

CHAPTER V

REPORT OF THE EXECUTIVE COMMITTEE

1. Introduction

The three years that have elapsed since the Beijing GA have been extremely rich and varied, and have seen major evolutions in the history of the IAU.

The actions of the Executive Committee can be highlighted in three categories:

● **Actions towards the community:**

- Follow-up of the Division restructuring approved at the Beijing GA in 2012: reforming the Commissions;
- Reorganization of the scientific meetings at GAs, with the merging of “Special Sessions” and “Joint Discussions” into “Focus Meetings”, and with the introduction of “Division Meetings”;
- Frequent use of electronic voting (signing-up for Commissions, elections, etc.) after improving the reliability of the membership database;
- Complete reorganization of the web site;
- Start of the digitization of the IAU Archives (publications and documents)

● **Global actions towards Education and Development:**

- Consolidation of the Office of Astronomy for Development (OAD) in Cape Town;
- Consolidation of the Office for Astronomy Outreach (OAO) in Tokyo;
- Creation of a new “Office for Young Astronomers” (OYA) in Oslo.

● **Actions towards the public:**

- Participation in public naming of solar-system satellites and planetary features;
- Worldwide contest for public naming of exoplanetary systems and their host stars (“NameExoWorlds”);
- Organizing a well-identified IAU “cornerstone” of the UNESCO 2015 “International Year of Light & Light Technologies” (“Cosmic Light”).

These actions, and other EC activities, are described in the following Sections.

2. Executive Committee

2.1. *Executive Committee Members*

The composition of the Executive Committee (2012-2015), as approved by the General Assembly in Beijing, is as follows:

Officers

President	Norio	Kaifu	(Japan)
President-Elect	Silvia	Torres-Peimbert	(Mexico)
General Secretary	Thierry	Montmerle	(France)
Assistant General Secretary	Piero	Benvenuti	(Italy)

Vice-Presidents (First term)

Renée	Kraan-Korteweg	(South Africa)
Xiaowei	Liu	(China Nanjing)
Dina	Prialnik	(Israel)

Vice-Presidents (Second term)

Matthew	Colless	(Australia)
Jan	Palous	(Czech Republic)
Marta	Rovira	(Argentina)

Advisors

Robert	Williams	(past President, USA)
Ian	Corbett	(past General Secretary, UK)

To this list was added George Miley (the Netherlands), as Adviser on Astronomy for Development.

2.2. Executive Committee meetings

The Executive Committee met on five occasions:

- EC92 (Beijing, XXVIII General Assembly): Sep.1, 2012
- EC93 (Nara, hosted by N. Kaifu): May 9-11, 2013
- EC94 (Canberra, hosted by M. Colless): Apr.30-May 2, 2014
- EC95 (Padova, hosted by P. Benvenuti): Apr.15-17, 2015
- EC96 (Honolulu, XXVIII General Assembly): Aug. 2 and Aug. 7, 2015

In addition, Officers' Meetings were held in Paris:

- OM2013: Feb. 7-8, 2013
- OM2014: Feb. 13-14, 2014
- OM2015: Jan.15-16, 2015

This last meeting allowed the Officers to attend the Opening Ceremony of the International Year of Light & Light Technologies at UNESCO on Jan. 19-20 (see Section 7).

The IAU cocktail, traditionally held at Paris Observatory during the OM, is the opportunity to thank the Institut d'Astrophysique de Paris (IAP) and the Paris Observatory for their hospitality and assistance during the year.

Abridged minutes of the 2013 meeting have been published in the Information Bulletin, issues IB111 and IB112 (2013). (See also Section 12.)

2.3. EC Working Groups

During this triennium, the EC Working Groups were as follows:

“Continuing” Working Groups

- IAU General Assemblies (Chair: Gang Zhao): http://www.iau.org/science/scientific_bodies/working_groups/126/
- Women in Astronomy (Chair: Francesca Primas): http://www.iau.org/science/scientific_bodies/working_groups/122/

“Ad hoc” Working Groups

- Public Naming of Planets and Planetary Satellites (Chair: Thierry Montmerle): http://www.iau.org/science/scientific_bodies/working_groups/209/
- International Year of Light: Cosmic Light (Chair: Richard F. Green): http://www.iau.org/science/scientific_bodies/working_groups/212/

These two WGs are temporary, and are discussed in Section 7.

3. Secretariat

3.1. *Location and Staff*

The IAU Secretariat is located on the second floor of the “Institut d’Astrophysique de Paris” (IAP), 98bis, Bd Arago, 75014 Paris. A copper plaque has been installed near the street entrance of the IAP, courtesy of the new IAP Director, F. Bernardeau, to help visitors and publicize the IAU. The premises (three office rooms and an archive storage room) are rented under contract with the French CNRS (owner of the IAP building), which we thank for advantageous conditions, that include IAP help to maintain the Secretariat hardware and software systems. The current staff is composed of:

- Muriel Besson, Head of Administration (full time)
- Madeleine Smith-Spanier, Assistant and Database Manager (full time)
- Ginette Rude, Archivist (0.4 FTE, or two days/week).

M. Besson and M. Smith-Spanier each occupy an office room, while G. Rude has a desk in the Archive storage room. The General Secretary has an office room large enough for small meetings (4-5 persons). Note that there is no extra space available in the IAU “corner”.

3.2. *History*

The current Secretariat staff listed above is entirely different from the Secretariat of the previous triennium, except for Archivist Ginette Rude (see below). It has been stabilised for less than a year, after a complicated history. This is only the third Secretariat in over two decades; M. Orine had been the IAU Secretary for about 20 years until she passed away suddenly in 2008, then Vivien Reuter took over the position (in March 2008) now known as “Head of Administration”, with Jana Zilova recruited as “Database Manager” in July 2009 (hence just before the Rio 2009 GA). The “Database” in question is the “membership database”, where the complete profiles of the IAU members (institutions, postal and email addresses, personal data, IAU body affiliations, etc.) are kept, the physical maintenance of the data being outsourced to ESO (see below). This task has

now become a crucial activity to keep the contacts and circulate information between individual members, the Union as a whole, and the Executive (in particular because of the widespread use of electronic voting this triennium (see Section 4).

Then Jana Zilova went on sick leave just before the 2012 Beijing GA, leaving V. Reuter and GS I. Corbett handle a very difficult situation. Eventually J. Zilova didn't return to the IAU Office after Beijing, and for legal reasons her contract was terminated in March 2013. In parallel, V. Reuter had already announced before Beijing that she would leave the IAU towards the end of 2012, and a procedure was conducted that eventually led to the recruitment before Beijing of the current Head of Administration, Muriel Besson (actual start of contract in October 8, 2012), with V. Reuter training M. Besson until she left the IAU (end of January 2013).

On the other hand, finding a replacement for J. Zilova was not easy, but eventually a new Database Manager, Julia Nauert, was hired in January 2013. Unfortunately, after only a few months of excellent work, Julia decided to return to her native Switzerland, ending her contract in August 2013. Then a friend of hers, Madeleine Smith-Spanier, a US citizen living in Paris, agreed to succeed her - and again a period of a few weeks was necessary to train her to the job - and to the IAU as a whole. But the situation was unstable again, in that Madeleine was on a 1-yr, non-extendable, US-France Young Workers visa, with a contract starting in October 2013. For a permanent-track job allowing her to continue, it was necessary, according to the French law, to make the position public, and have Madeleine compete with other candidates. The procedure was run by M. Besson, and among the applying candidates, it was clear that Madeleine was the best qualified. So Madeleine, after having had to return temporarily to the US for working visa reasons, is now on a permanent position (French "indefinite duration contract", with a 10-yr working visa) since Oct. 20, 2014.

To summarize, over a period of three years since the pre-Beijing period, the Secretariat has had two successive Heads of Administration, and three different "Database managers".

Actually, the situation could have been worse, because Ginette Rude, a retired former assistant to the Paris Observatory President, who was hired previously to be a part-time "Archivist" for the IAU publications and internal documents (on a permanent contract since January 2009), had announced that she would probably leave the Secretariat after Beijing. Fortunately, she became very interested the "IAU Archive" digitizing project with Cambridge University Press (see Section 12), and decided to stay. An Archivist-like profile is clearly needed at the Secretariat, especially with the 100th Anniversary of the IAU in sight (2019 - celebrated at the 2018 GA in Vienna); it will be very difficult to replace Ginette when she eventually decides to leave for good.

3.3. *Internal Tasks*

The tasks of the Secretariat staff are briefly described in what follows. Note however that the staff is organized as a team, with constant communication so that some tasks may be shared or temporarily transferred in case of need.

Head of Administration

Day-to-day accounting (income: dues from National Members or "funds-in-transit", travel and other expenses, grants, etc.). Contacts with National Members and various administrations (French taxes, social security, etc.); contracts (staff hiring; photocopier, phone, etc.). Supervising of the Secretariat staff. Contacts with the bank (HSBC). Note that almost all expenditures are now done via electronic transfer, and each transfer is authorized individually by the GS. Very few bank checks are signed (by the GS) and

each is photocopied. The HoA may however authorize transfers or sign checks when the GS is unavailable. The bank accounts can be monitored electronically at any time, with restricted access.

Assistant & Database Manager

Contacts with individual members. Updating the membership database, in collaboration with ESO (see next section), queries to National members and National Committees for Astronomy (NCA), etc. Organizing electronic consultations and elections. Help in the CUP editorial process (“ScholarOne” online submission of proceedings; see Section 12). Also, answering simple queries from the public (addressed to the “iaupublic@iap.fr” mailbox), or transferring them to competent astronomers (GS, Minor Planet Center, WGSBN, etc.).

Archivist

IAU and other publications: maintaining the IAU library, follow-up of scientific meetings (copyright forms, , etc.). Preparing and/or compiling documents to be digitized by CUP (see Section 12). Liaison with other libraries (observatories; Académie des Sciences, etc.). Storing and classification of “physical” IAU documents (EC meetings, etc.).

3.4. *Outsourced Tasks*

Essentially all high-level server tasks are outsourced under contract with ESO: general IAU web site maintenance and development, Press Office (web Announcements), maintenance of National and Individual membership and IAU bodies databases (Divisions, Commissions and Working Groups). This collaboration continues to prove extremely fruitful and dynamic developments and decisions are generally implemented almost in real time.

Another outsourced task in the present triennium has been professional accounting, consistent with the IAU legal status (non-profit organization based in France). (See Section 14)

4. **Electronic Voting and Membership Database**

4.1. *Electronic Voting*

The possibility for the whole IAU membership to vote electronically has been introduced during the previous triennium, with a subscription to the UK-based voting platform “Mi-Voice”.

Any vote or consultation takes place as follows:

- the relevant mass-mailing list is created (from a limited group, like Commission members, to the whole IAU membership or nearly 10,000 “active” members);
- a message with the appropriate instructions is sent, including a “unique voting code” (the equivalent of a “polling card”), giving access to the ballot (list of options or slate of candidates);
- at the end of the vote, the results are compiled automatically, and then announced manually using certain criteria (e.g., publishing the names of the elected candidates, but not of the defeated ones).

Note that organizing a vote requires coordination between three different actors:

- Mi-Voice in Southampton (UK) for attributing a list of randomly generated voting codes (up to 10,000), then recording and sorting the votes;
- The IAU Secretariat in Paris to attribute a voting code to each voting member (i.e., to each email address);
- ESO in Garching (Germany) to establish an up-to-date customized mailing list and send the messages with voting codes inserted.

During the present triennium, this voting platform has been used extensively, and very successfully, for various issues related to the follow-up of the Division restructuring (see Section 6):

- Joining Divisions (1-9) (winter 2012-2013)
- Establishing Division Steering Committees, with 6 “at-large” members (Spring 2013)
- Expression of interest for proposed new Commissions (Winter 2013-2014)
- Sign-up for the selected new Commissions (May 2014)
- Voting for the new Division Steering Committees: Division Presidents and Vice-Presidents, and replacement of 3 at-large candidates (June 2014)
- Establishing the Organizing Committees of the selected new Commissions (June-July 2014).

As an example of the effort made by the Secretariat and actors mentioned above, the Division and Commission elections were run in parallel in a time span of two months. There were 102 candidates for the 9 Divisions, and 289 for the 35 Commissions (in all 391 candidates). This translated into 23271 unique voting codes being sent to the 9245 “active members” (see below), for the 44 quasi-simultaneous elections, when taking into account the multiple individual affiliations to Divisions (1 to 9) and Commissions (1 to 3).

4.2. *Membership Database*

A key to the validity of the electronic voting is to have a reliable membership database, in other words of “IAU citizens” having the ability to vote.

An extensive search has been conducted by the Secretariat to locate “missing members” (typically, no or invalid email addresses) by contacting the NCAs, the National Members, Commissions and Divisions, even Google. Over the past triennium we have recovered almost 500 members.

Especially in view of the electronic voting, we have defined as “active members” those filling two conditions: (i) to have a valid email address, (ii) to be affiliated to at least one Division.

For each National Member, the “IAU Directory”:
(<http://www.iau.org/administration/membership/national/>) now lists “active members” (active link to their full profile), and “inactive members” (in black) - meaning that not enough information is available (this may include undeclared deceased members, etc.). With these definitions, the IAU Directory now lists 9245 “active members” (i.e., having the availability to vote), and 11277 members in total. The lists evolve in real time as new information is communicated to the Secretariat (iauinfos@iap.fr).

5. Membership of the Union

5.1. *New National Members*

Only one country applied for National Membership in 2015: Colombia (Category I). This was a strong application, with 25 Individual Members proposed for admission by the Membership Committee. The application followed a number of highly visible initiatives (proposed LARIM in 2016, organization of IAU Symposium 327 on “Fine Structure and Dynamics of the Solar Atmosphere”, approval of an “Andean OAD Regional Node”; see Section 8), well coordinated by the various institutions of Colombia (Observatorio Nacional, Universidad de los Andes, etc.).

This brings the total number of IAU National Members to 74 (see <http://www.iau.org/administration/membership/national/>).

5.2. *Individual Members*

The Individual Members of the IAU are recorded in the “IAU Member Directory”, which is now updated in real time as new information comes in (change of address, decessions, etc.). The information is normally provided by the NCAs (or equivalent if there is none, especially in small countries), with which the Secretariat is frequently in contact. As explained in Section 4, for each country the Directory now shows a list of members, differentiated according to their status:

- “active members”, having a valid email address and affiliated to at least one Division: these are equivalently the “voting members” to whom mass emails are being sent on various occasions, either globally (messages from the Executive, e-Newsletters, etc.), or partially (messages from Divisions or Commissions); the names are linked to their profiles (underlined in blue);
- “inactive members”, having some missing information (in general an invalid email address or not being affiliated to a Division in spite of requests; this may also include deceased members not notified to the Secretariat). Note that as soon as the correct information is received by the Secretariat, the “inactive” status can be immediately restored to “active”.

At the time of writing, there are currently 9245 active members, out of a total of 11276 members in the IAU database. (See <http://www.iau.org/administration/membership/individual/>)

In Honolulu, 1189 new Individual Members will be admitted, as compared with 1008 in Beijing and 887 in Rio. The number of deceased members reported at Honolulu will be close to 400 (including yet unrecorded previous members).

6. Divisions, Commissions and Working Groups

6.1. *New Divisional structure*

Following the adoption of Resolution B5 at the Beijing GA concerning the new Divisional structure proposed by the EC, the Division Presidents and the GS, on behalf of the EC, started to work together on solidifying the Division Steering Committees (by organizing elections), and on preparing a deep reform of the Commissions, itself having an impact on existing Working Groups. In particular, the DPs were invited at all the EC meetings since 2013.

The list of the new Divisions (with their final names) is as follows:

Division A Fundamental Astronomy
Division B Facilities, Technologies and Data Science
Division C Education, Outreach and Heritage
Division D High Energy Phenomena and Fundamental Physics
Division E Sun and Heliosphere
Division F Planetary Systems and Bioastronomy
Division G Stars and Stellar Physics
Division H Interstellar Matter and Local Universe
Division J Galaxies and Cosmology

In Beijing, the GA approved the list of Division Presidents and Vice-Presidents presented by the EC. Being therefore appointed, and not elected, and together, the “continuity tradition”, according to which Vice-Presidents would normally succeed the Presidents, was broken for the first time in the history of the IAU. This created a “virgin ground” to complete the Division restructuring by establishing the “Division Steering Committees” (replacing the “Organizing Committees”), with the main task of implemented the second recommendation of Resolution B5, i.e., to undertake a reform of the Commissions.

As a result, the DPs, with the approval of the EC, “invented” a new composition for the Division Steering Committees (DSC), by: (i) including ex-officio the Presidents of the existing Commissions (which was crucial given that the Commissions were to be reformed), and (ii) adding 6 elected “at-large” members, i.e., members drawn from their respective communities. Therefore, the very first step was to establish these communities themselves by asking all IAU members to sign-up for any number of new Divisions (i.e., from 1 to 9).

This original sign-up process (the main goal of which was thus to establish the “electorate” of each Division), launched in December 2012 (see <http://www.iau.org/news/announcements/detail/ann12026/>) lasted for three months, and turned out to be the first of a long series of electronic consultations using the Mi-Voice platform.

On average, about 25% of the IAU members chose “voluntarily” to be members of the new Divisions. Then what about the remaining 75% who didn’t sign up? At the time, all IAU members had to belong to at least one Commission, which was one of the conditions for being accepted as a new individual member. Since each Commission was assigned to a Division, the non-voting members were assigned the Division(s) corresponding to the Commission(s) they were members of. The Division “constituencies” being established in this way, elections of the at-large DSC members could be organized. Potential candidates were thus encouraged to apply, after consultation with Commission Presidents, and the Mi-Voice poll set-up by the Secretariat. (The current Commission affiliation for each Division can be found via the corresponding links of the IAU web page, e.g., Division A: http://www.iau.org/science/scientific_bodies/divisions/A/commissions/)

Therefore, a few weeks after the start of the current triennium, the DSCs and their Presidents were ready to start working on the Commission reform.

6.2. Commission Reform

The main milestones of the Commission reform were planned and articulated around the EC Meetings, where the DPs were invited to present their conclusions to the EC members.

The reform was thus broken down in three phases:

1) *Nara (EC93): "Commission Reset"*

Following discussions between the GS and DPs, the DPs proposed to the EC to reset the Commissions, i.e., to terminate all existing Commissions at the Honolulu GA, and organize a "Call for proposals for new Commissions". It was expected, in particular, that Commissions would be created on science areas currently absent from the present list of Commissions.

In the subsequent months, many discussions took place between DPs (with feedback from the DSCs) and the GS to reach an appropriate definition of Commissions adapted to each specific subject areas covered by the Divisions, and to set up the Call itself. An inspiration was the Call for Proposals for Symposia, which features a first deadline for submitting Letters of Intent, and a second deadline for submitting Full Proposals.

2) *Canberra (EC94): Call for Proposals*

Guidelines for submitting proposals, proposal forms, etc. were presented to the EC. A major topic of discussion between DPs had been to promote multidisciplinary, i.e., Commissions supported by more than one Division. (See <http://www.iau.org/news/announcements/detail/ann14014/>)

Three categories of Commissions were therefore defined:

- "Regular" Commissions (supported by one Division only);
- "Inter-Division" Commissions (supported by two or more Divisions, but featuring a "parent" Division, with the Commission President an ex-officio member of its DSC);
- "Cross-Division" Commissions (supported by two or more Divisions, but this time on equal grounds, i.e., with one Commission OC member being appointed ex-officio member of the DSC of each Division).

A timeline was agreed to implement the Call for Proposals for Commissions, with a deadline of Oct. 15 for the Letter of Intent, and Jan. 31 for the Full Proposals, so that the community would have ample time to reflect on the proposed Commissions, interact with the proposers and exchange opinions with the Executive on a dedicated web Forum (which turned out to be used rather sparingly), and for the proposers to possibly merge proposals on neighbouring topics (which has indeed been the case). The timeline also included milestones for organizing OC elections for the new Commissions, with the goal that the Commissions and their OC would be approved by the EC at the Honolulu GA. (See <http://www.iau.org/administration/events/past/>)

In all, 48 Letters of Intent were received by the Secretariat (see <http://www.iau.org/news/announcements/detail/ann14029/>). The submission indicated that the Commission reform was on the right track: in round numbers, compared with the existing 40 Commissions, about a third of the existing Commissions would not be re-proposed, a third would be re-proposed with sometimes significant changes, and a third were proposed on entirely new topics (such as Gravitational Waves, Astrostatistics, Computational Astrophysics, etc.).

During the 3.5 months of web posting of the Letters of Intent, electronic "Expressions of interest" were organized on three occasions, as a preview of the potential interest of the community for the proposed Commissions (see the last poll: <http://www.iau.org/news/announcements/detail/ann15002/>)

Then the Full Proposals entered a “recommendation phase”, in which the Division Presidents would recommend a number of new Commissions for approval by the EC.

3) Padua (EC95): Commission approval and OC elections

In total, 47 proposals were reviewed (one was not confirmed), this time both, and independently, by the Division Presidents (committee chaired by the GS), and by the EC Vice-Presidents (committee chaired by the President-Elect). Then the reviews were combined, and individual proposals re-discussed if necessary.

As a result of this “dual selection”, a list of 35 Commissions was submitted to the EC for approval, with a complementary list of proposals recommended for temporary “Division Working Groups” in the next triennium.

These approved “post-GA Commissions” (i.e., to take effect only at the Honolulu GA) can be found at: http://www.iau.org/science/scientific_bodies/postga_commissions/.

6.3. Commissions and Divisions Elections

6.3.1. Commissions Elections

Once the new Commissions were approved by the EC, to be established at the GA, it was necessary to organize the sign-up of their members, followed by the elections of their OC. Given the exceptional nature of the exercise (including for Commissions that never existed before), the DPs and EC endorsed the following election procedure:

a) The total number of position was adjusted to the size of the Commissions membership (see <http://www.iau.org/news/announcements/detail/ann15013/>), in line with the Working Rules: if N is the number of members, and P the number of positions: $P = 6$ for $N < 99$, $P=7$ for $100 < N < 199$, and $P = 8$ for $N > 200$.

b) The proposers of approved Commissions would not stand for election, but be ex-officio members of the OC, the lead proposer being future President by default (or else another proposer);

c) Separate elections would be held for the position on Commission Vice-President (normally future President);

d) “Open” elections would be held, i.e., self-appointed at-large candidates could stand for OC elections, including for the position of VP;

e) No candidate could stand for more than one position;

f) In order to encourage candidates for the VP position (the Working Rules state that there should be at least two candidates), the decision was made to opt for a “soft” VP election, in which the VP candidates would also stand for regular member position, so that if defeated as VP they would have a second chance to be elected as regular member.

The voters were asked to vote for at least one candidate (or abstain), up to a number defined by the number of positions available (different in each Commission depending on how many proposers would stay: some left to be elected elsewhere, or resigned, etc.)

The candidates were asked to write a statement and provide a photo; the Secretariat added a link to the IAU profile in the member Directory, for each of the 289 candidates.

In spite of the complexity of the poll, the elections worked extremely well. The Secretariat was able to handle the 35 elections successfully, which was quite an achievement. The results were published on July 15, in conformity with the timeline that was posted on the web site. (See <http://www.iau.org/news/announcements/detail/ann15024/>)

6.3.2. *Divisions Elections*

However, in parallel with the Commissions elections, the Divisions had to organize their own elections: Presidents and Vice-Presidents at the same time, an unprecedented situation (since the current ones were appointed together in Beijing), and half (3) of the previously elected at-large DSC members (which implied that the other half was requested to step down).

Here also an “open” vote was held, but with rules different than for the Commissions:

- a) The elections for President and Vice-President were “hard”: the defeated candidates would simply lose the corresponding election;
- b) Inasmuch as possible, there should be at least two P and two VP candidates (there were exceptions, discussed and agreed by all DPs and endorsed by the EC);
- c) Only three at-large positions were offered to the vote, a simple feature compared to the Commissions elections;
- d) Here also, no candidate could stand for more than one election;
- e) This rule was also extended to the Commissions elections (“one person-one function” rule).

Here also, the candidates were asked to write a statement and provide a photo; the Secretariat added a link to the IAU profile in the member Directory, for the 102 candidates.

The main difficulty was to manage the 9 simultaneous Divisions elections in parallel with the 35 Commissions elections.

The process worked extremely well also (and was much simpler than for Commissions). The results of the Divisions DSC elections were posted on July 31, as planned. (See <http://www.iau.org/news/announcements/detail/ann15021/>.)

6.4. *Working Groups*

Normally, Working Groups have to be approved at each GA, to continue existing (if they ask for it).

Since the current Commissions will be terminated at Honolulu, their WG will also be terminated. Following the Bye-Laws, new WG will have to be created, or re-created, by the relevant Commissions after Honolulu, with the approval of the relevant DSCs.

Division WGs are not concerned by the Commission reform, but they will be reviewed too for renewal, since some of them may now fall scientifically under the purview of new Commissions.

7. EC Actions towards the Public

7.1. Creation of “ad hoc” EC Working Groups

During this triennium, the EC was directly engaged into two highly visible actions towards the public, which were conducted under the purview of two EC Working Groups:

a) inviting the public to participate in the naming of solar-system planetary satellites and surface features, and of exoplanetary systems: WG “Public Naming of Planets and Planetary Satellites”, chaired by the GS (http://www.iau.org/science/scientific_bodies/working_groups/209/)

b) participate in the UNESCO 2015 “International Year of Light & Light Technologies” (“IYL2015” for short): WG “Cosmic Light”, chaired by R. Green, with P. Benvenuti as EC representative (http://www.iau.org/science/scientific_bodies/working_groups/212/).

7.2. WG “Public Naming of Planets and Planetary Satellites”

The major actors of this Working Group are the “Working Group on Planetary Surface Nomenclature” (WGPSN, Division F; chaired by R. Schulz), and the “Working Group on Small Bodies Nomenclature” (WGSBN, Division F, Secretary G. Williams). Their decade-long experience in dealing with the public (e.g., for proposing asteroid names), and with space agencies (ESA, NASA) has been invaluable.

The actions of this WG have been twofold:

a) Solar-system objects: The year 2015 is exceptional for the space exploration of the solar system. Aside from missions ongoing for several years (Mars rovers and orbiters, Cassini), a number of highlights have been achieved (apart from the ESA Rosetta-Philae mission, which doesn’t involve name approval by the IAU):

(1) Participate in the naming of craters on Mercury (the last discovered before the end of the Messenger mission); (<http://www.iau.org/news/pressreleases/detail/iau1506/>)

(2) Similarly, participate in the naming of topological features on Ceres as a dwarf planet (Dawn mission)

(3) The public naming of Pluto’s surface features (fly-by of the New Horizons mission on July 14) is however still under debate at the time of writing (see <http://www.iau.org/news/pressreleases/detail/iau1502/>)

Previously, in collaboration with NASA, the IAU had sanctioned in 2013 the naming of Pluto’s four latest, HST-discovered satellites (naming criteria and official approval of names: <http://www.iau.org/news/pressreleases/detail/iau1303/>).

b) Public Naming of Exoplanets and their Host Stars: A contest was organized to engage the public in naming exoplanetary systems and their host stars (nicknamed “ExoWorlds”). This contest, named “NameExoWorlds”, is the first to be initiated by the IAU from the start. The goal being to submit naming proposals to the vote of the largest

possible public worldwide, a cooperation with the well-known “citizen-science” organisation Zooniverse was set up. The contest was originally organized in several phases:

- (1) Selection by the IAU of a set of 305 exoplanets offered for naming (making up 260 exoplanetary systems with 1 to 5 exoplanets), having reliable data (typically monitored for more than 5 years); (<http://www.iau.org/news/pressreleases/detail/iau1404/>)
- (2) In parallel, creation of an “IAU Directory for World Astronomy”, open to clubs and associations interested in astronomy (“clubs” for short), to record registrations to the contest; (<http://www.iau.org/news/pressreleases/detail/iau1406/>)
- (3) Voting by the registered clubs to select 20 “most popular” ExoWorlds to be named (<http://www.iau.org/news/pressreleases/detail/iau1505/>);
- (4) Submitting naming proposals (one per club per ExoWorld) to the IAU;
- (5) Posting of the proposals on the web and having the public worldwide vote for the best proposals;
- (6) Announcing the “winners” and the winning names for each of the 20 ExoWorlds at a special ceremony during the GA in Honolulu (after due consideration to cultural and geographical balance).

At the time of writing, 601 clubs are registered with the Directory, and 225 naming proposals have been received. Unfortunately, due to unexpected difficulties with Zooniverse, phase (5) had to be delayed, and will be the one announced at the GA, as an official “Public Event” (<http://www.iau.org/news/pressreleases/detail/iau1507/>). At the time of writing, how to announce the winning names (Phase (6)) is still under discussion, in coordination with the WG.

7.3. WG “Cosmic Light”

The name of the WG is that of a “cornerstone” of large projects submitted to the IYL2015 Organizing Committee (<http://www.iau.org/iyl/>). It was created by the EC at the beginning of 2014, and quickly capitalized on the experience gained by the IAU during IYA2009. The priorities of the IAU were soon established, as:

- a) “the Right to Starlight” (implementation of Resolution B5 approved at the Rio 2009GA): dark skies and astronomical sites protection (both professional and public)
- b) light from the Universe, in particular contribute to celebrating of the 100th anniversary of Einstein’s Theory of Relativity

The WG issued a Call for Proposals for world-class projects covering item (a), with a special seed funding of 30 kE (<http://www.iau.org/iyl/proposals/>). The selected projects are:

- o Cosmic Light Awareness (<http://www.iau.org/iyl/cornerstones/cosmiclightawareness/>)
- o Galileoscope (<http://www.iau.org/iyl/cornerstones/galileoscope/>)
- o Light: Beyond the Bulb (<http://www.iau.org/iyl/cornerstones/lightbeyondthebulb/>)

7.4. Outlook for the future

Normally these two WG, which are time-limited, will be dissolved in early 2016, after due reporting and review. Perhaps some links should be maintained between the EC and the

WGPSN and WGSPN, and the WG “Public Naming of Planets and Planetary Satellites” kept operating in the next triennium after the end of the NameExoWorld contest.

8. Executive Summary of the OAD Activities in the triennium

The activities of the Office of Astronomy for Development were reviewed by the Executive Committee in all its annual meetings. In particular, the overall performance of the OAD spanning the period 2010-2014 was analyzed in depth together with the Report prepared by the ad hoc Review panel (see doc EC97-8-b OAD Review report-final) during the EC95 (Padova, April 15-17, 2015).

Therefore this document will only highlights in a concise form the main achievements of the OAD in the past triennium and concentrate on the negotiations between IAU and NRF that produced the revised version of the IAU-NRF Agreement on OAD, to be approved by the EC during the EC96-1 session.

For a more extended and comprehensive description of the OAD activities in the period 2010-2014, please refer to the Document OAD Self Evaluation which was prepared by the Director of OAD, Kevin Govender, for the Review Panel.

The IAU Office of Astronomy for Development was established in March 2011 as a joint venture between the IAU and the NRF to implement the IAU decadal Strategic Plan (SP), Astronomy for Development (AfD): 2010-2020.

Despite its small size (3 FTE) the OAD has been successful in implementing key elements of the SP during the first 3 years of its existence. Major accomplishments, as envisaged in the SP include:

- Establishment of its infrastructure and tools to communicate with an associated large global network of committed participants
- Establishment of 3 AfD Task Forces (TFs) covering (i) Universities and Research, (ii) Children and Schools and (iii) Public Outreach
- Development of a dedicated web portal, including the on-line submission procedures for the annual call for projects (<http://www.astro4dev.org>)
- Establishment of 4 OAD Regional Nodes (East Asia, South East Asia, East Africa, Southern Africa), with 2 additional ones approved more recently (West Africa, Andean South America) and others in the approval or planning stage (Portuguese Language Expertise Centre, Jordan ROAD, Armenia ROAD) .
- Recruitment of over 550 OAD volunteers
- Stewardship of the IAU development and education activities with the institution of an annual (highly oversubscribed) global call for proposals in each of the 3 Task Force sectors and coordination and management of the selection procedures
- Management and monitoring of contracts, projects and financial reporting for 42 projects selected by the TFs and approved by the IAU Extended Development Oversight Committee over the first 2 years.

During its first 3 years, the accomplishments and visibility of the OAD have brought substantial benefits and visibility both to the IAU and to South Africa for a tiny increment of the national and international expenditures on astronomy and space sciences.

Some important ambitions of the decadal Strategic Plan and the OAD have not been realised during the first triennium due to a lack of human resources. The most obvious of these is fund raising and another is the organisation of flagship “Astronomy for Development” projects.

9. Educational and Outreach activities: “IAU Offices”

In addition to the “Office of Astronomy for Development” (OAD) in Cape Town (see Section 8), the IAU has created an “Office for Astronomy Outreach” in Tokyo (not its original name), and this year a third one, the “Office for Young Astronomers” in Oslo. These initiatives demonstrate the continuous will of the IAU to be “global”, and not restricted to its Secretariat in Paris.

9.1. *Office for Astronomy Outreach (“OAO”: Tokyo)*

The present OAO was actually founded during the previous triennium (2009-2012), in the aftermath of the 2009 International Year of Astronomy, with the creation of the position of “Public Outreach Coordinator” (POC) at NOAJ (Tokyo), in charge to “resurrect” the network of “National Outreach Contacts” set up during IYA2009, and also to be the Editor of the “CAP Journal” (see Section 10). The position was filled by Sarah Reed just before the Beijing GA. Unfortunately, due to health reasons, Sarah could not stay in Japan and had to return to the UK. This happened in Spring 2013, just before EC93 in Nara. Given the projects initiated towards the public by the EC (see Section 7), it was decided to offer a position again, this time perhaps more ambitiously, since the position was to be the head of an “Office of Astronomy Outreach” (with a one-person staff to begin with), as “International Outreach Coordinator” (IOC). A call was issued internationally, which was quite successful since nearly 30 applications were received.

The selected candidate was Sze-leung Cheung, a Chinese citizen from Hong-Kong, who had in particular an excellent record of initiatives taken during IYA2009. Sze-leung was hired in early 2014, and presented to the EC at EC94 in Canberra. Sze-leung is now deeply involved in the “NameExoWorld” and “Cosmic Light” projects, and regularly publishes the “Astronomy Outreach Newsletter (latest Issue: <http://www.iau.org/news/announcements/detail/ann15022/>).

This time the OAO was on a sound basis, and the EC approved the hiring of a second person to the OAO, with the position of “International Outreach Assistant” (IOA). A new call was issued, with the full participation of Sze-leung. Again the call was very successful, and after selection and negotiation within a short list of three high-level candidates, a young lady from Portugal, Lina Canas, was hired just before EC95 in Padua, and presented to the EC via telecon.

At the time of writing, the OAO is very dynamic and in excellent shape, ready for new projects for the next triennium.

The OAO is co-funded by NAOJ and JAXA (Japan), Academia Sinica (China Taipeh), NOAC (China Nanjing), NARIT (Thailand), IIA (India), and KASI (Korea).

9.2. *Office for Young Astronomers (“OYA”: Oslo)*

This is a newly created structure, approved by the EC at EC95 in Padova, and recently signed by the IAU and the Norwegian Academy of Sciences and Letters (NASL). It is based on the existing “International School for Young Astronomers” (ISYA), which have been existing for many years, and have been funded since 2006 by NASL as a result of a first Agreement set up by past GS Oddbjorn Engvold.

The new Agreement, called “Office for Young Astronomers”, is an enhancement of the previous one, allowing for development not only of ISYAs (with the establishment of a joint IAU-NASL Steering Committee), but providing a flexible framework for future projects.

The text of the Agreement, although including no staffing, was strongly inspired by the existing Agreements for the OAD and OAO, and this logically refers now to an “Office for Young Astronomers” in Oslo, home to the NASL.

10. CAP Journal

CAPjournal (<http://www.capjournal.org>), is published by the IAU Division C Commission 55, “Communicating Astronomy with the Public” (CAP). It is an open-access, peer-reviewed journal for astronomy communicators that was launched in 2007. The current publication frequency is three issues per year. 2100 copies printed copied of each issue are distributed, with several thousand additional copies distributed as PDFs. The publication of the CAPjournal is a core function of C55.

During the change of leadership of the Office of Astronomy Outreach from Sarah Reed to Sze-leung Cheung (Section 9), it was decided to change the Editor in Chief, CAPjournal to Georgia Bladon on a contractual basis. She has done a sterling job of continuing the publication. The IAU funds the printing costs and the cost of the Editor in Chief. ESO funds the distribution, the proofreading and other miscellaneous costs.

The last issue Issue 17 was published in June 2015. The next issues are planned for September 2015 and December 2015. The editors are working on a special issue about the exciting science communication done around the Rosetta mission, but it is not clear if the team can commit to this due to the ongoing mission itself.

11. Scientific meetings

11.1. *List of Meetings (2012-2015)*

As usual, during the present triennium the IAU organized 9 Symposia each year, and 3 Regional IAU Meetings (“RIMs”: APRIM, Asia-Pacific; LARIM: Latin America; MEARIM: Middle-East and Africa).

However, at the Beijing GA 8 Symposia were organized (compared to the usual 6), because of the high quality of the proposals and the impact of their topics on the general program.

The list of IAU Symposia (all published by Cambridge University Press, see Section 12) is as follows (more details can be found at <http://www.iau.org/publications/iau/symposia/>; Symposia without Editors have not been published yet):

2012:

IAUS 287 Cosmic Masers - from OH to Ho

Stellenbosch, South Africa, 29 Jan -3 Feb 2012

Eds. R.S. Booth, E.M.L. Humphreys, W.H.T. Vilemmings

IAUS 288 Astrophysics from Antarctica

Beijing, China, August 20-24, 2012

Eds. Michael Burton, Xiangqun Cui, and Nicholas Tothill

IAUS 289 Advancing the Physics of Cosmic Distances

Beijing, China, August 20-24, 2012

Ed. Richard de Grijs

IAUS 290 Feeding Compact Objects: Accretion on All Scales Beijing

China, August 20-24, 2012

Eds. Chenmin Zhang, Tomaso Belloni, Mariano Méndez, Shuangnan Zhang

IAUS 291 Neutron Stars and Pulsars: Challenges and Opportunities after 80 years

Beijing, China, August 20-24, 2012

Ed. Joeri van Leeuwen

IAUS 292 Molecular Gas, Dust, and Star Formation

Beijing, China, August 20-24, 2012

Eds. Tony Wong, Jürgen Ott

IAUS 293 Formation, Detection, and Characterization of Extrasolar Habitable Planets

Beijing, China, August 20-24, 2012

Ed. Nader Haghighipour

IAUS 294 Solar and Astrophysical Dynamos and Magnetic Activity

Beijing, China, August 20-24, 2012

Eds. Alexander G. Kosovichev, Yihua Yan, Elisabete de Gouveia Dal Pino, Lidia van Driel- Gesztelyi

IAUS 295 The intriguing life of massive galaxies

Beijing, China, August 20-24, 2012

Eds. Daniel Thomas, Anna Pasquali, Ignacio Ferreras

2013:

IAUS 296 Supernova Environmental Impacts

Kolkata, India, January 2013

Eds. Alak Ray, Richard A. McCray

IAUS 297 The Diffuse Interstellar Bands

Noordwijkerhout, The Netherlands, May 2013

Eds. Jan Cami, Nick L. J. Cox

IAUS 298 Setting the scene for Gaia and LAMOST

Lijiang, China, May 2013

Eds. Sofia Feltzing, Gang Zhao, Nicholas A. Walton, Patricia A. Whitelock

IAUS 299 Exploring the Formation and Evolution of Planetary Systems

Victoria, Canada, June 2013

Eds. Mark Booth, Brenda C. Matthews, James R. Graham

IAUS 300 Nature of Prominences and their role in Space Weather

Paris, France, June 2013

Eds. Brigitte Schmieder, Jean-Marie Malherbe, S. T. Wu

- IAUS 301 Precision Asteroseismology**
Wroclaw, Poland, August 2013
Eds. Joyce A. Guzik, William J. Chaplin, Gerald Handler, Andrzej Pigulski
- IAUS 302 Magnetic Fields throughout Stellar Evolution**
Biarritz, France, August 2013
Eds. Pascal Petit , Moira Jardine and Hendrik C. Spruit
- IAUS 303 The Galactic Center: Feeding and Feedback in a Normal Galactic Nucleus**
Santa Fe, USA, October 2013
Eds. Lorant Sjouwerman, Cornelia Lang, Jürgen Ott
- IAUS 304 Multiwavelength AGN Surveys and Studies**
Byurakan, Armenia, October 2013
Eds. Areg M. Mickaelian, David B. Sanders
- 2014:**
- IAUS 305 Polarimetry: The Sun to Stars and Stellar Environments**
Punta Leona, Costa Rica, December 2014
- IAUS 306 Statistical challenges in 21st Century Cosmology (SCCC 21)**
Lisbon, Portugal, May 2014
- IAUS 307 New windows on massive stars: asteroseismology, interferometry, and spectropolarimetry**
Geneva, June 2014
Eds. Georges Meynet , Cyril Georgy , José Groh and Philippe Stee
- IAUS 308 The Zeldovich Universe: Genesis and Growth of the Cosmic Web**
Tallinn, Estonia, June 2014
- IAUS 309 Galaxies in 3D across the Universe**
Vienna, Austria, July 2014
- IAUS 310 Complex planetary systems Namur**
Belgium, July 2014
- IAUS 311 Galaxies Masses as Constraints of Formation Models**
Oxford, United Kingdom, July 2014
- IAUS 312 Star Clusters and Black Holes in Galaxies across Cosmic Time**
Beijing, China Nanjing, August 2014

IAUS 313 Extragalactic Jets from every angle

Puerto Ayora, Galapagos Islands, Ecuador, September 2014

There was no Symposium organized in 2015 before the GA. In addition, three Regional Meetings were organized (not published by the IAU):

LARIM 2013 XIV Latin American Regional IAU Meeting
Florianópolis, SC, Brazil, November 2013
Contact: Zulema Abraham

APRIM 2014 12th Asia-Pacific IAU Regional Meeting
Daejeon, Korea, Rep of., August 2013
Contact: Young Chol Minh

MEARIM 2014 Third Middle-East and Africa IAU Regional Meeting
Beirut, Lebanon, September 2014
Contact: Roger Hajjar

11.2. *Changes introduced for General Assembly Meetings*

At the EC93 meeting in Nara, important changes were approved by the EC and Division Presidents, concerning the scientific meetings at the General Assembly:

- (1) Merging of the “Special Sessions” and “Joint Discussions” into single, medium-length topical meetings, named “Focus Meetings” (1-2.5 days)
- (2) Creation of “Division Meetings”, to highlight the scientific activities of Divisions independently of the topics of Symposia and Focus Meetings; for some Divisions this would also include business sessions (9 parallel sessions of 2 days).

Note that Commissions and Working Groups may also organize their own business sessions during a GA. Given the Commission reform undertaken during the present triennium (see Section 6), it will be important to review the respective roles of Division Meetings and business sessions of their Commissions and Working Groups.

12. IAU web site, Publications & Archives

12.1. *IAU web site*

The IAU web site, as a means of communication with the member community and with the public, has been completely redesigned by the Press Office (Press Officer: Lars Christensen; webmaster: Raquel Yumi Shida, both at ESO), and presented and approved by the Executive Committee at EC93 in Nara. (See <http://www.iau.org/news/announcements/detail/ann14012/>)

The old web site is now completely forgotten, and has given way to a modern, dynamic presentation with catch-eye images, “Featured News” carousel, etc. New pull-down menus allow quick access to internal information (meetings, committees, Divisions, Commissions, etc.). “Private” information, i.e., reserved for IAU members (such as statements of election candidates, access to proposals, etc.), are protected by a specific login (IAU membership code) and personal password.

The IAU home page (iau.org) now has several features, designed to enhance and clarify communication:

- Top: “Featured News”, designed as a carousel to attract attention on the last five important news: these can be “Announcements” (i.e., news from the General Assembly, new Commissions, etc.), or “Press Releases” (sent to Press Offices around the world, thus more oriented towards the public, such as a public naming campaigns, prize announcements, etc.).
- Below: the latest Press Releases and Announcements, with access to the whole list.

To date, since the publication of the new web site, 72 Announcements have been published, as well as 16 Press Releases, since EC93.

Then in the bottom half of the page are regular news of general interest and deadlines (generally administrative), news of planetary surface feature names, and standing “themes” for the public (Selling Star Names, Pluto, How to become an Astronomer, The Constellations, etc.).

In addition, when a Press Release is issued, a recap “e-Newsletter” (sometimes featuring a message from the GS if appropriate) is sent, hence on an irregular basis, to all the “active” members of the IAU Member Directory (see Section 5).

To the right is a column listing easy-to-reach standing information (General Assembly, OAD, OAO, past publications, etc.).

12.2. Publications

12.2.1. *Contract with Cambridge University Press*

The Publisher for all IAU publications is Cambridge University Press (CUP). The current contract has been renewed until the end of 2018, i.e., the end of the year of the GA in Vienna. Therefore, a continuation or termination has to be decided at the 2018 EC meeting preceding the GA.

The present status is that the collaboration with CUP has been truly exceptional, in the best “academic spirit” (CUP is actually a non-profit company), demonstrating a lot of competence and flexibility, and it is hard to imagine a reason why the current contract should not be renewed in 2018.

12.2.2. *Symposia*

The “IAU Symposia Series” is the flagship of all IAU publications, bringing in fact a significant revenue to the budget of the Union. The debate “paper vs. electronic” is now obsolete, as no more than 10 % of the Proceedings are now printed on paper. Most of the revenue comes from subscriptions of libraries - most of which now lack shelf space to store all the books and publications.

Technically, the Symposia Series are handled like a journal (issues are numbered, and there must be in principle 9 issues per year). A new system is being tested (called “ScholarOne”) by which contributions to Symposia will be accepted in real time to complete a volume, instead of having to wait for the whole volume to start production. This new procedure is expected to relieve pressure on the Editors, and speed up publication (ultimately down to a few weeks after the last contribution has been received).

The list of Symposia published during the present triennium is as follows:

2012:

- IAUS 280 The Molecular Universe**
Toledo, Spain, June 2011
Eds. J. Cernicharo, R. Bachiller
- IAUS 281 Binary Paths to Type Ia Supernovae Explosions**
Padova Italy, July 2011
Eds. Rosanne Di Stefano, Marina Orio, Maxwell Moe
- IAUS 282 From Interacting Binaries to Exoplanets: Essential Modeling Tools**
Tatranska Lomnica, Slovakia July 2011
Eds. Mercedes Richards, Ivan Hubeny
- IAUS 283 Planetary Nebulae: An Eye to the Future**
Puerto de la Cruz, Tenerife, July 2011
Eds. A Machado, L Stanghellini, D Schönberner
- IAUS 284 The Spectral Energy Distribution of Galaxies**
Preston, United Kingdom, September 2011
Eds. Richard J Tuffs, Cristina C Popescu
- IAUS 285 New Horizons in Time-Domain Astronomy**
Oxford, UK, September 2011
Eds. Elizabeth Griffin, Robert Hanisch, Rob Seaman
- IAUS 286 Comparative Magnetic Minima: Characterizing quiet times in the Sun and Stars**
Mendoza, Argentina October 2011
Eds. David Webb and Cristina Mandrini
- IAUS 287 Cosmic Masers - from OH to Ho**
Stellenbosch, South Africa, Feb 2012
Eds. R.S. Booth, E.M.L. Humphreys, W.H.T. Vilemings

2013:

- IAUS 288 Astrophysics from Antarctica**
Beijing, China, August 20-24, 2012
Eds. Michael Burton, Xiangqun Cui, and Nicholas Tothill
- IAUS 289 Advancing the Physics of Cosmic Distances**
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Ed. Richard de Grijs
- IAUS 290 Feeding Compact Objects: Accretion on All Scales**
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Eds. Alak Ray, Richard A. McCray

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Noordwijkerhout, The Netherlands, May 2013
Eds. Jan Cami, Nick L. J. Cox

IAUS 298 Setting the scene for Gaia and LAMOST

Lijiang, China, May 2013
Eds. Sofia Feltzing, Gang Zhao, Nicholas A. Walton, Patricia A. Whitelock

IAUS 299 Exploring the Formation and Evolution of Planetary Systems

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Eds. Mark Booth, Brenda C. Matthews, James R. Graham

IAUS 300 Nature of Prominences and their role in Space Weather

Paris, France, June 2013
Eds. Brigitte Schmieder, Jean-Marie Malherbe, S. T. Wu

- IAUS 301 Precision Asteroseismology**
Wroclaw, Poland, August 2013
Eds. Joyce A. Guzik, William J. Chaplin, Gerald Handler, Andrzej Pigulski
- IAUS 302 Magnetic Fields throughout Stellar Evolution**
Biarritz, France, August 2013
Eds. Pascal Petit , Moira Jardine and Hendrik C. Spruit
- IAUS 303 The Galactic Center: Feeding and Feedback in a Normal Galactic Nucleus**
Santa Fe, USA, October 2013
Eds. Lorant Sjouwerman, Cornelia Lang, Jürgen Ott
- IAUS 304 Multiwavelength AGN Surveys and Studies**
Byurakan, Armenia, October 2013
Eds. Areg M. Mickaelian, David B. Sanders

2015:

- IAUS 307 New windows on massive stars: asteroseismology, interferometry, and spectropolarimetry**
Geneva, June 2014
Eds. Georges Meynet, Cyril Georgy , José Groh and Philippe Stee

12.2.3. *General Assembly Proceedings*

There are three publications (also with CUP) associated with General Assemblies. If the GA is held in year N:

- Transactions A (TrA: Reports of Astronomy), compiling mainly triennial reports of Commissions and Working Groups and published in year N;
- Transactions B (TrB: Proceedings of the General Assembly), compiling the reports of the GA Business Sessions, the separate business meetings of Commissions and WGs, the membership of Divisions, Commissions, countries, etc. ; normally published in year N+1;
- Highlights of Astronomy, containing the proceedings for the scientific meetings at the GA (other than GA Symposia), i.e., “Special Sessions” and “Joint Discussions”, and also Invited Discourses; normally published in year N+2.

This scheme could not be followed for this triennium for the Beijing volumes, essentially because of the Commission Reform:

- *TrA* was not requested, but is now being turned into a “legacy” volume, since the present Commissions will disappear in Honolulu. The EC has made the decision (at EC94 in Canberra) to suppress this volume, but in fact it still needs to be published to mark the end of the Commission regime that has existed since the creation of the IAU in 1919. Therefore it will be published after the GA (with Oct. 15 as a deadline for

submitting triennial, even hexennial reports for Commissions not having sent their report for the Beijing GA; and also the Honolulu GA business meetings of these Commissions). It will be edited by the current GS, as would have been the case in the past;

- *TrB* has been delayed for a long time but is now in production;
- *Highlights of Astronomy* (#15) has been published earlier this year.

This issue will be the last of the series. Because of the merging of the GA “Special Sessions” and “Joint Discussions” into “Focus Meetings” (see Section 11), a new series will be launched: “Astronomy in Focus” (agreed by CUP).

TrB will host the new Division Meetings (Section 11) proceedings, in the form of summaries of the meetings, with contributions accessible on-line only.

12.2.4. *Information Bulletin*

Because of the revamping of the web site, and the new, dynamic way of announcing IAU news, the traditional bi-annual Information Bulletin (IB) has been temporarily suspended. The last issues published were IB111 (February 2013), and IB112 (July 2013).

It is expected that the IB will resume publication in the next triennium, but its contents and editorial policy have to be rediscussed in view of the increasing importance of the web site and its fast turnaround time for news (in contrast, the IB is normally published every six months). Turning it into an Archive of selected documents having appeared on the web site, and/or EC documents and records, are possibilities to be explored in the next triennium.

12.3. *IAU Archives*

As a result of an obvious necessity, and triggered by the proximity of the IAU centennial (it was founded in 1919 so celebrations are expected on the occasion of the GA2018 in Vienna), a project to digitize the IAU publications and documents has been started with CUP.

The project has two parts:

- the “IAU Book Archive” project, which concerns all IAU publications since the founding of the IAU (Transactions, Colloquia, Symposia, etc.);
- the “IAU Document Archive” project, which concerns physical archives currently stored at the French Académie des Sciences (corresponding to A. Blaauw’s book: “History of the IAU, the first 50 years”; Kluwer), and more recently at the IAU Secretariat. The selection of these archives has started by G. Rude, but it needs supervision by a historian (who should be D. Baneke, from Leiden University).

Concerning the “Book Archive” project, difficult legal issues have been encountered, notably with Springer, who bought two of the previous IAU publishers (Reidel and Kluwer). After more than two years, no agreement has been reached between the IAU (advised by CUP) and Springer to agree on copyrights, but Springer has nevertheless unilaterally decided to put their IAU publications part of their own “Book Archive” collection (for a fee), and CUP is about to do the same (with free access, thus at a cost for the IAU): to date CUP has digitized about 180 volumes (Symposia and Colloquia since 1955). The story may go on for some time until the whole issue is finally settled legally.

Apart from the CUP archive digitization project, with the help of Ginette Rude, the web site now offers access to all IAU Executive Committees since 1919: (http://www.iau.org/administration/executive_bodies/past_committees/executive_committee/), and to all GA Newspapers since the first issue (Moscow, 1958): (http://www.iau.org/publications/iau/ga_newspapers/).

13. Relations with other scientific organizations

13.1. ICSU

The IAU is a member of the International Council of Science (ICSU). Through ICSU, the IAU participates in highly relevant data activities under CODATA (The Committee on Data for Science and Technology) and WDS (The World Data System). Other activities include COSPAR (Space Research), SCOSTEP (Solar-Terrestrial Physics), IUCAF (Radio Astronomy and Space Science) and SCAR (Antarctic Research). Through these bodies the IAU is able to influence worldwide developments and strategy in fields of interest, but is increasingly concerned that the strategic priorities of ICSU are of little direct relevance to the IAU, and indeed to many of the “basic science” unions. This concern has been raised to the attention of the newly appointed Executive (2015) and constructive discussion on possible improvements of the IAU - ICSU relationship has been started. In particular the activities of the IAU-OAD on promotion of science through the international network of Regional Nodes represent a possibility for joint sponsored initiatives.

13.2. UNESCO

The IAU and UNESCO have renewed in 2013 a 5-yr MoU concerning the “Astronomy and World Heritage” initiative (see <http://www.iau.org/news/pressreleases/detail/iau1302/>).

In this document, the IAU commits itself to enhance its advisory role for preserving astronomical sites (including modern facilities) in the framework of the “World Heritage” in science. (This has been achieved recently with the creation of Commission C4 “Astronomy and World Heritage”, under Division C.)

A number of actions have taken place in the present triennium leading to nominations to World Heritage (Pulkovo Observatory, etc., but also proposed “High-Altitude Observatories”). The IAU also maintains the very informative “IAU-UNESCO Portal to the Heritage of Astronomy” (<http://www2.astronomicalheritage.net/>).

It is expected that a scientific committee will be established by UNESCO, including the IAU and ICOMOS (International Committee on Monuments and Sites), to advise and select proposals for nominations according to UNESCO rules (which are quite complex).

13.3. *UN-COPUOS (The United Nations Committee on the Peaceful Uses of Outer Space)*

The IAU is an active contributor in this body, and particularly on the issue of forecasting, and potentially mitigating, future impacts of Near Earth Objects (NEOs; comets: NECs; asteroids: NEAs) on Earth. In particular in 2013 and 2014 the General Assembly of the United Nations (UN) has agreed that an international response is necessary to coordinate and develop mitigation measures to address the Near-Earth Object (NEO) impact threat. Mitigation includes detection, follow-up, and characterization of NEO impact threats as well as the development of possible deflection techniques. Consequently the International Asteroid Warning Network (IAWN) and Space Mission Planning Advisory Group (SMPAG) was recommended by the Working Group and formally endorsed by COPUOS at its 56th session in June 2013, by the 68th session of the UN General

Assembly in December 2013, and by the 69th session of the UN General Assembly in December 2014. IAU, through the IAU Minor Planet Center, is actively participating in the activities of the IAWN network.

13.4. COSPAR

The IAU is collaborating with COSPAR on the organization of their “Capacity Building Workshops” (<https://cosparhq.cnes.fr/events/cb-workshops>), the GS being an ex-officio member of the SOC, for those of astronomical interest. The last ones took place in Mexico (2014: X-ray astrophysics), China (2013: High-Energy Astrophysics), and Buenos Aires (2012: IR and mm Astronomy). The next one will be in Brazil (2015: Planetary Mission Data Analysis).

14. Financial Matter

The Accounts for the present triennium (2012-2014) and the proposed budget for the next triennium (2016-2018) are given in detail as a separate document, that has also been sent to the Finance Committee for review.

Here we give comments about the most important issues.

14.1. Accounts 2012-2014

14.1.1. Income

By far the main income of the IAU comes from the dues paid by National Members according to their Dues Category, each Category being associated with a certain number of “Units of Contribution” (Bye-Laws, Chap. VII).

The Unit of Contribution (UC) is approved by the General Assembly. Its value for the year 2015 is 2860 €. Adding up all Categories, but not taking into account suspended countries, yields a total of 305 UC, representing a nominal income of $305 \times 2860 = 872300$ €. Another important contribution comes from royalties of IAU publications with Cambridge University Press (variable, but for this triennium around 100 k€). So in round members, in a normal year the IAU should have an income close to 1 M€.

Unfortunately, we are constantly struggling with unpaid dues, which regularly represent about 150 k€ for a given calendar year. But the year 2014 has been particularly bad, with over 300 k€ missing in dues. While some averaging effect does take place (dues can be paid late, or partly, in a given year covering a previous year), we have observed a steady decline (of 2-3 % /year). The situation can be serious because a large part of the expenditures is essentially fixed (salaries for the 2.4 FTE of the Secretariat, running costs of the EC and other administration, etc.). The only flexibility comes from “external” activities such as educational programs, which are strategic to the IAU actions, and could be in peril, whereas these educational programs (in the widest sense, i.e., including “capacity building” actions such as grants for Symposia) add up to more than 50 % of the IAU budget.

14.1.2. Expenditures

The budget approved by the Beijing GA did not include (temporary) additional expenditures that reflected actions undertaken by the EC during the present triennium:

- (a) As explained in Section 6., to implement Resolution B5 about Commission reform, the Division Presidents were invited to all EC meetings, starting with EC93 in Nara. The resulting additional cost was about 30 k€/year (or about 3 k€/DP/yr).

- (b) The Agreement over the Office of Astronomy Outreach (OAO) includes a contribution of 25 kE/year for the OAO staff (see Section 9)
- (c) To participate in the International Year of Astronomy (IYL2015) cornerstone “Cosmic Light”, seed funding of 30 kE has been allotted in 2015 to a Call for Proposals for global projects (see Section 7)

An increasingly important expenditure is the IAU contribution to the OAD: in 2015 this contribution was 50 kE/yr for running costs, and 110 kE/yr for (seed) funding of projects selected by the Task Forces of the OAD. Overheads are not negligible (a Steering Committee meeting costs about 10 kE), so, with about 170 kE/yr, the OAD alone represents about 20 % of the IAU budget.

On the other hand, the GS resided in Paris, so the IAU studio could be assigned to G. Rude as part of her salary, represented a saving of about 20 kE/yr.

14.2. *Proposed budget 2016-2018*

The main differences with the present budget are as follows:

14.2.1. *Income*

We propose to increase the UC by 2 % /year, in continuation of the increase approved in Beijing. This increase is meant to take inflation into account, which is significantly variable from country to country.

Of course we hope that the National Members will pay their dues more regularly, and that some suspended countries will come back to the community.

14.2.2. *Expenditure*

No “special operations” comparable to the previous triennium are foreseen at the moment.

- The Division Presidents will be invited to one EC meeting only (other meetings will be organized by telecon): 30 kE for the whole triennium;
- The rental of the studio must be re-incorporated (20 kE/yr);
- There is an additional contribution to the OAO for the second staff hired in 2015 (25 kE/yr; see Section 9);
- Additional funding is proposed for the OAD, at the level of 20 kE/yr. This is mostly dedicated to implementing the OAD Review Committee recommendation to seek a part-time staff (or contractor) for fund-raising activities (see Section 8);
- Additional funding (20 kE the first yr, 10 kE/yr the following years) is proposed for outsourcing centralized IT developments for Divisions and Commissions (web page maintenance, databases, etc.: ESO, see Section 3), so that the access doesn't change from triennium to triennium when Presidents change.

14.3. *Accounting and Auditing*

During the previous triennium, the accounts were maintained by the Head of Administration V. Reuter, who used the SAGE professional accounting system. The accounts were then converted by a professional accountant at the end of each year into the legally required format, and the annual accounts were submitted to an external auditor. The 2012 accounts were approved in this way.

Starting in 2013, the new Head of Administration, being unfamiliar with SAGE, opted (with the GS agreement) for a complete outsourcing of the accounting, i.e., providing data to the same accountant, who then did both the SAGE accounting and the legal

<u>BUDGET OF INCOME 2016 - 2018 (Euros, rounded):</u>				
	2016	2017	2018	Total
A Adhering Organizations (National Member dues)	883 851	901 425	919 605	2 704 881
C Total Royalties (CUP)	60 000	60 000	60 000	180 000
D Funds in Transit (OAO- ISYA-Gruber Fellowship)	89 960	89 960	89 960	269 880
F Bank Revenue	5 000	5 000	5 000	15 000
TOTAL INCOME	1 038 811	1 056 385	1 074 565	3 169 761
<u>BUDGET OF EXPENDITURE 2016-2018 (Euros, rounded):</u>				
	2016	2017	2018	Total
M General Assembly	15 000	15 000	410 000	440 000
N Scientific Activities	207 800	227 920	66 960	502 680
O Educational Projects	252 100	252 100	252 100	756 300
P Funds in Transit (OAO- ISYA-Gruber Fellowship)	89 960	89 960	89 960	269 880
Q Cooperation with the other Unions	30 030	30 660	31 290	91 980
R Executive Committee	79 493	79 683	79 874	239 050
S Publications (IB-Archives)	38 000	13 000	13 000	64 000
T Staff Salaries, Taxes & Charges	149 843	153 487	157 220	460 550
T3 Outsourced tasks	89 850	79 870	79 890	249 610
T4 General Office Expenditures	25 400	25 400	25 400	76 200
TOTAL EXPENDITURE	980 976	970 580	1 209 194	3 160 750
INCOME over EXPENDITURE	57 835	85 805	-134 629	9 011

Figure 1. Proposed budget 2016-2018

presentation at an additional cost of about 6kE/yr. To save money (about 6 kE/yr), it was then decided to drop the external auditor. The accounts for 2013 and 2014 were thus approved by the outsourced accountant.

It should be noted that, because the bank accounts (at HSBC) are accessible electronically at any time, and all transfers are also electronic (each transfer being authorized by the GS), the day-to-day accounting is quite robust and transparent. Very few checks are signed nowadays, and most of them for administration (French taxes, etc.).

However, at a Officers meeting held during the EC95 in Padova, with I. Corbett (past GS) as consultant, it was decided that, following the recommendation of the Finance Committee, the procedure stated in Working Rule 24.b., will be re-introduced with annual external audits starting from the year 2015.

14.4. *MBM Lawsuit*

I. Corbett informed the EC at the EC95 meeting in Padova that the IAU action against the previous auditors MBM (in charge of the IAU accounts until 2008) had been dismissed (to his surprise and disappointment) by the Court and that it had been decided not to appeal. This action is therefore terminated.

14.5. *Accounts 2012-2015 and Budget 2016-2018*

The corresponding tables are provided in a separate document for EC96-1 (identical to that sent to the Finance Committee).

15. Gruber Foundation

The IAU is involved in two awards funded by the Gruber Foundation:

- the Cosmology Prize (worth 500 k\$);
- the Fellowship (stipend of 50 k\$ for a young astronomer).

The Cosmology Prize is awarded each year. The IAU nominates one member of the selection committee (currently Wendy Freeman, Chair). The IAU issues a “Featured News” Announcement when the recipient(s) are announced by the Gruber Foundation. When the selection falls in a GA year, the Prize is presented during the Opening Ceremony (see <http://www.iau.org/news/announcements/detail/ann15016/>).

In contrast, the IAU is entirely responsible for managing the “TGF Fellowship”: candidate selection and management of the award in negotiation with the recipient’s institute.

The rules have evolved at the initiative of the IAU and in agreement with the Gruber Foundation. Indeed, the first two years of this triennium showed a modest interest for the award, frequently considered as a post-doc fellowship, however not competitive with the best post-docs. In addition, the closing date for the applications (Nov.1) was too early to make credible plans for a post-doc. And lastly, there were administrative problems of various sorts linked with overheads on the amount of the fellowship.

Nevertheless, the first two years (and the last of the previous triennium) showed that there were excellent candidates at the ending-PhD/starting-post-doc stage. Therefore, the suggestion was to target more precisely this young astronomer career segment, and to move the application deadline to March 15 to be closer to the end of a normal PhD (http://www.iau.org/science/grants_prizes/gruber_foundation/fellowships/)

This change met with great success, since there were 2 candidates for the 2013 Fellowship, 7 for 2014, and 26 for 2015 (i.e., after the modification of the rules). This year’s recipient hasn’t even finished his PhD (http://www.iau.org/science/grants_prizes/gruber_foundation/fellowships/recipients/fellow2015/).

16. NASL & Kavli Prize in Astrophysics

The relations with the Norwegian Academy of Sciences and Letters are excellent. The latest episode has been the signature of the Agreement creating the “Office for Young Astronomers”, to enhance the current agreement concerning the International Schools for Young Astronomers (see Section 9).

This document includes a supplementary section referring to the Kavli Prize in Astrophysics, that reinforces the role of the IAU in establishing the selection committee. (For now this role is limited to selecting members out of a pre-defined list of names proposed by the Royal Society, the Max-Planck Society, and the US Academy of Sciences.)