

Planning the future for Division C

Mary Kay Hemenway, John Hearnshaw, Beatriz Garcia, Pedro Russo, Xiaochun Sun, Clive Ruggles, and Richard Green

Membership

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Division Membership 1528

Steering Committee 2012-2015

President: Mary Kay Hemenway (USA)

Vice-President: Hakim Luthfi Malasan (Indonesia)

Elected Members: Kimberly Kowal Arcand (USA), Juan Antonio Belmonte Aviles (Spain), Beatriz Elena Garcia (Argentina), Michele Gerbaldi (France), Raymond P. Norris (Australia), Kazuhiro Sekiguchi (Japan)

Ex-Officio Members (Commission Presidents): Rajesh Kochhar (India, Division Secretary and President of Commission 41), Jean-Pierre de Greve (Belgium, President of Commission 46), Lars Lindberg Christensen (Germany, President of Commission 55),

Steering Committee 2015-2018

President: John Hearnshaw (New Zealand)

Vice-President: Susana Deustua (USA)

Elected members, first term:

Katrien Kolenberg (Belgium), Linda Strubbe (Canada),
Pamela L. Gay (USA), Saeko S. Hayashi (USA)

Elected Members, Second term:

Michèle Gerbaldi (France), Kazuhiro Sekiguchi (Japan)

Ex-Officio Members (Commission Presidents):

Beatriz Garcia (Argentina; C1), Pedro Russo
(Netherlands; C2), Xiaochun Sun (China Nanjing; C3),
Clive Ruggles (UK; C4)

Advisor (Past President): Mary Kay Hemenway (USA)

Looking Forward

- Focus Meetings at this GA
- Reform of Working Groups: new commissions have no current working groups
- Symposium 326: Research in Astronomy Education: Far Reaching Impacts and Future Directions (October 2016)
- Celebration of IAU's 100th anniversary at next GA in Vienna
- Co-operation with OAD, OAO, and OYA (responsible for ISYA)

New Division President

Comments by John Hearnshaw

- I wish to thank all those who ran for positions on the Division Steering Committee. We had 12 candidates for the four new positions on the DSC.
- Of the four new DSC members, all those elected are women, so we have a very strong female voice in Div C, which I welcome.

Our commissions need to work together

We have four commissions in Division C

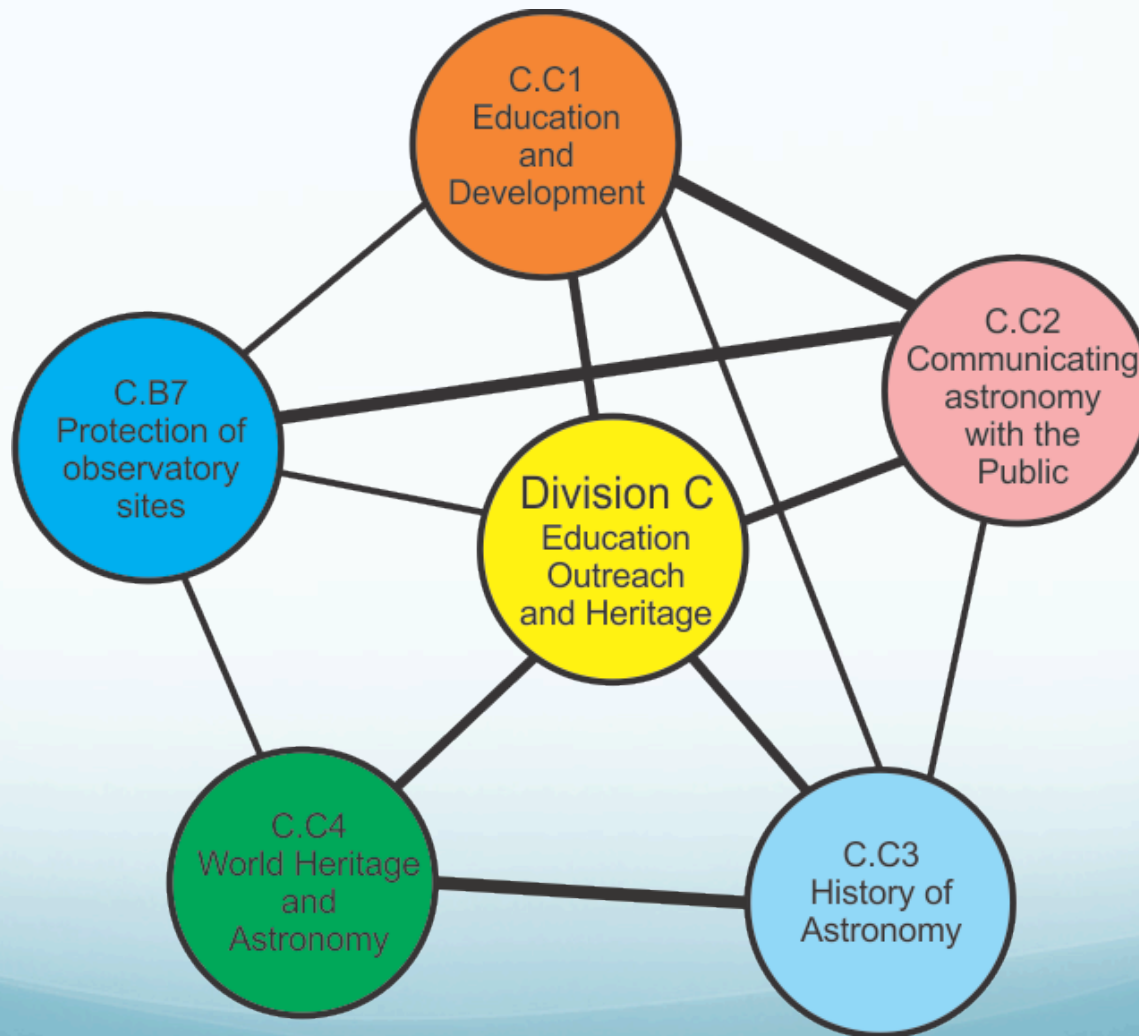
- C.C1: Education and development
- C.C2: Communicating Astronomy with the Public
- C.C3 History of Astronomy
- C.C4 World Heritage and Astronomy

and links to a fifth

- C.B7 Protection of Existing and Potential Observatory Sites

There are many synergies among all these topics.

Synergies and links within Division C



A proposal for a symposium covering all the themes of Division C and the links between them

- Any proposal for 2017 would need to be made by 15 December 2015, with a letter of intent by 15 September.
- Any proposal for a symposium for 2018 would be made by these dates one year later, in 2016.
- With the IAU centenary being in July 2019, we should probably look at proposing a GA symposium for the Vienna 2018 GA with major involvement of C.C3 History of Astronomy, but also involving other Division C commissions.

We should look at rationalizing our newsletters

- The old C46 (Education and Development) has long had a successful Newsletter, published electronically.
- OAD and OAO also have their newsletters and the old C55 (CAP) publishes the CAP Journal
- This could be a good time to consider a Divisional Newsletter covering all the activities of Division C, possibly as a development of the C46 Newsletter.

C.C1:Astronomy Education and Development

President: Beatriz Elena Garcia (Argentina)

Co-proposers:

Jean-Pierre de Greve (Belgium)

Amelia Ortiz Gil (Spain)

VP (elected): Paulo Sergio Bretones (Brazil)

At-large members (elected):

Kathleen DeGioia Eastwood (USA)

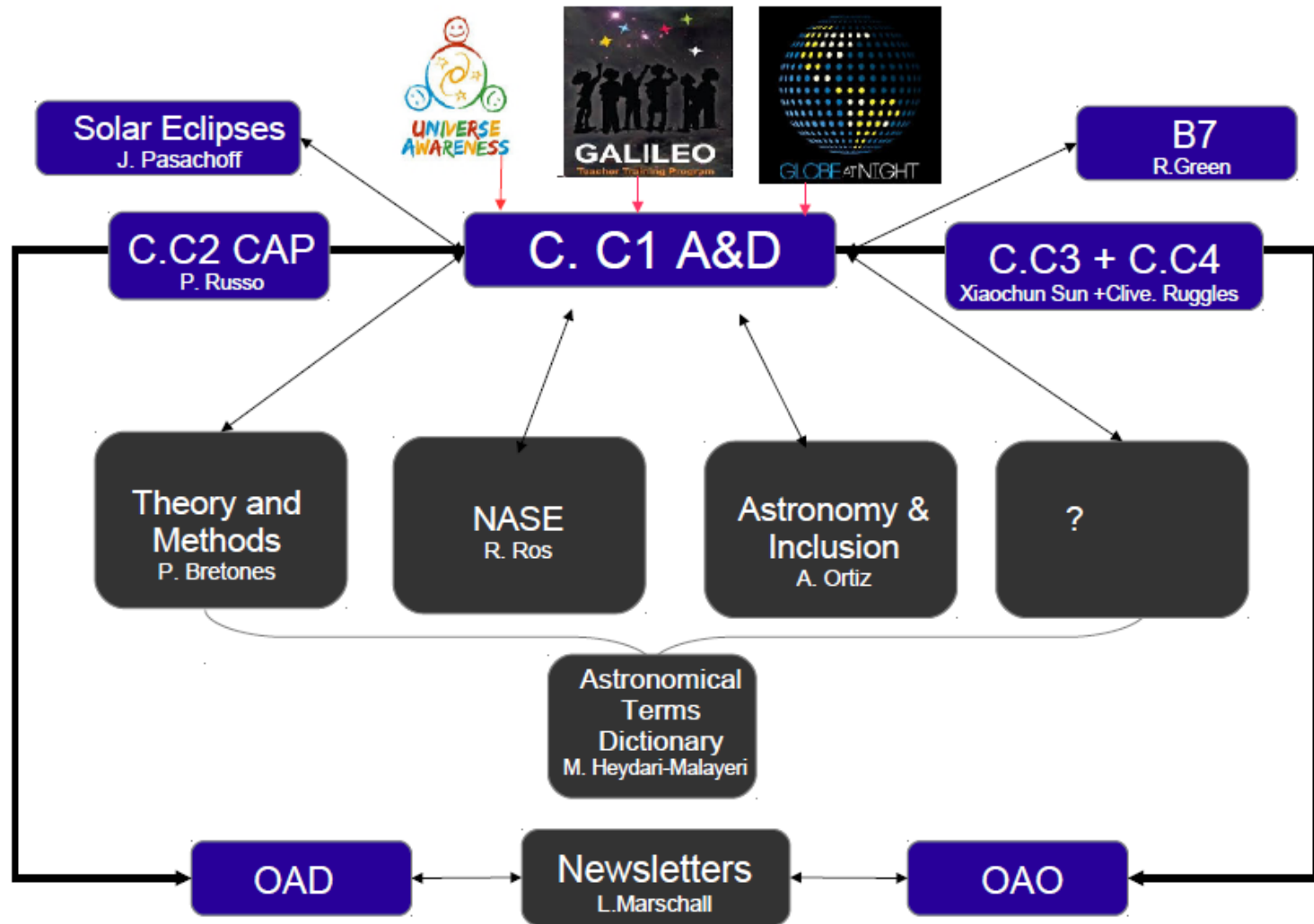
Christopher David Impey (USA)

Nicoletta Lanciano (Italy)

C.C1 Possible Working Groups 2015-18

- WG1 Theory and Methods in Astronomy Education
- WG2 Network for Astronomy School Education
- WG3 Astronomy and Inclusion

C.C1 Possible New Structure 2015-18



Renewed structure of the Commission

a. WG1 Theory and Methods in Astronomy Education

Goals:

1. Adequate research into educational tools, models, quality and impact evaluation.
2. Innovate and adapt teacher training, curricula, pedagogical methods to the fast changing knowledge base, the societal changes and the corresponding changes in attitude of the young.
3. Develop a promotional strategy for enhancing Astronomical Educational Research and promote summary reviews of scholarly production that already exists.

This WG has about 100 members

Web site : <http://www.caperteam.com/iau/>

b. WG2 Network for Astronomy School Education (NASE)

ISO 29990:2010, *Learning services for non-formal education and training, implementation*

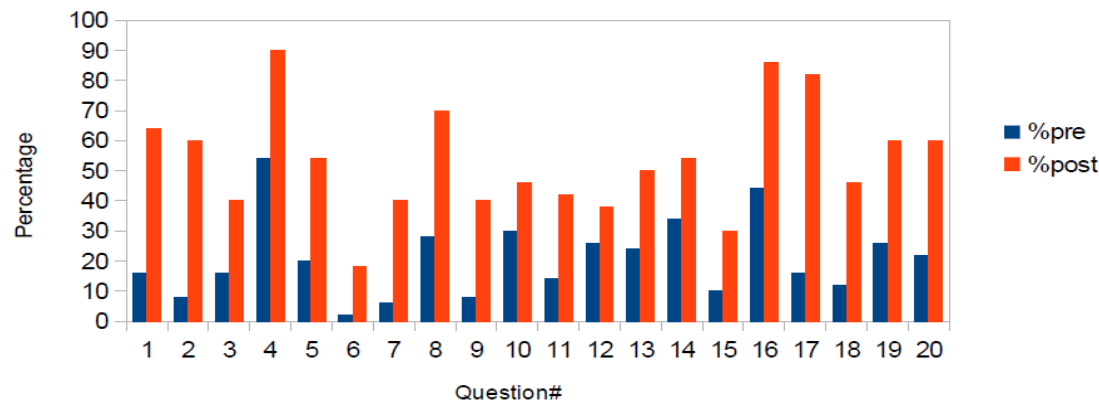
- New ISO standard aims to improve quality of learning services and facilitate comparison on worldwide basis.

“ISO 29990 will help learning service providers improve their ability to consistently provide quality services, improve organizational effectiveness, and reduce overall business costs.”

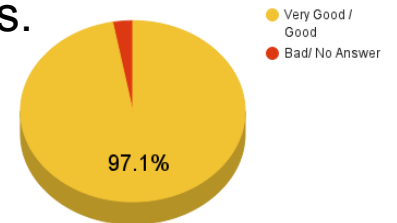
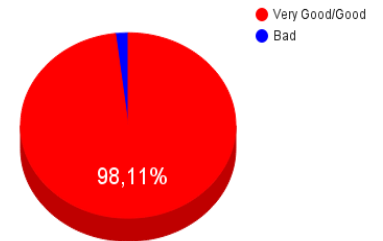
NASE Course key content, in the frame of the ISO 29990-2010 standard

- Extensive customer orientation (the student), by implementing satisfaction survey.
- Continuous students learning evaluations.
- Service assesment by Ministries and departments that administer the funds for the course.
- Study of Impact and monitoring of the courses.
- Preparation of special and complementary material.
- Maintenance of the Network based on NASE Local Groups.

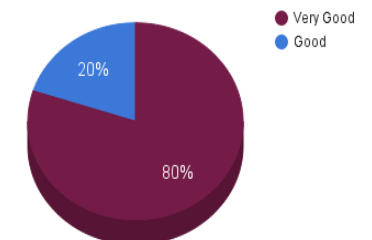
NASE Evaluation Results



Satisfied Expectation



Pedagogical Methods



c. WG Astronomy and Inclusion

An interdisciplinary approach (astronomers, educators and disability specialists) in developing new teaching and learning strategies.

Recent applications, exhibitions and workshops, permit to confirm that we live in an era with a “ new public of sciences”.

The “Sign Language Universal Encyclopedic Dictionary” project, which proposes the dissemination of a unique language for the deaf worldwide on Astronomy, received the support from OAD – TF3.



The web site (in construction) is: <http://sion.frm.utn.edu.ar/iau-inclusion/>

Some changes for the CC1

The **WG Public Understanding at the Times of Solar Eclipses and Transits** (Jay M. Pasachoff) is now an inter-division WG.

The WG National Liaison on Astronomy Education and Newsletter, the structure, distribution and content will be revised.

(<http://iaucomm46.frm.utn.edu.ar/newsletters/>)

The IAU Dictionary of Astronomical Concepts.

The group has developed an Etymological Dictionary of Astronomy and Astrophysics (<http://dictionary.obspm.fr>), and created a new semantic tool called AstroConcepts, providing definitions of astronomical concepts present on Web pages.

We will improve this task which, in the new scheme of the Commission, will cross all the others WG.

The strategy developed during the last period demonstrates to be very efficient

To enlarge the impact of our mission, CC1 supports the

IAU S326: “Research in Astronomy Education: Far Reaching Impacts and Future Directions” (Oct., 2016)

The main topics of this Symposium are:

- State-of-the-art of astronomy education research in countries/continents on papers/dissertations/meetings.
- Meta-analysis of astronomy education research on contents/school grade levels/focus on education cross studies.
- Astronomy misconceptions across the globe.
- Use of AER experiments and results by teachers and museum educators.
- Innovations in research methodologies and instrumentation
- Measuring museum and planetarium learning
- Research into the value and influence of astronomy education in other disciplines
- Impact research on leveraging new media and information systems.
- Overview of astronomy education research

Conclusions (The challenge for the next period)

integrate the job of many people in the Union and beyond, through an improved connection between the Comms at the Division and the OAD and OAO:

- ✓ promoting the adoption of successful structures and programs such as GHOU, GTTP, NASE, UNAWE based on good practices in Education,
- ✓ considering the diversity and defending the identity,
- ✓ creating a repository for resources,
- ✓ giving visibility to many anonymous collaborators,
- ✓ and teaching on how to defend one of the world heritages, the starry sky.
- ✓ working in research into educational tools, models, quality and impact evaluation

New CC1Web site: <http://iau-cc1.frm.edu.ar> (in construction)

IAU Commission C2

Communicating Astronomy with the Public

Commission C2 Organizing Committee Officers 2015 - 2018

President: Pedro Russo (the Netherlands)

Vice-President (elected): Rick Fienberg (USA)

At-large members (elected):

Megan Kirsty Argo (UK), Carol Ann Christian (USA), Kingsley C. Okpala (Nigeria), Sylvie D. Vauclair (France)

C2 Co-proposers:

Lars Lindberg Christensen (EU/Germany), Rick Fienberg and Pedro Russo

What is C.C2: Communicating Astronomy with the Public?

Commission C2 is a ***think/do-tank*** that convenes the astronomy communication community and seeds initiatives to explore new ways to communicate astronomy with the public.

We focus on community initiatives and new trends and less on implementing projects, as that naturally falls more to OAD and the OAO.

Mission C.C2: Communicating Astronomy with the Public

- To encourage and enable a much larger fraction of the astronomical community to take an active role in explaining what we do (and why) to our fellow citizens.
- To act as an international, impartial coordinating entity that furthers the recognition of outreach and public communication on all levels in astronomy.
- To encourage international collaborations on outreach and public communication.
- To endorse standards, best practices, and requirements for public communication.

C.C2 Proposed Working Groups

- Communicating Astronomy with the Public Journal

Chair: Georgia Bladon, Editor in Chief, CAPjournal

Deliverables: 3 issues / year

- Communicating Astronomy with the Public Conferences

Chairs: Sze-leung Cheung and Oana Sandu

Deliverables: 1 international conference / 2 years

- Outreach Professionalisation & Accreditation

Chairs: Rick Fienberg

Deliverables:

- Public Outreach Information Management (?)

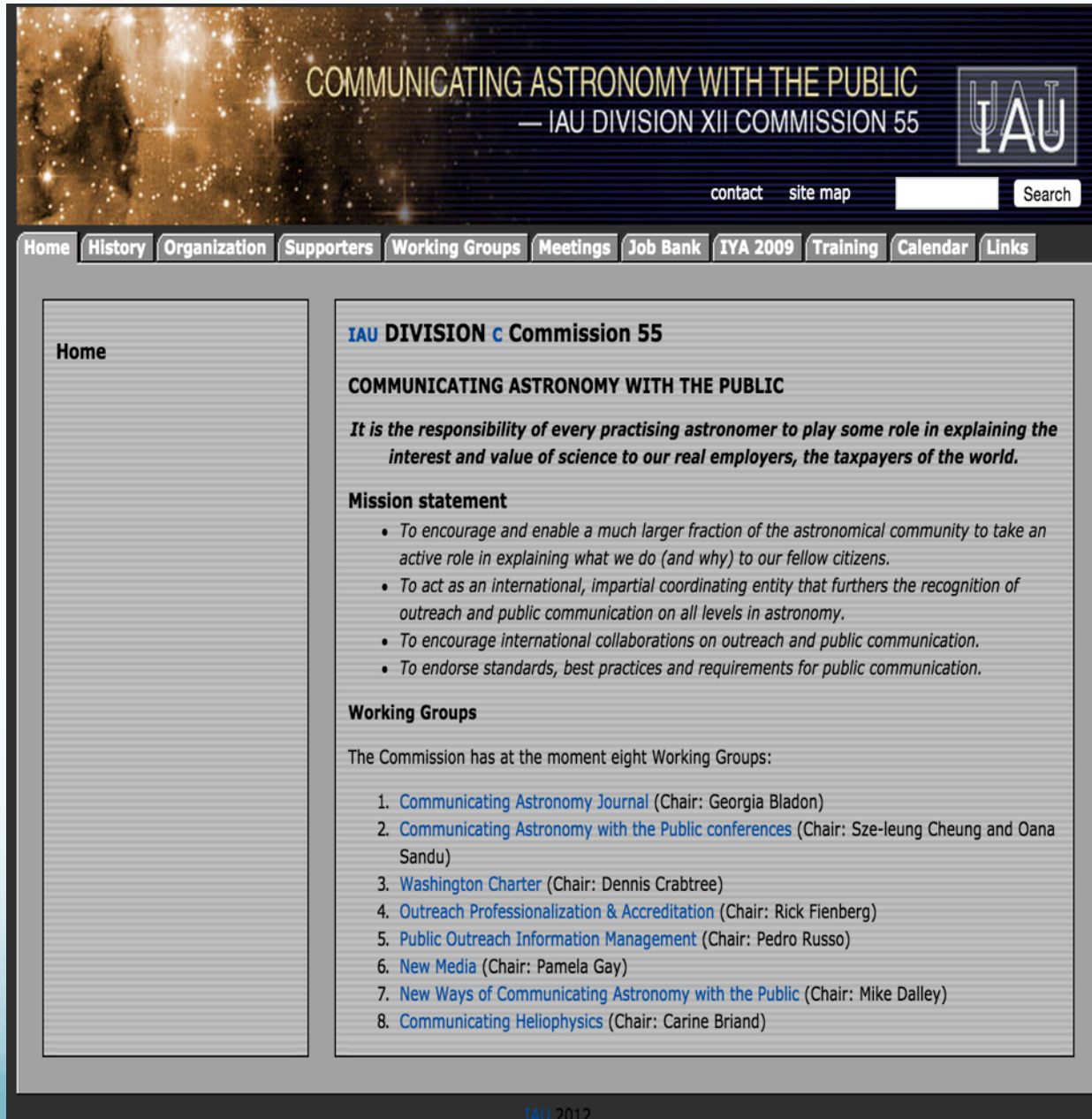
Chairs: TBD

Deliverables: Standards

- Training? / Personal Development

Chairs: TBD

Deliverables: Training course / syllabus



COMMUNICATING ASTRONOMY WITH THE PUBLIC
— IAU DIVISION XII COMMISSION 55

IAU

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IAU DIVISION c Commission 55

COMMUNICATING ASTRONOMY WITH THE PUBLIC

It is the responsibility of every practising astronomer to play some role in explaining the interest and value of science to our real employers, the taxpayers of the world.

Mission statement

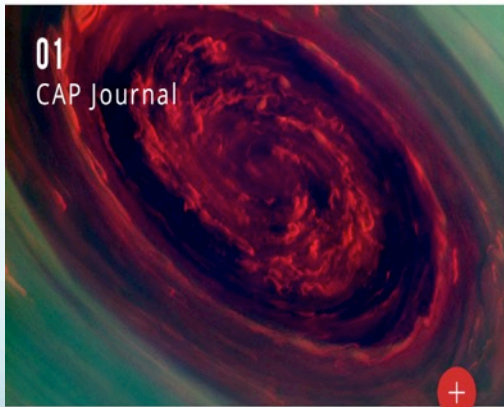
- To encourage and enable a much larger fraction of the astronomical community to take an active role in explaining what we do (and why) to our fellow citizens.
- To act as an international, impartial coordinating entity that furthers the recognition of outreach and public communication on all levels in astronomy.
- To encourage international collaborations on outreach and public communication.
- To endorse standards, best practices and requirements for public communication.

Working Groups

The Commission has at the moment eight Working Groups:

1. [Communicating Astronomy Journal](#) (Chair: Georgia Bladon)
2. [Communicating Astronomy with the Public conferences](#) (Chair: Sze-leung Cheung and Oana Sandu)
3. [Washington Charter](#) (Chair: Dennis Crabtree)
4. [Outreach Professionalization & Accreditation](#) (Chair: Rick Fienberg)
5. [Public Outreach Information Management](#) (Chair: Pedro Russo)
6. [New Media](#) (Chair: Pamela Gay)
7. [New Ways of Communicating Astronomy with the Public](#) (Chair: Mike Dalley)
8. [Communicating Heliophysics](#) (Chair: Carine Briand)

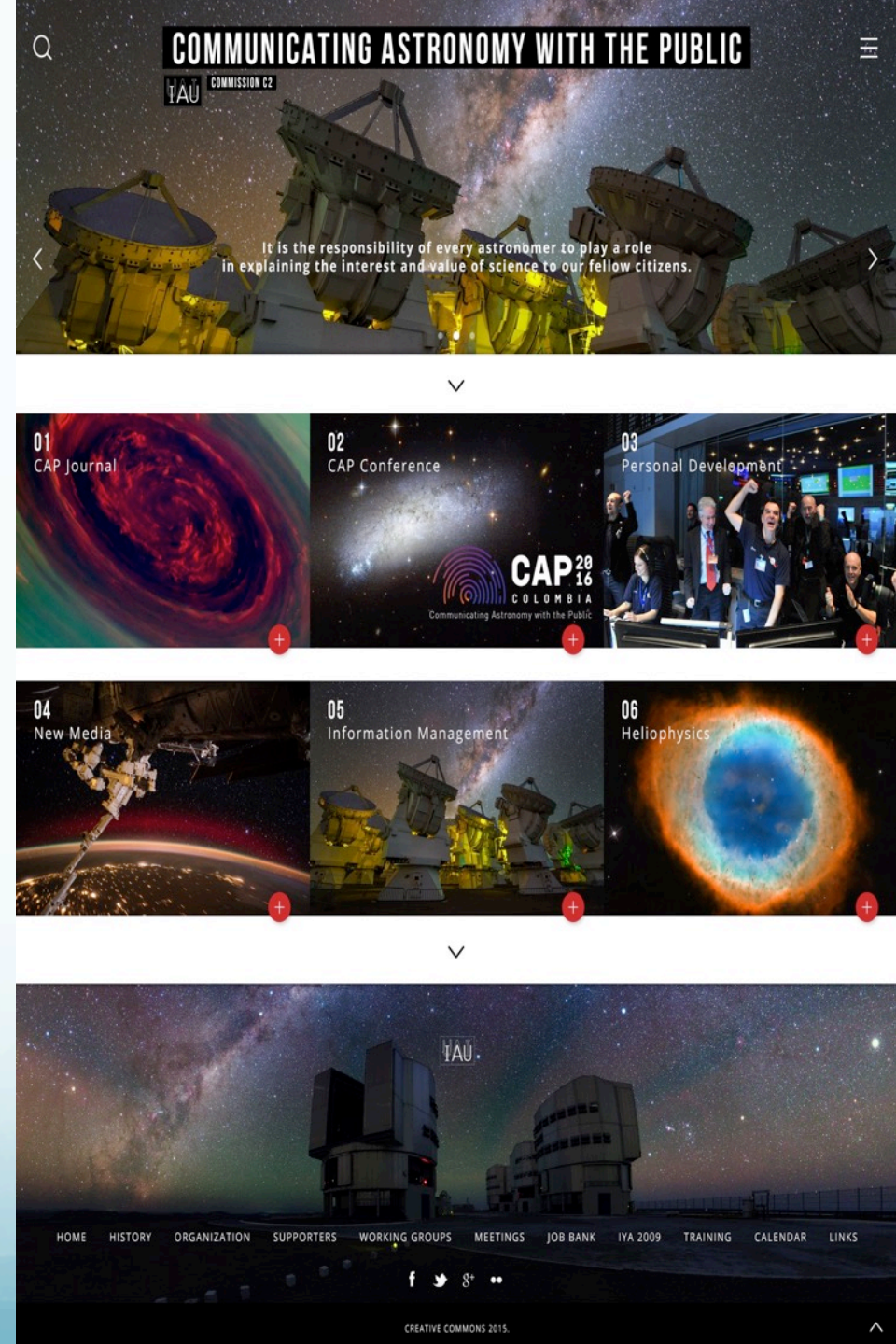
IAU 2012



www.communicatingastronomy.org

- Central Hub for Astronomy Communicators: research-communicators to professional communicators
- **Focus:**
 - Community building through journal and conferences
 - Career development: from training to accreditation and professionalisation

New version: December 2015



Commission 55 / Commission C.C2 Business Meeting

Tuesday, 11 August 2015 10:30-12:30
Room 327

WHAT DO YOU THINK ABOUT PUBLIC OUTREACH IN ASTRONOMY?

LET'S MAKE PUBLIC OUTREACH AN
EFFECTIVE PRACTICE IN OUR COMMUNITY!



Please take part in the survey:
www.unawe.org/outreach/



CAP 2016

COLOMBIA

Communicating Astronomy with the Public

**New trends and
techniques to
communicate Astronomy**

capcolombia2016@parqueexplora.org
www.capcolombia2016.org

May 16th
to 20th
2016

Parque Explora
Medellín, Colombia

C.C3: History of Astronomy

President: Xiaochun Sun (China – Nanjing)

Co-proposers:

Ray Norris (Australia)

David Valls-Gabaud (France)

VP (elected): Wayne Orchiston (Thailand)

At-large members (elected):

Owen Gingerich (USA)

Jay M. Pasachoff (USA)

Christiaan L. Sterken (Belgium)

Appreciation of hard work by the OC of C41 for the successful renewal of our Commission

- Great leadership by Rajesh Kochhar, Former President.
- Many suggestions, inputs, revisions and corrections by the OC members. The proposal had 16 versions, 2 “final” versions and 1 “final final ” version.

C.C3 A fine tradition to be kept alive

- One of the most active and influential unit of the Union.
- Organized many important events which won recognition of the history of astronomy as a serious discipline.
- Five Proposed Working Groups: *'Archives'*, *'Historical Instruments'*, *'Johannes Kepler'*, *'Transits of Venus'* and *'Astronomy and World Heritage'*.
- The History of Astronomy website.
- Connection with other scholarly communities.

C.C3 Future work

- A special event celebrating 100 years of IAU.
- Cultural astronomy, including Archaeoastronomy and Ethnoastronomy.
- Historical astronomical observations in all cultures.
- The Astronomical Silk Road: Transmission of astronomical knowledge between East and West.

C.C4: World Heritage and Astronomy

President: Clive Ruggles (UK)

Co-proposers:

Mikhail Marov (Russian Federation)

Malcolm Smith (Chile)

Vice-President (Elected): Gudrun Wolfschmidt
(Germany)

At-large members (elected):

Roget Ferlet (France)

Siramas Komonjinda (Thailand)

C.C4

Will be responsible for:

- Co-ordinating the full range of the IAU's heritage activities in association with UNESCO
- Helping ensure that cultural properties and artefacts significant in the development of astronomy (of all ages) are duly studied, protected and maintained
- Working with advisory bodies to help establish global vision and robust general principles for assessing value
- Working with governments and organisations to help prepare, or encourage the preparation of, WHL nomination dossiers

C.C4

Plans and goals for 2015–18

- Develop further Thematic Studies, e.g. focusing on the technological heritage of space exploration
- Continue to maintain and improve UNESCO–IAU portal to the heritage of astronomy
- Advance particular WHL nomination projects with the hope of producing the first nomination(s) within the coming triennium

C.C4

Possible Working Groups

associated with particular nomination projects:

- “Windows to the Universe” project (High-mountain observatories and their dark skies)
- “Route of astronomical observatories” project, classical observatories in Europe and former colonies
- Space Heritage / Baikonur cosmodrome

C.B7: Protection of Existing and Potential Observatory Sites

President: Richard F. Green (USA)

Co-proposer: Ramotholo Sefako (South Africa)

VP (elected): Constance Elaine Walker (USA)

At-large members (elected):

David Galadí-Enríquez (Spain)

Harvey Steven Liszt (USA)

Yongheng Zhao (China – Nanjing)



C.B7: Our Vision

- To make tangible progress in stopping the encroachment of artificial sky glow and RFI on major astronomical research facilities.
- To raise public awareness to prevent the losses caused by light pollution for all observatories and for the fundamental right to starlight as in Resolution 2009-B5.
- To work with relevant national and international authorities to set up legal policies and guidelines for the protection of astronomical quality of areas suitable for observational research and/or meriting astronomical world heritage status.

C.B7: Implementation - 1

- Continue the strong voice of astronomy in IYL activities to educate about dark skies and quality lighting
- Sustainable development and provision of information and materials for education and public outreach about dark skies and quality lighting beyond the IYL through an IAU web clearinghouse.
- Creation of regional structure for focusing response on specific issues and providing interface for regional activities.
- Close interaction with CIE to set illumination standards that protect astronomical observations

C.B7: Implementation - 2

- Encouragement of industry efforts to produce spectrally controlled LEDs.
- Education of professional colleagues about urgency of site protection issues; provision of supporting materials for their public presentations. Includes interaction with radio astronomers for site protection against RFI.
- Close interaction with International Dark-Sky Association.
- Engagement with the IAU World Heritage activities for astronomical site designation.
- Provision of forum for astronomer efforts to enhance local and national legal frameworks for dark/quiet sky protection.

You are needed to save the world (from blinding itself)

- The problems of artificial sky glow and RFI cannot be cured by only the part-time efforts of a few directors and staff members trying to protect their sites.
- Educating the public and standing up for IAU's resolution that everyone in the world has the right to a dark night sky is an appropriate obligation for all of us.
- The C.B7 steering committee invite you to Focus Meeting 21 to learn and engage. The time is now!

Question and Answers

The background of the slide features a series of overlapping, wavy, horizontal bands in various shades of blue and white, creating a soft, abstract, and modern aesthetic.

Related Focus Meetings

- Completed last week, **FM 19: Communicating Astronomy with the Public in the Big Data Era**
- 11-13 August, **FM2, Astronomical Heritage: Progressing the UNESCO-IAU Initiative**
- 11-13 August, **FM 21: Mitigating Threats of Light Pollution & Radio Frequency Interference**
- 13-14 August, **FM 20: Astronomy for Development**

DON'T FORGET TO VIEW DIVISION C POSTER PAPERS!