analysis study to manage a journal collection in two astronomy libraries. M. Gomez
- 11:20 The NASA Astrophysics Data System: Bibliometric investigations. M. Kurtz
- 11:40 *Poster Review* B. Madore

VI. B. New tools, knowledge discovery (Chair: G. Eichhorn)

- 11:50 Exploring and querying document collections using concept hierarchies and visualisation tools. D. Egret
- 12:10 *Lunch*
- 14:00 Identifying the important papers for one astronomical object. S. Lesteven
- 14:20 Vocabulary mapping in the NASA ADS: Prospects for practical subject access. D. Dubin
- 14:40 Navigating from publications to astronomical databases. F. Ochsenbein

VII. ASTRONOMY USERS (Chair: C. Birdie)

- 15:00 The IAU Working Group on publishing. M.C. Storey
- 15:20 *Coffee and poster break*

VII. Panel: Astronomy users (content to be confirmed)

- 15:40 Chair: D. Crabtree
- Exponential growth of scientific information and orientation in World Wide Web. M. Wolf, L. Byson
T. Dorokhova
- Bibliographical search: keep a critical eye on your results. P. Dubois

CONCLUDING REMARKS

- 16:50 B. Corbin

POSTERS

1. R. Albrecht, P. Boyce Mining the web: How useful is the global public library ?
2. H. Andernach Professional astronomy without a librarian, or: A professional astronomer as "amateur" librarian
3. R. Baglioni, A. Gasperini The information resources in Arcetri Astrophysics Observatory between metadata and semantic Web.
4. S. Barve, Gopal-Krishna Recent trends in radio astronomical research in India.
5. A. Beiser, P. Houlaha, Lowell Observatory archive image database.
E. Nettell, A. Stone
6. F. Brunetti, M. Marra, E. The cost and the use of serials in Italian astronomical libraries.
Olostro Cirella, L. Schiavone
7. F. Brunetti, F. Martines ILL/DD services of the INAF observatories library: "a modest proposal"
8. I.S. Cecere, E. Olostro Cirella, The ancient books collection of the Capodimonte Astronomical Observatory:
E. Stendardo Iconography online.
9. M. Cummins Physical vs virtual astronomy libraries.
10. M. Cummins, U. Grothkopf Communicating and networking by astronomy librarians.
11. T. Dorokhova, N. Dorokhov T-REX is not lord but mate in information land.
12. A. Gasperini, R. Baglioni The Arcetri Astrophysics Observatory historical archive.
13. U. Grothkopf, E. Bryson Annual Reports of Observatories.
14. E. Isaksson Astronomy library - a rare species in a small country.
15. I. Jankovics, J. Kovacs, I.J. Gothard astrophotographic plate library: digitization and archiving of the
Vincze original plates taken by Eugen von Gothard at the end of the XIXth century.
16. N. Markova The Pulkovo Observatory Library develops electronic services.
17. F. Martines, F. Morale¹ Investigation of Metadata Applications at Palermo Astronomical
Observatory.
A comparative study of the distribution of authors of the "Revista mexicana
18. V. Mata-Acosta, M.E. Jimenez- de Astronomia y Astrofisica". With the application of the Law Lotka.
Fragozo The Argentinian astronomers and the resistance to the change.
19. E. Nievas The digitalization of the Capodimonte historical archive.
20. E. Olostro Cirella About the digitalization of the Capodimonte historical archive.
21. E. Olostro Cirella, P. Paura, M. An astronomical library at large.
Gargano, M.T. Fulco
22. E. Potter The set of brochures on comets in Pulkovo Observatory library.
23. D. Randazzo Online resources on rare and antique books in astronomy.
24. S. Ricketts Evolution of the AAO library.
25. N. Robert Astrophysics production in France until 2000: what image is conveyed by the
Los Alamos and ADS bases?
26. H. Sadsaoud, F. Le Guet Tully Algiers observatory and its library.
27. K. Satpathy The information professional at crossroad.
28. T.V. Shevchuk The library of SII "Astronomical Observatory" of Odessa National
University.
29. J. Struck Educational resources for children on supernovae.
30. V.V. Vitkovskij, N.A. Kalinina, Problem of science output evaluation of archive data using.
O.P. Zhelenkova
31. V.V. Vitkovskij, V.N. The astronomy education in the digital age.
Chernenkov, E.I. Kajsina, N.A.
Kalinina, G.A. Mal'kova, V.S.
Shergin, O.P. Zhelenkova

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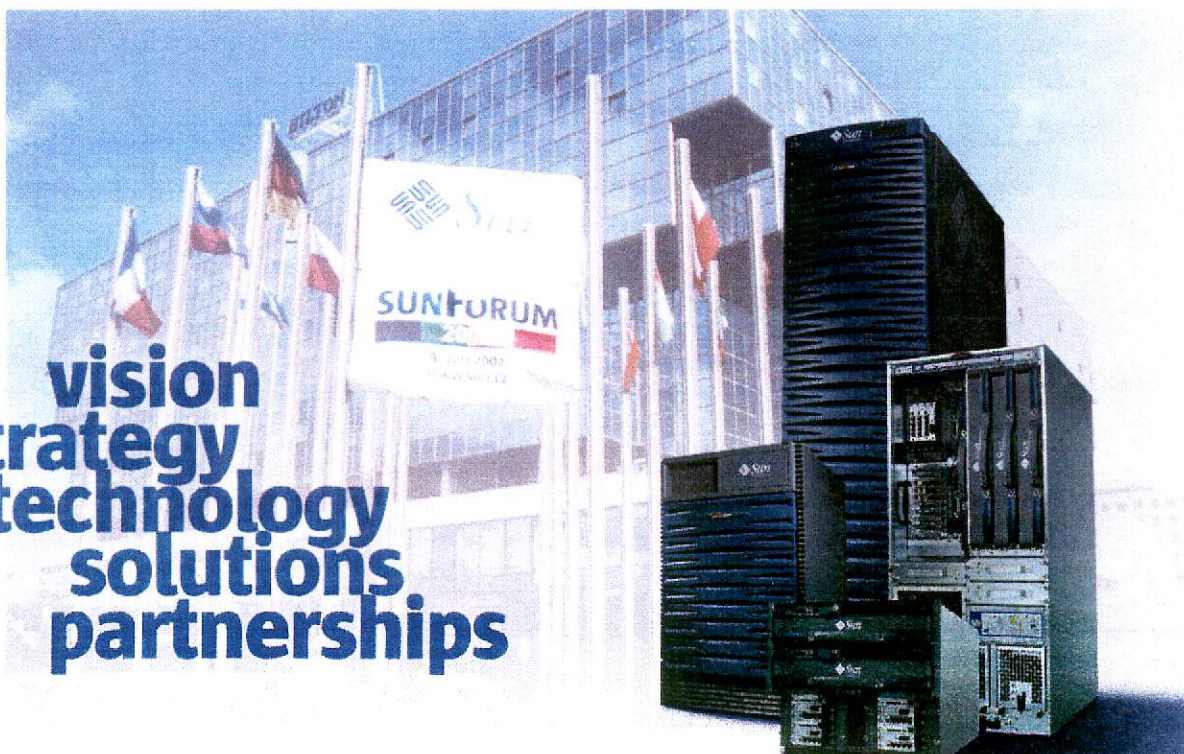
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1. **CFHT's HAWAIIAN STARLIGHT.**

Jean-Charles Cuillandre

Canada-France-Hawaii Telescope, USA

For the longest time, magazine editors and other "cool image" starved media complained about the lack of material images in astronomy. Indeed, after the death of the photographic plates, replaced by the favored use of electronic detectors, low resolution false color images of the deep sky were produced with little concern about aesthetics. However, Space Telescope Science Institute, was the first to understand the great potential for producing stunning images of pictures taken through the eyes of the Hubble telescope. On Mauna Kea, the Canada-France-Hawaii Telescope has been the leader in electronic wide-field imaging for the past decade, bringing the largest CCD mosaic cameras in the world at its prime focus. Since 1999, it operates the CFH12K camera, a 100 million pixel CCD mosaic that produces incredibly detailed images of the sky over a field of view 1.5 times the size of the full moon. Besides allowing key scientific programs, (e.g. the discovery of the cosmic shear), this instrument, with a depth and resolution never before reached, is also a great tool for producing beautiful images of the sky. This presentation will describe the image creation process, starting with the basics of target selection and concluding with the various methods CFHT has adopted for the purpose of showcasing their images.

2. **THE LIBRARIAN AS TEACHER:
INSTRUCTING THE NEXT GENERATION OF INFORMATION LITERATE
SCIENTISTS AT CASE WESTERN RESERVE UNIVERSITY.**

William Claspy

Case Western Reserve University, USA

Scientists have nearly unlimited access to research directly at their desktop. Troubling to us as librarians is the scientist's ability (or inability!) to effectively access this information. The University Library at CWRU, like most academic libraries, has been faced with declining gate counts and reference transactions. In order to ensure that our students will know how to use the digital materials that we make available to them, we have implemented a primary initiative to increase our teaching role on campus. We aim to create an information literate community that knows how to navigate the new digital library.

Library instruction to academic departments in the physical sciences is an unusual mix, but one that we have had success with at CWRU. In order to reach this group of information seekers, we have had success by using the following methods to reach our community:

- ◆ Partnering with other constituencies on campus
- ◆ Creating new ways to provide instruction
- ◆ Assessment of teaching tools and student learning

By taking the library and our instruction to the physical sciences community, we are in the process of creating information literate students who will be more successful as graduate students and researchers in the future. With this program, our role has changed from traditional librarian to teacher.

3. **INFORMATION DISSEMINATION:
EXPLORING THE LIBRARIAN'S ROLE IN PUBLIC RELATIONS.**

Virginia M. Smith
Gemini Observatory, USA

Historically the special librarian's role has been to store and preserve the organization's knowledge. However, in the modern Information Age this role has evolved to address the importance of information dissemination. The management of electronic resources has been a very important aspect of the Gemini librarian's job since the library's inception. In this paper, I discuss the methods that the Gemini Observatory is using to share its resources with a growing audience of users.

I also explore trends regarding the library and its role in public relations. The Gemini Observatory's Public Information and Outreach office was established to educate and inspire the public about astronomy. The Librarian and Graphic Artist are members of the PIO staff and comprise the 'Web Team'. This paper also includes a discussion of the many tasks that they perform together to support the PIO office's goals.

4. **WHAT'S THE DIFFERENCE BETWEEN
A 'READING ROOM' AND A 'LIBRARY?'**

Jane Holmquist
Princeton University, USA

This question is a no-brainer for librarians. The difference between a "reading room" and a "library" is, of course, *the librarian!* But this answer is not so obvious nowadays to many of our (former) users, who think books and journals are passé, and all the information you really need is easily accessible on the Web. In this paper, I will examine 1) the arguments of those who believe the physical space allotted to the traditional library should be decimated and the remainder converted to lab and office space, and 2) the arguments of those who continue to believe that, in an institution committed to research, teaching and learning, the library is sacred space, an intangible asset, where users can find an organized collection of books and journals for reading, as well as peace and quiet for thinking and reflecting. I will also discuss what librarians and astronomers might consider a "core" astronomy collection.

5. ASTRONOMY LIBRARY: AN ENDANGERED SPECIES IN SMALL COUNTRY ?

Eva Isaksson

University of Helsinki, Finland

What will happen to small astronomy libraries in a country where academic library resources have been strongly channelled towards increased nationwide electronic access?

Finland started building its national LINNEA network in mid-1980s. It was a comprehensive effort, in which all the universities participated. The union catalog FINUC was distributed in microform, until in 1993 when the online union catalogue LINDA was launched. It includes bibliographic data from all the participating libraries in all parts of the country.

The acquisition of electronic materials is increasingly being coordinated through the national electronic library, FinELib. Academic libraries tend to arrange campuswide access to electronic materials by joining the appropriate consortia via FinELib.

Bibliographic data of the holdings in the two Finnish academic astronomy libraries (at Helsinki and Turku) are thus available online, and they can access an increasing amount of materials via FinELib. But at what cost?

The increasing level of technical expertise that active participation requires seems to be favoring larger library units, where tasks can be shared. In a small library, one person might end up with a disproportionate workload. At the same time, the union catalogue seems to be bringing more customers to use resources that were originally designed to be used mostly by local astronomers.

Both astronomy libraries have one librarian each. In Turku, the cataloguing is done in a central library, not in the Tuorla observatory library, with older collections remaining uncatalogued. In Helsinki, the cataloguing has been done by the astronomy librarian.

FinELib has strongly lessened the need to arrange online access by direct subscriptions by smaller library units, but its campuswide nature means that ever larger units are making the decisions affecting access to these materials. University of Helsinki observatory has already had quite a few access problems related to this.

6. THE EXISTENCE AND DEVELOPMENT OF THE ASTRONOMICAL LIBRARY IN THE DIGITAL AGE.

Zhang Jian

Purple Mountain Observatory, The People's Republic of China

In recent years, the development of many complex technologies such as electronic publishing, computer information processing, and network communication, has challenged the effectiveness of the traditional library. In addition, traditional methods of data acquisition and the ever increasing demand from users, now threaten to undermine the librarian's survival.

The author seeks to analyze the present challenges in observatory libraries and offer some thoughts for discussion on the modern astronomical library.

**7. PROPOSAL FOR A CENTRALIZED ASTRONOMY AND ASTROPHYSICS
FACILITY FOR THE UNIVERSITIES :
AN ENDEAVOUR OF THE INTER-UNIVERSITY CENTRE FOR
ASTRONOMY AND ASTROPHYSICS LIBRARY, PUNE, INDIA.**

Nirupama Bawdekar

Inter-University Centre for Astronomy and Astrophysics, India

The paper describes the aim behind setting up of the Inter-University Centre for Astronomy and Astrophysics with a slant to the situation which existed in the field of higher education in India during the post-independence period upto 1988. With a view to facilitate access to resources in astronomy and astrophysics in the country, IUCAA Reference Centres have been set up in three places in India, which carry out research in different areas of astronomy and astrophysics. The current scenario, the advantages in adapting to the information technology as well as some of the issues of concern are discussed.

The paper examines the rise in the subscription of important foreign journals in astronomy, astrophysics and physics during the period 1997-2002 in the IUCAA library.

In light of the increasing costs, the role of the IUCAA library as a centralized astronomy and astrophysics facility at the disposal of all universities in the country has great significance. The problem is especially serious for the university libraries due to the limited budget. As a probable solution to the rising costs, the possibility of extending electronic access to the universities actively involved in astronomy and astrophysics research is discussed.

**8. DISCOVERING THE NETWORK AND COMMUNICATING AMONGST
ASTRONOMY LIBRARIANS : OR FINDING MY FEET.**

Mark David Hurn

Institute of Astronomy, University of Cambridge, UK

A light-hearted description of starting work at an astronomy library. With particular reference to discovering the networks, human and computer, which go to make up the astronomical library community. Starting with a description of my librarianship career before astronomy. Networking with (SLIL –Special Librarians In London). Why I applied for this job. Starting work at the Institute of Astronomy. A brief description of the Institute library. A glorious tradition: IoA librarians past and present. Getting to know the computers. Joining email lists (ASTROLIB & SLAPAM). Adventures with email and web forums. Saying hello, introducing myself to other Astronomy librarians (RAS and ROE). Other libraries and other networks (SLIC and CLG) in Cambridge. Other libraries in Britain. Unusual inter-library loan sources. Getting on with the job: my plans for the future. Looking back: where I went right and where I went wrong.

9. THE VIRTUAL OBSERVATORY PROJECTS : CURRENT STATUS, DEVELOPMENTS AND PLANS.

Peter J. Quinn

European Southern Observatory, Germany

There are currently several funded international efforts on the design and initial deployment of virtual observatories. The Astrophysical Virtual Observatory (AVO) Project is a EC supported, three year Phase-A study of a VO for European astronomy. The UK eScience ASTROGID project is a member of the AVO consortium. Both European projects are affiliated with the US National Virtual Observatory and other international VO projects. I will outline the goals and objectives of these projects and their current status as well as key European and global milestones for the next three years.

10. NETWORKING OF BIBLIOGRAPHICAL INFORMATION : LESSONS LEARNED FOR VIRTUAL OBSERVATORY DEVELOPMENT.

Françoise Genova and Daniel Egret

CDS, Observatoire Astronomique de Strasbourg, France

Networking of bibliographic information is particularly remarkable in astronomy. On-line journals, the ADS bibliographic database, SIMBAD and NED, are everyday tools for research, and provide easy navigation from one resource to another. Tables are published on line, in close collaboration with data centers. Recent new developments include the links between observatory archives and the ADS, and the prototype object links between Astronomy and Astrophysics and SIMBAD. This networking has been made possible by close collaboration between the ADS, data centers such as the CDS and NED, and the journals, this partnership being now extended to observatory archives. A set of simple, de facto exchange standards, like the bib/refcode to refer to a published paper, has been the key for building links and exchanging data. This partnership, in which practitioners from different horizons agree to link their resources and to work together to define useful and usable standards, has produced a revolution in scientists' practice. It is an excellent model for the Virtual Observatory projects.

11. THE RUSSIAN VIRTUAL OBSERVATORY.

Olga B. Dluzhnevskaya ¹, Vladimir V. Vitkovskij ², O. Yu. Malkov ¹, O. Zhelenkova ²,
N. Kalinina ², A.A. Kilpio ¹, E. Yu. Kilpio ¹, D.A. Kovaleva ¹, V. Chernenkov ², V. Shergin ²

¹INASAN, Russia

²Special Astrophysical Observatory of the Russian Academy of Sciences (SAO RAS),
Russia

The Russian Virtual Observatory (RVO) will be an integral component of the International Virtual Observatory (IVO). The RVO has a main goal of integrating resources of astronomical data accumulated in Russian observatories and institutions (databases, archives, digitized glass libraries, bibliographic data, a remote access system to information and technical resources of telescopes etc.), and providing transparent access for scientific and educational purposes to the distributed information and data services that comprise its content. Another goal of the RVO is to provide Russian astronomers with on-line access to the rich volumes of data and metadata that have been and will continue to be produced by astronomical survey projects.

Centre for Astronomical Data (CAD) among other Russian institutions has the largest experience in collecting and distributing astronomical data for more than 20 years. Some hundreds of catalogs and journal tables are currently available from the CAD repository, mirrors of main astronomical data resources (VizieR, ADS, etc) are maintained in CAD recently. Besides, CAD accumulates and makes available for astronomical community information on principal Russian astronomical resources.

The Special Astrophysical Observatory of Russian Academy of Sciences (SAO RAS) is the main Russian ground-based center of astronomical observations. The observatory operates by two optical telescopes, 6-m (BTA), 1-m (ZEISS), and radio telescope (RATAN-600). BTA and RATAN-600 are the largest astronomical instruments in Russia. The informatics department of SAO RAS has created the territorial distributed information network with an exit into the Internet by the satellite channel.

**12. VIRTUAL OBSERVATORY – INDIA:
INFORMATION SUPPORT FOR REMOTE USERS.**

A. Vagiswari, Christina Birdie, Nirupama Bawdekar, Ajit Kembhavi, S. Geetha

Indian Institute of Astrophysics, India

A Virtual Observatory (VO) seeks to provide a single virtual platform which will provide easy access to astronomers to large astronomical data over a many different wavelengths. The data is gathered from space based missions and from ground based telescopes. VO related projects are being started in India also, and Virtual Observatory- India is the brain child of IUCAA, as a collaboration between astronomers and software developers in the country. Specific programs are being developed, and mirror sites of databases are being created. It has received funding from the government. Astronomical Libraries in India will play a major role in this project in the form of Virtual Information Support.

The Virtual Information Support (VIS) will serve as a tool for meeting the information needs of the astronomy community in the country, from anywhere, at anytime. It will be a major support to provide seamless access to the resources held in the astronomy libraries, including the online interactive services.

FORSA (Forum for Resource Sharing in Astronomy) is an informal cohesive group of astronomy libraries in India, which will be the force behind this Virtual Library to share their resources and services. The major VIS initiative in 2002 will be the design and implementation of a web site - with features such as newsletter, an integrated library database of all the libraries of the FORSA members, and an online interactive form to facilitate the interlibrary exchange.

**13. ELECTRONIC JOURNAL PUBLISHING SEVEN YEARS ON :
IS THE REVOLUTION OVER OR JUST BEGINNING ?**

Evan Owens

The University of Chicago Press, USA

The Astrophysical Journal first appeared on the web with the 1 July 1995 issue of the ApJ Letters. In 1995, this was an interesting new experiment; seven years later, electronic journals are ubiquitous in the sciences and are common even in the social sciences and humanities. In this talk, I will discuss the state of the journal publishing business seven years into the electronic revolution and consider what has and has not been accomplished. I will then examine current industry initiatives, including cross-publisher linking and resource discovery and recent developments in electronic journal archiving. Finally, I will speculate on the future of the journal and of journal publishing in a world where information is considered as a commodity item.

14. IoP PUBLISHING – SERVING THE PHYSICS COMMUNITY.

Tony O'Rourke

Institute of Physics Publishing Ltd, UK

IoPP publishes a number of titles in High Energy physics and Astrophysics. In January 2002, it took over publication of the "Journal of High Energy Physics" from SISSA, Trieste. The paper will cover IoPP's plans for a new publication in the field of Astrophysics as well as give an overview of IoPP's astro-related book publishing programme. There will also be an update on IoPP's archive digitisation project.

IoP Publishing is part of the Institute of Physics, the British learned society dedicated to the advancement of physics.

15. MERGERS, ACQUISITIONS AND ACCESS: STM PUBLISHING TODAY.

Kathleen Robertson

Institute for Astronomy Library, USA

Electronic publishing is changing the fundamentals of the entire printing/delivery/archive system that has served as the distribution mechanism for scientific research over the last century and a half. The merger-mania of the last 20 years, preprint pools, and publishers' licensing and journals-bundling plans are among the phenomena impacting the scientific information field. Science-Technology-Medical (STM) publishing is experiencing a period of intense consolidation and reorganization. This presentation gives an overview of the economic factors fueling these trends, the major STM publishers, and the government regulatory bodies that referee this industry in Europe, Canada and the USA.

16.

**PASA – AN ELECTRONIC-ONLY MODEL
FOR A SMALL ASTRONOMY JOURNAL.**

Michelle C. Storey

CSIRO Publishing, Australia

In this presentation I will discuss some of the challenges currently faced by small journals. The Internet could facilitate a more distributed network of research publications, but the expense involved in producing both electronic and paper copy of journals has led some small journals to close. PASA (Publications of the Astronomical Society of Australia) is a fully refereed, ISI-listed journal for original research in astronomy, focusing on areas relevant to current research in Australia. The journal is owned by the Astronomical Society of Australia and published by a not-for-profit publisher, CSIRO Publishing. From 2002 PASA will be moving to principally electronic publication. All the steps involved in producing a quality journal will be preserved, except for the final stage of printing and posting a paper copy. PASA is also producing a quarterly broadsheet, the PASA Update Bulletin, to promote the contents of PASA. Using the PASA Update Bulletins, a large number of readers can be reached and made aware of the content that PASA is publishing, and they can access the papers either directly, or via the NASA Astrophysics Data System. Best-practice is being followed regarding access to and archiving of the electronic material. I will outline the background to the decision to produce an electronic-only astronomy journal, describe the model to be adopted for publication of PASA, and report on the response from the astronomical community.

17. OBSERVATORY PUBLICATIONS - QUO VADIS ?

Andras Holl and Magda Vargha

Konkoly Observatory, Hungary

I. History of observatory publications

In the first part we discuss briefly the history of observatory publications. Early Hungarian examples are given, and the holdings of Konkoly Observatory Library are discussed. A case of library exchange from 19th century Hungary is also mentioned.

II. Role and value

Then we express our opinion about the role and value of observatory publications as inexpensive means of information exchange. We think that several of them were of high scientific standard, guaranteed by the standing of the publisher (the observatory), and the editor (mostly the director). They contain highly important catalogues and observations still used and cited. Moreover, they give a sometimes unique vista on the scientific program of the publishing institution.

III. Preserving observatory publications on the web

We think that observatory publications should be preserved on the web, and modern services should be used. Bibliographic information should be entered to ADS, pages should be scanned and tables converted into machine readable form. Plans at Konkoly Observatory with its *Mitteilungen/Communications* series are mentioned.

IV. Continuing observatory publications on the web / preserving web contents in observatory publications

We argue that the tradition of observatory publications should be continued, utilizing modern technical possibilities. The recent shift towards commercial journals puts a heavy burden on Library budgets. We think that scientific standard could be kept high, and the web could provide effective means for circulation. A reference to the Open Archives Initiative should be made here.

Moreover, we introduce the idea of preserving the contents of observatory websites in the form of observatory publications: in linear text form, bound to finite volumes, and numbered as a part of a series (note that this does not necessarily involve paper). This would be beneficial for future generations.

V. Technical possibilities, standards, support

To achieve this all, observatories should cooperate with databases, they would need methodological help, standards should be strengthened, and, in the case of publications of observatories that do not exist any more, the community of astronomy libraries should take steps.

18. THOUGHTS ON PRESERVATION; THE PAST IN THE PRESENT.

P. D. Hingley

Royal Astronomical Society, England

It appears that few if any currently active large scale Observatories have any kind of official plan for the long term preservation of historical records of their activities. While this lack of system may make future research more exciting (!) it is hardly an optimal situation. For those who live in the real world however it is unlikely that any substantial resources or space will be devoted to this purpose, nor that it will occupy more than a corner of otherwise fully occupied peoples' time. This talk will look at the problem from the point of view more of the historian than the Librarian; will consider some past consequences of such a lack and suggest a short 'wish list' of what may be achievable within the constraints of *realpolitik*. Some possible alternative strategies to maintaining the institution's own archives, including placing material with local or regional archives, and sources of advice on conservation, will also be considered.

19. DIGITAL HISTORY : PROBLEM OF CREATION OF RESOURCES.

Zdeněk Uhlíř

Department of Manuscripts and Early Printed Books
National Library of the Czech Republic, Czechia

The presented paper is based on the reference background of historical librarianship, so that it does not take the definition of problems of astronomy as anticipated, clearly defined and unambiguously structured. In this respect we can see the historical astronomical material at three different horizons: firstly, as factographic data preserved from the past or as that we can take today as factographic data; secondly, as an evidence of acquisition and explication of this factographic material, i.e. history of astronomy as science; and thirdly, as an inclusion of an astronomic theme into historical material in general, i.e. also in an extra-science sense into an intellectual discursus and non-intellectual mentality.

At present we are witnesses of a transition from the environment of dominantly printed word into the dominantly electronic-digital environment. In connection with this important change in communication takes place also a new conceptualisation of information and knowledge. This must be responded also by retroconversion of present sources and creation of the new ones. In this wider context the horizon of discursus and mentality seems to be fundamental – the domain of a historical librarian is just here.

Creation of historical resources in the electronic-digital environment has three aspects: firstly, it is a permanent creation of digital image copies; secondly, building a catalogue as an access point common for both original and subsidiary documents; thirdly, production of full texts and also bibliographic and factographic databases or comments-monographs. Owing to the fact that there in the electronic-digital environment does not exist any document in strict, right sense it increases the importance of the context of data and an information becomes an interpretation. And owing to the fact that the subject itself appears as a theme at more horizons together, the knowledge becomes an interpretation at a next level. The resources in the electronic-digital environment are prepared for an indirect, i.e. also an indefinite utilisation. So it is not enough only to represent data in an objective way but it is also necessary to make them available so that they enable an interpretation in various contexts (the sphere of information) and also at various horizons (the sphere of knowledge). It demands both inter-disciplinary and trans-disciplinary attitudes not a concentration on a certain discipline and specialization. From all of this follows a need of changing the library and information work for the information-knowledge work.

20. **OBSERVATORY PUBLICATION PRESERVATION :
MICROFILM, DIGITAL SCANS, WHAT'S NEXT?**

Donna J. Coletti

Harvard-Smithsonian Center for Astrophysics, USA

Since 1996, the John G. Wolbach Library at the Harvard-Smithsonian Center for Astrophysics has participated in a preservation project, funded by the U.S. National Endowment for the Humanities and carried out at Harvard University's Weissman Preservation Center, to preserve the history of science. More than 2,000 volumes of our 3,000 volume collection of early (18th and 19th century) observatory publications from around the world have been preserved on microfilm. An additional project to produce digital (TIFF) images from the microfilm is underway.

Recently Harvard University unveiled its Digital Repository Service (DRS) offering a state-of-the-art electronic storage and retrieval system for collections. DRS incorporates management of administrative and structural metadata associated with stored objects, preservation policies and procedures to ensure the continued usability of stored objects, and delivery of an object to a registered or known software application (e.g., an online catalog). To help its libraries prepare materials for the DRS, Harvard offers the service and guidance of preservation experts from the Imaging Services Preservation & Imaging Department.

We issued a challenge to Harvard, "Show us what you can do with an old volume of the Observatory Publications" and they accepted. In this presentation you will be shown the result of the challenge as well as two other digital versions of the same volume created during the past seven years for comparison. The first version was scanned from the paper in 1995. The second was scanned from microfilm produced from the NEH project and the third version is the result of the "Harvard Challenge". The advantages and disadvantages of each version will be discussed.

21. CURRENT AND FUTURE HOLDINGS OF THE HISTORICAL LITERATURE IN THE ADS.

Guenther Eichhorn, Alberto Accomazzi, Carolyn S. Grant,
Michael J. Kurtz, Vicente Rey Bacaicoa, Stephen S. Murray

Harvard-Smithsonian Center for Astrophysics, USA

The Astrophysics Data System (ADS) has the largest freely available archive of scanned literature in the world. One major part of this archive is to provide access to the full text of the historical astronomical literature. We have already on-line all major journals and many smaller journals back to volume 1. We currently have scanned over 30 journals as well as many conference proceedings.

An important part of this literature are observatory publications. The ADS is collaborating with the Wolbach Library at the Harvard-Smithsonian Center for Astrophysics in a project to microfilm these historical observatory publications. We are scanning these microfilms and making the scans available through the ADS. We currently have over 300,000 pages from over 30 observatory publications on-line.

In order to fully utilize these scans we need help in collecting metadata for these publications. We have developed an interactive tool to capture the metadata. If you are willing to help us with this task please contact the first author at gei@cfa.harvard.edu.

The ADS is funded by NASA Grant NCC5-189.

22. YODA : YERKES OBSERVATORY DIGITAL ARCHIVES.

Judith A. Bausch

Yerkes Observatory, University of Chicago, USA

The Yerkes Observatory Digital Archives (YODA) project began as an in-house project for the Yerkes Observatory centennial in 1997 along with the Yerkes Observatory Virtual Museum (<http://astro.uchicago.edu/yerkes/virtualmuseum/YOVMuseum.html>). Currently, a Filemaker Pro database of nearly 600 images exists with over 1000 images remaining to be scanned. I will discuss the organization of the database and show some of its content.

**23. MARIA MITCHELL'S LEGACY TO VASSAR COLLEGE AND BEYOND :
FOSTERING ENTHUSIASM FOR ASTRONOMY AT A SMALL LIBERAL
ARTS COLLEGE, AMONG WOMEN IN PARTICULAR.**

Flora Grabowska

Vassar College, USA

The presentation will open with a brief overview of Maria Mitchell's life, her stipulations in agreeing to join the Vassar College faculty, projects she initiated with Vassar students, illustrated with photographs, and mention of her role in building the library collection. From there the presentation will focus on more recent history with figures showing gender breakdown of astronomy students since 1969 when Vassar admitted males. The recent and ongoing projects of Professor Debra Elmegreen, on the Maria Mitchell Chair, will be briefly described as well as recent and ongoing URSI (Undergraduate Research Summer Institute) and Senior thesis projects again including a breakdown by gender. This section will include illustrations of the new observatory, opened in 1997. What gathered information and observations etc. is preserved and how will be discussed. Finally there will be a brief section on, "Where are they now?" focusing on alumnae.

I plan a richly illustrated, multimedia presentation, including scanned images of one or more original documents from Special Collections, photographs of students then and now, the old and new observatories (the old is a listed historic building), a look at the website created commemorating the cross country trip Maria Mitchell made with students to observe the solar eclipse in 1878.

To do the material justice, an hour would be ideal, but, if need be, a shorter version could be presented. I see this talk as part of topic IV, the preservation and history of astronomy. A poster presentation is a possibility, but could not convey the scope of the achievements in the last hundred years and into the future.

**24. THE FUTURE OF CONSORTIA IN INDIAN LIBRARIES –
FORSA CONSORTIUM AS FORERUNNER.**

Christina Birdie and A. Vagiswari

Indian Institute of Astrophysics, India

The quantity of information purchased by libraries has been declining in recent years due to the price escalation of scholarly publications. Libraries are exploring new ways to provide more information with less budget. In the field of Astronomy and Astrophysics, many of the journals have made a significant departure from the traditional publishing model. The availability of electronic format of these journals has facilitated the librarians to adapt to the new technology driven-media. While trying to accommodate the changed information format they have encountered the necessity for additional funds and the required infrastructure to access the information. Libraries in India are no exception to experience this metamorphosis of information. Librarians have the additional responsibility to take care of the economics part of the expensive information they buy for their users. FORSA (Forum for Resource Sharing in Astronomy) is an informal group consisting of 8 astronomy libraries in India. It has the potential to become a "Consortium", by sharing the access to a few electronic journals. Publishers and Vendors have been cooperative, by offering alternative business models suitable to libraries. They encourage the libraries to form "Consortium" to bargain with them for a better deal in pricing. It is a convenient situation for the publishers also to communicate to a group collectively rather than transacting with individual libraries. Can FORSA consortium model be a forerunner for other groups of libraries, which are in the preliminary stages towards getting converted as formal Consortium?

In this paper we have tried to identify the various offers made by different publishers for getting access to electronic journals. We have also attempted to analyze the suitability of these offers for developing future consortia keeping in view the requirements and use of the digital information in India. Some of the challenges could be sorted out with the help of governments' participation in bridging the Digital Divide within the country.

25. NEW DEVELOPMENTS IN ELECTRONIC INFORMATION MANAGEMENT. A NEW WAY OF EXCLUSION ?

Fernando Merida-Martin

Instituto Nacional de Técnica Aeroespacial, Spain

The amount of information and the number of sources available through electronic media and networks are ever increasing. Even libraries and information centres with considerable expertise in electronic information management are having difficulties in coping with this increase. Yet the proliferation of networked information sources and development of new technologies offer both opportunities of innovative electronic information management strategies and challenges in the area of integrated multimedia information services.

Developed nations are main characters in the new information management situation and, although there is not an equal degree of development of techniques in these countries, there is no doubt that all of them are very well prepared to achieve results, while the less developed countries are facing a new way of exclusion.

The main objective of this paper is to review how the current developments in electronic information management could bring (or not) information managers, reference librarians and others professionals or users in general, tools to implement an up-to-date networked information services in retrieving, disseminating, storing and preserving electronic information for posterity. Of course this will happen if the centres are able to get the means, equipment and knowledge, if not, every modern development in this area will be useless for them, keeping those centres out of sources and information in the way they are understood today.

Less developed nations need programs of support to be more readily able to take full advantage of the mass of technical information that is available electronically throughout the world, and to share their own valuable resources as well.

International programs and financial resources devoted to this subject will be taken in account in this of the paper

**26. ACCESS TO THE ASTRONOMICAL LITERATURE THROUGH
THE NASA ASTROPHYSICS DATA SYSTEM
FROM DEVELOPING COUNTRIES.**

Guenther Eichhorn, Alberto Accomazzi, Carolyn S. Grant,
Michael J. Kurtz, Vicente Rey Bacaicoa, Stephen S. Murray

Harvard-Smithsonian Center for Astrophysics, USA

The Astrophysics Data System (ADS) is the search system of choice for Astronomers world-wide. The searchable database contains over 2.5 million records. In addition the ADS has over 1.8 million scanned article pages from about 250,000 articles, dating back as far as 1829. There are currently more than 10,000 regular users (more than 10 queries/month). ADS users issue almost 1 million queries per month and receive 30 million records and 1.2 million scanned article pages per month.

The ADS is accessed from almost 100 countries with a wide range of the number of queries per country. Approximately 1/3 of the use is from the USA, 1/3 from Europe, and 1/3 from the rest of the world.

In order to improve access from different parts of the world, we maintain 9 mirror sites of the ADS in Brazil, Chile, China, England, France, Germany, India, Japan, and Russia. Automatic procedures facilitate keeping these mirror sites up-to-date over the network.

Both the search system and the scanned articles in the ADS can be accessed through email. Email can be used by users that are on slow or unreliable Internet connections. It allows access to the ADS for people who do not have a connection that is good enough to use a web browser.

We are currently in the process of developing a stand-alone ADS system that can be updated through DVDs. This would provide access to the capabilities of the ADS from sites that do not have any Internet access at all. The capacity of hard disk drives is sufficiently large by now to store a complete ADS system on one large disk.

The ADS is funded by NASA Grant NCC5-189.

**27. OFFERING MORE INFORMATION TO ASTRONOMERS
BY COLLABORATION AMONG ASTRONOMY LIBRARIES.**

Guo Hongfeng

National Astronomical Observatories of China, China

The information requirements of astronomy research, the information services which we can offer to astronomers from the network, and the possibility of offering more information to astronomers by international collaboration and sharing among astronomical information resources are discussed in this paper. The collaboration and the network information services in China are also reported.

**28. ASTRONOMICAL INFORMATION SERVICES :
WHAT CAN WE DO WHEN PROBLEMS BECOME BIG PROBLEMS ?**

Juana Maria Sainz Ballesteros

The Libraries and information in Astronomical Institutions in Argentina before the actual crisis, and its consequences at present. What can we do in the near and not so near future? Did we think of any solution?

**29. HOW TO SUCCEED IN ASTRONOMY WITHOUT
HAVING TO USE A TELESCOPE, OR
A LIBRARIAN'S GUIDE TO HIGH IMPACT PAPERS.**

Sarah Stevens-Rayburn¹ and Ellen N. Bouton²

¹ Space Telescope Science Institute, USA

² National Radio Astronomy Observatory, USA

The authors have undertaken a study of High Impact Papers in astronomy from a subset of ISI's 2001 database, covering papers published 1991-1999 and cited 1991-2000. The intent of the study was to measure the relative impact of papers based on data gathered from multiple telescopes as opposed to those from a specific telescope. The results have been somewhat surprising in that high citation rates are not as frequently tied to direct observational material as they are to theories, data compilations (either laboratory astrophysics or observational surveys), and reviews. We explore these observations, along with suggesting caveats in the use of citation information, based on differing counts for the same papers from ISI and the ADS.

30. TOWARDS AN AUTOMATED RETRIEVAL OF PUBLICATIONS BASED ON TELESCOPE OBSERVATIONS.

Uta Grothkopf and Angelika Treumann
European Southern Observatory, Germany

We analyze papers based on VLT observations regarding (a) the information provided about facilities used and (b) possible retrieval through ADS. The following topics are looked at:

- Where in the papers do authors report on the facilities used and how detailed is this information? Can it be used to measure scientific output of observatories, telescopes, instruments and observing programs?
- Which percentage of relevant papers is retrieved through ADS, how many irrelevant papers are picked up, and why?
- How can automated retrieval of papers be improved and which factors remain problematic?

We conclude that the currently available retrieval options are not sufficiently reliable to abandon manual literature screening. The implementation of dedicated LaTeX-tags in the macros of core astronomy journals and a specific search option through ADS would probably improve the procedure considerably and help to move towards (mainly or entirely) automated retrieval of papers.

31. A WEB ACCESSIBLE OBSERVATORY PUBLICATIONS DATABASE.

Dennis Crabtree¹ and Liz Bryson²

¹ National Research Council of Canada
Herzberg Institute of Astrophysics, Canada

² Canada-France-Hawaii Telescope, USA

We describe a database of refereed publications based on data obtained from a variety of major ground-based telescopes. This database contains not only the publication information for each paper but the current number of citations and the predicted final number of citations (FNC) as well. The citation information is retrieved automatically from the NASA Astrophysics Data System. The methodology used to determine the FNC is described. The FNC can be used to compare the impact of papers that range in age as it accounts for general increase in citations the longer a paper has been published. This database is accessible through a simple Web interface that allows users to query the database in several different ways.

We will present an analyse of the publication and citation information in the database. We will also show several examples of the Web interface to the database.

**32. BIBLIOMETRIC INVESTIGATIONS IN
SPECIAL ASTROPHYSICAL OBSERVATORY.**

Ekaterina Filippova
Nizhnij Arkhyz, Russia

Bibliometric data for the Special Astrophysical Observatory are presented. Statistics and analysis of issues being brought out at SAO are given. Statistical data on publication of papers of the SAO researches from the day of foundation of the observatory through 2000 are presented. The numbers of papers that appeared in domestic and foreign scientific issues are compared. An attempt is made to analyze the correlation of the number scientific papers with the number of researches of the observatory and also with the funding of SAO and receiving grants for researches. It can be seen that the steady rise in publications observed from 1968 to 1991 gave way to an abrupt fall during the first (1992-1995) and second (1998) crises in our country.

**33. A CITATION ANALYSIS STUDY TO MANAGE
A JOURNAL COLLECTION IN TWO ASTRONOMY LIBRARIES.**

Monique Gomez ¹ and Fernando Merida ²

¹ Instituto de Astrofísica de Canarias, Spain

² Instituto Nacional de Técnica Aeroespacial, Spain

The management of journals in libraries is a difficult task as subscriptions costs increase year after year, library budgets are tight, new journals appear and new modalities of subscriptions are becoming available.

Small and medium astronomy libraries that do not belong to big consortia may have difficulties in maintaining a relevant collection of journals. In this context, evaluation of collections is becoming even more necessary.

Bibliometrics offers several methods to evaluate collections: one of them is the analysis of references cited in articles.

In this work, we present the results of the analysis of the references cited in the articles published by authors of the Instituto de Astrofísica de Canarias or of the INTA-LAEFF (*Laboratorio de Astrofísica Espacial y Física Fundamental*). We rank the publications cited by title and by year to determine the most used publications and how far back the collections are used. Additionally, to see if the advent of ADS and electronic journals in the mid90s has influenced the reading or citing practices of the authors, we compare two sets of data: articles published over the period 1990-1993 that we define as the pre-ADS period and articles published over the period 1997-2000 defined as the ADS period.

**34. THE NASA ASTROPHYSICS DATA SYSTEM :
BIBLIOMETRIC INVESTIGATIONS.**

Michael J. Kurtz, Guenther Eichhorn, Alberto Accomazzi,
Carolyn Grant and Stephen S. Murray

Harvard-Smithsonian Center for Astrophysics, USA

Because the use of ADS is now the dominant means by which astronomers access the technical literature the ADS usage logs can provide a uniquely powerful view of the way an entire discipline (astronomy) uses the technical literature.

We examine the obsolescence of the technical literature of astronomy as a function of article age based on the actual readership of an article. We demonstrate conclusively that previous studies, which find the obsolescence function is the sum of two exponentials, or the product of one exponential with a growth function, are too simplistic. We demonstrate that an obsolescence function, which is the sum of four exponentials with very different time constants, can fit the actual use data very well.

We demonstrate the relationship between usage as measured by readership, and usage as measured by citations. Differing from all previous studies we show that on the average the actual obsolescence is the same for both measures. We also show that there are large variations in these measures for individual articles, and show the extent and nature of these variations.

We use a combination of readership data and citation data to create new measures for the scientific productivity of individuals and groups. We apply these new measures to a number of interesting cases.

**35. EXPLORING AND QUERYING DOCUMENT COLLECTIONS
USING CONCEPT HIERARCHIES AND VISUALISATION TOOLS.**

J. Alaux¹, T. Dkaki², D. Egret³, S. Lesteven³, J. Mothe¹

¹ Institut de Recherche en Informatique de Toulouse, France

² Institut Universitaire Technologique de Strasbourg, France

³ Centre de Données astronomiques de Strasbourg, France

This paper presents the results of a study based on a data collection of 10,000 articles extracted from the ADS, corresponding to the production of the French astronomical community during five years (1996-2000). We introduce a new approach to provide users with solutions to explore a document collection. A key point in our approach is that

**36. IDENTIFYING THE IMPORTANT PAPERS
FOR ONE ASTRONOMICAL OBJECT.**

Soizick Lesteven, P. Dubois, P. Fernique, F. Genova, F. Ochsenbein, M. Wenger
CDS, Observatoire Astronomique de Strasbourg, France

In astronomical databases such as SIMBAD, the number of bibliographical references attached to one astronomical object is continuously growing, with the accumulation of published literature over the years. Some objects are cited in many papers, and it may be difficult to identify the most relevant papers, i.e. those which contain extensive results about that object.

A first aid for the evaluation of the relevance of a paper consists in reporting additional information about the importance of the object in the article. The number of citations of the object in the paper gives one measure. The relevance can also be evaluated from the location of the citations of the object name in the paper: as an example, when the object name appears in the title of the paper, or/and as an "Individual" keyword, that object is generally extensively studied. The fluctuant nomenclature used to designate the astronomical objects is one of the obstacles to be taken into account to derive a significant measure of the impact of the various papers dealing with each object.

An evaluation of the classification criteria will be presented.

**37. VOCABULARY MAPPING IN THE NASA ADS :
PROSPECTS FOR PRACTICAL SUBJECT ACCESS.**

Jonghoon Lee and David Dubin
Graduate School of Library and Information Science,
University of Illinois, USA

The popular NASA Astrophysics Data System includes bibliographic records indexed with terms from a variety of semi-compatible descriptor languages. These include coordinate index terms taken from the NASA Thesaurus and Astrophysical Journal subject headings, among others. In an ongoing project, we have worked to develop a system that takes as input the NASA terms assigned by professional indexers, and translates them into ApJ headings. Our system maps sets of descriptors, rather than individual descriptors, since two or more coordinate index terms may translate to a single pre-coordinated subject heading. We began our study with lexical resemblance as the main source of evidence, and later developed a connectionist system that exploits patterns of consistent co-assignment in a subset of the ADS collection that is indexed using both ApJ headings and NASA terms. Our most recent efforts have been aimed at improving the network's performance via supervised learning.

38. **NAVIGATING FROM PUBLICATIONS
TO ASTRONOMICAL DATABASES.**

Francois Ochsenbein ¹, Claude Bertout ², James Lequeux ², Francoise Genova ¹

¹ CDS, Observatoire de Strasbourg, France

² Astronomy and Astrophysics Editorial Office, France

The implementation of journals on the Web has opened new possibilities for the scientific usage of published results, because it is now possible to link published articles to other types of information. The availability of published information in electronic form also allows for new types of content validation, complementary to the referee's validation and to the layout performed by the publisher.

One important mid-term objective is the implementation of links between the astronomical objects quoted in published articles and databases such as SIMBAD and NED, thus giving the readers an immediate access to details about these objects. Since SIMBAD and NED offer links to other databases, to images, and to the literature concerning these objects, all the available information about the objects quoted in that article are just a few clicks away.

Such links from the objects quoted in the papers to databases are not only a help to the readers, they also enable a systematic checking of the designations used in the published papers, thus improving the content quality. These links also give potentialities for more automatized ways for the bibliographic scanning performed by the SIMBAD and NED teams. The task of building and maintaining these links is however difficult, because the nomenclature used in the articles to designate the astronomical objects is highly fluctuant, and the authors are often careless in this domain.

Since several years now, authors publishing in A&A are offered the possibility to quote the astronomical objects they are studying directly in their latex manuscript (via the `\object` macro). Since April 2001, this macro is being translated into an actual link from the article to the SIMBAD database. This experiment is still in a prototype phase. Its various aspects will be presented, and the first conclusions in terms of usage, reliability, relevance, and long-term maintenance will be discussed.

39. THE IAU WORKING GROUP ON PUBLISHING.

Michelle C. Storey

FCSIRO Publishing, Australia

The International Astronomical Union Working Group on Publishing was formed in mid-2001 as a Working Group of the IAU Executive. The Working Group's purpose is to address the continuing need to determine how the publication of research results should evolve in the world of the Internet, electronic publishing, and databases and the Virtual Observatory Project. For example, we have been determining guidelines to ensure streamlined and reliable connections between material in publications and other electronic resources. We aim to help ensure that the publication of research results evolves in a direction of maximum benefit to astronomy by providing an effective information conduit between publishers and astronomers. In this talk I will describe past and proposed activities of the IAU Working Group, and will seek feedback and ideas on how the Working Group on Publishing can best serve the needs of astronomers and astronomy information providers.

40. EXPONENTIAL GROWTH OF SCIENTIFIC INFORMATION AND ORIENTATION IN WORLD WIDE WEB.

Tatyana Dorokhova

Astronomical Observatory of Odessa National University, Ukraine

The swift growth of the number and length of publications in the narrow but advanced fields of astrophysics is shown with certain examples of astrophysical researches. In this situation AstroWeb, ADS, CADC, SIMBAD, HEASARC, CATS, etc. present invaluable assistance. Cooperation of an astronomer and a librarian-as-guide in the shoreless sea of information is important for a stimulation of effective scientific work (see, for example, LISA III proceedings, 1998: Brenda Corbin, p. 27; Sarah Stevens-Rayburn & Ellen Bouton, p. 195). There are noticed the features of the Internet resources' utilization in Ukraine.

41. **BIBLIOGRAPHICAL SEARCH :
KEEP A CRITICAL EYE ON YOUR RESULTS.**

P. Dubois

Observatoire Astronomique de Strasbourg, France

Bibliographical databases become indispensable tools in astronomical research. But the search result of course depends on the indexation rules specific to each database. Some of these differences will be analysed and illustrated by astronomical examples.

42. **CONCLUDING REMARKS – LISA IV, JULY 5, 2002.**

Brenda G. Corbin

U. S. Naval Observatory, USA

A short history of how the Library and Information Services in Astronomy (LISA) conference came into existence will be given, with some remarks about the character of each meeting. Memorable moments of the conference just held will be mentioned. The author's thoughts on the future of LISA will be briefly discussed.

1. MINING THE WEB: HOW USEFUL IS THE GLOBAL PUBLIC LIBRARY ?

Rudolf Albrecht ^{1*} and Peter B. Boyce ^{2#}

¹ Space Telescope European Coordinating Facility, Germany

² PBoyce Associates, USA

The Web has matured into the most universal source of information. At this point in time it still suffers from the fact that finding the pertinent information, even if available, is difficult for a variety of reasons.

This poster explores the usefulness of the Web for professional scientists and for the interested public. Using examples, we examine the reliability and completeness of the information on subjects which are well known, and on cutting edge science. A recent survey by the AAS (1) shows that only about 1% of the articles which astronomers read are found through standard Web search engines. Specialized services like the ADS are more popular (20%), but information passed on by colleagues is the most popular among astronomers (21% of the articles are found that way).

Directions for future developments are suggested.

* Affiliated to the Space Telescope Division, Research and Science Support Department, European Space Agency

Senior Consultant to the American Astronomical Society

(1) Supported in part by a grant from NASA to the AAS.

2. PROFESSIONAL ASTRONOMY WITHOUT A LIBRARIAN, OR : A PROFESSIONAL ASTRONOMER AS "AMATEUR" LIBRARIAN.

Heinz Andernach

Departamento de Astronomia, Universidad de Guanajuato, Mexico

Virtually every "serious" place where professional astronomy is done has a librarian, even if shared with the physics or math department. Since the foundation in 1995 of the Dept. of Astronomy of University of Guanajuato no librarian was assigned to it. Instead, the corresponding duties were performed by volunteering astronomers, and since early 1997 by myself. In this poster paper I give some insight into the experience obtained during these five years as "amateur" librarian. Until now we do not have a proper space for our book and journal holdings, nor do we have funds to afford a single journal subscription at the institutional rate, or a standing order to even one of the major conference proceedings in astronomy. Despite these strong economical and space limitations imposed by our University, the output and performance of our research staff does not seem to suffer from the lack of a librarian and a proper library. I present information on other small astronomy institutions in Mexico confirming that our department is not an isolated case, and that in fact the majority of astronomy places in Mexico work (or rather "have to work") not only without a librarian, but some also without a well-ordered library and library catalogue.

**3. THE INFORMATION RESOURCES IN ARCETRI ASTROPHYSICS
OBSERVATORY BETWEEN METADATA AND SEMANTIC WEB.**

R. Baglioni ¹ and A. Gasperini ²

¹ Università degli Studi di Firenze,
Dipartimento di Astronomia e Scienza dello Spazio, Italia

² Istituto Nazionale di Astrofisica,
Osservatorio Astrofisico di Arcetri, Italia

It is becoming more and more apparent that libraries are going to play a key role in the new W3C's paradigm for the semantic web. For this reason the library of Arcetri is looking into the possibility of a way of publishing different kinds of electronic documents on the net and a way of enriching them with semantic metadata. We have realized that RDF (Resource Description Framework) from W3C and the Dublin Core Metadata Set are the two main building blocks of the semantic web. A first step concerning this project was presented at the fourth national meeting of the Italian astronomical libraries held in Cagliari. The project is now taking shape: in a first phase we are focusing on the library catalogue and in a second phase we will consider bibliographies, preprints and technical reports, web pages, archives of astronomical data, photographic and historical archives. All the documents contained on the Arcetri's web site can be filled with metadata in order to build sophisticated relationships among them based on their semantic contents.

We present a software written in Java which converts the metadata extracted from the above mentioned documents in a RDF model. We can interrogate this model to point out complex relations. We have also prepared a web interface to this model to permit the query.

The library can coordinate these efforts in tight cooperation with the programmers of the computing service.

4. RECENT TRENDS IN RADIO ASTRONOMICAL RESEARCH IN INDIA.

Sunita Barve and Gopal-Krishna

National Centre for Radio Astrophysics, India

This paper attempts to present a fairly transparent analysis of some key trends in the research carried out by radio astronomers in India during the past 12 years (1990-2001). The motivation to focus on the work of radio astronomers comes from the major strides which India has recently made by indigenously building the world's largest radio telescopes operating at metre wavelengths. This telescope, called "Giant Metrewave Radio Telescope (GMRT)" is now operated as an international facility. Besides providing to the international astronomy community a perspective on the work of their Indian counterparts, our study highlights the utility of modern international databases (such as ADS) for making an objective analysis (even at a librarian's level) of the scientific contours and output of the research community in selected areas.

Based on an in-depth analysis of a well-defined and essentially complete sample of around 400 papers published in refereed journals, we probe several key questions. These include : (a) observational v/s theoretical research output, (b) degree of involvement of Indian telescopes, (c) use of the different wavebands for astronomical studies, (d) use of rapid v/s normal publication channels, (e) use of Indian astronomy journals (f) multi-wavelength investigations, (g) the evolution of the above trends over the past decade.

Related publication : Discovery potential of small/medium-size optical telescopes :

A study of publication patterns in Nature (1993095) in Bulletin of Ast. Soc. of India.-Vol. 26 (1998) p. 417-424.

5. LOWELL OBSERVATORY ARCHIVES IMAGE DATABASE.

Antoinette Beiser, Padraig Houlahan, Ed Nettell, Ava Stone

Lowell Observatory Library, USA

The Lowell Observatory archives contain over 1600 images dating back to 1855. Included are images of Percival Lowell and his family in Boston, Lowell's photographs of his travels to Korea and Japan in the 1880's, and his later travels to North Africa in 1896. There are many photographs of the construction of the Observatory at the turn of the century and of early staff. We have also scanned several of Percival Lowell's drawings of the "canals" of Mars from his observing logs and have included scans of the Pluto discovery plates. The images have been scanned in thumbnail, low resolution (72 dpi) and archival format (300 dpi) and are available for searching on the Library's web page. The database has greatly decreased the amount of physical handling of the photographs and has made the collection available to a much wider audience.

6. **THE COST AND THE USE OF SERIALS
IN ITALIAN ASTRONOMICAL LIBRARIES.**

Francesca Brunetti ¹, Monica Marra ², Emilia Olostro Cirella ³, Luisa Schiavone ⁴

¹ Arcetri Astrophysical Observatory, Italy

² Bologna Astronomical Observatory, Italy

³ Capodimonte Astronomical Observatory, Italy

⁴ Torino Astronomical Observatory, Italy

We present the results of a two-year study on the characteristics, cost, and use of the collections of serials in Italian astronomical libraries. These libraries, which serve twelve Astronomical and Astrophysical Observatories and two Astronomy Departments (Arcetri Astrophysical Observatory; Department of Astronomy, University of Bologna and Bologna Astronomical Observatory; Brera and Merate Astronomical Observatories; Cagliari Astronomical Observatory; Capodimonte Astronomical Observatory; Catania Astrophysical Observatory and Department of Astronomy, University of Catania; Rome Astronomical Observatory; Padova Astronomical Observatory and Department of Astronomy, University of Padova; Palermo Astronomical Observatory "Giuseppe S. Vaiana"; Teramo Astronomical Observatory "Vincenzo Cerulli"; Torino Astronomical Observatory; Trieste Astronomical Observatory), have been working as a network since 1995: they created the mailing list ASTROBIB and the metaOPAC CUBAI for books, and carried out other projects such as the Italian Astronomy Libraries Journals Catalogue. At the beginning of 2002 all the Italian Observatories have merged into the Istituto Nazionale di Astrofisica (National Institute of Astrophysics, INAF), and so our libraries may now be considered as units of a National Astronomical Library.

In the year 2000 we spent about 2/3 of the budget (corresponding to ~440 kEuros) in the subscriptions of serials, confirming the trend of research and university libraries where the cost of periodicals subscriptions is the highest.

This fact, together with the coming into operation of the National Institute, moved us to investigate the hypothesis of a consortium policy for the twelve Observatories in the purchasing and management of our main source of expense.

In doing this, we first analysed the characteristics of our collections, place by place, and evaluated the cost of on-line accesses and paper subscriptions. Then we studied the relations between cost and use of the serials.

All the data that we collected will be used to create a new policy in buying periodicals.

7. ILL/DD SERVICES OF THE INAF OBSERVATORIES LIBRARY: “A MODEST PROPOSAL”.

Francesca Brunetti ¹ and Francesca Martines ²

¹ INAF – Osservatorio Astrofisico di Arcetri, Italy

² INAF - Osservatorio Astronomico di Palermo “Giuseppe S. Vaiana”, Italy

From January 1st, 2002, Italian Astronomical Observatories have been merged into one national Institute (INAF, Istituto Nazionale di Astrofisica). Observatory libraries have also been affected by this process and librarians are trying to cope with the change in order to improve library services in this new context.

Due to this change, there are several new projects under way, ranging from a census of the journal subscriptions (both paper and electronic) and their costs, to the study of inventory problems related to the merging in INAF.

An effort has been made to set up a regulation of Interlibrary Loan and Document Delivery services between the INAF libraries. An investigation has been made about several ILL/DD systems, both Italian and international, and a set of elements to be adopted for users registration and inquiries has been identified. The results of the survey and the proposed regulation scheme will be presented and discussed.

8. THE ANCIENT BOOKS COLLECTION OF THE CAPODIMONTE ASTRONOMICAL OBSERVATORY: ICONOGRAPHY ONLINE.

Imma S. Cecere ¹, Emilia Olostro Cirella ², Enrica Stendardo ²

¹ Società Nazionale di Scienze Lettere e Arti, Italy

² Osservatorio Astronomico di Capodimonte, Italy

The original nucleus of the Capodimonte Astronomical Observatory Library, constituted during the period 1812-1815, grew with time by numerous acquisitions and remarkable gifts. To-day, the ancient book collection contains rare books, such as Johannes de Sacro Bosco's incunabulum, the *De sphaera mundi* (Venetiae, 1488), quite a few *cinquecentine* and *seicentine* – some books of Tycho, Copernicus, Galileo, father Kircher, and the Jesuit Clavius –, two important examples of the eighteenth-century celestial cartography, the *Atlas Coelestis* of John Flamsteed and the *Atlas Novus Coelestis* of Johann Gabriel Doppelmayr, as well as various classics of the science of the last two centuries.

Recently we catalogued the symbolic and the artistic representations of the ancient books collection. This iconographic documentation (e.g. valuable and enigmatic engraved title-pages, elaborated frontispieces, original printing marks, and representations of astronomical instruments) was then studied. At the last, these illustrations were digitised to make them available on-line soon.

9. PHYSICAL VS VIRTUAL ASTRONOMY LIBRARIES.

Marlene Cummins

Astronomy and Astrophysics Library, University of Toronto, Canada

With the ever increasing substitution of electronic resources for print materials, the replacement of personal service by desk-top delivery, and the prevailing (false, of course) notion that anyone can successfully search the internet for anything, astronomers and students are increasingly by-passing the physical library (including staff) in their research activities. The invisible role of the library in providing these virtual resources and services is another of the problems associated with this phenomenon. Is there anything that we can do about these and other negative effects?

This roundtable discussion will begin with a brief description of the current state of affairs. Then four librarians will discuss the situation from various perspectives.

Finally, a short list of some partial measures taken by some libraries will be given. We will then open up discussion as to what is happening and what other effective responses we can make to this good news/bad news situation. Please bring your ideas.

**10. COMMUNICATING AND NETWORKING
BY ASTRONOMY LIBRARIANS.**

Marlene Cummins ¹ and Uta Grothkopf ²

¹ Astronomy and Astrophysics Library, University of Toronto, Canada

² European Southern Observatory Library, Germany

Librarians in other disciplines have often marvelled at the effective networking that takes place among astronomy librarians.

How do we do it? In January 2001, a survey was undertaken to assess problems, successes and trends around the world. The results are described in our publication "Communicating and Networking in Astronomy Libraries" (<http://www.eso.org/libraries/communicating/>).

Here we present some of the ways in which librarians communicate with various groups.

11. T-REX IS NOT LORD BUT MATE IN INFORMATION LAND.

Tatyana Dorokhova and Nikolay Dorokhov

Astronomical Observatory of Odessa National University, Ukraine

T-Rex is a Thesaurus Building Project realized by R.M. and R.R. Shobbrook in cooperation with the librarians of different countries on the instructions of the International Astronomical Union (see Shobbrook, R. M., 1989, LISA I proceedings, p.72). The Thesaurus is useful now as a manual for librarians and scientists for the competent retrieval access to information. We carry out the translation of the Astronomy Thesaurus to Russian and, further, to Ukrainian in the context of the Multi-Lingual Supplement (R.R. Shobbrook, R.M. Shobbrook et al., Version 2.1, 1995). The work for ranking and classification of the knowledges become particularly valuable in the light of an avalanche growth of information.

12. THE ARCETRI ASTROPHYSICS OBSERVATORY HISTORICAL ARCHIVE.

A. Gasperini¹ and R. Baglioni²

¹ Istituto Nazionale di Astrofisica, Osservatorio Astrofisico di Arcetri, Italia

² Universita' degli Studi di Firenze, Dipartimento di Astronomia e Scienza dello Spazio, Italia

In 1993, during the renovation of the premises of the library, we found some boxes containing archive material. This archive is made up of letters, reports, papers and paper drafts, scientific notes, circulars, conference proceedings, astronomical data collections, books and book drafts, maps, invoices, balance sheets, obituaries, pictures and spectrograms, drawings and journal cuttings. This material covers, discontinuously, a period which runs from 1893 to the early 1970's. Unfortunately neither a register nor a summary list of these items was found. However, the importance of these papers for the history of Italian astronomy and, in particular, for the history of the Arcetri Observatory, was immediately clear.

For the time being, only the Abetti correspondence is being considered (about 2300 items) respecting the order and the arrangement given by Giorgio Abetti himself. Antonio and Giorgio Abetti were directors of Arcetri Astrophysics Observatory from 1894 to 1925 and from 1925 to 1954 respectively and they left their indelible mark on the Italian astronomical research.

Furthermore a complete bibliography of Antonio and Giorgio Abetti's publications was prepared so it is possible to complete the reconstruction of the two personalities.

The bibliographic references concerning Antonio e Giorgio Abetti are now available. The references are an important tool for researchers who are studying Italian astronomy between the nineteenth and the twentieth centuries. All the references have been stored in an electronic archive. For this reason a suite of "open source" technologies have been used: the database engine is mSQL while all procedures are written in Perl, both for updating the database and for querying it.

The electronic archive is available for public consultation via a web interface so that everyone connected to internet can access it. A CGI module, also written in Perl, collects the searching parameters from the user and queries the database. Simple queries are generated through a web form, but the user can also submit complex queries directly editing a template automatically provided by the form itself.

13. ANNUAL REPORTS OF OBSERVATORIES.

Uta Grothkopf¹ and Elizabeth Bryson²

¹ European Southern Observatory, Italia

² Canada-France-Hawaii Telescope Corp., USA

We provide an alphabetical listing of those observatories that are known to publish annual reports. The entries include descriptions of both print and electronic versions, including hyperlinks to the reports if available. The list is located on the web at :

<http://www.eso.org/libraries/reports.html>.

**14. ASTRONOMY LIBRARY –
A RARE SPECIES IN A SMALL COUNTRY.**

Eva Isaksson

Observatory, University of Helsinki, Finland

There are currently two academic libraries in Finland that specialize in astronomy: Helsinki University Observatory Library, and Tuorla Observatory Library at Turku. Elsewhere in Finland, astronomy collections are a part of larger academic libraries. Of these, the Helsinki library is the older, with collections dating back to the 1600s. With some 800 shelf metres of collections, it is also the larger compared to some 350 shelf metres in Tuorla.

Finland is a small EU country with over 5 millions of inhabitants. The first Finnish University, the Academy at Turku, was founded in 1640. Astronomy was practised since its founding, but first in 1817 an observatory was built in Turku. When a fire destroyed most holdings of the Academy in 1827, the observatory building was spared. The university was then moved to the new capital, Helsinki, and the library collections were transferred to the new observatory, which was opened in 1834. These old collections are nowadays placed in the museum that was opened in the meridian hall of the observatory in 1984.

Like so many libraries at astronomical observatories elsewhere, the Helsinki Observatory Library grew into a relatively self-contained unit, its services being mainly directed to astronomers. The holdings of the observatory library today are representative of several centuries of resources that have been available for Finnish astronomers. It is thus a living monument of both what has been present, and also for what has been lacking.

Until recently, the Helsinki University Library services used to consist of a patchwork of individual libraries, usually located at the respective institutes, with a few separate central libraries. However, these small libraries are now disappearing, and being merged into large campus libraries. The observatory library remains separate for the time being.

With ever increasing emphasis on shared electronic resources and larger campus units, will astronomers at Helsinki be able to keep their unique library?

**15. GOTHARD ASTROPHOTOGRAPHIC PLATE LIBRARY :
DIGITIZATION AND ARCHIVING OF THE ORIGINAL PLATES TAKEN
BY EUGEN VON GOTHARD AT THE END OF THE XIXth CENTURY.**

I. Jankovics, J. Kovács, I.J. Vincze

Gothard Astrophysical Observatory of Loránd Eötvös University, Hungary

Eugen von Gothard (1857-1909) played very important role in European astronomy at the end of the XIX century.

From the 1880's he focused his scientific activity on the astronomical application of photography. His pioneering work on this field made him world-wide known and definitively entered his name the history of science.

The scientific inheritance of E. von Gothard is maintained by Gothard Astrophysical Observatory of Loránd Eötvös University. A valuable part of this material is the astronomical plate collection of 455 pieces taken between 1885 and 1900 and containing unique images of comets, star clusters, nebulae, galaxies and stellar spectra, e.g. the plate recorded the central star of the Lyra nebula (M57) for the first time in the world in 1886.

**16. THE PULKOVO OBSERVATORY LIBRARY DEVELOPES
ELECTRONIC SERVICES.**

Natalia Markova

Pulkovo Observatory Library, Russia

The Pulkovo Observatory Library is working on the new electronic catalogue of the "Struve Fund". The existing printed catalogue was created in the 19th century and does not reflect the present-day reality (e.g. losses during the WWII and the fire of 1997).

The library started working on the extended electronic catalogue of the publications about the Pulkovo Observatory. this will include the bibliographic descriptions of literature with pictures and photos indicated. We consider placing this catalogue on our web-page important as we receive a number of requests for this sort of information from all over the world.

**17. INVESTIGATION OF METADATA APPLICATIONS AT
PALERMO ASTRONOMICAL OBSERVATORY.**

Francesca Martines and Flavio Morale

INAF - Osservatorio Astronomico di Palermo “Giuseppe S. Vaiana”, Italy

There is the need at several astronomical observatories, including our own, to find an effective way to collect, organise and retrieve different types of information about different types of resources, both physical and digital: a typical metadata task.

This task implies the management of information in many different areas, including, but not being limited to, status of requested/ordered books, bibliographical data about Observatory publications, computer resources at the Institute (handbooks/software/hardware), astronomical databases and reports. Moreover, information retrieval from publishers' electronic catalogues and selected lists is also part of this task.

A study is currently under way in order to identify possible solutions. The use of the Dublin Core Metadata Elements Set (DCMES) as a description scheme is investigated. The Extensible Markup Language (XML), with the Resource Description Framework (RDF) as Document Type Definition, is being considered as a language to retrieve the data. Examples will be provided and discussed.

**18. A COMPARATIVE STUDY OF THE DISTRIBUTION
OF AUTHORS OF THE
"REVISTA MEXICANA DE ASTRONOMIA Y ASTROFISICA".
WITH THE APPLICATION OF THE LAW LOTKA.**

Veronica Mata-Acosta¹ and Maria Elena Jiménez-Fragozo²

¹ Instituto de Astronomía, UNAM, México

² Instituto de Astronomía, UNAM, Observatorio Astronómico Nacional, México

With the application of the law lotka in this case. We pretend to know the behavior of the authors the both journals Revista Mexicana de Astronomía y Astrofísica and the Revista Mexicana de Física. For the observation of the behavior of this authors. We have used the database PERIODICA. From 1979 to 2001.

19. THE ARGENTINIAN ASTRONOMERS AND THE RESISTANCE TO THE CHANGE.

Eleodoro F. Nieves

Facultad de Ciencias Astronomicas y Geofisicas, Observatorio, Argentina

Most of the Argentinian astronomers often travel to Europe and the United States. In those places they adapt to new technologies. But when they return to Argentina, they come back to the paper journal on desk practices.

Here it shows several situations to solve different ways among users.

20. ABOUT THE DIGITALIZATION OF THE CAPODIMONTE HISTORICAL ARCHIVE.

Emilia Olostro Cirella

Osservatorio Astronomico di Capodimonte, Italy

The Capodimonte Astronomical Observatory has an historical archive rich of documents testifying the development of the astronomical research in Southern Italy, mainly in Naples. The documents span between 1802 and 1948, i.e. from the origins of the Institute to the end of the Second World War.

Recently the Archive was rearranged and an inventory was published. This paper, besides describing the reorganisation of the Archive, presents a project of digitalisation of the material which, similarly to other historical documents, will be made available on line.

21. AN ASTRONOMICAL LIBRARY AT LARGE.

Emilia Olostro Cirella, Paolo Paura, Mauro Gargano, Maria Teresa Fulco

Osservatorio Astronomico di Capodimonte, Italy

The "Osservatorio Astronomico di Capodimonte", an ancient institution, is a reference point in Naples both for scientific research and public outreach. The library, a focal point for these activities, consists of a rich ancient book collection, a modern section of monographs, a remarkable section of journals, and an important archive of documents backdating to 1802.

In the last few years both sections of modern books and journals, together with the archive, have been catalogued and made available on-line. A similar work is in progress for the ancient collection. A particular attention of the work of the librarians is addressed to the history of the Astronomical Observatory of Capodimonte, astronomy and science in general.

This paper presents all the activities of the library which are now carried on using all the electronic and on-line information resources and points out a particular objective of our Observatory: a new way of spreading the astronomical culture to a wide public, besides the common reference service, using the facilities of the public outreach.

**22. THE SET OF BROCHURES ON COMETS
IN PULKOVO OBSERVATORY LIBRARY.**

Elena Potter

Pulkovo Observatory Library, Russia

The Pulkovo Observatory Library is a potential powerful information resource, which until now has not been available for a wide range of users. The library contains the unique collection of brochures with descriptions of over 1500 comets from the 15th - beginning of the 20th centuries. For instance, the "Halley's Comet" section about 300 brochures. Many of them include unique illustrations and pictures. This section is of special interest for astronomers, historians, astrologists, amateur astronomers, etc. The paper gives more information on the "Comet" collection.

**23. ONLINE RESOURCES ON RARE AND ANTIQUE
BOOKS IN ASTRONOMY.**

Donatella Randazzo

INAF - Osservatorio Astronomico di Palermo "G.S. Vaiana", Italy

A web site is being constructed with the aim to present online resources on rare and antique books related to astronomy. General resources of interest to historical librarians, such as acquisitions, cataloguing, preservation, conservation and digitalization projects are offered, as well as specific resources in the field of Astronomy.

24. EVOLUTION OF THE AAO LIBRARY.

Sandra Ricketts

Observatory Epping, Australia

In the last few years, the AAO library has become more electronically oriented. The activities of the librarian have as a consequence also evolved, and now include such tasks as the e-printing of scientific papers and the production of the AAO newsletter, in addition to the more traditional activities.

**25. ASTROPHYSICS PRODUCTION IN FRANCE UNTIL 2000 :
WHAT IMAGE IS CONVEYED BY THE LOS ALAMOS AND ADS BASES ?**

Nathalie Robert

5, Allée des Hortensias, France

Problems.

The preprint base of Los Alamos is generally described as an element which deeply changed the way scientific information is publicized. ADS (Astrophysic Data System) is also a tool which changed researchers' attitude towards information. Reality however seems more complex. The issue presents two aspects: firstly, do these bases make French research in astrophysics more visible? Secondly, for what purpose and in what way do researchers use these bases?

Data Collecting and Processing (METHOD).

A corpus of researchers in astrophysics was made up using the centers referenced in CNRS (National Scientific Research Center). The latter consists of the researchers from section 14 "solar system and remote universe". The whole corpus comprises 793 researchers located in 11 university centers. ADS and the physics section of the LANL base were then queried using this list of names. The bibliographical data collected was processed with the Infotrans software and then exported towards a spreadsheet. This data makes up more than 50 000 bibliographical references. The time covered by this study ends in December 2000. In addition, a series of interviews was carried out with astrophysicists in order to better determine how this base is used.

Results.

The base of Los Alamos is used as an archive and one notes that a significant number of preprints is submitted after being published. This base contains an ever-increasing number of papers, but it is still under-used by researchers: 83% of French researchers have never submitted a single article! One can however outline certain characteristics and establish a typology of the researchers who record their documents in this base. A bibliometric study of the journals included in ADS and the articles included in the Los Alamos base was also carried out.

Discussion.

The names of the researchers were collected from the laboratories' directory. Working on people's names generated many problems due to renaming, homonymy, and spelling variations. In addition, information present on the Web can vary in the course of time and the directories did vary during the time necessary to complete this study.

26.

ALGIERS OBSERVATORY AND ITS LIBRARY.

Hamid Sadsaoud ¹ and Françoise Le Guet Tully ²

¹ Observatoire d'Alger, Algeria

² Observatoire de la Côte d'Azur, France

There are two main historical astronomical observatories in Africa: one in the Southern Hemisphere (Cape Town) and one in the Northern Hemisphere (Algiers). The British found the first one in 1820 and the French the second in 1856. Both played important international roles and both are still active. When reorganised in the 1880s, Algiers Observatory was installed in its present location, at the top of a 300m high hill nearby the city. It received a beautiful library as well as modern astronomical instruments: a 50 cm Foucault telescope, a 32 cm coudé refractor by Loewy, a 32 cm photographic refractor and a 20 cm meridian circle. Because of its unique geographical situation Algiers Observatory soon took an active part in the world network of institutional observatories. It participated in the Carte du Ciel and also in the worldwide longitude measurements. In 1957 a Danjon prismatic astrolabe was added to its equipment. Today the director and its colleagues are conscious of the importance of their XIXth century astronomical instruments, library and archives, and the institute – now called Centre de Recherche d'Astronomie, d'Astrophysique et de Géophysique (CRAAG) – has already started to take conservation measures for the instruments. If the organisation of the library for the astronomers is relatively satisfactory, the state of its historical part raises serious questions because for various reasons the scientific archives have been mixed up with administrative archives, historical publications and books. Altogether the quantity of documents to be sorted out is estimated at one hundred linear meters. In order to ensure the best conditions for the future of its precious historical library and archives, the CRAAG wishes to take initiatives based on advice of specialists. From the encounter with librarians at LISA IV and from discussions with colleagues confronted by the same problems we hope for specialized and enlightened advice.

27. THE INFORMATION PROFESSIONAL AT CROSSROADS.

Kishor Sathpathy

Regional Engineering College, India

“IT is more than a technology. It is the name of the greatest opportunity that history has placed before our nation to achieve India’s all round renewal. It teaches us a national can achieve if all of unitedly.”

*Shri Atal Behari Bajapai
Hon’ble Prime Minister of India*

As we are at the threshold of year 2002. We librarians must access & reassess our constantly changing library environment. The future is not very far, librarians individually and collectively cannot afford to ignore the changing shape of information services that is emerging. Everyone knows that the primary objective of libraries is to organize and provide access of information. This objective will never change, but the format and methods that are used will change dramatically, providing new opportunities and challenges.

The paper attempts to review the role of a library professional in this environment and suggest skills development areas to be taken seriously. The paper raises not only issues of concern but also tries to provide solutions. The focus of the paper is on rethinking the role of a library professional in relation o his identity and facilitating the search of excellence in the information age.

The paper describes about “participating approach, attitudinal, modernity, behavioral change & work motivation” among librarians towards acceptance of IT. It is suggested that these four concepts together can reshape the existing library system in India in order to meet the future challenges of the 21st century. It also enumerates the role of the Librarians in the IT era such as role of manager, resource procurer, creator or disseminator, preserver of culture, knowledge organizer, researcher or retriever, educator, lifelong learner, expert or advisor and advocate & also the ten competencies required to perform these roles.

**28. THE LIBRARY OF SII " ASTRONOMICAL OBSERVATORY"
OF ODESSA NATIONAL UNIVERSITY.**

T.V. Shevchuk

Astronomical Observatory Odessa, Ukraine

The history of the foundation of library of Astronomical Observatory of the Odessa (Novorossiisk) National University and the history of creation of the basic and additional funds is considered. From middle XIX century to now the library fund have more than 100 thousand units of storage.

The information about:

- 100 thousand photoplates of the star sky received in Odessa and 10 thousand of snapshots, received in Simeiz observatory;
- the catalogues containing the data on a location of stars, and large planets;
- the spectral and photometric characteristics of stars and satellites, received in observatory;
- the depository of UBV photometric observation of variable stars;
- Presence of the rarity editions stored in archives of observatory are given.

The publishing of SII "Astronomical observatory" Odessa national University is considered.

29. EDUCATIONAL RESOURCES FOR CHILDREN ON SUPERNOVAE.

James Timothy Struck

Roosevelt University, Chicago, Illinois, USA

The National Science Education Standards (1996, National Academy of Sciences) suggest mention of "objects" like the "sun, moon" and stars in grades K-4 and element formation in grades 9-12. Children's librarians and even some astronomy librarians should know about some of the literature for children about supernovae not only because supernovae are critical to higher element formation, but also to educate youth about the universe's expansion and stars.

This poster will examine children's literature about supernovae in many forms--1. Books and other print resources, 2. ERIC Reports (a print resource), 3. Internet Sites, 4. Some sources listed in indexes of children's resources (KidQuest and JuniorQuest from Proquest). Brief summaries of some of the various children's sources on supernovae will be given in a handout. (It should be noted that these indexes contain some "adult" sources like Astronomy magazine articles, for example).

Internet sites concerning supernovae have some better educational features than print sources. For example, some internet sites have 1. Links to other sites, 2. Affiliation with NASA and their experts, 3. More current data, 4. Comments/feedback sections. Caution, however, is urged: A study of internet sites about a medical condition in the online version of the journal Pediatrics argued many internet sites contain inaccuracies. Some limited attempt at evaluation of both print and online sources will be made.

Despite the wealth of information on the internet, print sources are still important. The print sources--like an ERIC Report, for example, which asks why the Milky Way does not have more supernovae or a children's book which asks about the color of a 1987 supernova—contain valuable lessons and questions not in the internet sites. Part of my point is that a virtual library would lack some important materials. Also, old data (like the older ERIC documents) is still important.

In addition, a search of the Children's Catalog (1909-2000) yields the lesson that some indexes are not comprehensive. Only two books—one in 1991 and one in 1986— are cited under the term supernova, while, actually, at least four other books for children on supernovae were published over that time period.

Adult articles on supernovae literature, for example, Virgil Diodato's 1991 article "Supernova 1987A: A Case Study of the Flow of Information in the Literature of Astronomy and Physics" and David Stern's 1989 article "Supernovae: A Guide to the Literature" will be discussed as well. Part of this analysis will be some very basic analysis of the pattern of children's literature on supernovae (basic bibliometrics); that is, what percent of literature was produced following Supernova 1987A, for example.

30. PROBLEM OF SCIENCE OUTPUT EVALUATION OF ARCHIVE DATA USING.

V.V. Vitkovskij, N.A. Kalinina., O.P. Zhelenkova

Special Astrophysical Observatory of Russian Academy of Sciences, Russia

The observatory telescopes are shared tools of astronomical community and the exchange by observational data between the participants is supposed. SAO RAS archive consists from local archives that to receive observational data from diverse acquisition systems. To get access to observational data the Informatics Department of SAO RAS works out a search information system. A server and web-based technology Oracle are expected to use for the realization of the system. Besides access to observation data the information the system can serve as a tool for investigation of the science archive. One of interest questions is an evaluation of science output of observations. The evaluation provides by counting of bibliographical references of papers concerning to a certain celestial object. Link between two information warehouses (data archive and bibliographical database) can produce this service. On the first stage we are going to collect bibliographical information from e-reports of principal investigators of observation programs. Connections with international astronomical biblio resources will be a next stage of development of the service. Similar worldwide unification archive and biblio resources will allow evaluating a quality of archive and survey data and frequency of requests to them.

31. THE ASTRONOMY EDUCATION IN THE DIGITAL AGE.

V.V. Vitkovskij, V.N. Chernenkov, E.I. Kajsina, N.A. Kalinina,
G.A. Mal'kova, V.S. Shergin, O.P. Zhelenkova

Special Astrophysical Observatory of Russian Academy of Science (SAO RAS), Russia

Main idea of the Open Virtual Media for astronomical education is the transformation of a system of astronomical education from separate astronomical science-educational schools existing at universities to common educational space integrating an intellectual potential, methodical and research possibilities of educational and scientific organizations. Attempt of realization of such approach - the Open Virtual Media of Astronomical Education project is developing by the SAO RAS Science - Education Shared Center (SESC).

SESC SAO was created in 1997 on the base of Special Astrophysical Observatory of Russian Academy of Science. This center unites efforts of the five largest universities of Russia: Moscow, St.-Petersburg, Rostov, Kazan and Ural in the training of the students and post-graduate students of astronomy and preparation of highly qualified astronomers. The center provides an interaction between the academic science and educational process in higher educational institutes.

It is supposed, that the research institutes will participate main Russian, and, hereinafter, both foreign astronomical schools and granting a possibility of practical work in its shaping. The quota of the trainees can be rather wide - from the students, post-graduate students and young experts up to the schoolboys and astronomy amateurs. The teaching collective submitted originally by leading universities and observatories of Russia will replenish with the experts of other countries and other scientific directions.

Methods and approaches of OVM:

- Development hypertext and multimedia educational and methodical manuals, courses, laboratory works and control tests.
- Development Web-portal of OVM. Specialized astronomical portal reduces time of access to the interesting information. The portal will have the two-level distribute structure. The core and subject focused databases are allocated. To the core the access goes more often. This warehouse saves and the integrates more settled information, for example, catalogues, digital surveys, papers, bibliography and etc.
- Creation of system of reliable telecommunication channels and equipment to adequate to OVM tasks and requirements. Ensuring of OVM interaction with other astronomical resources of global information networks. Whenever possible education centers should be connected among themselves by separate telecommunication channels, which do not depend on the regional Internet traffic.
- Creation of means and methods for remote access to experimental astronomical complexes.

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