



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

Newsletter 70 – March 2009

**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.

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DISTRIBUTE THIS NEWSLETTER
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**This newsletter is available at the following website
<http://physics.open.ac.uk/~bwjones/IAU46/>
which has a link from
<http://iau46.obspm.fr/>**

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EDITORIAL

Thanks to everyone who has made a contribution to this edition of the Newsletter. It is thinner than usual – a couple of promised articles didn't arrive.

For the October 2009 issue the copy date is **Friday 16 October 2009**. 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 TIFFs 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 websites

Recall that in September 2007, the C46 website was transferred 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 2009; I've also sent this list to Paris so that the listing there can be updated. Also there is the set of triennial National Liaison reports for 2003-2005

Very early issues of the C46 Newsletter

Just for the record, note that as well as the issues 50-60 of the Newsletter on my website, I also have hard copy of the first issue I edited, number 49 in October 1998, plus hard copy of some earlier ones, edited by John Percy.

Barrie W Jones

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

MESSAGE FROM THE PRESIDENT

As was to be expected, the International Year of Astronomy (IYA) has put a strong mark on the entire activity of IAU Commission 46. The IYA commenced in Paris, on 15 and 16 January 2009, with an impressive opening event. It took place under the aegis of the UN, UNESCO, and the IAU.

It was immediately followed by a conference “Astronomy in Culture and Society”. If the first reunion approached the problem of education through astronomy only indirectly addressing this problem throughout the world, the latter one had a series of communications referring to astronomy education and development. One of the fundamental questions raised in the context of cultural and education diversity, was

- what are the current efforts in astronomy education across the planet, especially in the developing countries?

A special poster about Commission 46 drawn up by Michele Gerbaldi, was posted throughout the conference. As was stated in the rationale of the conference, “Overall, this conference will therefore bring together most major actors that succeed in ensuring that astronomy is present at all levels in education and culture worldwide.”

A special session was dedicated to “Primary, Secondary and Higher Education in Astronomy”, but practically all other sessions included contributions incorporating aspects related to astronomy.

A session dedicated to education through astronomy will take place at the University of Hertfordshire between 20 and 23 April, during the European Week of Astronomy and Space (JENAM 2009): The IYA in Europe, to be later followed during the IAU General Assembly in Rio de Janeiro (6, 7 and 10 August) by Special Session 4 “Astronomy Education between Past and Future”.

Another series of activities, which will be presented in various notes in this Newsletter, bring forth the efforts for improved education through astronomy regarding future pollution at a global level.

Magda Stavinschi

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

REPORT ON A VISIT TO SRI LANKA

Sri Lanka, the island nation south of India has an excellent tradition of higher education and has produced astronomers of repute. Most of them have, however, settled abroad including the USA, Europe and Australia. This is like the chicken and egg problem: students go abroad for research because there are no world class facilities for studying astronomy at home and such facilities are not created at home because of lack of interested users.

I was deputed to Sri Lanka by the International Astronomical Union under the auspices of its Commission 46 Programme Group for World Wide Development of Astronomy (PGWWDA). I visited Sri Lanka from 30 November to 08 December 2008. My local host at Colombo was Dr Kavan Ratnatunga, who made all the local arrangements. The purpose of this trip was to assess the ambience of astronomy in Sri Lanka's academic community and to inform them about the benefits of joining the IAU.

As suggested by Kavan I had timed this trip to coincide with the 64th Session of the Sri Lanka Association for the Advancement of Science (SLAAS). The SLAAS meeting started on the 1st of December and I was invited as one of the three guests of honour. In that capacity I was given time to speak in the inaugural session which was attended by Professor Tissa Vitarana, the Honorable Minister for Science and Technology of Sri Lanka. I took advantage of this opportunity to show a Powerpoint presentation on what the IAU is and what it has to offer. The material supplied by John Hearnshaw, the Chairperson of PGWWDA, came in useful for making a suitable show. I emphasized the IAU activities that help a young astronomer trying to make a mark in the field, or a faculty member in his research. I also showed a Powerpoint presentation about my own institution, the IUCAA (Inter-University Centre for Astronomy and Astrophysics), highlighting its visitor and pedagogical programmes. I stressed the advantage to be gained by Sri Lankan faculty and students through interacting with IUCAA. From the questions at teatime after the session I could gather that the information had been well received.

At the SLAAS session, on the third day, at the campus of Colombo University, I gave an invited talk on *Facts and Speculations in Cosmology*, which was well attended and which generated quite a few questions at the end. Overall, I feel that by timing my visit with SLAAS I got more exposure than I otherwise would have received.

The visits in Colombo included, additionally, the Arthur C Clark Institute for Modern Technologies ACCIMT, originally associated with the distinguished science populariser and science fiction writer Arthur C Clark. The Institute has a 45cm telescope in operation. I had been present when this telescope was installed in 1996. Understandably, the city lights and urban pollution of Colombo do not make the present site ideal, but it was refreshing to meet a group of academics that were using the telescope for useful studies of stars.

Opposite the ACCIMT stands the University of Moratuwa where I gave a talk entitled *Why study astronomy?* in which, again, I stressed the benefits of international interaction such as brought about by the IAU programmes. This University has a course on astronomy and the students who asked questions after the talk appeared well informed. I also was introduced to a young college student who has read (and understood) a considerable part of college astronomy on his own. I have encouraged him to attend some of the schools at the IUCAA.

I visited the Colombo planetarium, which uses a large analogue projector and seems stuck in an old-fashioned rut. Because they are asked to have programmes that rhyme well with what little astronomy forms part of the school curriculum, there is hardly any scope for innovation or improvisation.

Towards the end of the week, I visited Kandy where my first stop was at the Institute of Fundamental Studies, whose inauguration ceremony I had attended in December 1982. In 1982, there had been a lot of optimism about the IFS, which, alas, has not borne fruit. There is hardly any core academic

staff or a vigorous visitor programme. It was very sad to see an institution of great potential being allowed to sink to this level of apathy.

In contrast, the visit to the Postgraduate Institute of Science (PGIS) in the University of Peradeniya brought some cheer. I met several faculty members who showed interest in having astronomy as a part of the physics syllabus. I described to them the system existing in India where students are offered the astronomy option apart from other areas like nuclear physics, condensed matter physics, etc. My talk on *Facts and Speculations in Cosmology* generated a good discussion as I tried to be provocative in my criticism of the “Big Bang”.

While in Colombo, I called upon the Minister for Science and Technology who had been present at the opening of the SLAAS session when I had spoken. We discussed the proposal that Sri Lanka considers joining the IAU. The Minister agreed that the advantages of such a move could not be denied and in normal circumstances he would have readily agreed to the proposal. However, he stressed that conditions were not normal and Sri Lanka was fighting an internal war, which was causing a heavy drain on its resources. Support for many constructive projects had therefore been put on hold till the war ended. Although there were signs that this might happen relatively early, the Minister felt that the proposal to join the IAU would have to wait till that actually happened. So I feel that we need to wait a couple of years in the hope of a more opportune time to raise the issue again.

On the positive side, however, the Minister promised to find money for Sri Lankans wanting to attend courses or schools at the IUCAA, which would increase the number of practising astronomers. At present this option should be acted upon and, if possible, the IAU might also consider extending support to bright young individuals wishing to make progress in astronomy. In the last analysis, a nation can benefit by joining the IAU provided it has an “above threshold” population of interested and working astronomers.

To summarize, while there may be a good case for waiting for 2-3 years before approaching Sri Lanka about joining the IAU, the intervening period may be profitably used to encourage participation by young Sri Lankan astronomers in the IAU activities like the ISYA. The IUCAA can also play a role in this enterprise.

I conclude this report by thanking John Hearnshaw for suggesting this visit and giving valuable inputs to its planning. I am also grateful to Ajitha Ratnatunga, Kavan’s brother, for providing accommodation in Colombo in his house. A special vote of thanks goes to Kavan Ratnatunga for meticulous planning of this trip and attention to details. His personal contacts at various levels in academia as well as in Government circles helped smooth my work. He accompanied me at all stages and provided valuable information and arguments. Without him, I doubt if I would have had such a meaningful trip.

Jayant V Narlikar
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THE INTERNATIONAL YEAR OF ASTRONOMY IN SRI LANKA

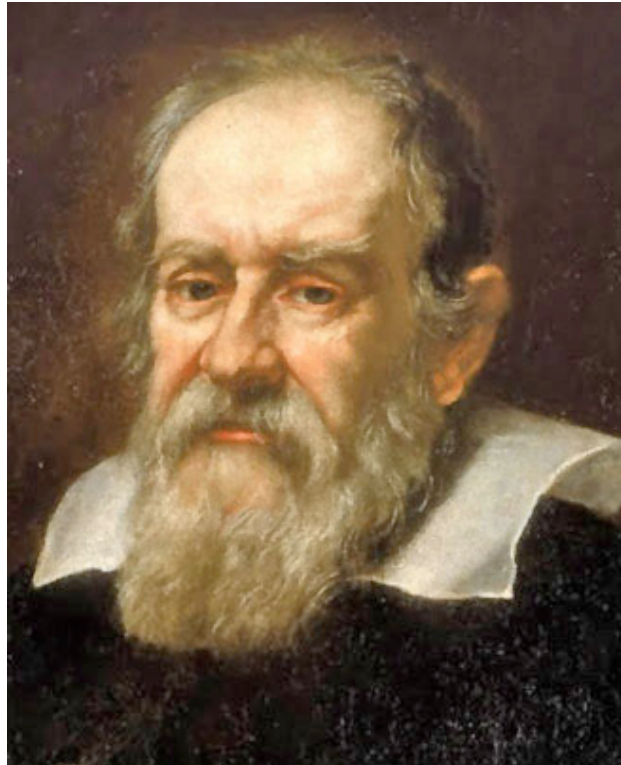
The IYA2009 Sri Lanka website is at <http://aalk.lakdiva.net/iya2009>

You can find upcoming events on the home page and AT the year schedule <http://aalk.lakdiva.net/iya2009/schedule/> and for “Projects” <http://aalk.lakdiva.net/iya2009/projects/>
Join us on facebook at <http://www.facebook.com/group.php?gid=18626836165>

Thilina Heenatigala (IYA2009 - National Node Secretary), General Secretary Sri Lanka Astronomical Association
thilina_atn@yahoo.com

EXHIBIT ON GALILEO GALILEI IN FLORENCE

From 04 May to 31 December 2008, The Istituto e Museo di Storia della Scienza (Institute and Museum of the History of Science) in Florence Italy held an exhibition on Galileo's telescope and the observations he made with it. It was a precursor to the UN International Year of Astronomy. The display consisted of rare and precious instruments (among them the objective and the only two existing telescopes by Galileo), manuscripts, and ancient books. Also on display were telescopes, tools, manuscripts, objective lenses as well as the improvements that have been made to the telescope since Galileo.



Portrait of Galileo Galilei by Giusto Sustermans

According to Charlini Somaweera, “Galileo developed the idea of the telescope from toys that were made in Holland and sold on the roads of Venice in 1609”. In addition to Galileo's tools, the exhibit showed instruments of other Tuscan scientists, and the discoveries that were made by them of the Milky Way and the phases of Venus.

Comprehension of optical and astronomical principles were facilitated by interactive exhibits and multimedia. There are excellent interactive educational resources available online at the Museum's website <http://www.imss.fi.it/index.html> These include: “The life and work of Galileo – a virtual tri-dimensional exploration”; “Galileo's Telescope, The Instrument that Changed the World”; and “The Medici and Science: Instruments and Machines in the Grand-Ducal Collections”. If you are fortunate enough to actually venture to Florence, be sure to visit the Medici Gardens and Palace to view an additional excellent and comprehensive exhibition on instruments from the Medici Scientific Collection. These are seen amidst the elegant painted walls and ceilings of the Italian Renaissance.

A very special interactive site on Galileo's telescope may be found at the website <http://brunelleschi.imss.fi.it/esplora/cannocchiale/> This is complimented by a website on his compass <http://brunelleschi.imss.fi.it/esplora/compasso/>

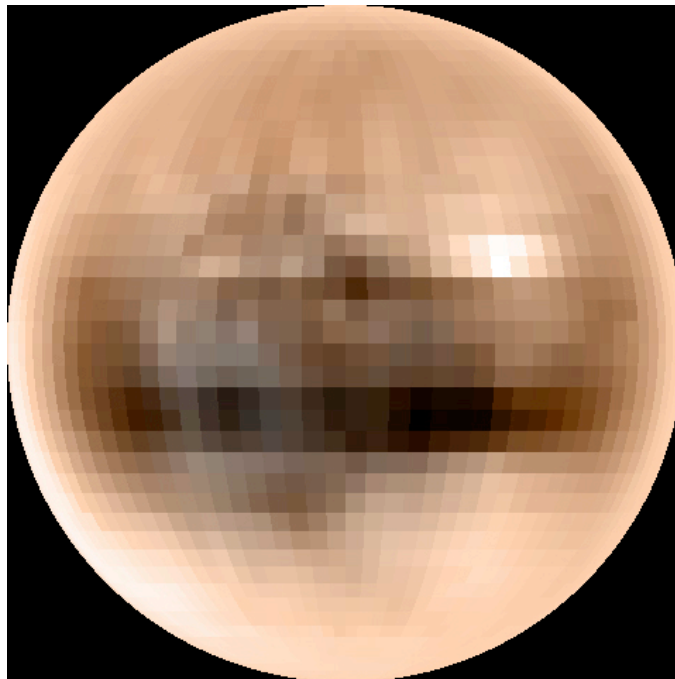
The Museum held a complimentary exhibition on “Galileo's Telescope, The Instrument that Changed the World” at China's Beijing Planetarium from 15 October 2008 to 10 January 2009. The book and educational material on the exhibition may be downloaded from their website

<http://www.bjp.org.cn/en/index.htm> Whether online or in person the visit was a special and ideal launch for the International Year of Astronomy 2009.

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IS PLUTO A PLANET? AN EDUCATIONAL OPPORTUNITY

At the forthcoming IAU General Assembly in Rio de Janeiro, Brazil, I believe that the classification of Pluto will be discussed again, though I can find no reference to this on the website. But regardless of whether it will be discussed, there is widespread dissatisfaction at the outcome of extensive discussions at the IAU General Assembly in Prague, when Pluto was placed in the category “dwarf planet”, whereas Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, were classified as “planets”.



Map of Pluto based on Charon eclipses, approximately true colour and among the highest resolution possible with current technology

No, I’m not going into these classifications here – there’s a comprehensive account in “Is Pluto a Planet”, by David A Weintraub (Princeton University Press, 2009). What I’m doing here is pointing out that Pluto’s classification is an excellent, topical, and public example of the advantages and difficulties of classification in science

- why is classification important?
- what criteria are used as the basis of classification?
- the inevitability of difficulties of classification at the boundaries between classes.

You can probably think of further general issues in science for which Pluto’s classification provides an excellent case study.

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

OLIMPIÁDA LATINO-AMERICANA DE ASTRONOMIA E ASTRONÁUTICA

From 10-12 October 2008, in Montevideo, delegates met from Brazil (João Batista Garcia Canalle), Chile (Olga Hernandez de la Fuente), Colombia (Jorge Guevara), Paraguay (Christian Schaerer, Miguel Volpe and Mariano Bordas), and Uruguay (Julio Blanco and Tabare Gallardo), in the presence of the advisor of UNESCO Guillermo Lemarchand, and the online virtual presence of Mexico's delegate Eduardo Mendoza.

The actions taken by those delegates regarding the Olimpiáda Latin-americana de Astronomia e Astronáutica were to

- establish the Council of Delegates of the participating countries
- establish the Astronomy and Astronautics Latin-American Olympiads (OLAA)
- approve the general statute for participation (which will be incorporated soon)
- establish Brazil as the first venue for 2009 and Mexico as the second
- give the basic guidelines for the issue of the document proofs and the discussion about the same through the participation of the delegates, via the Internet
- establish formal contacts with UNESCO through its advisor Dr Guillermo Lemarchand
- appoint the following officers of the Council:
 - President: João Batista Garcia Canalle (Brazil)
 - Vice-President: Julio Blanco (Uruguay)
 - Secretary: Olga Hernandez de la Fuente (Chile)
- establish October as the month of the Astronomy and Astronautics Latin-American Olympiads
- undertake appropriate actions to ensure communication, integration and participation of the largest possible number of countries on the continent
- accept as founders those delegates who should be accredited as such before the end of the first of the Astronomy and Astronautics Latin-American Olympiads.

The actions that were left unresolved and that should be solved as soon as possible are to

- establish the relationship of content for the Olympiad
- create a forum for participation of delegates
- try to establish the official logo of the OLAA (the logos are of local development and ownership of each seat)
- establish contacts with countries those were not present in Montevideo and Quito, and/or were not reported
- increase the number of delegates to get a full representation
- establish Spanish and Portuguese as official languages of the OLAA
- ask all local NODES AIA2009 for further dissemination of the event in order to achieve a participation as representative as possible; get a short-term appreciation of the Council of the IAU
- seek the expected support from the IAU.

We are seeking and expecting the cooperation of IAU, specially via Commission 46, and in order to achieve this we request you to kindly inform us of any activities related to education that take place with IAU recognition, and help us to enable contact other regional Olympiads.

As Commission 46 seeks to further the development and improvement of astronomical education at all levels throughout the world, and to disseminate information concerning astronomy education at all levels, we think that this is a good opportunity to promote the dissemination of astronomy at the middle school level. It is for these reasons that will apply for the following

- official recognition by Commission 46 and the IAU, of the OLAA as the Latin American Astronomy Olympiad
- the widest circulation to member countries to achieve the widest possible participation
- a special award from the IAU, institutionalized according to the criteria of Commission 46.

At the moment the central office is located at the Universidade do Estado do Rio de Janeiro, and you can submit all correspondence to
Olimpíada Latino-americana de Astronomia e Astronáutica.
Dr João Batista Garcia Canalle
Instituto de Física – Universidade do Estado do Rio de Janeiro
Rua São Francisco Xavier 524/3023-D
Maracanã – 20559-900
Rio de Janeiro – RJ
Brasil

With greetings, and waiting for a response
for the Council of Delegates
Dr João Batista Garcia Canalle
Chairman OLAA

Jane Gregorio Hetem
jane@astro.iag.usp.br

(I presume that the various requests have been made to Commission 46 and the IAU, other than through this Newsletter: Editor)

LAUNCH OF AN ASTRONOMICAL SOCIETY IN MOZAMBIQUE

(See also “Development of astronomy in Mozambique”, C46 Newsletter 69, pages 9-11: Editor.)

I would like to share with you some evidence that the IAU visits to developing nations are catalysts to the development of astronomy.

Following my recent visit to Mozambique, my hosts have launched a new astronomical society, to coordinate and promote astronomical activities in the country, with the IYA 2009 serving as an initial focus. I encourage you to visit the website <http://astromozzaia2009.weebly.com/>. It is in Portuguese, but just simply looking at the pages will give you an impression of the enthusiasm and vibrancy of this new initiative. I think that if the IAU can find creative ways of nurturing these nascent groups, it will help to ensure their sustainability. I will maintain contact with AstroMoz, and provide whatever support and encouragement I can.

I have encouraged the founders to write a small article for the next C46 newsletter.

Peter Martinez
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INDIAN ASTRONOMY: THE CONCEPTUAL SIDE

There are two important facts which have to be noted along with the article of Rajesh Kochhar and Arvind Paranjape (“Teaching of Astronomy in India”, C46 Newsletter 69, page 5).

The socio-economic diversity of India has been known for many decades and so professional astronomers are expected to take proper steps to overcome it. One can still take useful steps in popularizing conceptual astronomy, instead of relying on high tech instruments like CCD cameras for spreading technical awareness. This requires using simplicity and novelty in teaching astronomy. The most recent leader who used this way in restructuring India was Mahatam Gandhi – but many of the present leaders have forgotten him, I think. Nevertheless, I am using this approach for many years and

part of my contribution can be seen in the Bulletin which Professor Syuzo Isobe used to edit. Let me mention just one point in support of this.

I have met with some participants of the Astronomy Olympiad, here in Pune, who do not know how we can “prove” that Mercury is the first planet and Venus is next and both are inner planets. This is the fault of teachers, not students, because they do not tell them how can we couple the knowledge of circle and tangent from high school geometry, with the observations of Mercury and Venus, and arrive at the required answer. This coupling can be better understood with the help of a very simple model, which anyone can make using a plastic racket. I insist on making that model by using hand and head, for better understanding of concepts. But for more than a decade or so, people are using costly instrumentation and ignoring some basic concepts. My model led to a useful discussion with Robert Olley, see

www.scientificblogging.com/news_releases/international_year_astronomy_2009_perfect_chance_learn_astronomy

If high school pupils 14-16 years old are not properly motivated for combining maths, physics and astronomy, then what can happen about ten years later? A glimpse of the obvious answer can be found in an observation, which I reported in 2006. It is regarding the “latent” response given by doctoral/post-doctoral students 25 or more years old, to a summer school in astronomy and astrophysics in a well known centre in Pune – see the proceedings of the “Cosmic Frontiers” conference, Durham UK, July-August 2006, published by the Astronomical Society of Pacific.

Hence, I think that the conceptual side of astronomy be given due attention in the IYA events.

Dileep V Sathe, Retired Teacher, Associate, COSPAR, Pune, MH, India
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A SHORT REPORT ON ASTRONOMY EDUCATION IN INDONESIA

(This has been sent to the Newsletter, and covers 2006 to 2008 – a full report is expected for the National Liaison’s Triennial Reports: Editor)

At the national and regional scale, education in science, especially in astronomy, has been actively conducted in Indonesia. At elementary level, astronomy is taught as part of the science course. Since 2006, many astronomy clubs are proliferating in Indonesia, thanks to the Ministry of National Education which actively supports the creation, training and dispatching of the national team for the International Astronomy Olympiad. Indonesia has been the host of the 2nd International Olympiad in Astronomy and Astrophysics in 2008, and has actively participated in the Olympiads since 2003.

At Bosscha Observatory, education services have been delivered to science teachers, astronomical clubs, amateurs as well as pupils. Around 60 000 visitors per year have visited this Observatory. Staff of Bosscha Observatory also cooperate with the Planetarium Jakarta to hold exhibitions, training for teachers and amateurs. The Jakarta Amateur Astronomy Association is the biggest one in Indonesia having more than 200 members. Together with Malaysia, the Philippines, Thailand, Vietnam, and Cambodia, Indonesia established the South East Asia Astronomy Network in 2007. Its scope includes education for elementary level teachers and pupils.

Hakim L Malasan
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INTERNATIONAL HELIOPHYSICAL YEAR 2007 FINAL REPORT

The United Nations and the IHY2007 Secretariat has published the IHY2007 Final Report (UN document ST/SPACE/43, 93 pages). If members of C46 would like to receive a printed copy, I need their mailing addresses. Unfortunately, the electronic version might not yet be available on the Web.

Hans Haubold
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ASTRONOMY EDUCATION REVIEW 14th ISSUE

Astronomy Education Review (AER), the web-based journal/magazine about astronomy education and outreach, announces the on-line publication of its 14th issue, now complete on the Web at <http://aer.noao.edu>. There is no charge for reading or downloading the full articles in the journal.

We are proud to announce that, as of January 2009, the American Astronomical Society has taken over the publication and management of the journal.

The new website is <http://aer.aip.org>. We will keep all issues through number 14 live at <http://aer.noao.edu> for several months. However, please begin to substitute the new address in any links or bookmarks you have for the journal.

The AER actively solicits interesting papers and articles on all aspects of astronomy and space science, education and outreach. All papers are refereed, and a set of guidelines for contributing to the AER is available at <http://aer.aip.org>. These guidelines are slightly different from the previous ones, so be sure to check the new web site if you are planning to submit a paper.

Manuscripts and questions can be directed to aer@aaas.org.

Sidney Wolff and Andrew Fraknoi, Editors
fraknoiandrew@fhda.edu

NEWS OF MEETINGS AND OF PEOPLE

EUROPEAN WEEK OF ASTRONOMY AND SPACE SCIENCE (JENAM 2009)

The local organising committee of the “European Week of Astronomy and Space Science” – the Joint European and National Astronomy Meeting 2009 (JENAM 2009), incorporating the Royal Astronomical Society’s National Astronomy Meeting (NAM) – is pleased to announce that registration is still open. Full details, information on European Astronomical Society (EAS) grants, the scientific and social programmes, and accommodation information can be found at <http://www.jenam2009.eu/>

JENAM2009 will be held 20-23 April 2009 at the University of Hertfordshire in the UK (30 km north of London). There will be EAS and RAS Prize Lectures, plenary lectures, EAS Symposia, and a multitude of parallel sessions. The European Space Agency (ESA) and the European Southern Observatory (ESO) have each provided substantial contributions to the programme, emphasizing the “Joint European” aspect of the “National Astronomy Meeting”. In addition OPTICON, RadioNet and ASTRONET are very much involved. Moreover, the UK Solar Physics Conference (UKSP) and MIST (Magnetosphere, Ionosphere, Solar Terrestrial) spring meeting will be celebrated as part of the “European Week of Astronomy and Space Science”, resulting in an event with the broadest possible appeal.

There will be ample outreach activities for the International Year of Astronomy, with public lectures scheduled for each evening of the conference, plus a special “Schools Day (click on Schools on the menu bar on the left hand side of the home page).

There will be seven EAS Symposia on the following topics:

- [The next era in radio astronomy: the pathway to SKA](#)
- [The standard cosmological models - successes and challenges](#)
- [Understanding substellar populations and atmospheres: from brown dwarfs to exo-planets](#)
- [The life cycle of dust](#)
- [Multi-wavelength high redshift surveys](#)
- [Three decades of gravitational lenses](#)
- [The IYA 2009 in Europe](#)

We look forward to welcoming you at the University of Hertfordshire in April.

Elias Brinks, Janet Drew (Chair SOC), Hugh Jones (Chair, Executive Committee), Jim Hough

IAU GENERAL ASSEMBLY 2009, RIO DE JANEIRO, BRAZIL, SPECIAL SESSION 4, 5-7 AUGUST, ASTRONOMY EDUCATION BETWEEN PAST AND FUTURE

This special session aims at discussing an integrated approach of the different efforts to increase and promote the teaching and learning of astronomy in the world, with emphasis on developing countries. To this end, attention will be given to research on education, specifically in the field of physics, to best practices of the use of astronomy in educational systems (specifically in developing countries), and to innovative learning initiatives other than formal education. The special session aims also at creating a universal perspective wherein modern (post-Copernican) astronomy will be presented as an intellectual cumulus.

The objective of the session is to disseminate best practices in teaching and learning activities of astronomy and to give an opportunity to learn about initiatives in different cultural and socio-economic settings. The special session also wants to give food-for-thought and proposals for reflection

for an integrative approach, and for optimization processes, to enhance the interest in astronomy and its role as a trigger towards science education in the educational systems, with emphasis on the developing countries. The outcome should be a sensitization of teachers and students alike to the concept of a universal history of astronomy and creation of some reliable source material which can be used as a teaching aid in a culture-specific context. The outcome could be a set of recommendations for future integrated actions, and eventually recommendations on new initiatives, framed into the new decadal policy plan.

Sessions

Day 1			
1	09-10.30	S1a	Teaching and education in astronomy
2	11-12.30	S1b	Teaching and learning in astronomy
3	14-15.30	S2	Cultural and historical astronomy
4	16-17.30	S3	Other training and outreach
Day 2			
5	09-10.30	S4	Astronomy heritage for education
6	11-12.30	S5	Astronomy education at spec. phases and ages
7	14-15.30	S5	Astronomy education at spec. phases and ages
8	16-17.30	S6	Curricula in different cultural settings
Day 3			
9	09-10.30	S7	Light pollution
10	11-12.30	S8	Integrating efforts

Jean-Pierre De Greve

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(Editor: I've extracted the following information from the IAU General Assembly website

<http://www.astronomy2009.com.br/scientific.html>)

Special Session SpS4 (Coordinating Division XII)

Astronomy Education between Past and Future

2.5 days, from 6 to 10 August, 2009

SOC chairs: Rajesh Kochhar (India), Jean-Pierre de Greve (Belgium), and Edward F. Guinan (USA)

SOC members: John B. Hearnshaw (New Zealand), George K. Miley (Netherlands), Ian E. Robson (UK), Rosa M. Ros (Spain), Il Seong Nha (Rep. of Korea), Malcolm G. Smith (USA), and Antônio Videra (Brasil)

Principal topics:

- research and best practices in teaching and learning methodologies in sciences, specifically in physics
- astronomy as a trigger towards science education (including best practices in innovative astronomy teaching)
- cultural and historical astronomy: the importance of non-western views of the skies for astronomy teaching in both developing and developed countries
- teaching astronomy in developing countries
- innovative learning and training initiatives other than teaching
- the role of astronomy education at specific phases and ages, from age 4 to university/PhD
- the use of educational telescopes
- IAU sponsored education and development programs
- networking activities enhancing connectivity among young people in the International Astronomical Year
- the IAU decadal plan for world astronomy.

Editors: Rajesh Kochhar, Jean-Pierre de Greve, Magda G. Stavinschi, & Edward F. Guinan
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(And also.....)

Young Astronomers' Consulting Service Office

will be open during the General Assembly, where young astronomers may meet each other and/or meet senior astronomers by arranged appointments to seek advice on their investigations and careers.

Chair: Jean-Pierre De Greve (Brussels, Belgium) jpdgreve@vub.ac.be

INTERNATIONAL CONGRESS OF SCIENCE EDUCATION 2009

With great pleasure we inform you about the International Congress of Science Education, and ten years of the Journal of Science Education (Cartagena, Colombia, 15- 18 July 2009). Details are at <http://www.colciencias.gov.co/rec/cong>

The main aim on this Congress is to discuss international experience in science education. The venue in Latin America presents a special opportunity for our community, and your participation would create a high interest and impact for this international event.

The Journal of Science Education, JSE, has an international character and publishes articles about science education (physics, chemistry, biology, mathematics, etc.) at university and secondary or high school levels. Authors from 53 countries have published more than 320 peer evaluated articles in previous issues. Our authors are: from Europe (47%), America (45%), Asia (7%), Africa (1%). About 46% of published works have been about research in science education.

We invite you to take part in this International Congress, and are looking forward to your academic and other contributions and participation to the activities of this scientific event.

Organizing Committee

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SRI LANKA NATIONAL ASTRONOMY MEETING 2008

Nearly 100 students with a few professional scientists and astronomers gathered for the first Sri Lankan National Astronomy Meeting (NAM 2008). It was hosted and organized by the Sri Lanka Astronomical Association, and took place 29 November at 14:00 onwards, in the Auditorium of the Sri Lanka Association for Advancement of Science (SLAAS).

The NAM 2008 “International Year of Astronomy 2009 and School based Astronomy”, focused on the International Year of Astronomy (IYA) 2009 which is a global celebration of astronomy and its contributions to society and culture, highlighted by the 400th anniversary of the first use of an astronomical telescope by Galileo Galilei. The aim of the IYA is to stimulate worldwide interest, especially among young people, in astronomy and science under the central theme “The Universe, Yours to Discover”. The NAM 2008 detailed the Sri Lanka involvement in IYA2009, the scheduled programs for 2009, possible programs, and discussed school based astronomy. One of the highlights of the NAM 2008 was the launch of the “Network of School Astronomical Societies” which is a virtual network where all the school astronomical societies will gather together to enhance the interaction between schools. The NAM 2008 was followed by a lecture from a professional astronomer. A schedule of these and other events can be found on the official website of NAM 2008 <http://aalk.lakdiva.net/NAM08>

Media representatives attended the meeting.

Further information can be found at
Sri Lanka Astronomical Association, <http://aalk.lakdiva.net/>
International Year of Astronomy2009 – Sri Lanka, <http://aalk.lakdiva.net/iya2009>
International Year of Astronomy2009, <http://www.astronomy2009.org/>

Note: The Ceylon Astronomical Association was founded in June 1959, later known as Sri Lanka Astronomical Association, and is now revived as the Astronomical Association of Lanka (AALK). It is a not-for-profit association founded by Sir Arthur C Clarke and Herschel Gunawardene. Its purposes are pursuing the study of astronomy and promoting astronomy education and related sciences. The revived Association's goals include usage of the Internet to carry out research on astronomy and related sciences among university students and others.

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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
- 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 at <http://physics.open.ac.uk/~bwjones/IAU46/>
