

COMMISSION 30: RADIAL VELOCITIES

(VITESSES RADIALES)

PRESIDENT: A. Tokovinin

VICE-PRESIDENT: B. Nordström

ORGANIZING COMMITTEE: D. Dravins, H. Levato, T. Mazeh, N. Morell, H. Quintana, M.A. Smith, L. Szabados, S. Udry

Attendance: The meeting opened at 16.00 p.m. on Wednesday 16 July 2003 with about 20 IAU members in attendance.

1. President's report

1.1. Membership

Commission 30 has 129 members and consultants in 28 countries who are active in the area of radial velocities (RVs). The president reported that the following new members had joined Commission 30 since the last IAU General Assembly: E. Glushkova (Russia), G. Torres (USA), J. Sperauskas (Lithuania), J. Skuljan (New Zealand), G.J. Federico (Argentine). The last 2 names are new IAU members who joined the Union at this GA. On the other hand, 4 persons who were on the list of C30 but are no longer in the IAU directory are excluded: J. Boulon, F. Giesecking, C. Huang, N.B. Sanwal. The president noted that only 106 members have e-mail and can effectively participate in the work of the Commission. Of the remaining C30 members, some do not have e-mail at all, some changed their address without informing IAU. The list of "lost persons" is thus a constant worry for the president. A potential resource for new C30 members is large, mostly related to modern projects in exo-planet searches, stellar oscillations and large RV surveys including extragalactic.

1.2. Election of new Organizing Committee and vice-president

Birgitta Nordström from the Niels Bohr Institute for Astronomy, Physics and Geophysics (Copenhagen Denmark), was appointed unopposed as the new president of C30 for the triennium commencing July 2003. Only one candidate for the vice-president – Stephane Udry from the Geneva Observatory (Switzerland) was nominated, so there was no need of election.

Four members of the OC retire in July 2003. The nominating Committee identified 4 candidates for the vacant positions: Elena Glushkova (Sternberg Astronomical Institute), Francis C. Fekel (Tennessee State University), Dimitri Pourbaix (University of Brussels), Guillermo Torres (Center for Astrophysics). Again, there was no need for election. The OC members that remain in service until 2006 are Dainis Dravins (Lund Observatory), Hugo Levato (Complejo Astronomico El Leoncito, Argentine), Laszlo Szabados (Konkoly Observatory), and Myron A. Smith (CSC/IUE Observatory).

1.3. Conference proposals

Commission 30 receives each year several requests for the support of IAU meetings. Five meetings in 2003 supported by C30 are IAU Colloquium 191 "The environment

and evolution of binary and multiple stars" (Mérida, Mexico, February 3-7 2003), IAU Symposium "Large Scale Surveys, Stellar and Galactic Astronomy" (not accepted by IAU), Joint Discussion (JD) on "Solar-like oscillations: observations and theory", JD on determinations of stellar masses (not accepted by IAU), and JD on extragalactic binaries. Support was given by C30 for the two meetings in 2004: Symposium "The A star puzzle" and Symposium "Multi-wavelength investigations of solar activity".

The president noted that the activity of the OC in considering meeting proposals is quite low: of 8 OC members, only 2-5 usually give their opinion on the proposed meetings. Some relevant meetings go without our support even being asked.

1.4. Commission web site

The web page of C30, linked to the main IAU site <http://www.iau.org>, is the main instrument for disseminating in the astronomical community the information related to radial velocities. It gives information on C30 organizational matters (member lists, OC, newsletter, reports, etc.), on the activity of C30 working groups, and a collection of useful links. The html version of the Triennial Report (2000-2003) is available – extended with respect to the published report and with direct access to the abstracts of the cited papers by means of ADS services. The web page compares favorably to pages of some other IAU Commissions, although many things could definitely be improved.

1.5. Working groups of Commission 30

Commission 30 had 3 Working groups in the past triennium.

Standard radial-velocity stars (R.P. Stefanik and S. Udry): this WG did not show any activity since 1999. Its existence should be re-considered by the new OC of C30. C. Scarfe noted that the work on RV standards for hot stars is still unfinished, and that high-precision RVs of late-type standards can be used for new analysis of their stability, hence there remains a task for the WG on standards.

Bibliography of stellar radial velocities (chaired by Hugo Levato): a catalog of stellar RVs is being maintained and updated. It is available on the web at <http://www.casleo.gov.ar/catalogo/catalogoin.htm>

Ninth catalog of the orbital elements of spectroscopic binary stars (chaired by A. Tokovinin): see the report of D. Pourbaix below.

1.6. The future of Commission 30

The Commission 30 has a clearly defined mission: perfection of radial-velocity techniques. After a very successful meeting on precise RVs (1998) some members voiced the opinion that this mission is accomplished. However, several projects for massive RV surveys of stars using new techniques of data acquisition and reduction, robotic telescopes, etc. are being started now. Together with the ever expanding field of redshift surveys (some 10^6 redshifts have been measured by now), this indicates a necessity of continuing work on the RV techniques and the usefulness of C30. Recent contributions of C30 include precise definition of radial velocity (D. Dravins and co-authors) and new catalog of spectroscopic binaries. The Triennial Report makes it clear that astronomical research that makes use of RVs is more vigorous and innovative than ever.

As noted by C. Scarfe, this is not the first time that C30 has reviewed its own reasons for continuing to exist. During his term as president, R. Griffin proposed that it be disbanded, and argued the case for doing so. This caused many other people to think about the matter, which proved to be a very useful exercise, as well as leading to the commission's continued existence since then.

The current activity of C30 and the composition of its OC make it clear that we are a Commission on *stellar* radial velocities. Several past C30 presidents, particularly David Latham, tried very hard to include non-stellar RVs within the scope of the commission, and to involve non-stellar astronomers in the commission's work. For several years C30 had such persons on the OC, but this is no longer the case. Work on extragalactic RVs is covered in the triennial reports of the Commission, but nothing else is done. C30 is irrelevant outside the visible range of spectrum, despite the stated claim to cover all techniques and wavelength ranges. Apparently, the Doppler effect alone cannot unite specialists in different fields and cannot justify the existence of IAU Commission.

The future of C30 is closely related to the future of IAU as a whole. IAU is important for communication and information exchange among astronomers world-wide, but the forms of its activity are changing. Internet is nowadays the main vehicle of communication, accompanied by a slowly diminishing role of meetings. Now some young astronomers do not see any particular reasons for joining IAU. IAU should also be important in maintaining the infra-structure of our science – things that everybody needs but nobody wants to do like standards, constants, definitions, catalogs, databases etc. Infra-structure is usually an activity with low “impact” in terms of public relations and is often threatened by big projects. Developing countries play an important role here and can take care of infra-structure in the world-wide division of labor in astronomy, orchestrated by IAU.

Members of C30 and especially its OC are urged to continue their service to astronomical community and to search for new areas where useful contributions can be made. Active recruitment of new C30 members is possible, especially from the teams of new projects like RAVE or exo-planet searches. Organizing a major conference should be given a thought. Finally, we have to consider and evaluate the possibilities to re-structure C30 (merging with other Commissions, re-profiling or even closing).

In the discussion following president's report, opinions on the future of C30 were expressed by Colin Scarfe, Birgitta Nordström and others.

2. The report on the Ninth catalog of the orbital elements of spectroscopic binary stars

Dimitri Pourbaix has presented a report on the status of the 9-th catalog of the elements of spectroscopic binary orbits – SB9. The benefits of this web-based catalog are numerous: permanent update, accessibility from other databases, easy connection to the original articles via bib-codes and ADS, ease of catalog use for various studies including statistics. The SB9 can be accessed at <http://sb9.astro.ulb.ac.be>

As of July 1, 2003, SB9 contained 1999 orbits for 1985 systems (for comparison: 1469 systems in SB8). Most of entered orbits are new ones, only 50 are improvements of SB8 orbits. Unlike SB8, the new catalog contains individual RVs (now available for 599 systems). Major work of entering orbits still remains to be done (at least 675 papers, with an average of 2.5 orbits per paper, await entering). The goal of the SB9 WG is to achieve reasonable completeness by the next GA in 2006. Help of various researchers who contributed their data to SB9 is acknowledged. At the same time, some WG members have not yet entered their own data! Few unsolved issues and plans for new tools were presented as well.

3. Announcement of the SPS3 meeting

Brian Mason announced the Special Session SPS3 on a new classification scheme for double stars on July 18, 2003, and presented the proposed WMC scheme of component designation. This scheme was recommended for further development at the IAU

GA 24 in Manchester, and a resolution “ON DESIGNATING COMPONENTS OF BINARY/MULTIPLE STAR SYSTEMS” was passed at GA 25. The Commission 30 was not required to formally endorse this resolution, but this activity is clearly of relevance to the Commission. The web page of SPS3 is <http://ad.usno.navy.mil/wds/wmc/sps3.html>

The meeting closed at about 17.00.

A. Tokovinin

Outgoing President of the Commission

B. Nordström

Incoming President of the Commission

DIVISION X

RADIO ASTRONOMY

Division X provides a common theme for astronomers using radio techniques to study a vast range of phenomena in the Universe, from exploring the Earth's ionosphere or making radar measurements in the solar system, via mapping the distribution of gas and molecules in our own and other galaxies, to study the previous vast explosive processes in radio galaxies and QSOs and the faint afterglow of the Big bang itself.

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L. Padrielli
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R. Taylor
J. Turner
J. Maria Torrelles

PARTICIPATING COMMISSION
Commission 40: Radio Astronomy

DIVISION X: RADIO ASTRONOMY *(RADIOASTRONOMIE)*

PRESIDENT: Lucia Padrielli

VICE-PRESIDENT: Luis Rodriguez

BOARD: Leonardo Bronfman, Francoise Combes, Peter Dewdney, Philip John Diamond, Anne Green, Masato Ishiguro, Leonid Litvinenko, Juan-Maria Marcaide, W. Miller Goss, Jim M. Moran, Ren-Dong Nan, George Nicolson, A. Pramesh Rao, Richard Schilizzi, Jean L. Turner

Commission 40: Radio Astronomy

Commission 40 held one business meeting and sponsored three scientific/technical sessions of reports from the working groups and from Radio Observatories. About 30 people attended the business meetings and about 40 attended the working group and observatory sessions.

1. Division Officers

During the last triennium, Division X/Commission 40 operated with a Scientific Organizing Committee (SOC) of 17 members. The new IAU Statutes and Bye-Laws allow a maximum number of 12 members in the SOC. We had therefore to replace the 9 members that have already operated for 6 years, with 4 new members. That was not easy, considering the need to maintain as much as possible a geographic equilibrium in the distribution of the member countries and a good distribution of competencies.

The nominating committee for the new members consisted of the whole SOC. We had 34 nominees: 11 from European Area, 12 from US/Canada Area, 6 from Asiatic Area, and 5 from South America + Australia + South Africa Areas. There were elections of candidates per different areas among the SOC members and the result was approved by the Executive Committee and by the attendees at the business meeting. Luis Rodriguez (Mexico) was appointed as Division X president; Ren-dong Nan (China) is the new vice president, Gloria Dubner (Argentina), Michael Garrett (Netherlands), Russ Taylor (Canada) and Jose Maria Torrelles (Spain), are the new members of the Organizing Committee;

Continuing members of the Organizing Committee are: Philip Diamond (UK), Anne Green (Australia), Masato Ishiguro (Japan), W. Miller Goss (USA), A. Pramesh Rao (India), Jean Turner (USA), and Lucia Padrielli (past president) ex officio. Thanks are due to the following retiring members: Leonardo Bronfman (Chile), Peter Dewdney (Canada), Leonid Litvinenko (Ukraine), Juan-Maria Marcaide (Spain), Jim M. Moran (US), George Nicolson (South Africa), Richard Schilizzi (Netherlands) and Francoise Combes (France) - new member of the Division VIII OC.

2. Commission 40 Working Groups

At the moment three Working Groups are active:

2.1. Global VLBI

Chair J. Romney

VLBI continues to expand rapidly and a constant coordination is vital. The tasks of the WG are: i) recommendations of standard interfaces for data transmitted over fiber optic links and for 'off the shelf' tape recorders; ii) Studies on a compatible scheme for handling data from the now incompatible 1-Gigabit recording systems; iii) Studies on data management for space VLBI.

2.2. Astrophysically important spectral lines

Chair M. Ohishi

This WG has the task of finalizing the list of spectral lines and presenting it to the IAU as a resolution urging protection of the appropriate frequency bands. This is particularly important in the mm-submillimeter wavelength regime. This wavelength regime is the "frontier" in spectrum protection and management.

2.3. Interference Mitigation

Chair T. Tzioumis

The group has the following tasks:

- Technological solutions (interference rejection schemes, state-of-the-art RF filter technology, antenna null steering, interference recognition, and data editing).
- Regulatory innovations: new ways of sharing the radio spectrum.
- Radio-quiet zones: designating remote areas on the Earth's surface where satellite and other broadcasts (emissions) will be restricted in frequency and in time, and where future radio observatories may be located.
- Institutional innovations: supranational body to examine and test all space vehicles for out-of-band and spurious emissions prior to launch;
- Interface between IAU/URSI and IUCAF to the OECD/CSTP Task Force, which is expected to report to the Global Science Forum (formerly the Mega-Science Forum).

The continuation of these working groups with the present chairships was approved. A new Working Group is proposed by Commission 41, asking for co-sponsoring of Commission 40: "HISTORIC RADIO ASTRONOMY" proposed SOC: R. Davies (UK), J. F. Denisse (France), K. Kellermann (USA), M. Morimoto (Japan), W. Orchiston (Australia, Chair), S. Slysh (Russia), G. Swarup (India) and H. van Woerden (Netherlands). The proposal was approved by the commission members.

3. IAU Representatives To Other Organizations

IUCAF: R.J. Cohen (UK), D. Emerson (US), and K. Tapping (Canada), M. Ohishi (Japan) are the continuing representatives. The proposal to replace the outgoing member Ananthkrishnan (India) with H. Chung (Korea) was approved.

ITU: M. Ohishi (Japan) and T. Gergely (USA) will continue.

URSI: L. Rodriguez (Mexico) will replace L. Padrielli (Italy).

4. New Members

Considering also the new IAU members, at present the Div X/Commission 40 members are about 950.

5. Presentation of the special session: designating components of binary/multiple system.

After the presentation of Brian Mason, the co-sponsoring of Commission 40 to the Type C resolution on “designating components of binary/multiple system” was approved. In particular the commission recommends that a uniform designation scheme, based on expansion of WMC system, would be developed during the next 3 years to include all types of components and that this would be reviewed in time for its adoption to be considered at General Assembly XXVI.

6. General Discussion

The revised IAU Statutes and Bye-Laws have been discussed. The salient feature is that, starting from GAXXVI (Prague 2006), each Division will be responsible for suggesting to the EC whether to create, continue or terminate a Commission. The Divisions should continually check how the organization of the work within its field is going on, and some kind of activity report and plan for the future of the Commissions may be relevant, for their continuation.

Each Commission will belong to a specific Division. All those that do not belong to a Division are assembled into the new Division XII for interdisciplinary matters. It is clear that the Union is moving in the direction of strengthening the division structure, and deleting a number of small commissions. The structure of our division (Division X) is already quite monolithic and we should continue in this way.

7. Reports from Working Groups and Large Scale New Instruments

Reports from the following working groups and Large Scale new Instruments were presented:

Astrophysically Important Spectral Lines (M. Ohishi)

Global VLBI (L. Gurvits)

Interference mitigation (T. Tzioumis)

ALMA (R. Booth)

SKA (R. Schilizzi)

8. Observatory Reports

Reports on activities from various observatories, countries and projects were presented:

The Large Millimeter Telescope (P. Schloerb);

Results from the ODIN satellite (R. Booth);

The Submillimeter Array (J. Moran);

Allen Telescope Array (D. Bock);

The new 40-m radio telescope of OAN in Yebes (R. Bachiller);

New instruments at the Max-Planck-Inst. for Radio Astronomy (R. Wielebinski);

BIMA; CARMA (D. Bock);
The Green Bank Telescope (P. Jewell);
The GMRT (S. Ananthakrishnan);
The RRI (U. Shankar);
mm Observations with ACTA (J. Whiteoak);
mm observations with VLA (L. Rodriguez);
HartRAO (J. Jonas)

Lucia Padrielli
President of the Division

DIVISION XI

SPACE AND HIGH ENERGY ASTROPHYSICS

Division XI connects astronomers using space techniques or particle detectors for an extremely large range of investigations, from in-situ studies of bodies in the solar system to orbiting observatories studying the Universe in wavelengths ranging from radio waves to gamma rays, to underground detectors for cosmic neutrino radiation.

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PARTICIPATING COMMISSIONS

Commission 44: Space & High Energy Astrophysics

DIVISION XI: SPACE AND HIGH ENERGY ASTROPHYSICS

(ASTROPHYSIQUE SPATIALE ET DES HAUTES ENERGIES)

PRESIDENT: G. Srinivasan

**BOARD: M.D. Arnaud, S.A. Bludman, Th.-J.L. Courvoisier, J.M. da Costa,
H. Hasan, G. Hasinger, P.T. O'Brien, L. Piro, R. Schilizzi, B. Shustov, W.
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Commission 44: Space and High Energy Astrophysics

1. Introduction

A business meeting of Division XI/Commission 44 was held in XXVth General Assembly of the IAU in Sydney, Australia, on 18 July 2003. Chair of the meeting was Prof. G. Srinivasan, President of the Division and President of the Commission 44. Prof. H. Okuda, Vice President was also present.

2. Report of the Business Meeting

On the general activities of the Division in the past period (2000–2003), Prof. Srinivasan reported that the past period was very successful and fruitful, being provided by various missions such as X-ray observations by AXAF Chandra and XMM Newton satellites as well as the mapping of cosmic background radiation by WMAP, and newly opened lunar expeditions have also revealed the presence of water ice in the polar region and that neutrino astronomy has also consolidated its position in astronomy by extensive build up of new facilities, new projects for detection of gravitational wave are actively promoted. Reports of the Working groups on Astronomy from the Moon and Particle Astrophysics were made. Prof. N. Kaifu reported the past activities of the working group and explained future missions. Importance of continuation of the both working groups was emphasized.

3. Working Group

Two working groups are running under the Division XI, one is Astronomy from the Moon and the other is Particle Astrophysics. The former has been created to encourage better communication and possible coordination for implementation of the astronomical observations from the Moon. There have been several precursor missions, such as the new series of US missions, Clementine and Lunar Prospector, and the European SMART1 and the Japanese Lunar-A and SELENE will be launched soon. The latter has been started from the last General Assembly in Manchester, and operated very successfully. The Working Group organized the Joint Discussion on “Non Electromagnetic Windows for Astrophysics” in the General Assembly in Sydney. Many interesting talks were presented on neutrino, gravitational wave as well as high energy cosmic ray problems in both astronomical and physical points of view. The meeting was very successful

with active discussion and the participants foresee the flourishing future of the field. The Division has proposed the continuation of the both working groups in the coming period.

4. Board Members

Under the strong recommendation and advice of the Executive Committee to reducing the number of board members and favoring new member, and balancing the fields (high energy, low energy and particle astrophysics), the following members board members were proposed by the former President, Prof. Srinivasan and all have been approved in the XXVth General Assembly in Sydney.

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Sidney Bludman
Joao Braga
Noao Brosch
Leonid Gurvits
Hashima Hasan
George Helou
Ian Howarth
Hajime Inoue
Piro Luigi
Ganesan Srinivasan *Former President*

Haruyuki Okuda
Incoming President of the Division

DIVISION XII

UNION-WIDE ACTIVITIES

Division XII consists of Commissions that formerly were organized under the Executive Committee that concern astronomers across a wide range of scientific sub-disciplines and provide interactions with scientists and a wider community, including governmental organizations, outside the IAU.

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A. Gurshtein
J. Pasachoff
M. Smith

PARTICIPATING COMMISSIONS

Commission 5: **Documentation & Astronomical Data**
Commission 6: **Astronomical Telegrams**
Commission 14: **Atomic & Molecular data**
Commission 41: **History of Astronomy**
Commission 46: **Astronomy Education & Development**
Commission 50: **Protection of Existing & Potential Observatory Sites**

DIVISION XII: UNION-WIDE ACTIVITIES

(ACTIVITES D'INTERET GENERAL DE L'IAU)

PRESIDENT: Virginia Trimble

BOARD: K. Aksnes, J. Andersen, F. Genova, A. Gurshtein, S. Johansson,
J. Pasachoff, M. Smith

Commission 5: Documentation and Astronomical Data

Commission 6: Astronomical Telegrams

Commission 14: Atomic and Molecular Data

Commission 41: History of Astronomy

Commission 46: Astronomy Education and Development

Commission 50: Protection of Existing and Potential Observatory Sites

Pursuant to a decision by the Executive Committee, a new Division, XII, was established during 25th General Assembly. It consists of the six Commissions that formerly came directly under the Executive Committee and is provisionally titled Union-Wide Activities. These six Commissions (5, 6, 14, 41, 46 and 50), whose reports appear separately, have in common, first, that their responsibilities affect astronomers across a wide range of scientific subdisciplines and, second, that they are engaged in a good deal of interaction with scientists and the wider community, including governmental organizations, outside the IAU. Many of them also have significant numbers of consultants who have expertise relevant to their tasks, but who are not professional astronomers.

Division XII Officers. Triennium 2003–2006 The initial Division Board consists of the Presidents of the constituent Commissions, with a Division President and Vice President appointed by the Executive Committee and the Division will be self-governing in the usual way from the 26th General Assembly.

President:	V. Trimble
Vice President:	J. Andersen
Board:	F. Genova (President, Commission 5)
	K. Aksnes (President, Commission 6)
	S. Johansson (President, Commission 14)
	A. Gurshtein (President, Commission 41)
	J. Pasachoff (President, Commission 46)
	M. Smith (President, Commission 50)

A preliminary meeting of officers and board took place on July 18th, all Commissions being represented by an outgoing or incoming President. Among the topics discussed were the proposals for symposia and colloquia to be held in 2004, with significant support being expressed for two of the symposia and two of the colloquia. Three of these four were among those selected for IAU sponsorship during EC78.

Virginia Trimble
President of the Division

COMMISSION 5: DOCUMENTATION AND ASTRONOMICAL DATA

(DOCUMENTATION ET DONNEES ASTRONOMIQUES)

PRESIDENT: F. Genova

VICE-PRESIDENT: R.P. Norris

**ORGANIZING COMMITTEE: M.S. Bessel, O. Duzhnevskaja, H. Jenkner,
O. Malkov, F. Murtagh, K. Nakajima, F. Ochsenbein, W. Pence, M. Schmitz,
R. Wielen, Zhao Y.H**

1. Business meeting (July 21st, 2003)

Commission 5 activity reports for 2000-2003, prepared by the President, Vice-president and Working Group and Task Force chairs, were presented. Among the highlights:

- the unanimous vote of document NOST_100-2.0 as the new official FITS standard, published in *Astronomy and Astrophysics* in 2001, and the adoption and publication of the two first World Coordinate System papers; a Type C resolution adopting these as IAU standards is published below;
- the submission and subsequent ratification by the General Assembly of a Class B resolution on Public access to Astronomical archives, in the context of international discussion on intellectual property, in particular at ICSU and CODATA;
- the fourth *Library and Information Services in Astronomy* (LISA) conference, successfully held in Prague on July 2-5, 2002;
- the rapid world-wide development of Virtual Observatory projects, which were successfully presented on July 18th, 2003, during Joint Discussion 8: *Large Telescopes and Virtual Observatories: Vision for the future*
- Special Session 3, held on July 18th, 2003, which discussed a new classification for double stars, and proposed a Type C resolution ratified by Commission 5 business meeting as shown below.

The Commission 5 Web site will be transferred to <http://cdsweb.u-strasbg.fr/IAU/>. Commission 5 Working Group reports for 2001-2003 are published on this Web site.

1.1. Structure of the Commission Working Groups and Task Groups

The following structure is proposed for Commission 5 Working Groups and Task Groups:

- Working Group Astronomical Data, Chair R.P. Norris
- Working Group Libraries, Co-Chairs U. Grothkopf and F. Murtagh
- Working Group FITS, Chair W.D. Pence, vice-chair F. Ochsenbein

- Working Group Virtual Observatories (previously Virtual Observatories, Data Centres and Networks), Chair TBD. This new Working Group is established to be the IAU point of contact for Virtual Observatory actions, and to discuss and bless standards defined by the International Observatory Alliance.

The Task Force on Preservation and Digitization of Photographic plates, chaired by E. Griffin, may be proposed as a Working Group after discussing its charter, taking advantage of the new flexibility allowing Commissions to propose new Working Groups to approval by Divisions between two General Assembly meetings, and also because the status of Task Forces is unclear under new IAU rules.

Commission 5 is also ready to host again the Working Group on Electronic Publications, presently a Working Group of the Executive Committee, if the IAU Executive decides so.

2. Officers and Organizing Committee

The SOC proposed to the General Assembly is composed of President F. Genova, Vice-President R.P. Norris, and members: M.S. Bessel, O. Dluhnevskaja (past president), H. Jenkner, O. Malkov, F. Murtagh, K. Nakajima, F. Ochsenbein, W.D. Pence, M. Schmitz, R. Wielen, Zhao Y.H..

B. Hauck and G.R. Riegler resigned, and H.R. Dickel (WG Designations) and D.C. III Wells (WG FITS) were replaced by M. Schmitz and W.D. Pence respectively.

Commission 5 expresses its gratitude to the retiring officers for their decisive action for Commission 5 and the Working Groups.

3. Commission membership

Commission 5 welcomes incoming members: J. Bangert (USA), M.R. Calabretta (Australia), G. Eichhorn (USA), A. Golden (Rep. of Ireland), J.L. Hilton (USA), C. Hohenkerk (UK), D. Kovaleva (Russia), L. Michel (France), D. Pourbaix (Belgium), G. Pinigin (Ukraine), R.A. Shaw (USA), S.G. Valeev (Russia).

Consultants play a very important role in Commission 5. The present list is: T. Banks (USA), S. Borde (France), B. Corbin (USA), M. Cummins (Canada), S. Datta (India), M. Gomez (Spain). New consultants from 2003 on: J. Holmquist (USA), K. Robertson (USA) and D. Tody (USA).

4. Activity for the next triennium

The new triennium will take place in a new administrative environment, which should be very favorable for Commission 5 activities. One important evolution is the creation of the new Division XII, *Union-Wide Activities*, which will host Commissions 5, 6, 14, 41, 46, 50. In addition, the new by-laws open the way for more flexibility and responsibilities at Commission level, with e.g. the possibility for Commissions to propose new Working Groups for Division approval between General Assemblies. Commission 5 President takes the action to clarify the status of consultants with the IAU Executive - the issue has already been discussed at the first meeting of Division XII and several Commissions under Division XII stress the important role of consultants, and the need for proper recognition at IAU level. The possibility for Commissions to propose new IAU members should be explored - for instance, it would be very useful that Commission 5 could propose key consultants e.g. from WG Libraries and from the LISA conference organizing committee for full IAU membership.

Important actions for the next triennium will be

- to bring new active members, and to prepare for officer rotation in the future. It is hoped in particular that the development of the Virtual Observatory projects will attract new, younger astronomers to an active role in IAU and Commission 5; this also means that Commission 5 has to be useful and efficient!
- to manage properly interfaces between Working Groups inside Commission 5, and also with Division XII and with other Commissions and Divisions.

The action and evolution of Commission 5 will take into account the evolution of the context, in particular the development of the Virtual Observatory, which is one of the few truly global endeavors of astronomy. Commission 5 Working Groups represent important topics which require a special organization at international level. There is some inter-dependence between the Working Groups, which will be managed by designation of a few common members and by Commission 5 executive. The President will produce an organigram and publish it on the Web. Commission 5 will not aim at gathering all data-related IAU groups together, but rather to maintain good communication with them. SOC membership will be revised before the next General Assembly, to comply to the maximum number of participants (4-8 persons). This could limit the SOC to Working Group chairpersons. The possibility to grant an "emeritus" status will be explored. Each WG will also revisit its Organizing Committee membership.

Two open questions have to be addressed in the coming years: maintenance of IAU Thesaurus (pointed at as an important resource for astronomy and in particular for the Virtual Observatory during JD8 - which could be under responsibility of WG Libraries); coordination of usage of astronomical units - this is an important issue for the FITS Working Group in particular, and Commission 5 has to participate to actions on-going on that topic in other Divisions.

It is proposed to organize a Joint Discussion on public access to archives at the next General Assembly.

5. Resolutions

Commission 5 supports Resolution B *Public access to astronomical Archives* presented by R.P. Norris and later ratified by the General Assembly.

Two Type C resolutions were ratified by Commission 5 during its business meeting:

- Resolution presented by the FITS Working Group, establishing the World Coordinate System (WCS) as part of the FITS standard

Commission 5,

recognizing the scientific requirement to accurately compare images obtained at different observatories, in different band passes, and with different angular resolution,

recommends that all astronomical observatories and computing facilities recognize and support the celestial coordinate World Coordinate System [WCS] standard as described in *Astronomy and Astrophysics* vol.395, pp.1061-1075 and 1077-1122 (2002), in addition to recognizing and supporting the basic FITS standard as described in *Astronomy and Astrophysics* vol.376, pp.359-380 (2001).

- Resolution drafted by Commissions 5 and 26, later ratified by Commissions 8, 42 and 45 and the Working Group on Interferometry, on designating components of binary/multiple star systems

Recognizing

- a. the increasing synergy of techniques for the investigation of stellar companions blurring the traditional distinction between astrometric, spectroscopic, and photometric binary and multiple stars;
- b. the detection of substellar (including planets) as well as stellar components by these techniques, and
- c. the need for a simple, unambiguous, flexible, and computer friendly designation scheme for components of binary and multiple star systems,

noting that future ground and space-based telescope projects have the potential to detect both substellar as well as stellar components in increasingly large numbers, *recommends* that a uniform designation scheme, based on expansion of the Washington Multiplicity Catalog (WMC) system, be developed during the next 3 years to include all types of components and that this be reviewed in time for its adoption to be considered at General Assembly XXVI.

Acknowledgments. Thanks to Ray Norris who took notes during the meeting

Françoise Genova

President of the Commission

References**FITS papers**

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- Greisen, E.W., & Calabretta, M.R. 2002, *A&A*, 395, 1061
- Calabretta, M.R., & Greisen, E.W. 2002, *A&A*, 395, 1077

LISA IV

Library and Information Services in Astronomy IV, Emerging and Preserving: Providing Astronomical Information in the Digital Age 2003, ed. B.G. Corbin, E.P. Bryson & M. Wolf (DC: U. S. Naval Observatory)

Virtual Observatory

See e.g. JD8 proceedings and proceedings of the yearly *Astrophysics Data Analysis Systems and Software* conferences, published in ASP Conference Series