



COMMISSION 46
ASTRONOMY EDUCATION AND DEVELOPMENT
Education et Développement de l'Astronomie

Newsletter 68 – March 2008

**Commission 46 seeks to further the development and improvement of
astronomical education at all levels throughout the world.**

Contributions to this newsletter are gratefully received at any time.

**PLEASE WOULD NATIONAL LIAISONS
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This newsletter is available at the following websites

**<http://iau46.obspm.fr/>
<http://physics.open.ac.uk/~bwjones/IAU46>**

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EDITORIAL

Thanks to everyone who has made a contribution to this edition of the Newsletter. For the October 2008 issue the copy date is **Friday 17 October 2008**. If you can include photos or illustrations with any material, please do so. Feel free to encourage others to submit material – anything with an astronomy education or development aspect will be considered.

IAU C46 NEWSLETTER – GUIDANCE FOR CONTRIBUTORS

The editor is happy to accept articles on any aspect of astronomy education or development, including obituaries and other articles on people. 500-2000 words are the approximate upper and lower limits. Shorter contributions, up to a few hundred words, such as meeting announcements, meeting reports, and other news items, are also welcome.

Send contributions to me by email, at b.w.jones@open.ac.uk. You can either send a Microsoft Word attachment (preferred) or include the text in the body of the email. Illustrations should be sent as separate, individual files, preferably as JPEGs or TIFs up to about 2 Mbytes each.

I try to edit as lightly as possible, and I certainly don't care whether US English or British English is used. I also leave local turns of phrase untouched unless the meaning is obscure. Clarity, conciseness, and being interesting or informative are what I like. Only in rare cases is heavier editing necessary.

The C46 website

As I reported in the last Newsletter, the C46 website was transferred in September 2007 to the Observatoire de Paris. The new URL is on the title page of this Newsletter – <http://iau46.obspm.fr/> If you enter this website you can see that only a few back issues of this Newsletter are there. The complete set dating from shortly after I took over as editor can be found at <http://physics.open.ac.uk/~bwjones/IAU46>, starting with Newsletter 50, March 1999. At the same URL I've included the National Liaison details as at mid March 2008. I've also sent this list to Paris so that the listing there can be updated.

Milton Keynes Festival of Science

In the summer of 2007 the first Milton Keynes Festival of Science was held in Milton Keynes UK. My wife and I organized a schools competition, Design an Alien Lifeform. This was a huge success, attracting over 800 entries! It will be repeated in autumn 2008.

Here are a few entries from 2007, from just one school, the Rivers School in Bletchley, Milton Keynes.



Barrie W Jones

(for contact details see Officers & Organizing Committee of Commission 46)

MESSAGE FROM THE PRESIDENT

Like the entire astronomical community, Commission 46 is also preparing to welcome the International Year of Astronomy 2009 through its specific actions: it seeks to further the development and improvement of astronomical education at all levels worldwide through the various projects it initiates, maintains, and develops, as well as through the dissemination of information concerning astronomy education at all levels.

In view of the complexity of its mission, a new structure for C46 will be defined before the IAU General Assembly of 2009.

The most important groups will continue their activity:

Working Group for the Worldwide Development of Astronomy (WDA)

Working Group for the Exchange of Astronomers (EA)

Working Group for International Schools for Young Astronomers (ISYA)

Working Group for Teaching Astronomy for Development (TAD)

Working Group for Collaborative Programs (CP)

Working Group for Public Education at the Times of Solar Eclipses

(Editor: these are currently called Program Groups.)

A special group will deal explicitly with the preparations for 2009: Time-bound Working Group IYA 2009.

The approach of the International Year of Astronomy is an extraordinary opportunity to remind every country's authorities about the role of astronomy education in the 21st century, and especially to find new means so that astronomy education becomes efficient in all countries and at all levels, both for astronomical research proper and the perspective it gives to young people on science in the first place, and on culture in general.

A special group will be active for three years (2008 – 2010) in order to concentrate all efforts of the existing working groups (presently called program groups), as well as those of the C46 National Liaisons, and to create a bridge between IAU Commission 46 and the National Nodes for IYA 2009. It will preserve connections with any IAU commission which has a special activity dedicated to IYA 2009, such as Commissions 41 and 55.

Another working group will help the teaching of astronomy in schools at different levels: Working Group for Elementary Astronomy Education (EAE).

As we are part of the IAU, we should focus on professional astronomy. But the future of the latter can only be ensured if we do interact with the educational world at all levels. Moreover, astronomy (including space research) offers tremendous opportunities to raise interest in science in all sorts of disciplines. It appeals to the curiosity, creativity and involvement of young people all over the world.

These are only some of the reasons why astronomy education at pre-university level is becoming increasingly important for world astronomical research. The EAE group intends to encourage education at this level (see the Resolution on the Value of Astronomy Education adopted by the IAU GA in 2003). It envisages supporting teachers by proposing new education means, through the dissemination of informative materials, the counselling of those who organize regional or international olympics, the exchange of journals, books, equipments. Within reasonable limits and on the basis of well documented evidence, the EAE group may ask Commission 46 and the IAU for financial support.

The EAE group will have the following structure:

TAS Teachers Astronomy School

ETAS Educators Training Astronomy School

SET School for Educators Training

ASET Astronomy School for Education
IAUSE IAU School for P/S Educators

This working group will be chaired by Rosa M Ros.

All this was discussed at the Informal Brainstorm IAU Strategic Plan for Astronomy Development for 2010-2020, headed by George Miley, in the presence of other members of the C46 EC: Catherine Cesarsky, Ian Corbett, Karel van der Hucht, Bob Williams

These new proposals and suggestions concerning the improvement of the commission's activity are subjected to your attention so that you may make suggestions.

The remaking of the Commission 46 members list was a special effort which also requires your support. If you notice email addresses that are no longer in operation or commission members that have been overlooked, please let us know (editor: making sure that I am also notified).

Magda Stavinschi

(for contact details see Officers & Organizing Committee of Commission 46)

ASTRONOMY IN SRI LANKA

Interest in Astronomy in Sri Lanka is undoubtedly ancient. The vastness of space and time was accepted by the ancient scholars of Buddhism. An ancient map of the Universe – perhaps the oldest in existence, six feet in diameter, is carved on a rock cave in Ran Masu Uyana near Tisa Lake in Anuradhapura (North Central Sri Lanka).

Modern astronomical research in Sri Lanka started in the late 19th century with planetary observations carried out by P B Molesworth (1867-1906) who, in 1901, discovered the South Tropical Zone disturbance on Jupiter using his 13 inch Newtonian reflector mounted at Fort Fredrick, Trincomalee (North East Sri Lanka). Molesworth's publications appear in the Monthly Notices of the Royal Astronomical Society and he has also been recognized by having a crater named after him on Mars.

I believe astronomy is an intricately multidisciplinary science; but each of its component disciplines is very basic and even cutting-edge. It is often sidelined in developing countries, apparently due to misconceptions about its usefulness to society and the practicalities of imparting or teaching it arising from a basic lack of resources. However, specific parts of this wide science that tries to understand our Universe as a whole are amenable to delivery in Sri Lanka, especially considering the wide interest that everybody has in the mysterious worlds beyond our Earth.

Therefore our main objective is to popularize astronomy among the general public of Sri Lanka. But it has been a hard task due to lack of resources in a country like ours.

I would like to bring your attention to what I and my colleagues have done to improve and popularize astronomy in Sri Lanka in the last few years.

There are two major places I have been involved with in the last few years. First is the Royal College Astronomical Society (RCAS), my school astronomy society, which celebrated its 40th anniversary this year. I joined it as an ordinary member, and then became the President and international coordinator. Since I passed out from the school I now serve the society as the Instructor. We have about 300 students as members from ages 9 to 18 (mainly 15-16). Since it's a school based society we are not allowed to have many public events, but we have a substantial program and we have the record of organizing the greatest number of programs compared to other clubs/societies in our school.

At RCAS we have been conducting (2000-2007)

- weekly lectures and activities for our members with a participation of 30 students
- about 20 night/day camps where we had about 250 participants in each camp
- about 20 workshops on Mars, the Sun, stars, etc., for our members as well as for other school based astronomy clubs
- an annual quiz competition among our members and among other astronomy clubs
- an annual astronomy workshop with more than 30 schools participating around the country
- an annual sci-fi short story competition among members.

Other than these activities there had been few special lectures, sci-fi film airing, exhibitions, and so on.

Then there's the Astronomy and Space Study Center (ASSC) where I'm the observation coordinator. ASSC is a non-profit and non-governmental center which is run by a group of astronomy enthusiasts whose goal is to promote astronomy throughout Sri Lanka. This year we celebrated our 20th anniversary, and are still going very strong as an astronomy education center. Most importantly we act as a mother organization to all other school astronomical societies in Sri Lanka. We have programs for the members, and also we have conducted programs for other school astronomy societies, and for the public. Since ASSC was established we have had more than 50 000 participants in our programs and we have a current membership of 1500.

Just to give you a glimpse of our activities, during 2001-2007 we have conducted

- weekly lectures and activities for members on every Saturday

- about 40 observing session for members
- about 10 workshops.

We have also

- helped schools to start astronomy clubs (we have started 6 new clubs)
- given assistance to school based astronomy clubs, by judging their astronomy quizzes, giving lectures, and provided any help needed.

Overall, we have delivered about 20 programs in about 12 schools, including night camps, quizzes, workshops, lectures, etc.

In addition to my activities with the RCAS and the ASSC, last year I got involved in the oldest existing astronomy association in Sri Lanka – the Ceylon Astronomical Association (Sri Lanka was formerly known as Ceylon) founded in 1959 by Sir Arthur C Clarke, who was the first President. Unfortunately it has become pretty much inactive. But last year we re-launched the Ceylon Astronomical Association as the Astronomical Society of Sri Lanka (AALK) (<http://aalk.lakdiva.net>) with myself as the General Secretary, Prof Kavan Ratnatunga (retired professional astronomer) as President, and Sir Arthur C Clark as the patron (ed. – sadly, Sir Arthur C Clark died 19 March 2008).

I think for a country like ours we are giving a considerable amount of effort to develop a field like astronomy.

Lastly I would like to tell you little about myself. I'm 21 years old and currently studying at a local private university and hope to transfer to a good astronomy based university (probably in the USA, or maybe somewhere else). My goals are to be an astronomer (observational), astronaut, and last but not least an astronomy educator to popularize this wonderful field to people anywhere on Earth. My website is www.thilinaheenatigal-astronomy.blogspot.com

Clear skies & always keep looking up!!

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ASTRONET

Science vision and infrastructure roadmap for the next twenty years in Europe

Efficiency requires detailed planning for the future. Intergovernmental research institutions in Europe feel the necessity to design their collective future in astronomy in order to gain much more effectiveness and success while working together. A new entity was created to coordinate the European efforts in the astronomy area: Astronet was born.

Astronet was created by a group of European funding agencies in order to establish a comprehensive long-term planning process for the development of European astronomy. The main objective of this strategic plan is to cover the ambitious ground- and space-based astronomy to get the best approach to the highest priority scientific questions. Astronet was established in 2005 by many European agencies, with financial support from the European Union (see <http://www.astronet-eu.org>).

The current situation of European astronomy has been built by combining multilateral partnerships; the most important of them are ESO for ground-based telescopes and ESA for space-based astronomy. Developing this idea and expanding to all domains of astronomy requires a comprehensive Science Vision and Roadmap for the future infrastructure in astronomy.

Astronet will cover all astrophysical objects, the global structure of the Universe, the Solar System, observing in space and from the ground, radiation physics, astroparticles, and gravitational waves. It

will also address development, observation (including the Virtual Observatory), modelling, and theory, not forgetting the improvement of coordination, planning and execution of research programs.

The Astronet project covers four main activities:

- a Science Vision for European astronomy for the scientific development over the next 20 years
- an Infrastructure Roadmap for European astronomy in order to prepare the coordinated development of major astronomical research infrastructures
- targeted Coordinated Actions in order to identify formal barriers which might impede future development
- networking to promote the exchange of information between all relevant partners in European astronomical research.

Currently the first activity has been completed and the second one is in operation.

Science Vision

The first step of Astronet was the development of a Science Vision in order to identify the key astronomical questions which may be answered in the next 20 years by a mixture of observation, simulations, experiment, and theory.

The Science Vision Working Group identified four key questions which can expect significant advances in the future twenty years:

- do we understand the extremes of the Universe?
- how do galaxies form and evolve?
- what is the origin and evolution of stars and planets?
- how do we (and the Solar System) fit in?

The Science Vision Working Group established four Panels (A, B, C and D corresponding to the four questions mentioned) that included about 50 scientists distributed over different areas of expertise and nationalities. Each of the panels concentrated on one of the key questions, and established the experiments and new facilities needed to make progress. The book titled *A Science Vision for European Astronomy*, edited by P T de Zeeuw and F J Molster (Astronet 2007) is an account of the work of this Group.

Infrastructure Roadmap

The next goal for the Science Vision Working Group is to produce a Roadmap which defines the required infrastructures and technological developments in order to implement the Science Vision plan. The final audience for this work is expected to be the funding agencies throughout Europe, politicians with responsibility for science technology and education, university directorates and science faculties, professional astronomers, and organisations and individuals responsible for training school teachers. A Roadmap Working Group has been set up.

Roadmap Working Group

Chair: Mike Bode (Liverpool JMU)

Ex-Officio Members: Chairs and Co-chairs of Panels

Membres at Large: Catherine Turon (Observatoire de Paris), Xavier Barcons (CSIC-UC), Jean Clavel (ESTEC), Phil Diamond (RadioNet), Gerry Gilmore (OPTICON), Thjis van der Hulst (Groningen), Guy Monnet (ESO), Hans-Walter Rix (MPIA), Ian Robson (ATC), Guy Wormser (CNRS/IN2P3),

The Panels

To the initial four Panels (A, B, C, D) has now been added a new panel (E). on Education and Communication of Science. The five Panels are as follows.

A High energy; astroparticle; gravitational waves

Chair and Co-Chair: Guenther Hasinger (MPE), Patrizia Caraveo (INAF)

B UV, optical, infrared, radio, and millimetre wave observations, including survey instruments

Chair and Co-Chair: Michael Grewing (IRAM), Laurent Vigroux (IAP)

C Solar telescopes; "in situ" (Solar System) missions, lab studies

Chair and Co-Chair: Mats Carlsson (Oslo University) and Therese Encrenaz (Observatoire de Paris)

D Theory, computing facilities and networks, Virtual Observatory

Chair and Co-Chair: Françoise Combes (Observatoire de Paris), Paolo Padovani (ESO)

E Education, recruitment and training, public outreach

Chair and Co-Chair: Rosa M Ros (Technical University of Catalonia), Bob Fosbury (ESO)

Panel E

The main objective of Panel E is to study the current situation in education, and public communication related to astronomy, and to propose a set of recommendations for the future.

The Terms of Reference provided by the Astronet Board to Panel E are to

- assemble information on initiatives to utilise astronomy and astrophysics to enhance school age education and assess their impact
- assemble information on postgraduate recruitment and training in Europe, including numbers of students in different areas (both science and technology development if possible)
- assemble information on primary sources of publicity for our subject area and assess their impact (via international comparison if appropriate), assess where greater cooperation, additional resources (including human resources) and/or better practise would significantly enhance the above areas (in A-D) in Europe
- highlight any areas of industrial relevance (particularly in training aspects).

The most efficient way to achieve these aims was to divide the full Panel into five task groups which focus on data gathering and assessment in the following areas

- primary and secondary school education
- University education and research
- science museums and planetaria
- relationships with industry
- public communication and outreach.

The five task groups have produced a picture of the current situation in order to expose and investigate many of the issues and problems that had been identified during the Panel's discussions. Each task group has made personal contacts and used many published documents and web based searches. The task groups distributed special questionnaires to obtain more information on certain points.

The Panel E members are

Chair Rosa . Ros (Spain), Co-Chair Robert Fosbury (ESO)

Members: Robert Hill (Ireland), Dirk Lorenzen (Denmark), Leonarda Fucili (Italy), Alan Pickwick (UK), Lars Christensen (ESA), Claus Madsen (ESO), Veselka Radeva (Bulgaria), Jose Carlos del T. Iniesta (Spain), Andy Newsam (UK)

The draft roadmap developed by Panels A, B, C, D, and E will be presented in spring 2008 and will be discussed by the community at the Liverpool Symposium, which will be held in Liverpool, 16-19 June 2008. A web based discussion forum will be set up at the time of publication of the roadmap (Spring 2008) and this forum will be open until just after the Liverpool Symposium. The final roadmap will be released in autumn 2008.

Rosa M Ros

(for contact details see Officers & Organizing Committee of Commission 46)

INTERNATIONAL YEAR OF ASTRONOMY 2009

As the IAU website (<http://www.astronomy2009.org/>) states, "The vision of the International Year of Astronomy 2009 is to help the citizens of the world rediscover their place in the Universe through the day and night time sky, and thereby engage a personal sense of wonder and discovery. All humans should realize the impact of astronomy and basic sciences on our daily lives, and understand better how scientific knowledge can contribute to a more equitable and peaceful society."

With the support of UNESCO, the United Nations declared 2009 to be an International Year of Astronomy. It will be celebrated all over the world with special events. The international committees are currently in the planning stages, with the cooperation of 107 nations and 17 organizations (as of 04 March 2008). There are eleven exciting Cornerstone projects proposed, several of which deal with education issues (the Galileo Teacher Training Program, Universe Awareness, and Developing Astronomy Globally). Consider volunteering your time to any of them. The website lists the chairperson for each Cornerstone project.

Fifty countries have national websites that describe local initiatives. Each cooperating nation has a national node chair/single-point-of-contact. This is the person you should contact to offer your ideas and/or receive new ideas on how you can become involved. Think about adapting ideas for your own country and culture. You'll find the list of national nodes on the UN website (below) under Organizational Structure.

The IYA is your opportunity to bring astronomy to the attention of your community, your educational system, and your country. Share your ideas with each other and become involved!

The UN declaration on IYA2009 can be found at

http://www.astronomy2009.org/index.php/?option=com_content&view=article&id=344

Mary Kay Hemenway, IYA2009 EC Working Group

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GETTING READY FOR IYA 2009

The lunar eclipse of 20 February 2008, a testing ground

Mexico, as are other countries, is getting ready for the year 2009 celebrations. Several Mexican institutions dedicated to astrophysics decided to take advantage of the 20 February 2008 lunar eclipse to have a rehearsal on mass observations. The main institutions involved were: Instituto de Astronomía and Science Museum *Universum* of Universidad Nacional Autónoma de México (UNAM), Instituto Nacional de Astrofísica Óptica y Electrónica (INAOE), Instituto Politécnico Nacional, and fourteen amateur groups from the region, such as Nibiru and Safir, that are associated with the Schools of Science and Engineering at UNAM. Their addresses can be found at the Year 2009 webpage <http://www.astronomia2009.org.mx/>

The setting was magnificent – the Main Square in Mexico City popularly called the Zócalo. In order to handle the crowd, 100 telescopes were set up in pairs, one pointing to the Moon and another to Saturn. These telescope pairs were arranged in groups of 24, where people stood in line to make observations. A host stood at the beginning of the line, directing people and handing them a leaflet containing

information about the eclipse, about Saturn, and about the constellations that could be seen on that beautiful night (no clouds, no cold weather).

A bandstand was set up to house a lecturer and artistic performers, and two large screens were placed on either side so that people all over the square could see the performances, demonstrations and astronomical images transmitted directly from Mexico's main observatories at San Pedro Mártir, Cananea, and Tonanzintla.

At the beginning of the evening there was a performance by a modern ballet group followed by a public lecture on Galileo that included hands-on demonstrations and a mambo group that danced the premiere of "...and yet it moves". There was an official ceremony with the Mayor of Mexico City and the President of UNAM, as well as the secretaries of Science and Education of the City.

Several astronomers mingled with the crowd to point out the constellations with green laser beams and answer questions on science.

Booths were installed for activities with the children, workshops on telescopes and conversations with astronomers. A set of posters with explanations of the lunar eclipse and descriptions of Saturn were placed in the fashion of a science exhibit.

The attendance was estimated to be 20 000 at any one time – altogether the total attendance was about double this figure. The queues at the telescopes were about 1 hour long, and the observation time per person on both telescopes was about 1-2 minutes. Needless to say, people were delighted.

In order to organize such an event teamwork was essential as well as fund raising. The participation of amateurs was fundamental; they contributed not only with their telescopes, but also by making the observation memorable.

In spite of the large number of people and the absence of public illumination, no problems were reported. In any case, traffic circulation was closed in the area, and there were three ambulances at the site as well as public toilets.

On the streets near the main square and at other places additional owners of telescopes went out to show the night's beauty to passers by. Public events were held in more than 10 cities, including Morelia, Ensenada and Monterrey.

The event was recorded by UNAM's television station and was profusely covered by the media.

This is the first time that a scientific event on such a large scale was attempted in our country. We are very glad that it was a great success!

Silvia Torres, Mariana Espinosa and Julieta Fierro
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IAU DECADAL STRATEGIC PLAN FOR ASTRONOMY DEVELOPMENT

The IAU Executive Committee regards stimulating astronomy education and development throughout the world as one of the most important tasks of the IAU. The work of Commission 46 has been enormously important for us for many years and we applaud the many members of the Commission who have participated in these activities. The accomplishments of the Commission and its various Programme Groups have been impressive and much has been achieved with little resource. With the

impending International Year of Astronomy, the time is opportune to review the long term strategy of the IAU. At its last meeting the Executive Committee decided to give specific responsibilities to the Vice Presidents. I was asked to take on the portfolio relating to Commission 46 activities and was charged with producing a draft decadal plan for IAU activities in development and education.

There are several reasons why such a decadal plan is desirable. First, technology is changing. For example, the widespread access to the internet and the future availability of remotely operated telescopes for education are important opportunities that must be exploited. Secondly, several new programmes are being developed external to the IAU that can contribute substantially to our goals, particularly in the areas of secondary and primary education. It is our hope that given the limited available resources, coordination and focusing of the various IAU and non-IAU programmes can produce a programme that as a whole is greater than the sum of its parts. Thirdly, to augment our efforts additional funding is needed. I am convinced that an ambitious and well-founded strategic plan is a prerequisite for any attempt to solicit additional external funding.

We have therefore embarked on an exercise that we hope will produce a document for ratification at the next General Assembly in Rio de Janeiro in August 2009. It is the intention that the plan will address the rationale for astronomy development, education at the primary secondary and tertiary levels, public outreach, and the development of an infrastructure for research.

To “kick off” the process an informal “brainstorming” meeting was held at the Institut d’Astrophysique, Paris 27-29 January 2008, on the initiative of the IAU Executive Committee. Present were the Chair and Vice Chair of Commission 46 and the chairs of WWDA, TAD and ISYA, and several of the IAU Officers. In addition there were representatives from the following related programmes: The Japanese Tripod, ODA programme, IYA Cornerstone 11/Africa Plan, Las Cumbres Observatory/Faulkes Telescopes, Hands on Universe, and Universe Awareness. The meeting was lively and resulted in several interesting ideas. A draft document with the outline of a possible plan will be produced for preliminary discussion by the IAU Executive Committee at its annual meeting in late May 2008.

The Paris meeting was only a first step on the road to a plan and several relevant bodies were not represented there, including Commission 55. Our intention is to obtain input about the document from members of Commission 46 and 55 and other relevant parties in Division XII. There will be ample time to do this after May. My goal is to have a draft strategic plan approved by the Executive Committee at the end of this year, for discussion and hopefully ratification at the General Assembly.

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ASTRONOMY EDUCATION REVIEW: 12TH ISSUE

Astronomy Education Review (AER), the web-based journal/magazine about astronomy education and outreach, announces the on-line publication of its 12th issue, now complete on the website at <http://aer.noao.edu> There is no charge for reading or downloading the full articles in the journal.

When you go to the AER site, you will see that the next issue is already under way. You can find the full 12th issue by clicking on Back Issues, and then on [Volume 6, Issue 2, 2008](#) [[PDF](#)]

The AER actively solicits interesting papers and articles on all aspects of astronomy, space science education, and outreach. The journal gets between 130 000 and 270 000 hits per month from every state of the USA and over 90 other countries. All papers are refereed and a set of guidelines for contributing to the AER are available on the website.

Sidney Wolff and Andrew Fraknoi, Editors

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AUDIO RECORDINGS OF TEN PUBLIC LECTURES BY NOTED ASTRONOMERS

Audio recordings of ten public lectures by noted astronomers are now available as free MP3 downloads at the website of the nonprofit Astronomical Society of the Pacific (ASP)

<http://www.astrosociety.org/education/podcast/index.html>

These talks were recorded at Foothill College in the Silicon Valley Astronomy Lecture Series. They are made available to the public through the kind support of a donor with a strong interest in education who wishes to remain anonymous. Each hour long lecture on some exciting development in our study of the Universe is followed by an extensive question and answer period, in which the speaker gives further details and personal glimpses about the topics under discussion.

Among the talks available so far are

- Dr David Morrison (NASA Ames Research Center): Taking a Hit – Asteroid Impacts and Evolution
- Dr David Grinspoon (Denver Museum of Nature & Science): Comparing Worlds: Climate Catastrophes in the Solar System
- Dr Bruce Margon (University of California, Santa Cruz): Glimpsing the Edge of the Universe – Results from the Hubble Space Telescope
- Dr Dale Cruikshank (NASA Ames): The Planet Pluto: Maligned but Not Forgotten
- Dr Alex Filippenko (University of California, Berkeley): Dark Energy and the Runaway Universe
- Dr Frank Drake (SETI Institute): Estimating the Chances of Life Out There
- Dr Nathalie Cabrol (SETI Institute): The Mars Exploration Rover Mission

A few talks are also available as video files (instructions can be found on the same website).

These lectures are co-sponsored by: NASA's Ames Research Center, The SETI Institute, The Foothill College Astronomy Program, and The Astronomical Society of the Pacific.

Andrew Fraknoi

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THE UNIVERSE AWARENESS (UNAWE) PROGRAMME

UNAWE is an international initiative for economically disadvantaged young children aged 4-10. UNAWE will expose children in developing countries and in underprivileged communities in Europe to the inspirational aspects of astronomy. It is also a network of astronomy outreach/education professionals and volunteers worldwide. Further information can be found at

<http://www.univereawareness.nl/>

Barrie W Jones

(for contact details see Officers & Organizing Committee of Commission 46)

NEWS OF MEETINGS AND OF PEOPLE

PREPARING FOR THE INTERNATIONAL YEAR OF ASTRONOMY: A HANDS-ON SYMPOSIUM, 2-4 JUNE 2008, ST LOUIS, MISSOURI

This symposium is part of the 120th Annual Meeting of the Astronomical Society of the Pacific (ASP), cosponsored with, and part of, the 2008 Summer Meeting of the American Astronomical Society.

The symposium will bring together education and public outreach professionals, educators in museums, in planetaria, and in other informal settings, college instructors, and scientists and graduate students who want to become engaged in astronomy outreach during the International Year of Astronomy (IYA) in 2009.

IYA celebrates the 400th anniversary of the astronomical telescope. Activities are being planned in over 100 countries and throughout the USA. If you are interested in planning IYA programs in 2009, this meeting is an excellent chance to learn more about what various institutions and organizations are proposing to do, to coordinate your ideas and activities with colleagues, and to find out where funding may be available.

For more detailed meeting information, see the ASP meeting web site

<http://www.astrosociety.org/2008meeting>

Presentations during the symposium can be made in the following formats

- poster papers (for describing local activities or plans or previewing specific materials)
- 10-minute oral presentations (for sharing information on activities, plans, or programs of wider interest)
- 90-minute interactive presentations (hands-on program/activity demonstrations or interactive panels, training on a suite of materials -- typically with more than one presenter) –we only have room for a limited number of these.

Note that an individual may be a first author/primary presenter on a maximum of one oral/interactive presentation and one poster. For the 90-minute sessions, groups working in the same area are encouraged to join forces.

Abstract submissions for symposium posters and presentations should be made via the American Astronomical Society web pages for their Summer 2008 meeting

<http://www.aas.org/meetings/aas212/>

Although we welcome a wide range of posters and presentations, we do ask that each one have an explicit connection with the goals and programs of IYA, which are described in more detail on the ASP meeting web site.

Registration for the meeting is through the American Astronomical Society. You may register and attend whether you present a paper or not.

Andrew Fraknoi

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JENAM 2008, 02-12 SEPTEMBER, VIENNA: A SESSION ON EDUCATION AND COMMUNICATING ASTRONOMY IN EUROPE

JENAM 2008 will be held in Vienna 8-12 September. We wish to draw your attention to Symposium 2 Education and Communicating Astronomy in Europe – Preparation for IYA2009. This is being

organised by IAU Commissions 46 and 55 through their Presidents, Magda Stavinschi and Ian Robson. The Symposium is for a full one day session plus a plenary talk by the IAU President, Catherine Cezarsky.

This is a call for papers, oral and posters, for the above symposium. Oral papers will be for 15 minutes plus 5 minutes questions. The abstracts need to be submitted through the conference webpage and the deadline is 31 May. Please note the rules for registration and submission of abstracts. Note that this symposium covers both the educational and outreach areas and we will be trying to seek a good balance between the two areas, BUT, in both cases the focus will be on activities pertinent to IYA 2009. The SOC includes Rosa Maria Ros, Pedro Russo and Natasa Stanic.

Full details of JENAM 2008 are at

<http://www.cosmic-matter.org/indico/conferenceDisplay.py?confId=6>

Rosa M Ros

(for contact details see Officers & Organizing Committee of Commission 46)

USEFUL WEBSITES FOR INFORMATION ON ASTRONOMY EDUCATION AND OUTREACH MEETINGS

The following websites contain information on future (and recent) meetings and conferences on, or very relevant to, astronomy education and development. In compiling this short list I am well aware of a strong European bias. **Please send me by email URLs for relevant websites in other areas of the world.**

UK

The Association for Astronomy Education

<http://www.aae.org.uk>

The British Association of Planetaria

<http://www.bap.redthreat.co.uk>

The National Schools Observatory

<http://www.schoolsobservatory.org.uk>

Europe

The European Association for Astronomy Education

<http://www.eaae-astro.org>

The European Astronomical Society

<http://www.iap.fr/eas>

The European Southern Observatory

<http://www.eso.org/outreach/eduoff>

USA

(among several other good sites)

The Astronomical Society of the Pacific

<http://www.astrosociety.org>

Barrie W Jones

(for contact details see Officers & Organizing Committee of Commission 46)

INFORMATION TO BE FOUND ON THE IAU C46 WEBSITE

Among the information contained on the IAU C46 website <http://iau46.obspm.fr> is the following

- Overview (of C46, in English, French, and Spanish)
- Offices and Organizing Committee
- Program Groups
- National Liaisons (directory)
- Online Newsletters
- Presidents and Current Vice-President
- Resolution on the Value of Astronomy Education (passed by the IAU General Assembly 2003)
- External links
- Announcements/News
- Commission 46 Terms of Reference, Rules & Guidelines

Please note that since September 2007 this website has been hosted and maintained at the Observatoire de Paris. Announcements/news and comments/suggestions should be sent to Chantal Balkowski at Chantal.Balkowski@obspm.fr

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Officers & Organizing Committee

The officers 2006-2009 are: the President, the Vice-President, and the Retiring
President. Details of the Organizing Committee, and membership of the
Program Groups are at <http://iau46.obspm.fr/>

National Liaisons **Barrie W Jones (PG Chair)**
These are listed at <http://iau46.obspm.fr/> and at
<http://physics.open.ac.uk/~bwjones/IAU46>
