PRESS OFFICE JENAM 2010 - REPORT AND CLIPPING

Lisbon, 6 to 10 September 2010

THE SCIENCE OFFICE – Science Communication
www.scienceoffice.org

Introduction:

The Science Office was assigned the organisation of the Press Office for the Joint European and National Astronomy Meeting (JENAM), and initiative of the European Astronomical Society (EAS) and the Portuguese Astronomical Society (SPA)

The conference took place between the 6th and 10th of September 2010, at the Faculty of Sciences of the University of Lisbon, Portugal.

The Science Office

The Science Office is a network of professionals with excellent skill-sets in communication, science, and everything in between. The Science Office team is flexible enough to operate in a vast number of areas, yet homogeneous enough to manage an effective synergy between the many disciplines that are present in its projects. More information about our work at www.scienceoffice.org

Standard Press Office

The Science Office proposed to make:

- 1 press release (media advisory) before the conference (1st week of August)
- 1 press release for the opening of the conference
- 1 media kit (consisting of relevant information to the media, including contacts and 15-20 newsworthy abstracts), ENG + PT
- Press releases (~10 expected), both for national and international press
- Staffed press room (1 press officer + assistant+ journalism intern)
- Online clipping report after the conference

Press Office Staff:

The following Science Office staff was present at the venue, for the duration of the conference:

- Mariana Barrosa
  Press Officer
  Science Office – Executive Director

- Lee Pullen
  Press Office Assistant
  Science Office – Science Writer

- Joana Martins
  Press Office Assistant
  Science Office – Journalism Intern

Distribution of press releases:

The press releases produced by the Science Office for JENAM 2010 were distributed through the following channels:

- AlphaGalileo – AlphaGalileo is the wold's independent source of research news. It distributes news releases and other information from science, health, technology, the arts, humanities, social sciences and business to the world's media. The news service, which is moderated, is provided by the independent not-for-profit organisation, AlphaGalileo Foundation Ltd.
- American Astronomical Society mailing list
- Science Office's own mailing list of national and international science journalists and bloggers.

Accreditation of journalists:

The journalists were invited to register with the press office on the first media announcement sent out before the beginning of the conference. The press office received the following accreditation requests:

Name	Media	Contact	
Maria Cruz	Science Magazine	mjb.cruz@gmail.com	attending
Sylvie Rouat	Sciences et Avenir	srouat@sciences-et-avenir.com	
Natasha Johnson	BBC Magazines	natashajohnson@bbcmagazines.com	
Ilya Ferapontov	RIA Novosti (http://en.rian.ru)	holzfinger@gmail.com	
Sarah Reed	Science Magazine	sreed@science-int.co.uk	attending
Anita Heward	Europlanet	anita.heward@europlanet-eu.org	attending
Marta Entradas	UCL	marta.entradas@gmail.com	attending
Gernot Meiser	Atelier für audiovisuelle Medien	info@av-atelier.de	
Sotira Trifourki	Cosmos Media	sotira.t@gmail.com	attending

There were other journalists present at the conference, who did not register with the press Office, namely from *LUSA* (the Portuguese Press Agency), from *Ciência Viva TV* (a Portuguese online science TV channel) and from *Jornal i*.

Media Kit:

A Media Kit with relevant information about the conference and containing summary information about each session was produced and put on line at the conference website, a few days before the start of JENAM 2010.

Please find it at the "Media Kit" section of this report.

Press releases:

The Press Office produced and distributed 10 press releases, together with images (the full versions can be found in the" Press releases, full version and images" section of this report):

1. **PR_01: released on the 8th August 2010**

   English version:

European Astronomy comes to Lisbon in September- The European Week of Astronomy and Space Science.

The Joint European and National Astronomy Meeting (JENAM) 2010, a major European astronomy meeting, will take place at the Faculty of Sciences of the University of Lisbon, Portugal, from Monday 6 September to Friday 10 September 2010.

   Portuguese version:

Astronomia Europeia vem a Lisboa em Setembro - Semana Europeia de Astronomia e Ciências Espaciais

A Joint European and National Astronomy Meeting (JENAM) 2010, uma das mais importantes reuniões científicas na área da astronomia na Europa, terá lugar na Faculdade de Ciências da Universidade de Lisboa de 6 a 10 de Setembro de 2010.

2. **PR_02: released on the 1st September 2010**

   English version:

Astronomy stars gather in Lisbon for the European Week of Astronomy and Space Science

Lisbon, 1 September: The Joint European and National Astronomy Meeting (JENAM 2010), a major European astronomy meeting, starts next week, running for 6 to 10 September, at the Faculty of Sciences of the University of Lisbon.

Portuguese version:

Estrelas da Astronomia reúnem-se em Lisboa para a Semana da Astronomia Ciências Espaciais e o público é convidado a participar.

Lisboa, 1 de Setembro: É já no próximo dia 6 de Setembro que começa a Joint European and National Astronomy Meeting (JENAM 2010), uma das mais importantes reuniões científicas na área da astronomia na Europa, e que decorrerá durante uma semana, na Faculdade de Ciências da Universidade de Lisboa.

3. **PR_03: released on the 6th September 2010**

English version:

When fundamental constants change over space — rethinking physics as we know it

Lisbon, 6 September 2010: New research suggests that the supposedly invariant fine-structure constant, which characterises the strength of the electromagnetic force, varies from place to place throughout the Universe. The finding could mean rethinking the fundaments of our current knowledge of physics. These results will be presented tomorrow during the Joint European and National Astronomy Meeting in Lisbon, Portugal, and the scientific article has been submitted to the Physical Review Letters Journal.

4. **PR_04: released on the 7th September 2010**

Portuguese version:

Ano Internacional da Astronomia 2009 chegou a centenas de milhões de pessoas: relatório final desvendado

Lisboa, 7 de Setembro: O relatório final de 1300 páginas do Ano Internacional da Astronomia 2009 (AIA2009) foi revelado hoje na Semana Europeia de Astronomia e Ciências Espaciais, em Lisboa. O documento mostra que pelo menos 815 milhões de pessoas em 148 países participaram naquele que é o maior evento científico a nível mundial das últimas décadas. Portugal foi um desses países, com uma estimativa de 2 milhões de portugueses atingidos pelo AIA.

5. **PR_05: released on the 7th September 2010**

English version (co-released with the International Astronomical Union):

Cosmic Diary Anthology Released as a Free Book: Postcards from the Edge of the Universe

7 September 2010, Lisbon: The book, Postcards from the Edge of the Universe, was launched today at the European Week of Astronomy and Space Science in Lisbon, Portugal. A legacy of the International Year of Astronomy 2009 Cornerstone project Cosmic Diary, the book features articles from astronomers around the world about the hottest astronomical topics of the moment.

6. **PR_06: released on the 10th September 2010**

Portuguese version:

Novos rumos para a educação das ciências na Europa discutiram-se esta semana em Lisboa, na Semana Europeia da Astronomia e Ciências Espaciais

Lisboa, 10 de Setembro 2010: Durante a Semana Europeia da Astronomia e Ciências Espaciais que decorre esta semana na Faculdade de Ciências da Universidade de Lisboa, vários astrónomos de todo o mundo discutiram os recentes sucessos e desafios para o futuro das instituições educativas, através da utilização de instrumentos modernos de ensino da ciência nas escolas europeias.

7. **PR_07: released on the 9th September 2010**

English version (co-released with the European Southern Observatory):

ESO's VLT Takes First Detailed Image of Disc around Young Star

New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the inner disc of matter around a young star. Stéphanie Renard of the Laboratoire d'Astrophysique de Grenoble and colleagues used the ESO VLT Interferometer to probe the secrets of the star HD 163296.

8. **PR_08: released on the 8th September 2010**

Portuguese version:

Portugal adere à ASTRONET e ao planeamento estratégico da Astronomia na Europa

Lisboa, 8 de Setembro de 2010: A Fundação para a Ciência e Tecnologia (FCT) aderiu esta semana à ASTRONET, a rede Europeia de Agências de Financiamento da Astronomia. Esta adesão vai permitir uma maior aposta na investigação em astronomia o nosso país.

9. **PR_10: released on the 10th September 2010**

English version:

Astronomer unveils the mysteries of "Green Pea" galaxies at JENAM conference in a victory for citizen science

Lisbon, 10 September 2010: Today at the Joint European and National Astronomy Meeting (JENAM2010), Ricardo Amorin will present a talk explaining the nature of strange so-called Green Pea galaxies. First discovered in 2007 by amateur stargazers, it has now been shown that these extraordinary and extremely compact star cities have low amounts of complex elements after being diluted by streams of gas and strong supernova winds. This announcement will be celebrated by the amateurs who first discovered Green Pea galaxies.

10. **PR_11: released on the 10th September 2010**

English version:

News results presented at the Joint European and National Astronomy Meeting tell us more about Dwarf Galaxy evolution

Lisbon, 10 September 2010: The 'Local Cosmology from Isolated Dwarfs (LCID)' team showed their most recent results that suggest that reionization alone is not able to stop star formation in Dwarf Galaxies, as had been expected. The results were presented yesterday during the European Week of Astronomy and Space Sciences.

Clipping:

During and after the conference, the Press Office collected the online news that originated on the press releases produced for JENAM. The search used the Google News search engine, with key words taken from the press releases, both in English and Portuguese.

We did not search the hard copy of the media or any TV footage.

The results of this search can be seen in the “Clipping” session of this report.

Media	Date	Title	URL
PR_01			
Space Daily	9-8-10	European Astronomy Comes To Lisbon In September	http://www.spacedaily.com/re
CORDIS Nouvelles	23-8-10	Conférence «Joint European and national astronomy meeting» à Lisbonne, au Portugal	http://cordis.europa.eu/fetch?(
Hobbyspace.com	10-8-10	European Astronomy comes to Lisbon in September	http://www.hobbyspace.com/r
Portal to the Universe	10-8-10	European Week of Astronomy and Space Science - Lisbon, Portugal, Sept 6-10, 2010	http://www.portaltotheunivers
AstroPT	10-8-10	Astronomia Europeia vem a Lisboa em Setembro	http://astropt.org/blog/2010/0
Ciencia.pt	10-8-10	Astronomia Europeia vem a Lisboa em Setembro	http://www.cienciapt.net/pt/in
Mundo Universitário	10-8-10	Astronomia Europeia vem a Lisboa em Setembro	http://www.mundouniversitari
Blogs de Ciência	10-8-10	Astronomia Europeia vem a Lisboa em Setembro	http://divulgarciencia.com/cate
PR_02			
OJE	6-9-10	Encontro internacional de Astronomia reúne 600 investigadores em Lisboa	http://www.oje.pt/noticias/nac
Correio da Manhã	6-9-10	600 astrónomos debatem a origem do Universo	http://www.cmjornal.xl.pt/deta
Público	5-9-10	Encontro internacional sobre Astronomia vai realizar-se em Lisboa esta semana	http://www.publico.pt/Ci%C3%
Jornal de Notícias	6-9-10	Astrónomos de todo o mundo reunidos em Lisboa	http://jn.sapo.pt/PaginaInicial/
Diário Notícias	6-9-10	Lisboa recebe grandes nomes da Astronomia	http://dn.sapo.pt/inicio/ciencia
Açoriano Oriental	5-9-10	Encontro mundial de Astronomia em Lisboa sobre temas em que Portugal está "fortemente envolvido"	http://www.acorianooriental.pt
i	5-9-10	Encontro mundial em Lisboa sobre Astronomia, área em que Portugal está "fortemente envolvido"	http://www.ionline.pt/conteud
CiênciaHoje	1-9-10	Centenas de cientistas reúnem-se para discutir astronomia e Ciências espaciais	http://www.cienciahoje.pt/inde
Softpedia	2-9-10	European Week of Astronomy and Space Science Next Week in Lisbon	http://news.softpedia.com/new
Boas Notícias	6-9-10	Lisboa recebe encontro internacional de Astronomia	http://www.boasnoticias.pt/inc
Destak	6-9-10	Encontro Internacional arranca hoje em Lisboa	http://www.destakes.com/redi
Açoriano Oriental	6-9-10	Congresso Internacional de Astronomia arranca hoje em Portugal	http://www.acorianooriental.pt
Au Fait	6-9-10	Plus de 600 astronomes réunis à Lisbonne pour débattre des progrès en astrophysique	http://www.aufaitmaroc.com/s
Metro	6-9-10	Lisboa enche-se de estrelas (PDF)	http://www.readmetro.com/sh
Diário Digital	5-9-10	Encontro mundial em Lisboa sobre Astronomia segunda-feira	http://diariodigital.sapo.pt/new

Correio do Minho	5-9-10	Astronomia: Encontro mundial em Lisboa sobre temas em que Portugal está 'fortemente envolvido'	http://www.correiodominho.pt
Jornal da Madeira	6-9-10	Astrónomos reunidos em Lisboa	http://www.jornaldamadeira.pt
GAEA	6-9-10	Encontro internacional sobre Astronomia vai realizar-se em Lisboa esta semana	http://gaea-astronomia.blogspo
Jornal do Algarve	6-9-10	Encontro internacional de astronomia leva 600 investigadores a Lisboa	http://www.jornaldoalgarve.pt/
Rádio Latina	5-9-10	Astronomia: Encontro mundial em Lisboa sobre temas em que Portugal está "fortemente envolvido"	http://radiolatina.lu/index.php?
Alpha Galileo	6-9-10	Estrelas da Astronomia reúnem-se em Lisboa para a Semana da Astronomia Ciências Espaciais e o público é convid	http://www.alphagalileo.es/Vie

PR_03

Space Ref	6-9-10	Fundamental Constant Might Change Across Space	http://www.spaceref.com/new
Space Daily	6-9-10	Fundamental Constant Might Change Across Space	http://www.spacedaily.com/re
Astronomy.com	7-9-10	Fundamental constant might change across space	http://www.astronomy.com/as
Moon Today	6-9-10	Fundamental Constant Might Change Across Space	http://www.moontoday.net/ne
Beyond the Cradle	6-9-10	When fundamental constants change over space — rethinking physics as we know it	http://beyondthecradle.wordpr
Deutchlandfunk	8-9-10	Astronomen beobachten Veränderung der Feinstrukturkonstante	http://www.dradio.de/dlf/send
Cosmos Magazine	9-9-10	Scientists propose a variable law of physics	http://www.cosmosmagazine.c
Expresso	11-9-10	Constantes inconstantes criam revolução na física?	http://aeiou.expresso.pt/consta
Physorg.com	6-9-10	Variations in fine-structure constant suggest laws of physics not the same everywhere	http://www.physorg.com/news
World Science	7-9-10	A “fundamental” number may be shifty, astronomers say	http://www.world-science.net/

PR_ 04

Inovação Tecnológica	8-9-10	Ano Internacional da Astronomia chegou a quase um bilhão de pessoas	http://www.inovacaotecnologic
Space Daily	8-9-10	International Year Of Astronomy 2009: Final Report Released	http://www.spacedaily.com/re
One India	8-9-10	India's participation highest during International Year of Astronomy 2009	http://news.oneindia.in/2010/(
Science Mag	8-9-10	International Year of Astronomy Claims Record Numbers of Citizen Stargazers	http://news.sciencemag.org/sci
Digital Journal	7-9-10	International Year of Astronomy: 815 million participated	http://www.digitaljournal.com/
Cósmoforum	12-9-10	Encerrado o Ano Internacional da Astronomia YIA2009	http://www.cosmobrain.com.b
Physics Today	7-9-10	International Year of Astronomy 2009 reached hundreds of millions of people: final report released	http://blogs.physicstoday.org/v
NASA Watch	7-9-10	International Year of Astronomy Reached Over 815 Million People	http://www.nasawatch.com/ar

Philosophy of Science	7-9-10	Remarkable--International Year of Astronomy 2009 statistics	http://philosophyofscienceport
PR_05			
One India	8-9-10	Log on to www.postcardsfromuniverse.org to send e-postcards from space to family, friends	http://news.oneindia.in/2010/0
DNA India	8-9-10	Log on to www.postcardsfromuniverse.org to send e-postcards from space to family	http://www.dnaindia.com/scite
Jounery to the stars	8-9-10	Postcards from the Edge of the Universe	http://journeytothestars.wordp
Portal to the Universe	8-9-10	Postcards from the Edge of the Universe – Free ebook	http://portaltotheuniverse.org/
IAU	8-9-10	The launch of the Postcards From the Edge of the Universe book at JENAM 2010	http://www.iau.org/public_pre
Sky at Night	8-9-10	Free download: new ESO book 'Postcards from the Edge of the Universe'	http://forum.skyatnightmagazi
DNA India	8-9-10	Log on to www.postcardsfromuniverse.org to send e-postcards from space to family	http://www.dnaindia.com/scite
Nauka w Polsce	8-9-10	Widokówki z krańców Wszechświata	http://www.naukawpolsce.pap
Jacktech	9-9-10	Le cartoline che arrivano dallo Spazio	http://www.jacktech.it/news/li
allesoversterrenkunde	7-9-10	Kosmisch dagboek gepresenteerd	http://www.allesoversterrenku
PR_06			
Astro.pt	14-9-10	JENAM 2010 – educação	http://astropt.org/blog/2010/0
PR_07			
Science Daily	10-9-10	First Detailed Image of Disc Around Young Star	http://www.sciencedaily.com/r
Astronomylive.org	10-9-10	First Detailed Image of Disc Around Young Star	http://www.astronomylive.org/
Astronomy & Astrophysics	10-9-10	ESO's VLT Takes First Detailed Image of Disc around Young Star	http://www.aanda.org/index.pl
Science News	10-9-10	First Detailed Image of Disc Around Young Star	http://enterprisepost.com/scie
PR_08			
CiênciaHoje	9-9-10	Portugal adere ao planeamento estratégico da Astronomia	http://www.cienciahoje.pt/inde
PR _10			
India Talkies	11-9-10	Mysteries of 'Green Pea' galaxies unveiled	http://www.indiatalkies.com/2(

Sindh Today	11-9-10	Mysteries of ‘Green Pea’ galaxies unveiled	http://www.sindhtoday.net/ne
Science Daily	12-9-10	Astronomer Unveils the Mysteries of 'Green Pea' Galaxies	http://www.sciencedaily.com/r
Science 2.0	12-9-10	Green Pea Galaxies - Another Win For Citizen Science	http://www.science20.com/ne
Cordis News	13-9-10	'Green Pea' galaxies: updates, and a tribute to citizen science	http://cordis.europa.eu/fetch?(
Space Daily	13-9-10	Astronomer Unveils Mysteries Of "Green Pea" Galaxies	http://www.spacedaily.com/re
Astronomy.com	13-9-10	Astronomer unveils the mysteries of "Green Pea" galaxies	http://www.astronomy.com/as
Hindustan Times	11-9-10	'Green Pea' galaxies' mystery unveiled	http://www.hindustantimes.co

PR_11

Space Daily	13-9-10	New Results on Dwarf Galaxies Evolution	http://www.spacedaily.com/re
Science Daily	10-9-10	Dwarf Galaxy Evolution: Reionization Alone Is Not Able to Stop Star Formation, Research Shows	http://www.sciencedaily.com/r
Care2	14-9-10	New Results on Dwarf Galaxies Evolution	http://www.care2.com/news/n

OUTROS

Destak	6-9-10	Dimensão e parcerias internacionais exigem um instituto nacional	http://www.destak.pt/artigo/7
CiênciaHoje	6-9-10	Portugal "devia ter" instituto nacional de Astronomia	http://www.cienciahoje.pt/inde
Correio da Manhã	7-9-10	Fundação exige instituto de Astronomia	http://www.cmjornal.xl.pt/deta
Rádio Ocidente	6-9-10	Dimensão e parcerias internacionais exigem um instituto nacional	http://www.radioocidente.pt/n
i	18-9-10	Astrónomas portuguesas. "Sinto-me a Jodie Foster, de jipe pelo deserto"	http://www.ionline.pt/conteud

Press releases, full version (English and Portuguese) and images:

Press release 01, image:

Caption: Faculty of Sciences, University of Lisbon

Credits: MUDA

European Astronomy comes to Lisbon in September
The European Week of Astronomy and Space Science

The Joint European and National Astronomy Meeting (JENAM) 2010, a major European astronomy meeting, will take place at the Faculty of Sciences of the University of Lisbon, Portugal, from Monday 6 September to Friday 10 September 2010.

This is an initiative of the European Astronomical Society (EAS) and will be an exciting scientific event, spanning front line topics in Astronomy, Space Sciences and technologies spread by the EAS Symposia, Plenary, Public and Special Sessions and posters. The programme for JENAM 2010 will cover a vast number of subjects ranging from the evolutionary aspects of Dwarf Galaxies, the study of Star Clusters in the era of Large Surveys, optical and infrared Interferometry, the role of environment in star and galaxies formation, Astronomy Planning in Europe, professional and amateur astronomers collaboration to new trends in Global Astronomy Education

Again, on this 18th edition of JENAM, main European astronomy infrastructures such as the European Southern Observatory (ESO) and the European Space Agency (ESA) will present their topical results. For the first time, CERN will participate at a JENAM with a major contribution.

More than 400 abstracts for oral presentations and posters have been submitted and around 600 astronomers from around the world are expected to attend.

This is the second time JENAM is held in Portugal and organised by the Portuguese Astronomical Society. Since its last Portuguese edition in Porto in 2002, astronomy has become the most competitive scientific area of research in Portugal, according to a study recently released by the Ministry of Science and Technology (http://www.gpeari.mctes.pt/archive/doc/Producaocientificanacional_fev2010_aa.pdf)

Details of the conference can be found on the official website: http://www.jenam2010.org

A draft programme can be found at: http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

Further information will be circulated before and during the meeting, including press notices on presentations that may be of special interest (subject to embargo).

JENAM 2010 is organised by the Portuguese Astronomical Society with the support of the Portuguese Foundation for Science and Technology (FCT), the Calouste Gulbenkian Foundation, OPTICON, RadioNet, ESO and ESA.

Media Registration

Media representatives are cordially invited to attend. Press room facilities will be available for the duration of the conference, from 9 am on Monday 6 September through to 5 pm on Friday 10 September. The venue has a wireless network.

Media registration is free. Any bona fide media delegates can pre-register online or by e-mailing info@scienceoffice.org (advance registration is not essential but encouraged).

Science bloggers and new media activists are most welcome to join the conference or our mailing list.

Notes for the editors

JENAM is organised each year in one of the European countries jointly by the European Astronomical Society (EAS) and one of the national astronomical societies. JENAM 2010 is the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

The European Astronomical Society (EAS) was founded in 1990 and its purpose is to contribute to and promote the advancement of astronomy, in its broadest sense, in Europe, by providing an independent forum for the discussion of subjects of common interest and by providing means whereby action can be taken on those matters which appear desirable to be handled at the European level. EAS brings together 24 European Astronomical Societies and more than 700 professional astronomers.

Links

JENAM: http://www.jenam2010.org

European Astronomical Society (EAS): http://eas.unige.ch/

Portuguese Astronomical Society: http://www.sp-astronomia.pt/

European Southern Observatory (ESO): http://www.eso.org/public/

European Space Agency: http://www.esa.int

Foundation for Science and Technology (FCT): http://alfa.fct.mctes.pt/

Calouste Gulbenkian Foundation: http://www.gulbenkian.pt/index.php?langId=2

RadioNet: http://www.radionet-eu.org/

OPTICON: http://www.astro-opticon.org/

Astronomia Europeia vem a Lisboa em Setembro
Semana Europeia de Astronomia e Ciências Espaciais

A ***Joint European and National Astronomy Meeting*** *(JENAM) 2010*, uma das mais importantes reuniões científicas na área da astronomia na Europa, terá lugar na Faculdade de Ciências da Universidade de Lisboa de 6 a 10 de Setembro de 2010.

Uma iniciativa da Sociedade Astronómica Europeia (EAS), este será um importante evento científico, abrangendo temas na linha de frente da astronomia, ciências espaciais e tecnologia, espalhados pelo Simpósios da EAS, Sessões Plenárias, Sessões Públicas, Sessões Especiais e Posters. O programa da JENAM 2010 irá abranger um grande número de assuntos que vão desde os aspectos evolutivos das galáxias anãs, o estudo dos agrupamentos estelares, Interferometria óptica e no infravermelho, o papel do ambiente na formação de estrelas e galáxias, o planeamento estratégico da Astronomia na Europa, colaboração entre astrónomos profissionais e amadores e as novas tendências na educação global da Astronomia

Nesta 18 ª edição da JENAM, grandes instituições científicas europeias como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA) irão apresentar os seus resultados mais actuais. Pela primeira vez, o CERN vai participar no JENAM com uma importante contribuição.

Mais de 400 artigos para apresentações orais e posters foram submetidos e espera-se que cerca de 600 astrónomos de todo o mundo estejam presentes neste encontro.

Esta é a segunda vez que a JENAM é realizada no nosso país e organizada pela Sociedade Portuguesa de Astronomia. Desde a sua última edição em Portugal, que teve lugar no Porto em 2002, a astronomia tornou-se a área mais competitiva da investigação científica em Portugal, segundo um estudo divulgado recentemente pelo Ministério da Ciência, Tecnologia e Ensino Superior (http://www.gpeari.mctes.pt/archive / doc/Producaocientificanacional_fev2010_aa.pdf).

Mais informações sobre a conferência podem ser encontrada no site oficial: http://www.jenam2010.org

O programa provisório da conferência pode ser encontrado em: http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

A JENAM 2010 é organizada pela Sociedade Portuguesa de Astronomia com o apoio da Fundação para a Ciência e Tecnologia (FCT),Fundação Calouste Gulbenkian, OPTICON, RadioNet, ESO e ESA.

Mais informações serão divulgadas antes e durante a conferência, incluindo notas de imprensa sobre as apresentações que podem ser de especial interesse (sujeito a embargo).

Acreditação de jornalistas

Os representantes dos meios de comunicação social são convidados a participar. Um Gabinete de Imprensa estará disponível durante o período da conferência, a partir das 09:00h de Segunda-feira 6 de Setembro até às 17:00h de Sexta-feira 10 de Setembro. O Gabinete dispõe de Internet sem fios.

A acreditação de jornalistas é gratuita, podendo um pré-registo ser feito online no website da conferência ou por correio electrónico para info@scienceoffice.org (a inscrição antecipada não é obrigatória, mas encorajada).

Bloggers de ciência são bem-vindos para participar da conferência ou para fazer parte da nossa *mailing list*.

Notas para os editores

A JENAM é organizada a anualmente num país Europeu, numa colaboração entre a Sociedade Astronómica Europeia (EAS) e uma das sociedades astronómicas nacionais. O JENAM 2010 é a 18ª Reunião Anual da Sociedade Astronómica Europeia e a 20ª Reunião Portuguesa de Astronomia e Astrofísica.

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Ligações

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Agência Espacial Europeia: http://www.esa.int

Fundação para a Ciência e Tecnologia (FCT): http://alfa.fct.mctes.pt/

Fundação Calouste Gulbenkian:http://www.gulbenkian.pt

RadioNet: http://www.radionet-eu.org/

OPTICON: http://www.astro-opticon.org/

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Press release 02, image:

Caption: A vision of the near-future ALMA antenna array.ALMA will be one of the topics discussed during JENAM

Credits: ALMA (ESO/NAOJ/NRAO)/L. Calçada (ESO)/H. Heyer (ESO)/H. Zodet (ESO)

Astronomy stars gather in Lisbon for the European Week of Astronomy and Space Science

Lisbon, 1 September: The Joint European and National Astronomy Meeting (JENAM 2010), a major European astronomy meeting, starts next week, running for 6 to 10 September, at the Faculty of Sciences of the University of Lisbon.

This initiative of the European Astronomical Society (EAS) will be attended by almost 600 astronomers from around the world. Topics at the forefront of astronomy, space sciences and associated technologies will be discussed, covering a wide array of subjects ranging from the search and study Earth-like planets to the most recent results on the formation and evolution of stars and galaxies and the Universe itself. Also of great importance will be the technical sessions addressing topics like the latest developments in optical interferometry and one of the next big infrastructures for research in radio astronomy: the Square Kilometer Array (SKA).

André Moitinho de Almeida, President of the Portuguese Astronomical Society, the institution that organises JENAM for the second time in Portugal, gives us some highlights of the conference: "I think we will have some very interesting sessions, such as the lecture by Raymond Wilson, one of the fathers of active optics and who will receive the Tycho Brahe Award 2010 during JENAM and the special sessions of the European Southern Observatory (ESO) and the European Space Agency (ESA) which will present recent results on the Rosetta Mission and Herschel Space Telescope, as well as an overview of future ESA missions within the Cosmic Vision Programme."

André Moitinho de Almeida also points out the Special Session dedicated to CERN (European Centre for Nuclear Research), which is participating for the first time in this conference: "in this session we will discuss future results of high energy physics obtained with the Large Hadron Collider and the impact of these results on astrophysics."

The European Southern Observatory (ESO) will be present with a talk on the E-ELT (European Extremely Large Telescope) made by Bruno Leibundgut, Director of ESO's Office for Science. ESO will also have a special session dedicated to ALMA, the Atacama Large Millimeter Array.

Another centrepiece of the Plenary Sessions is the Highlight Talks by Young Outstanding Researchers: on Tuesday, September 7, Enric Pallé (IAC) will address "*The Earth as a distant planet*"; and on Thursday, September 9, on the opposite edge of astronomical spatial scales, Catherine Heymans (ROE) will talk to us about "*Charting the dark Universe*".

But not only hard science will be discussed during JENAM. Topics such as strategic planning of astronomy in Europe, collaboration between professional and amateur astronomers, new trends in global education and the future of astronomy education and outreach after the International Year of Astronomy 2009 will also be addressed.

"*We believe JENAM greatly contributes to promote the advancement of astronomy in Europe. It is also a good opportunity for scientists to meet and discuss their projects and results and, finally, it provides an important forum of discussion for the most pressing topics in modern astronomy*", says Joachim Krauter, President of the European Astronomical Society.

Details of the conference can be found on the official website: http://www.jenam2010.org

The conference programme can be found at: http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

More detailed information about ESA and CERN Sessions here: http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=3&Itemid=34

JENAM 2010 is organised by the Portuguese Astronomical Society with the support of the Portuguese Foundation for Science and Technology (FCT), the Calouste Gulbenkian Foundation, Ciência Viva, OPTICON, RadioNet, ESO and ESA.

Notes for the editors

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Foundation for Science and Technology (FCT): http://alfa.fct.mctes.pt/

Calouste Gulbenkian Foundation: http://www.gulbenkian.pt/index.php?langId=2

Ciência Viva: http://www.cienciaviva.pt/home/index.asp?accao=changelang&lang=en

RadioNet: http://www.radionet-eu.org/

OPTICON: http://www.astro-opticon.org/

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Estrelas da Astronomia reúnem-se em Lisboa para a Semana da Astronomia Ciências Espaciais e o público é convidado a participar.

Lisboa, 1 de Setembro: É já no próximo dia 6 de Setembro que começa a Joint European and National Astronomy Meeting (JENAM 2010), uma das mais importantes reuniões científicas na área da astronomia na Europa, e que decorrerá durante uma semana, na Faculdade de Ciências da Universidade de Lisboa.

Nesta iniciativa da Sociedade Europeia de Astronomia (EAS), onde estarão presentes cerca de 600 astrónomos de todo o mundo, serão discutidos temas na linha de frente da astronomia, ciências espaciais e tecnologias associadas, abrangendo um grande número de assuntos que vão desde a busca e estudo de planetas semelhantes à Terra até aos mais recentes resultados sobre a formação e evolução de estrelas e galáxias e do próprio Universo. De grande relevo serão também as sessões de carácter mais tecnológico que tratarão dos últimos desenvolvimentos em interferometria óptica e no infravermelho e a uma das próximas grandes infra-estruturas como o E-ELT – European Extremely Large Telecope e o projecto de rádio-astronomia Square Kilometer Array (SKA).

Durante toda a semana em que decorre a conferência, o público está convidado a visitar, na Faculdade de Ciências da Universidade de Lisboa, uma exposição sobre temas relacionados com a astronomia, ciências espaciais e novas tecnologias, com a presença de grandes organizações científicas como a ESA, o ESO e SKA, redes europeias como a RadioNet, OPTICON, e o European Research Council, e também de algumas companhias nacionais que operam na área das tecnologias aeroespaciais como a Edisoft, Deimos e GMV.

Também de acesso livre ao público serão as palestras dos astrónomos Portugueses João Magueijo (Imperial College London), "*A anarquia e as leis da Física*", na terça-feira, dia 7, pelas 18:30h e de Paulo Freire (Max-Planck-Institut für Radioastronomie), "*Pulsares – os Relógios do Cosmos*", na sexta-feira, dia 10, pelas 19:00h.

André Moitinho de Almeida, Presidente da Sociedade Portuguesa de Astronomia, entidade que organiza pela segunda vez o JENAM no nosso país, salienta alguns pontos altos desta conferência: "*Penso que temos algumas sessões imperdíveis, como a palestra do Raymond Wilson, um dos pais da óptica activa e que vai receber durante o JENAM o Prémio Tycho Brahe 2010 e as sessões especiais do Observatório Europeu do Sul (ESO) E da Agência Espacial Europeia (ESA) que vai apresentar resultados recentes da missão Rosetta e do Telescópio Espacial Herschel bem como uma visão das futuras missões da ESA no âmbito do programa Cosmic Vision*."

André Moitinho de Almeida salienta ainda a Sessão Especial do CERN (Centro Europeu de Pesquisa Nuclear) que pela primeira vez participa nesta conferência: *" serão debatidos os futuros resultados de física de altas energias obtidos com o acelerador de partículas - Large Hadron Collider - e o impacto destes resultados na astrofísica*".

O Observatório Europeu do Sul (ESO) estará presente com uma apresentação sobre o E-ELT (European Extremely Large telescope) proferida por Bruno Leibundgut , Director Cientifico do ESO.O ESO irá igualmente ter uma sessão especialmente dedicada ao ALMA (Atacama Large Millimiter Array).

Outro ponto central desta conferência será as *Palestras de Jovens Investigadores Notáveis:* na terça-feira 7 de Setembro, Enric Palle (IAC) irá falar sobre "*A Terra como um planeta distante*". Na quinta-feira, 9 de Setembro, do lado oposto na escala espacial astronómica, Catherine Heymans (ROE) vai falar-nos sobre "*Mapear o Universo escuro*".

Mas nem só de ciência pura e dura se falará durante o JENAM. Também temas como o planeamento estratégico da Astronomia na Europa, a colaboração entre astrónomos profissionais e amadores, as novas tendências na educação global da Astronomia e o futuro do ensino e divulgação da Astronomia serão abordados.

"*Penso que o JENAM contribui para promover o avanço da astronomia na Europa. É também uma boa oportunidade para os cientistas se reunirem e discutirem seus projectos e resultados e, finalmente, fornece um importante fórum de discussão para os temas mais prementes na astronomia moderna* ", afirma Joachim Krauter, presidente da Sociedade Europeia de Astronomia." *Estamos muito contentes por este encontro se realizar em Portugal, um país que tem uma longa história na astronomia que remonta ao século XV e que apresenta nos últimos 30 anos uma impressionante evolução no que se refere à astronomia moderna*", termina Joachim Krauter.

Mais informação sobre a conferência pode ser encontrada no site oficial:
http://www.jenam2010.org

O programa da conferência pode ser encontrado em:
http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

Informações mais detalhadas sobre as Sessões da ESA e do CERN podem ser encontradas aqui:
http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=3&Itemid=34

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Agência Espacial Europeia: http://www.esa.int

CERN: http://public.web.cern.ch/public/

ALMA: http://science.nrao.edu/alma/index.shtml

Fundação para a Ciência e Tecnologia (FCT): http://alfa.fct.mctes.pt/

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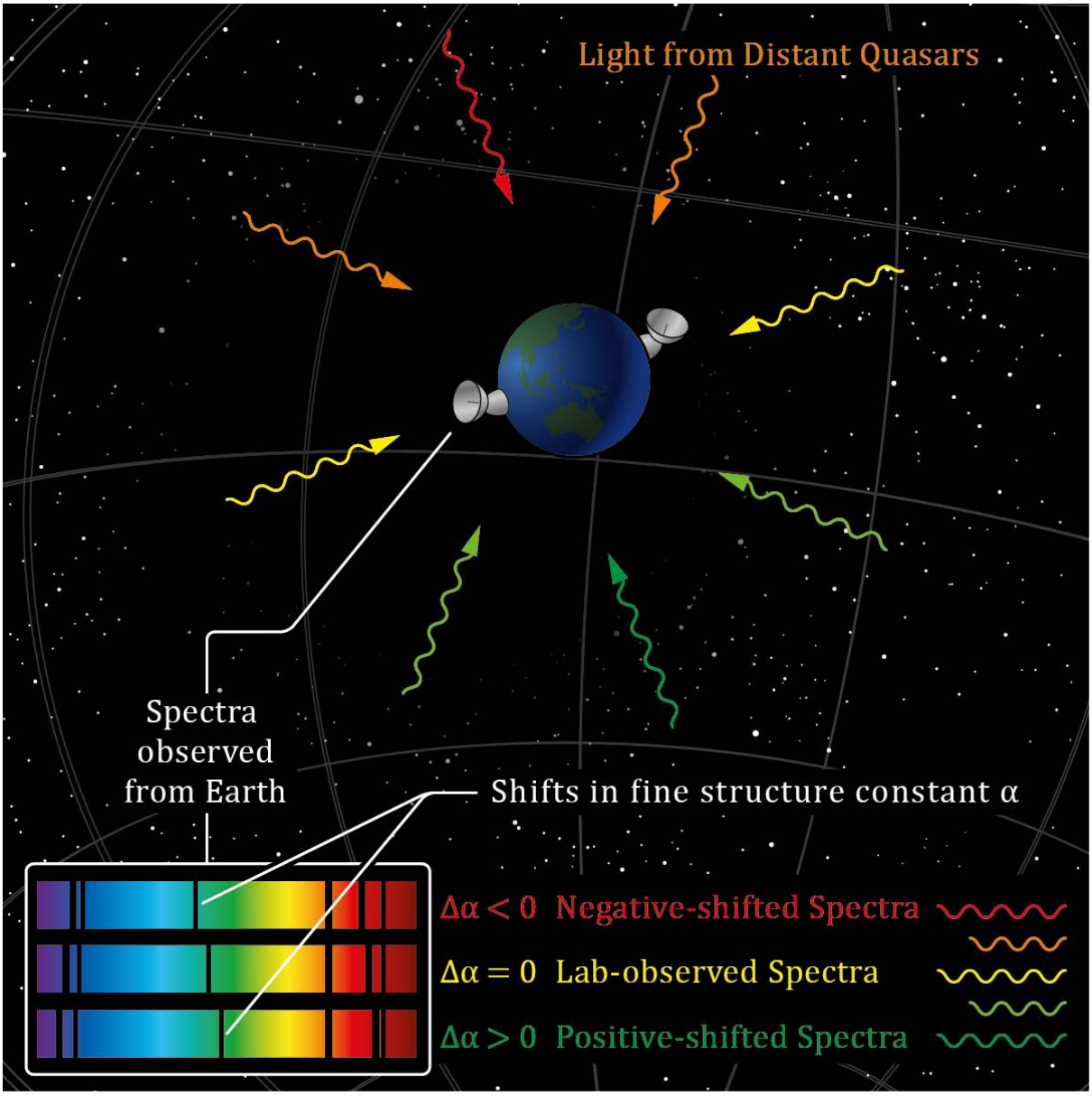
Press release 03, image:



Caption: "Quasars Spectra sifts imply variation of fine-structure constant: A team of astronomers have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their centre. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth".

Credits: Dr. Julian Berengut, UNSW, 2010

When fundamental constants change over space — rethinking physics as we know it

Lisbon, 6 September 2010: New research suggests that the supposedly invariant fine-structure constant, which characterises the strength of the electromagnetic force, varies from place to place throughout the Universe. The finding could mean rethinking the fundaments of our current knowledge of physics. These results will be presented tomorrow during the Joint European and National Astronomy Meeting in Lisbon, Portugal, and the scientific article has been submitted to the Physical Review Letters Journal.

A team of astronomers led by John Webb from the University of New South Wales, Australia, have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their centre. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth.

Webb's results imply that the fine-structure constant, which characterises the strength of the electromagnetic force, might have different values depending on which direction we are looking in the sky, thus being not so 'constant' after all.

“The precision of astrophysical measurements of the fine-structure constant, or alpha, dramatically increased about a decade ago when Victor Flambaum and I introduced the ´Many-Multiplet Method´, and since then evidence started mounting, suggesting this crucial physical quantity might not be the same everywhere in the Universe” says Webb.

The results obtained by Webb’s team suggest that if there is any time-variation, it may be much less than the variation with position in the Universe. If correct, the new data indicates that new physics will be required to explain something so fundamental. The implications of these results are so resounding that they are likely to cause controversy in the scientific community.

Using two world-class observatories, the Keck Telescope and the European Southern Observatory's Very Large Telescope, Webb and his team observed the very energetic radiation coming from the most luminous objects in the universe: quasars. Although quasars are incredibly far away, we can detect them from the Earth due to the sheer quantity of electromagnetic radiation that they emit, likely caused by material falling into supermassive black holes at their centres.

"The interaction of the light from the quasars with the gas clouds provides an impressive opportunity to investigate the physical conditions when the Universe was just a fraction of its current age," says PhD student Julian King, who played a major role in this research. "It is exciting that we have the technology to be able to measure the laws of physics in the early Universe so precisely," he added.

The new results collected by Webb and his team can be explained if our Universe is in fact exceptionally or indeed infinitely large, with fundamental quantities and 'constants' possessing different values from patch to patch. In such a scenario, we would exist in just a tiny part with correspondingly small changes in the physical constants. This view raises a whole series of new

questions on how 'alpha' and the other 'constants' have been so finely-tuned, in our local patch of the Universe, to develop physics and chemistry as we know them, and along them, life on Earth.

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Disclaimer: Please note that this result has not been published in a scientific journal and it is currently in the peer review process.

Professor Webb will present his work remotely from Australia during JENAM 2010 and his talk will be available via streaming on the conference's website at 9:00h, GMT +1 tomorrow.The talk will be recorded and will be available for viewing on the JENAM website.

Image caption and credits: "Quasars Spectra sifts imply variation of fine-structure constant: A team of astronomers have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their centre. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth". Credits: Dr. Julian Berengut, UNSW, 2010

Links:
Scientific Paper: http://arxiv.org/abs/1008.3907

Webb's presentation (streaming): mms://wms.fc.ul.pt/jenam2010

JENAM2010 website: http://www.jenam2010.org

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Press release 04, image:

Caption: Durante o Festival dos Oceanos 2009, dedicado ao tema da astronomia, foi pintada a maior tela com temas astronómicos do Mundo, o que lhe valeu um recorde do Guinness.

Credits: Festival dos Oceanos

Ano Internacional da Astronomia 2009 chegou a centenas de milhões de pessoas: relatório final desvendado

Lisboa, 7 de Setembro: O relatório final de 1300 páginas do Ano Internacional da Astronomia 2009 (AIA2009) foi revelado hoje na Semana Europeia de Astronomia e Ciências Espaciais, em Lisboa. O documento mostra que pelo menos 815 milhões de pessoas em 148 países participaram naquele que é o maior evento científico a nível mundial das últimas décadas. Portugal foi um desses países, com uma estimativa de 2 milhões de portugueses atingidos pelo AIA.

Este relatório é uma compilação dos resultados dos 216 participantes no Ano Internacional da Astronomia 2009 (AIA2009): 148 países, 40 organizações internacionais e 28 projectos globais. É um registo do legado desta surpreendente celebração internacional da astronomia e demonstra o entusiasmo, empenho e dedicação da comunidade.

Cerca de metade das organizações participantes no AIA2009 dão conta, neste documento, do número de pessoas atingidas pelos eventos que organizaram, bem como do orçamento que tiveram disponível para levar a cabo as suas actividades. Estima-se que o equivalente a pelo menos 18 milhões de euros tenha sido alocado a actividades do AIA2009. Este investimento financeiro foi complementado por contribuições em espécie de astrónomos amadores e profissionais, educadores e entusiastas que ajudaram a organizar os eventos.

O relatório conclui também que pelo menos 815 milhões de pessoas participaram ou foram de algum modo atingidas pelo AIA2009, em todo o mundo. Festas de estrelas, debates, palestras, exposições, programas escolares, livros, eventos artísticos, documentários e desfiles em homenagem à astronomia e as suas realizações, fizeram do AIA2009 o maior evento de ciência das últimas décadas.

Os valores mais elevados de participação vêm da Índia, onde se estima que mais de 700 milhões de pessoas tenham participado em actividades do AIA2009. No Brasil, um orçamento equivalente a 2 milhões de euros ajudou os organizadores a atingir 2,2 milhões de pessoas, com mais de 16 600 eventos em todo o país. A Coreia do Sul foi um dos países mais activos no AIA2009, com mais de 500 eventos que atingiram cerca de 11 milhões de pessoas. No Reino Unido, os organizadores usaram um orçamento de mais de 1 milhão de euros para chegar a mais de um milhão de pessoas.

Também em Portugal o AIA foi um retumbante sucesso. Ao orçamento nacional de 160 000 euros, proveniente da Ciência Viva, Fundação Calouste Gulbenkian e Fundação para a Ciência e Tecnologia, juntaram-se outras contribuições provenientes de instituições que organizaram actividades a nível local. Foi com um total de cerca de 500 000 euros que se organizaram mais de 4000 actividades em todo o país, que chegaram a cerca de 2 milhões de pessoas. Dessas, cerca de metade participaram directamente em actividades do AIA.

Essencial para este sucesso foi também o apoio das mais das 3000 pessoas, na sua grande maioria voluntários, que colaboraram na organização destes eventos, como frisa João Fernandes, que assumiu em Portugal a coordenação do Ano Internacional da Astronomia.

João Fernandes destaca algumas actividades que foram organizadas no nosso país. “Penso que merece especial atenção o facto de mais de 250 escolas primárias e secundárias terem estado envolvidas em actividades de astronomia, com apresentações e sessões de observação promovidas pelos professores e por astrónomos amadores e profissionais”, adianta.

Ainda nas escolas, realce para os dez cursos de formação avançada para professores "*Vamos ensinar e aprender astronomia*", que envolveram mais de 300 professores. Esta formação foi formatada de acordo com *Galileo Teachers Training Program,* um dos projectos-pilar do AIA2009.

Mas o público em geral também não foi esquecido. Entre centenas de palestras, reuniões públicas, peças de teatro, emissão de selos e exposições em todo o país, destaca-se o "Festival dos Oceanos", que em 2009 foi dedicado ao Ano Internacional da Astronomia e que levou à zona ribeirinha de Lisboa mais de 300 000 pessoas. Neste festival foi pintada a maior tela com temas astronómicos e oceanográficos do mundo. Com 4,8 km de comprimento, foi pintada por mais de 15 000 pessoas e atingiu o recorde do Guinness.

Há outras actividades no âmbito do AIA2009 que foram premiadas internacionalmente. Ana Mourão (IST) e o Centro Multimeios de Espinho foram premiados no âmbito do projecto "100 Horas de Astronomia", enquanto Luís Santo (Grupo Atalaia), o NUCLIO e, novamente, o Centro Multimeios de Espinho, foram premiados no âmbito do projecto internacional "Noites de Galileu".

Públicos menos habituais em eventos de ciência foram também atingidos em Portugal: "A exposição "Da Terra ao Universo" esteve patente em dezenas de locais em Portugal, incluindo uma prisão e um hospital", realça João Fernandes.

Destaque especial também para a série "1 Minuto de Astronomia" que levou à televisão pública 13 caras conhecidas, entre actores, músicos e apresentadores, a falar de astronomia.

"É muito difícil mencionar todas as actividades magníficas que tiveram lugar em 2009 no âmbito do AIA, mas elas estão bem documentas no relatório internacional final que é agora lançado, e os mais curiosos poderão consultá-lo", prossegue João Fernandes. "E claro que muitas destas actividades irão continuar além 2009, através da rede não formal que foi estabelecida entre as instituições que participaram e pela utilização dos muitos recursos digitais e físicos que foram produzidos" conclui.

Notas para os editores:

Em Portugal, o AIA2009 foi organizado pela Sociedade Portuguesa de Astronomia, com a colaboração da Fundação para a Ciência e Tecnologia, Fundação Calouste Gulbenkian, Museu da Ciência, Universidade de Coimbra, Agência Ciência Viva e Sociedade Europeia de Astronomia.

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Legenda da imagem: Durante o Festival dos Oceanos 2009, dedicado ao tema da astronomia, foi pintada a maior tela com temas astronómicos do Mundo, o que lhe valeu um recorde do Guinness.

Ligações

JENAM 2010: www.jenam2010.org
Ano Internacional da Astronomia 2009: www.astronomia2009.org
1 Minuto de Astronomia: www.1minutoastronomia.org
Galileo Teacher Training Program: www.site.galileoteachers.org
Centro Multimeios de Espinho: www.multimeios.pt
NUCLIO: www.nuclio.pt
Sociedade Portuguesa de Astronomia: www.sp-astronomia.pt

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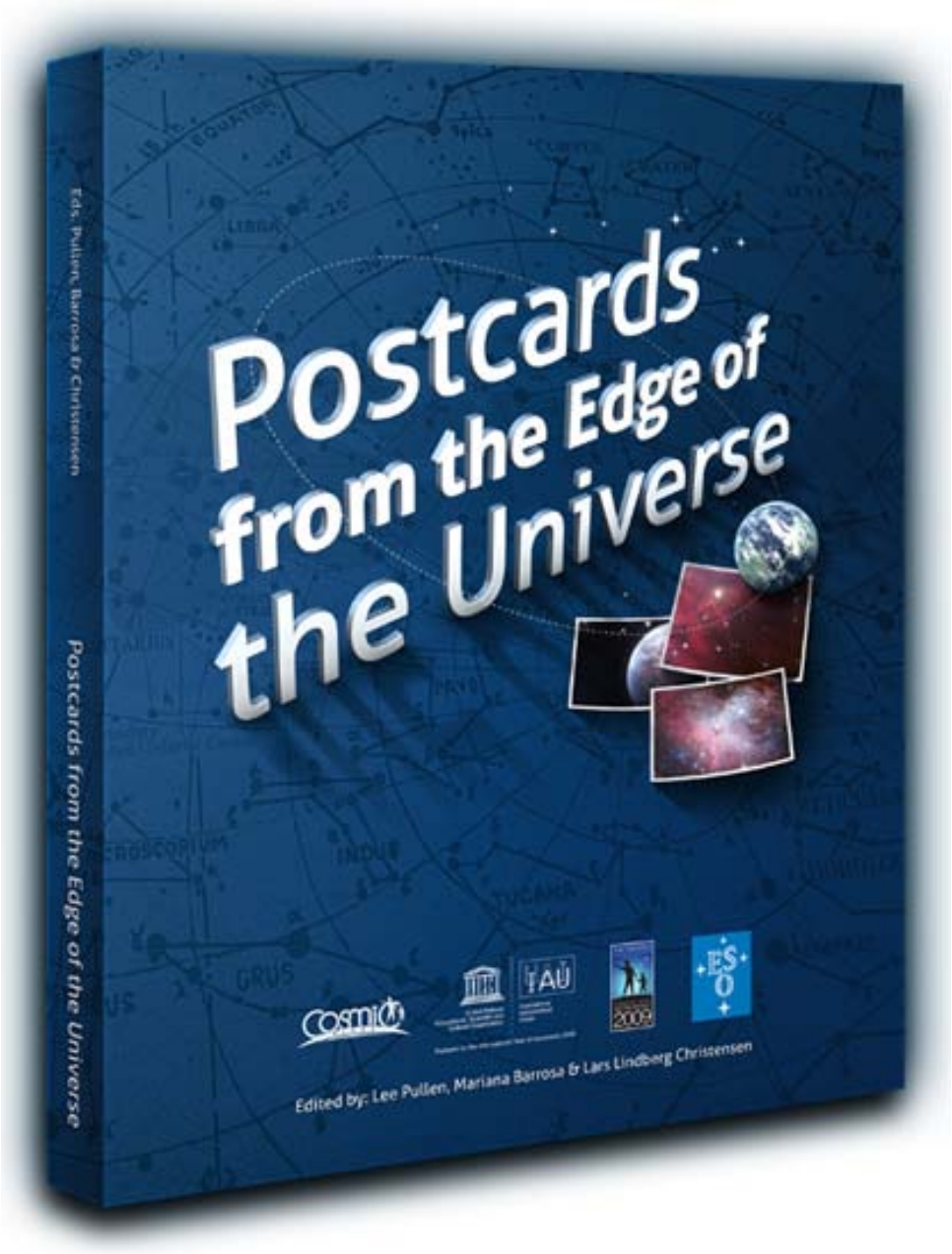
Press release 05, image:



Caption: Postcard from the Edge of the Universe, book cover

Credits: André Roquette, ESO

Cosmic Diary Anthology Released as a Free Book: Postcards from the Edge of the Universe

Source: IAU

7 September 2010, Lisbon: The book, Postcards from the Edge of the Universe, was launched today at the European Week of Astronomy and Space Science in Lisbon, Portugal. A legacy of the International Year of Astronomy 2009 Cornerstone project Cosmic Diary, the book features articles from astronomers around the world about the hottest astronomical topics of the moment.

From sunspots to black holes, planets around other stars, supernovae and dark matter, Postcards from the Edge of the Universe unveils the mysteries of today's research, looking at cutting-edge astronomy from around the world. Articles by 24 frontline astronomers from all corners of the globe explain their science in accessible language.

This book is based on a hand-picked selection of the best posts and science writing from the astronomy blog Cosmic Diary, one of the twelve Cornerstone projects of the International Year of Astronomy 2009 (IYA2009). The contributions have been compiled into an edited anthology that gives an enthralling snapshot of contemporary astronomy. The four-page popular-science articles all have a personal flavour, as each contributor has selected their own research topic, giving the reader a personal insight into work at the forefront of astronomy.

Lee Pullen, one the book's editors says, "The strengths of the Cosmic Diary are all here in this book: modern science, accessible writing and fascinating topics. The diverse areas covered mean there's something for everyone, whatever their level of space science knowledge. We're very happy to be offering this as a legacy of the International Year of Astronomy 2009."

Catherine Cesarsky, chair of the IYA2009 Executive Committee, adds, "Releasing this book means that the spirit of IYA2009 and the Cosmic Diary endures, allowing people all over the world easy access to modern astronomical research as presented by the scientists themselves."

Visitors to the book's website, www.postcardsfromuniverse.org, will find an option to send an electronic postcard from space to family and friends — the only postal service that makes light-speed deliveries.

Postcards from the Edge of the Universe was edited by Lee Pullen, Mariana Barrosa and Lars Lindberg Christensen and was produced in a collaboration between ESO, the International Astronomical Union and UNESCO in the framework of the International Year of Astronomy 2009.

Postcards from the Edge of the Universe is available as an electronic book for free download from http://www.postcardsfromuniverse.org/ and can be ordered in hardcopy form from ESO's shop.

Links:

* Postcards from the Edge of the Universe website: www.postcardsfromuniverse.org

* Cosmic Diary blog: http://www.cosmicdiary.org/

* ESOshop: http://www.eso.org/public/shop/

* The International Year of Astronomy 2009: http://www.astronomy2009.org/

* JENAM2001: http://www.jenam2010.org

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Press release 06, image:

Caption: Teachers Workshop

Credits: ESA

Novos rumos para a educação das ciências na Europa discutiram-se esta semana em Lisboa, na Semana Europeia da Astronomia e Ciências Espaciais

Lisboa, 10 de Setembro 2010: Durante a Semana Europeia da Astronomia e Ciências Espaciais que decorre esta semana na Faculdade de Ciências da Universidade de Lisboa, vários astrónomos de todo o mundo discutiram os recentes sucessos e desafios para o futuro das instituições educativas, através da utilização de instrumentos modernos de ensino da ciência nas escolas europeias.

Apesar de as Ciências da Educação serem reconhecidas como um dos pilares dos sistemas de ensino modernos, é impossível contornar o facto de que o interesse das novas gerações em temas de ciência tem vindo a diminuir. É necessária uma mudança dos métodos tradicionais de ensino da ciência. Os fascinantes avanços da astronomia dos últimos anos podem ser um poderoso aliado para atingir este objectivo.

O recém-aprovado Plano Estratégico da União Astronómica Internacional (UAI) para os próximos 10 anos (http://iau.org/static/education/strategicplan_091001.pdf) prevê o uso da astronomia como um impulsionador para o desenvolvimento em vários países. Isso só pode ser feito se houver um investimento constante em formação de educadores e na qualificação dos alunos com as ferramentas certas para enfrentar o mercado de trabalho.

Um pouco por todo o mundo têm vindo a ser desenvolvidas várias acções na área de formação de professores em novas tecnologias no ensino das ciências, através do ensino da astronomia. Portugal não é uma excepção.

O Galileo Teachers Training Program (GTTP), um projecto internacional iniciado no âmbito do Ano Internacional da Astronomia 2009 (AIA 2009), está a criar uma rede de formadores a nível mundial, dotando-os de conhecimentos sobre os melhores recursos e ferramentas para a educação em astronomia.

Estas técnicas são, posteriormente, transmitidas a professores, através de workshops, acções de formação e ferramentas de ensino *online*, entre outros. Tudo para que, no final, estes novos conhecimentos sejam aplicados nas salas de aula, designadamente através da utilização de novas tecnologias, motivando os alunos para a ciência e astronomia.

Como no resto do mundo, o GTTP é já um caso de sucesso em Portugal. O nosso país foi um dos que teve mais professores participantes (350) durante o AIA2009 e, nas palavras da coordenadora nacional deste programa, Rosa Doran, “notou-se em 2009 um acréscimo na participação e interesse dos professores, já que houve muita divulgação e as próprias escolas se preocuparam mais em fazer chegar a informação aos docentes”.

Esta formação teve três níveis: Introdução à Astronomia, Introdução à utilização dos Telescópios e GTTP – Novas Tecnologias, e foi levada a cabo com o apoio de várias instituições no país. Ao longo da formação, os professores aprenderam a usar *software* astronómico, telescópios robóticos, a fazer processamento de imagem, entre outros recursos.

Rosa Doran considera que há três grandes mais-valias deste projecto: Para além do investimento nas novas tecnologias no ensino e da promoção de um trabalho interactivo com os alunos, também o facto de os professores "terem sempre a quem recorrer para tirar dúvidas, através da rede de professores certificados" é um factor diferenciador em relação às acções de formação mais convencionais. São, inclusivamente, promovidos encontros e campanhas nas quais os professores estão convidados a participar, usando o que aprenderam na sua formação.

O GTTP é apoiado, a nível internacional, pelo Global Hands on The Universe (GHOU) e organizado, no nosso país, pelo NUCLIO – Núcleo Interactivo de Astronomia.

O NUCLIO foi recentemente certificado como entidade formadora pelo Conselho Científico-Pedagógico da Formação Contínua, e os cursos que ministra estão também em vias de certificação para o ano lectivo 2010/2011, o que significa que os professores que fizerem esta formação obtêm créditos.

Durante esta semana, a propósito da Semana Europeia da Astronomia e Ciências Espaciais, foi organizada uma destas acções de formação para professores que contou com cerca de 30 participantes oriundos de escolas nacionais. Esta formação contou com alguns formadores de gabarito internacional e que têm tido um papel preponderante no sucesso da implementação do GTTP a nível mundial, como Connie Walker, cientista do Office of Education and Public Outreach do National Optical Astronomy Observatory (E.U.A.) e Anita Heward, assessora de imprensa do Europlanet.

Leonor Cabral, da Escola Secundária da Cidaleda em Cascais, uma das professoras presentes na formação, entende que "é muito importante apostar neste tipo de iniciativas, pois elas motivam a troca de novos conhecimentos, e só assim é possível avançar para novos patamares". Nélson Correia, professor de Física e Química na Escola Secundária Maria Lamas em Torres Novas também vê vantagens na implementação de programas como o GTTP: "estas formações permitem-nos aprender a usar novos recursos e a dinamizar as aulas, motivando os alunos para a astronomia", explica. Rosa Doran espera agora "que estas novas gerações de professores a receber formação vão 'contaminando' mais e mais professores e alunos" de forma a continuar o sucesso do programa.

O GTTP vai já colhendo os seus frutos no terreno, mas falta agora chegar a interlocutores no Ministério da Educação, de forma a poder incluir esta formação nos programas curriculares das escolas, à semelhança do que vai acontecendo em outros países europeus.

Na continuação desta formação, o NUCLIO vai levar a cabo uma palestra com Connie Walker, com o tema "The Dark Side of Light: Choosing Starlight Over Our Light", que vai decorrer este sábado no Planetário Calouste Gulbenkian, em Lisboa, das 21h30 às 23h.

Notas para os editores:

Em Portugal, o AIA2009 foi organizado pela Sociedade Portuguesa de Astronomia, com a colaboração da Fundação para a Ciência e Tecnologia, Fundação Calouste Gulbenkian, Museu da Ciência, Universidade de Coimbra, Agência Ciência Viva e Sociedade Europeia de Astronomia.

A JENAM é organizada a anualmente num país Europeu, numa colaboração entre a Sociedade Astronómica Europeia (EAS) e uma das sociedades astronómicas nacionais. O JENAM 2010 é a 18ª Reunião Anual da Sociedade Astronómica Europeia e a 20ª Reunião Portuguesa de Astronomia e Astrofísica.

O Global Hands on the Universe é um programa educacional que permite a estudantes de todo o mundo fazer investigação, usando ferramentas e conceitos de ciência, matemática e tecnologia.

O NUCLIO – Núcleo Interactivo de Astronomia, é uma instituição criada em 2001 por astrónomos profissionais e amadores, responsável pela organização do GTTP em Portugal, que aposta na divulgação e ensino de ciência, em particular da astronomia e astrofísica.

Ligações:

JENAM 2010: www.jenam2010.org
Ano Internacional da Astronomia 2009: www.astronomia2009.org
Galileo Teacher Training Program: www.site.galileoteachers.org
Global Hands on The Universe: http://www.globalhou.net/
NUCLIO: www.nuclio.pt
Planetário Calouste Gulbenkian: http://www.planetario.com.pt/

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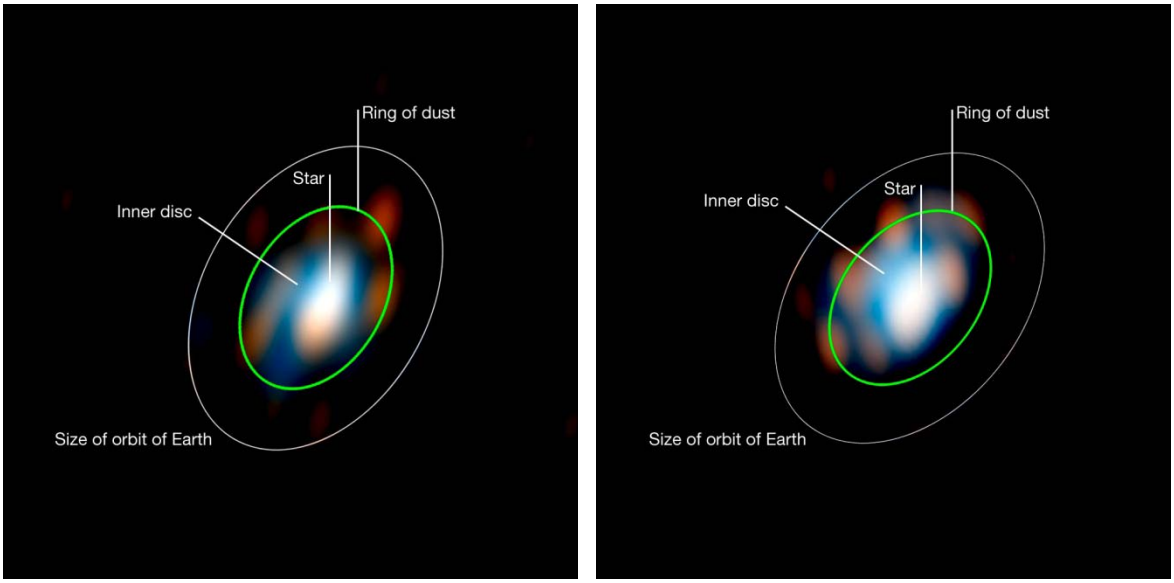
Press release 07, image:



Caption: A – Disc around the young star HD 163296 (observations)
http://www.eso.org/public/images/ann1058a/
New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the disc of matter around a young star. Stéphanie Renard of the Laboratoire d'Astrophysique de Grenoble and colleagues used the ESO VLT Interferometer to probe the secrets of the inner part of the disc around the star HD 163296. This image shows the reconstruction of images in two parts of the near-infrared spectrum (H and K). The green ellipse traces the location of the newly discovered ring inside which the dust was found. The white ellipse represents the orbit of the Earth around the Sun placed in this system in order to show the scale of the picture and the extraordinarily fine details that are revealed in this image.

Caption: B – Disc around the young star HD 163296 (observations and model)
http://www.eso.org/public/images/ann1058b/
New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the disc of matter around a young star. Stéphanie Renard of the Laboratoire d'Astrophysique de Grenoble and colleagues used the ESO VLT Interferometer to probe the secrets of the inner part of the disc around the star HD 163296. This is a reconstructed image of the VLTI observations using a model of HD 163296 with a central star surrounded by a disc. The comparison of this model with the observed images (image A) allows the astronomers to infer the properties of the inner regions around the young star.

Credit: ESO/S. Renard

ESO's VLT Takes First Detailed Image of Disc around Young Star

Source: ESO
Originally from: http://www.eso.org/public/announcements/ann1058/

New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the inner disc of matter around a young star. Stéphanie Renard of the Laboratoire d'Astrophysique de Grenoble and colleagues used the ESO VLT Interferometer to probe the secrets of the star HD 163296.

Young stars are surrounded by discs of dust and gas and scientists believe that it is in these discs that planets are born. Dusty grains in the disc stick to each other to make larger lumps that in turn also aggregate together. This growth is expected to continue until rocky bodies about the size of the Earth are formed.

"*The power of the VLT Interferometer to probe very fine details now allows us to see the inner region very close to the star where there is not expected to be any dust. The new images reveal the ring-shaped structure of this very elusive region,*" said Renard.

No single telescope currently in operation has vision acute enough to study such tiny and distant objects. The size of the region of the disc observed corresponds to 150 million kilometres — about the distance between the Earth and the Sun, but located at 360 light-years from Earth.

These very tiny details have an angular size of around 10 milliarcseconds — equivalent to trying to pick out small features on a road map held up 40 kilometres away. These minute angles are far smaller than any single telescope now operating can resolve.

To be able to image the inner part of the disc of matter close to the star, the team used a technique known as interferometry, in which sophisticated instrumentation combines the light from several telescopes into one observation. This increases the level of detail in the resulting pictures dramatically, although it does have some drawbacks: the results have to be reconstructed using complex mathematical algorithms because interferometry does not produce unambiguous images. But this difficult work is worthwhile as the resulting pictures tease out details far beyond the capabilities of the individual telescopes.

The team used data from the Very Large Telescope Interferometer, located at ESO's Paranal Observatory, for the bulk of their work on this star. The facility includes four 8.2-metre Unit Telescopes and four 1.8-metre Auxiliary Telescopes, which can be used in several different combinations to produce interferometric observations. The data was thoroughly analysed earlier this year [1] but, now, for the first time, the astronomers have been able to reconstruct an image of such a young object, with minimal assumptions, thanks to a powerful mathematical algorithm developed by team member Eric Thiébaut. The resulting image has the detail you would normally expect from a telescope with a mirror over 130 metres across, far bigger than any currently in existence. To gain further precision, the team combined the VLT Interferometer observations with data from CHARA, Keck and IOTA interferometers.

"*This is the first time that an image with such a level of detail has been achieved of a young star surrounded by a disc — a system that could represent how the Solar System formed 4.5 billion years ago,*" said co-author Fabien Malbet. "*We are eager to improve these images to understand the fundamental mechanisms that drive planetary formation better.*"

"*Creating an image of this star has really pushed back the boundaries of what is possible with current technology. It's a showcase for what can be achieved when you combine the power of some of the most advanced observatories in the world,*" concludes co-author Myriam Benisty. "*Interferometry has definitely entered the world of images and the Very Large Telescope Interferometer is a crucial part of it.*"

Notes

[1] This study was reported in "*Strong near-infrared emission in the sub-AU disk of the Herbig Ae star HD 163296: evidence of refractory dust?*" by M. Benisty et al. 2010, A&A 511, A74.

More Information

These results were presented at the JENAM 2010 conference on 9 September 2010, in Lisbon, Portugal, in Symposium 6 "Science Cases for Optical and Infrared Interferometry", and appeared at the same time in the journal *Astronomy and Astrophysics* ("*Milli-arcsecond images of the Herbig Ae star HD 163296*", by S. Renard et al.).

The team is composed of Stéphanie Renard and Fabien Malbet (Laboratoire d'Astrophysique de Grenoble), Myriam Benisty (INAF–Osservatorio Astrofisico di Arcetri), Eric Thiébaut (Centre de Recherche Astrophysique de Lyon) and Jean-Philippe Berger (European Southern Observatory).

JENAM is organised each year in one of the European countries jointly by the European Astronomical Society (EAS) and one of the national astronomical societies. JENAM 2010 is the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

The European Astronomical Society (EAS) was founded in 1990 and its purpose is to contribute to and promote the advancement of astronomy, in its broadest sense, in Europe, by providing an independent forum for the discussion of subjects of common interest and by providing means whereby action can be taken on those matters which appear desirable to be handled at the European level. EAS brings together 24 European Astronomical Societies and more than 700 professional astronomers.

ESO, the European Southern Observatory, is the foremost intergovernmental astronomy organisation in Europe and the world's most productive astronomical observatory. It is supported by 14 countries: Austria, Belgium, the Czech Republic, Denmark, France, Finland, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom. ESO carries out an ambitious programme focused on the design, construction and operation of powerful ground-based observing facilities enabling astronomers to make important scientific discoveries. ESO also plays a leading role in promoting and organising cooperation in astronomical research. ESO operates three unique world-class observing sites in Chile: La Silla, Paranal and Chajnantor. At Paranal, ESO operates the Very Large Telescope, the world's most advanced visible-light astronomical observatory and VISTA, the world's largest survey telescope.

ESO is the European partner of a revolutionary astronomical telescope ALMA, the largest astronomical project in existence. ESO is currently planning a 42-metre European Extremely Large optical/near-infrared Telescope, the E-ELT, which will become “the world’s biggest eye on the sky”.

Links
Research paper: http://www.eso.org/public/archives/announcements/pdf/ann1058.pdf
Interferometry: http://www.eso.org/public/teles-instr/technology/interferometry.html
JENAM2010 website: http://www.jenam2010.org

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Images
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B – Disc around the young star HD 163296 (observations and model)
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Press release 08, image:

Caption: Engº José Bonfim (FCT) e Jean-Marie Hameury (ASTRONET) esta manhã, durante a entrega do documento de adesão de Portugal à ASTRONET.

Credit: Lee Pullen/Science Office

Portugal adere à ASTRONET e ao planeamento estratégico da Astronomia na Europa

Lisboa, 8 de Setembro de 2010: A Fundação para a Ciência e Tecnologia (FCT) aderiu esta semana à ASTRONET, a rede Europeia de Agências de Financiamento da Astronomia. Esta adesão vai permitir uma maior aposta na investigação em astronomia o nosso país.

A ASTRONET foi criada em 2005 por um grupo de agências de financiamento europeias com o objectivo de estabelecer um plano a longo prazo para o desenvolvimento da astronomia europeia, consolidando e reforçando a sua posição de liderança mundial. Ao reunir as principais unidades de investigação europeias, bem como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA), a ASTRONET procura desenvolver um planeamento estratégico para a astronomia europeia.

Esta manhã, num acto simbólico, o Engenheiro José Bonfim, da FCT, e Mário Amaral, coordenador do Space Office, também da FCT, estiveram na sessão especial dedicada ao Planeamento Estratégico da Astronomia na Europa a decorrer no âmbito da Joint European National Astronomy Meeting 2010 (JENAM2010), onde entregaram o documento de adesão à ASTRONET, assinado a 1 de Setembro pelo Presidente da FCT, Professor José Sentieiro.

Presentes nesta sessão estavam também Jean-Marie Hameury e Johannes Andersen, representantes da ASTRONET, que desempenharam um papel crucial neste processo de adesão.

Outro dos actores fundamentais neste processo foi a Sociedade Portuguesa de Astronomia (SPA), na pessoa do seu Presidente André Moitinho de Almeida, que afirmou: “esta entrada da FCT na ASTRONET coloca Portugal no centro das decisões estratégicas do planeamento dos critérios de investimento e áreas científicas a apoiar. Será certamente um passo em frente no desenvolvimento da investigação em astronomia feita no nosso país.”

Isto é ainda mais importante se tivermos em conta que um dos objectivos da ASTRONET para os próximos quatro anos é o de diminuir o fosso científico e tecnológico entre as diferentes nações europeias.

O presidente da SPA acredita também que “Portugal pode desempenhar um papel importante na ASTRONET, pela partilha das experiências e especificidades de fazer investigação ao mais alto nível num país com limitações em termos de recursos.”

Esta adesão entra em vigor já na próxima 2ºfeira, dia 13 de Setembro DE 2010.

Notas para os editores:

A JENAM é organizada a anualmente num país Europeu, numa colaboração entre a Sociedade Astronómica Europeia (EAS) e uma das sociedades astronómicas nacionais. O JENAM 2010 é a 18ª Reunião Anual da Sociedade Astronómica Europeia e a 20ª Reunião Portuguesa de Astronomia e Astrofísica.

A ASTRONET foi criada por um grupo de agências de financiamento europeias, com o objectivo de estabelecer um planeamento estratégico para o desenvolvimento da astronomia europeia. Reúne as principais unidades de investigação europeias, bem como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA).

A Fundação para a Ciência e Tecnologia (FCT), fundada a 1997, promove o avanço do conhecimento científico e tecnológico em Portugal. Actua essencialmente através da concessão de financiamentos e de acordos de cooperação, bem como outras formas de apoio em parceria com universidades e outras instituições públicas e privadas, em Portugal e no estrangeiro.

O Space Office é um gabinete da FCT dedicado ao domínio espacial. Estuda os benefícios que a participação nacional nos programas espaciais europeus tem para a nossa sociedade e economia.

Legenda da imagem: Engº José Bonfim (FCT) e Jean-Marie Hameury (ASTRONET) esta manhã, durante a entrega do documento de adesão de Portugal à ASTRONET. Crédito: Lee Pullen/Science Office.

Ligações:

JENAM 2010: www.jenam2010.org

ASTRONET: http://www.astronet-eu.org/

FCT: http://alfa.fct.mctes.pt/

Space Office: http://alfa.fct.mctes.pt/apoios/cooptrans/espaco/

Sociedade Portuguesa de Astronomia: http://www.sp-astronomia.pt/

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Press release 10, image:

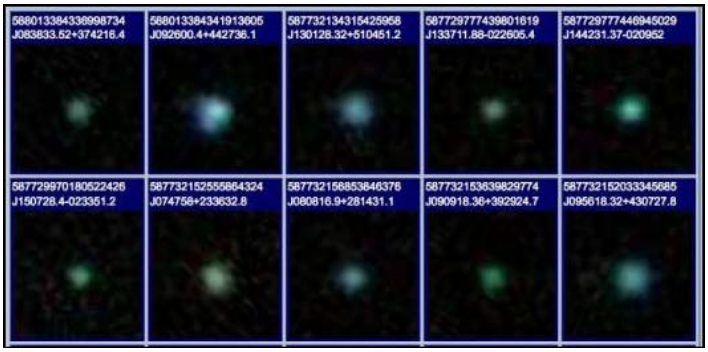

Image captions and credits:

JENAM_PR_10_IMAGE_A
http://upload.wikimedia.org/wikipedia/commons/c/cd/Cardamone_Peas.jpg
This image shows a selection of Green Pea galaxies discovered by the Galaxy Zoo team. Credit: Richard Nowell.

JENAM_PR_10_IMAGE_B http://upload.wikimedia.org/wikipedia/en/9/95/Wiki_Peas_Montage.jpg
The work of citizen scientists was invaluable in documenting Green Pea galaxies. Amateurs worked alongside professional astronomers to gather and analyse data. Credit: Sloan Digital Sky Survey and Richard Nowell.

JENAM_PR_10_IMAGE_C
Ricardo Amorin is presenting this research today at the JENAM conference in Lisbon. Credit: Lee Pullen (Science Office).

Astronomer unveils the mysteries of "Green Pea" galaxies at JENAM conference in a victory for citizen science

Lisbon, 10 September 2010: Today at the Joint European and National Astronomy Meeting (JENAM), Ricardo Amorin will present a talk explaining the nature of strange so-called Green Pea galaxies. First discovered in 2007 by amateur stargazers, it has now been shown that these extraordinary and extremely compact star cities have low amounts of complex elements after being diluted by streams of gas and strong supernova winds. This announcement will be celebrated by the amateurs who first discovered Green Pea galaxies.

Lead scientist Ricardo Amorin says, *"This Green Pea discovery is a fabulous example of how normal citizens, 'astronomy lovers', can help scientists with their collective efforts. They discuss the science with professional astronomers, and have written an excellent Wikipedia entry about Green Pea galaxies which presents a lot of information to people of the world."*

Green Pea galaxies were first classified by hobby stargazers. The online project Galaxy Zoo and Galaxy Zoo 2 asked interested members of the public to help sort through a vast depository of night sky images produced by the Sloan Digital Sky Survey. Categorising galaxy types is both important to learn about the evolution of the Universe, and also difficult because of the ambiguous shape of many. Astronomers turned to the online community for help, and citizen scientists flocked to sift through the images and look for galaxy types. Within 24 hours of launch the site was receiving an astonishing 70,000 classifications an hour.

These citizen scientists discovered a strange type of galaxy that did not fit with previously known types. Small in size and green in colour, they were soon named "Green Pea" galaxies. They appear to be compact low-mass galaxies undergoing intense star formation, and being around 1.5 to 5 billion years distant indicates that this is a brief but extreme stage of their evolution.

Green Pea galaxies are now known to be "metal-poor"; metals in this astronomical sense meaning any element other than hydrogen and helium. The study presented today suggests that gas gravitationally attracted from the outskirts of the Green Pea galaxies or beyond, combined with shockwaves from supernova explosions, are likely causes. Amorin explains, *"Discovering Green Pea galaxies has opened a new window to investigate galaxy evolution and star formation in the early Universe."*

Green Pea galaxies aren't the only citizen science successes to come from Galaxy Zoo. In 2007, Dutch school teacher Hanny van Arkel was categorising galaxies for the project when she came across a very strange object. This was soon named Hanny's Voorwerp, from the Dutch for "Hanny's Object". This strange phenomona baffled scientists, and it was only in June 2010 that a possible explanation – a supermassive blackhole in a nearby galaxy emitting radiation and making a cloud of gas glow – was provided. The community of amateur astronomers have cooperated to make an educational webcomic about this adventure, called "Hanny and the Mystery of the Voorwerp".

Amorin concludes, *"The Galaxy Zoo volunteers have put science very close to the citizens. This is an active and powerful way to spread science."*

The latest incarnation of Galaxy Zoo uses data provided by the famous Hubble Space Telescope, to peer deeper into the Universe than before. Perhaps even more citizen science discoveries are just around the corner.

Notes for the editors:

JENAM is organised each year in one of the European countries jointly by the European Astronomical Society (EAS) and one of the national astronomical societies. JENAM 2010 is the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

The European Astronomical Society (EAS) was founded in 1990 and its purpose is to contribute to and promote the advancement of astronomy, in its broadest sense, in Europe, by providing an independent forum for the discussion of subjects of common interest and by providing means whereby action can be taken on those matters which appear desirable to be handled at the European level. EAS brings together 24 European Astronomical Societies and more than 700 professional astronomers.

Image captions and credits:

JENAM_PR_10_IMAGE_A
http://upload.wikimedia.org/wikipedia/commons/c/cd/Cardamone_Peas.jpg
This image shows a selection of Green Pea galaxies discovered by the Galaxy Zoo team. Credit: Richard Nowell.

JENAM_PR_10_IMAGE_B
http://upload.wikimedia.org/wikipedia/en/9/95/Wiki_Peas_Montage.jpg
The work of citizen scientists was invaluable in documenting Green Pea galaxies. Amateurs worked alongside professional astronomers to gather and analyse data. Credit: Sloan Digital Sky Survey and Richard Nowell.

JENAM_PR_10_IMAGE_C
Ricardo Amorin is presenting this research today at the JENAM conference in Lisbon. Credit: Lee Pullen (Science Office).

Links:
Galaxy Zoo website: http://www.galaxyzoo.org/
Hanny and the Mystery of the Voorwerp: http://hannysvoorwerp.zooniverse.org/
Green Pea Wikipedia page: http://en.wikipedia.org/wiki/Pea_galaxy
JENAM2010 website: http://www.jenam2010.org

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Press release 11, image:

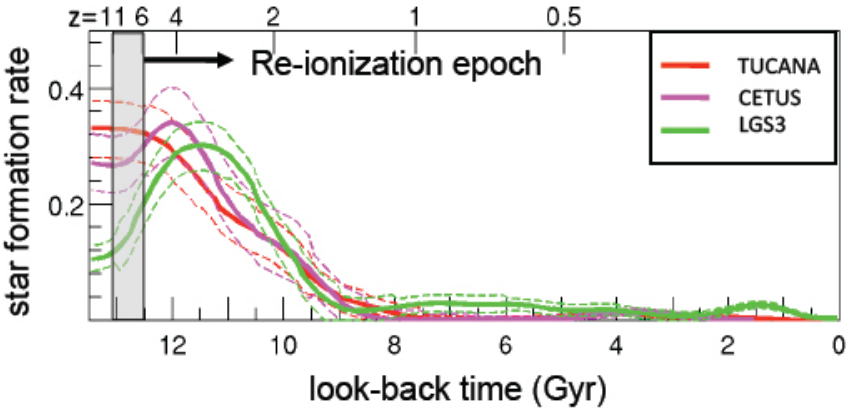

Image captions and credits:

JENAM_PR_11_IMAGE_A
Portion of the Cetus dSph galaxy as imaged by the HST. Note how nicely has been this galaxy resolved into stars by these observations, and that the density of stars is so low that the galaxy is almost transparent. Credit: NASA/ LCID

JENAM_PR_11_IMAGE_B
Star formation rate as a function of look-back time for three galaxies of the LCID sample. The shaded area indicates the time during which the Universe was re-ionized, a process that lasted till about 12.5 billion years (Gyr) ago. Note that all three galaxies formed most of their stars after re-ionization was complete. Credit: LCID

News results presented at the Joint European and National Astronomy Meeting tell us more about Dwarf Galaxy evolution

Lisbon, 10 September 2010: The 'Local Cosmology from Isolated Dwarfs (LCID)' team showed their most recent results that suggest that reionization alone is not able to stop star formation in Dwarf Galaxies, as had been expected. The results were presented yesterday during the European Week of Astronomy and Space Sciences.

The Big Bang model predicts that the universe started out as completely ionized plasma, which later cooled and allowed all of the atoms to recombine into neutral atoms. The first generation of stars and galaxies formed from this neutral material and produced high energy radiation which then ¨reionized¨ the universe. This period of reionization ended approximately 1 billion years after the Big Bang.

The 'Local Cosmology from Isolated Dwarfs (LCID)' project, led by Carme Gallart of the Instituto de Astrofisica de Canarias (Tenerife, Spain), has used over 100 orbits of the Hubble Space Telescope (HST) observing time with the ACS camera in order to obtain detailed star formation histories for six Local Group dwarf galaxies, which include details about early star formation. "All the galaxies in the sample, including those that ended star formation very early on, such as the Cetus dSph galaxy, formed most of their stars after reionization was complete. This demonstrates that reionization alone is not able to stop star formation in the smallest galaxies, as had been expected" says Gallart that has been working with a team of about a dozen people for 5 years on this project.

The smallest galaxies represent important probes of the conditions of the early Universe, since their early star formation can be strongly influenced by cosmic reionization. The most common prediction of models of dwarf galaxy evolution is that the early ionization of the gas in these galaxies by the cosmic UV background should have halted and prevented any subsequent star formation in them after about 12.5 Gyr ago.

The paper was published this week in the Astrophysical Journal.

Notes for the editors:

Astrophysical Journal link: http://iopscience.iop.org/0004-637X/720/2/1225

Image captions and credits:

JENAM_PR_11_IMAGE_A
Portion of the Cetus dSph galaxy as imaged by the HST. Note how nicely has been this galaxy resolved into stars by these observations, and that the density of stars is so low that the galaxy is almost transparent. Credit: NASA/ LCID

JENAM_PR_11_IMAGE_B
Star formation rate as a function of look-back time for three galaxies of the LCID sample. The shaded area indicates the time during which the Universe was re-ionized, a process that lasted till about 12.5 billion years (Gyr) ago. Note that all three galaxies formed most of their stars after re-ionization was complete. Credit: LCID

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Media Kit:

JENAM 2010 Press Kit

Version 1
6 August 2010
(This document will be updated as new information becomes available)

About the JENAM 2010 Press Office

The Portuguese Astronomical Society (PAS) will operate a Press Office from 6 to 10 September, from 9:00 to 18:00. It will have hard-wired and wireless internet, a fixed-net telephone, printer and access to copying machine for the convenience of the reporters who are attending the conference. Interviews with the conference participants can be arranged. Public Information Officers, scientists and representatives of the participating scientific institutions can provide hard copies of press releases, brochures and visual materials, which the Press Office will be happy to distribute. The PAS Press Office will update a wall with newspaper clippings.

The phone numbers of the press office will be available soon.

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Media Registration

Media representatives are cordially invited to attend. Press room facilities will be available for the duration of the conference, from 9:00 on Monday 6 September through to 17:00 on Friday 10 September. The venue has a wireless network.

Media registration is free. Any bona fide media delegates can pre-register online or by e-mailing info@scienceoffice.org (advance registration is not essential but encouraged).

Science bloggers and new media activists are most welcome to join the conference or our mailing list.

About JENAM 2010

The Joint European and National Astronomy Meeting (JENAM) 2010 will take place at the Faculty of Sciences of the University of Lisbon, Portugal, from Monday 6 September to Friday 10 September 2010.

JENAM is organised each year in one of the European countries jointly by the European Astronomical Society and one of the national astronomical societies. JENAM 2010 will be the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

This will be an exciting scientific event, spanning front line topics in Astronomy, Space Sciences and technologies, spread by the EAS Symposia, Plenary, Public and Special Sessions and posters.
More than 500 abstracts for oral presentations and posters have been submitted.

Details of the conference can be found at the official website: http://www.jenam2010.org/

A draft programme can be found at:
http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

Plenary Sessions

The JENAM 2010 Plenary Sessions are focused on themes of broad interest to the European community. Invited and highlight talks will present results and activities developed by researchers and major facilities for Astronomy, Space Sciences and Technologies.

A number of prestigious speakers are already confirmed:

Monday, 6 September
9:00 - Launch of the EAS "Lodewijk Woltjer Lecture" award talk. Lodewijk Woltjer made significant contributions to theoretical astrophysics from his fundamental work on the Crab Nebula and his studies on hydromagnetic equilibrium to the energy source of Radio Galaxies and Quasars. Under his leadership as Director General, ESO signed the VLT contract and established itself as one of the world's leading astronomical institutes. This inaugural talk will be given by L. Woltjer himself. More information available at the EAS website: http://eas.unige.ch/woltjer_lectures.jsp

Tuesday, 7 September
11:00 - In addition to the European Southern Observatory (ESO) Special Session on ALMA early science, Director General Tim de Zeeuw will give a Plenary presentation on ESO and the E-ELT, followed by the leader of the ESO Survey Team Magda Arnaboldi.

Wednesday, 8 September
14:30 European Astronomical Society (EAS) General Assembly, followed by Portuguese Astronomical Society General Assembly.

Thursday, 9 September
11:00 - European Space Agency (ESA) Plenary Session. Mark McCaughrean (Head of the ESA Research and Scientific Support Department) will give a presentation on the ESA Science Programme, followed by fresh Herschel results given by Göran Pilbratt and Rosetta fly-by results by Rita Schulz.

Friday, 10 September
11:00 - Talk by Richard Schilizzi, Global Director of SPDO, the SKA Project Development Office, Richard Schilizzi. After ALMA, and together with the E-ELT, SKA is one of the next big things in worldwide ground-based Astronomical facilities.

SPECIAL SESSIONS

A number of Special Sessions will take place at JENAM 2010 in which very different topics will be addressed ranging from techniques for data handling, processing and analysis, astronomy planning in Europe, cooperation between professional and amateur astronomers, research on antimatter at CERN, and new trends in global astronomy education.

SPECIAL SESSION 1: Astronomy Challenges for Engineers & Computer Scientists

This session deals with the challenges in integrating new and innovative techniques, diagnostic tools and ways of accessing and operating the facilities of the large telescopes in operation, and the ones under construction or being designed (like the Very Large Telescope, the Atacama Large Millimeter Array and the European-Extreme Large Telescope).

The integration of researchers from a wide range of backgrounds becomes even more challenging in order to fully prepare them in those new wide fields and to expose and involve them, right from the beginning of their careers, to international collaboration and participation in multinational and multidisciplinary teams.

Contact: Teresa Lago (mtlago@astro.up.pt)

Confirmed speakers:

Teresa Lago (Full Professor, FCUP/CAUP)
Bruno Leibundgut (Director for Science, ESO)
Andreas Kaufer (Director of La Silla Paranal Observatory, ESO)
Roberto Tamai (Director of Technology Division, ESO)
Xavier Barcons (Instituto de Física de Cantabria (CSIC-UC) & ALMA Board)
Roberto Gilmozzi (Director of Telescope Division, ESO)
Colin Cunningham (Director of UK ELT Programme)
Michèle Péron (Director of Engineering & Software Development, ESO)

More information on the Session page: http://www.jenam2010.org/index.php?option=com_content&task=view&id=21&Itemid=73

This Special Session will take place on 6 September.

SPECIAL SESSION 2: Radio Astronomy in Iberia

Radio Astronomy and its techniques are rightly recognised as a driver of scientific and technological development worldwide. Portugal and Spain will host a collection of radio astronomical facilities covering most of the radio spectrum, paving ground for a new generation of scientists with the potential to promote long term scientific cross-border collaboration with an experimental focus along main European strategic lines.

In this session we will address, among other topics, the importance of bilateral cooperation between Portugal and Spain and taking advantage of the existence of several world class radio astronomical facilities in Spain like IRAM, Yebes 40-meter antenna, high-rank developments for ALMA, EVN, space observatories like Herschel, and near-future projects like RAEGE with Açores, and LOFAR stations planning.

Portuguese and Spanish scientists and engineers are invited to exchange project know-how, present strategic research lines and foster collaborations for future cooperation on R&D research, spectrum management, and infrastructures.

Contact: Domingos Barbosa (dbarbosa@av.it.pt)

SPECIAL SESSION 3: ESO Special Session: ALMA Early Science - opportunities and tutorials

By the end of January, the Atacama Large Millimeter Array (ALMA) will start the Commissioning and Science Verification phase and a call for Early Science proposals is expected to be released at the end of 2010. It is time for future European users to prepare themselves for the first ALMA observations.

In this session, an overview of the entire ESO programme will be presented, with special emphasis on ALMA with a presentation of the current status of construction, the ALMA development plan and its opportunities, and the European ALMA Regional Centre plans for user support in preparation and during Early Science.

Confirmed speakers:
W. Wild (ALMA Status)
J. Afonso (ALMA Science)
P. Klaassen (CASA tutorial)
L. Testi (ALMA Early Science)
M. Zwaan (ALMA support for European users - the ARC)
E. van Kampen (Observing Tool tutorial)

Contact: Leonardo Testi (ltesti@eso.org)

SPECIAL SESSION 4: ESA Special Session: Elements of the science programme for JENAM2010
The ESA special session provides an overview of the ESA science programme and highlights of the most recent results. The ESA special session will focus on selected topics with emphasis on science areas covered in the symposia scheduled for the first two days of JENAM 2010. The audience will be brought up to date with the current status of missions in flight and under preparation, and provided with a view to the future as embodied in the Cosmic Vision programme.

Contact: Timo Prusti (tprusti@rssd.esa.int)

SPECIAL SESSION 5: Astronomy Planning in Europe - Towards an Even Stronger European Astronomy
Europe possesses the world's most powerful optical observatory – ESO's Very Large Telescope on Cerro Paranal, Chile. Europe has also launched a number of first-rank space observatories such as XMM, Herschel, and Planck. And even larger facilities are planned or under way in optical, radio, and particle astronomy, some on a purely European basis, some as a joint participation in global projects. European astronomy has come a long way by learning to cooperate. The good use of national human and financial resources to remain fully competitive in the future is paramount if Europe is to continue to make more and better science.

The ASTRONET network of European funding agencies for astronomy was created to promote such progress, supported by the European Commission. The groundwork was laid with the Science Vision and Infrastructure Roadmap prepared in 2007-8 (see http://www.astronet-eu.org). With the ASTRONET contract now likely to be extended through 2014, the time is ripe to start taking action on those recommendations in cooperation with such established discipline-oriented networks as ASPERA, OPTICON and RadioNet.

The purpose of this half-day session is to update the astronomical community on ASTRONET's activities towards benefit of European astronomy as a whole and receive feedback on the optimum course of action in the near-term future.

Contact: Johannes Andersen (ja@astro.ku.dk)

SPECIAL SESSION 6: New Trends in Global Astronomy Education
Although Science Education is recognised as one of the pillars of modern education systems, we cannot get around the fact that the interest of the younger generations in science topics has been decreasing. A change from traditional science teaching methods is called for and astronomy's fascinating developments of the last few years can be a powerful ally to achieve this goal.

The recently approved IAU Strategic Plan for the next 10 years foresees the use of astronomy as a trigger to development in several nations. This can only be achieved if we steadily invest in training educators and qualify students with the right tools to enter the work market.

In this symposium we will discuss recent successes and challenges for the future in engaging authorities in the broader use of modern science teaching tools in European schools.

Contact: Rosa Doran (rosa.doran@nuclio.pt)

SPECIAL SESSION 7: Education and Outreach after IYA2009 in Europe
The International Year of Astronomy 2009 (IYA2009) featured tens of thousands of events worldwide. These were organised and implemented by many professionals, amateurs and volunteers who built IYA2009 into the most successful science education and public outreach project ever undertaken.

This Session focuses on two key aspects of IYA2009: outreach in terms of communicating astronomy with the public, and the educational value of astronomy in attracting young people into science and technology studies at school and after. A huge number of events were planned across Europe, so contributors are invited to share their experiences. This symposium is an excellent opportunity to learn from each other and gather new ideas for events and projects after IYA2009.

Contact: Pedro Russo (prusso@eso.org)

SPECIAL SESSION 8: Amateur and professional astronomers in Europe: how pro-am cooperation is changing astronomy
After observing for a number of years, many amateur astronomers want to go further, making a meaningful contribution to astronomy, either through public outreach, informal education, or research. The International Year of Astronomy 2009 was the ultimate proof that such cooperation is not only possible but also desirable, generating highly valuable outcomes. In fact, astronomy is one of the few sciences where amateurs can contribute to leading-edge knowledge.

During this Special Session we will explore the current status of professional and amateur cooperation in astronomy and explore the possible future plans for a common platform to foster or even strengthen cooperation.

Contact: Pedro Russo (prusso@eso.org)

SPECIAL SESSION 9: 30 years of IRAM
The year 2009 marked the 30th anniversary of the creation of the "Institut de Radioastronomie Millimétrique" (IRAM). Both of IRAM's observatories, the 30-metre telescope on Pico Veleta in Spain and the interferometer on the Plateau de Bure in France, are prime facilities for radio astronomy and the most powerful observatories today operating at millimetre wavelengths.

The celebration of IRAM's 30 years will be an opportunity to examine new scientific horizons that will be opened by the next generation of radio telescopes, and to explore the role that IRAM will continue to play in this new and rapidly evolving landscape.

Contact: Pierre Cox (cox@iram.fr)

SPECIAL SESSION 10: CERN
In this Special Session dedicated to the European Organization for Nuclear Research (CERN) the following topics will be addressed: Nuclear Physics at Isolde and its implications on Nuclear Astrophysics; Antimatter at Cern AD and the measurement of fundamental constants; Reference measurements for neutrino and cosmic rays physics with NA61 and the LHC status (tbc).

SPECIAL SESSION 11: Teacher Training Session
This Session will provide good examples of the use of new technologies in science teaching. This session will be promoted by the Galileo Teacher Training Program team and will introduce the participants to modern tools such as:
- Image processing software;
- Hands-on science activities: building telescopes, spectroscopes, etc;
- Robotic Telescopes;
- Science Campaigns: International Asteroid Search Campaign, Supernova Campaign, Extra-Solar Planets Campaign;

- Dark Skies Awareness.

Contact: Rosa Doran (rosa.doran@nuclio.pt)

EAS Symposia

SYMPOSIUM 1: From Varying Couplings to Fundamental Physics

Nature is ruled by a number of physical laws and fundamental dimensionless couplings which determine the properties of our physical universe, from the size of atoms, cells and mountains to the ultimate fate of the Universe as a whole. Yet, it is rather remarkable how little we know about them.

The constancy of physical laws is one of the cornerstones of the scientific research method, but for fundamental couplings this is an assumption with no other justification than a historical assumption. There is no "theory of constants" describing their role in the underlying theories and how they relate to one another or how many of them are truly fundamental. Studying the behaviour of these quantities throughout the history of the Universe is an effective way to probe fundamental physics. This explains why ESA and ESO include varying fundamental constants among their key science drivers for the next generation of facilities.

More information at the symposium site: http://www.astro.up.pt/vfc2010

Contact: Carlos Martins, CAUP, Portugal (Carlos.Martins@astro.up.pt)

SYMPOSIUM 2: Environment and the Formation of Galaxies: 30 years later
30 years after the seminal work of Alan Dressler on the density-morphology relation, which established environment as a driving mechanism for galaxy formation and evolution, we have learned that both local processes (nature) and environment (nurture) contribute towards shaping the galaxy populations. The connection between these two aspects still remains an open question.

Recent and upcoming surveys extend out to the high redshift Universe, where the effect of environment on galaxy formation will be more apparent on the underlying stellar populations.

This Mini Symposium brings observations and theory together with the purpose of establishing the role of environment in the star formation and assembly histories of galaxies. The meeting will include a round table session where the latest results and ideas will be discussed by a number of experts, also encouraging active participation from the audience.

More information at the symposium site: http://www.mssl.ucl.ac.uk/~ipf/GF.html

Contact: Ignacio Ferreras, MSSL/UCL (ferreras@star.ucl.ac.uk)

SYMPOSIUM 3: Dwarf Galaxies: Keys to Galaxy Formation and Evolution
While many lines of evidence highlight the role of dwarf galaxies (DGs) in the cosmic scenery, as possible building blocks of Hubble-type galaxies and important contributors to the chemical enrichment of the Universe, the formation and evolution of these systems is only sketchily understood.

This Mini Symposium aims at providing a forum for observers and theoreticians to exchange ideas and new results on the many evolutionary aspects of DGs near and far: what have we learned thus far and which are the main opportunities and challenges for the near future.

More information at the symposium
site: http://www.astro.up.pt/investigacao/conferencias/dwarfgalaxies2010/

Contact: Polychronis Papaderos, CAUP, Portugal (papaderos@astro.up.pt)

SYMPOSIUM 4: From Macro to Micro Stellar Transit
Stellar transits provide us fundamental information about planets, stars, and the properties of discs: geometrical sizes, dynamical masses, bulk densities, inclinations of orbital axis with respect to rotational axis, apsidal motions, centre-to-limb darkening, and circumstellar disc structure. Those properties are crucial ingredients in the understanding of the formation and evolution of stars and the planetary systems around them.

Great progress has been and will be made in the study of stellar transits through observations and theory, particularly with the successful operation of the COROT and KEPLER space missions. This meeting will focus on the observational and theoretical aspects of transits in stars, around four topical questions:
- Stellar eclipses: what have we learned from them across the H-R diagram and what is the connection with current observations that focus on exoplanets?
- Planetary transits: why is there a large spread in the mass-density relationship of transiting exoplanets? How could we find transiting habitable planets?
- Atmospheres of transiting planets and biomarkers: what information do we have about planet spectra and how does it compare to brown dwarf spectra? What should we do for being prepared to get transmission spectroscopy of habitable exoplanets?
- Disc transits: what is the connection between disc structures and planetary and stellar companions?

More information at the symposium site: http://www.ucm.es/info/carmenes/lisboa/

Contact: Eduardo L. Martín, Centro de Astrobiología, Spain (ege@iac.es)

SYMPOSIUM 5: Star Clusters in the Era of Large Surveys
Stars form mainly in clustered mode. Over time, these clusters evaporate and/or disrupt, enriching the general field population. Cluster lifetimes can vary enormously, ranging from a large population of short lived individuals that get shattered in a few Myr while emerging from their parent clouds, to old globular clusters inhabiting the halo of Milky Way for more than 12 Gyr.

Estimates indicate that the Milky Way has around 200 billion stars (number growing every few years) and presently hosts ~10^5 or more star clusters. However, only about 2500 open clusters have been identified and constitute a sample affected by several well known selection effects. Less than a half of these clusters have actually been studied, and this subset suffers from further selection biases.

This symposium will be a meeting point for discussing what and how can recent, on-going and planned large area surveys from ground and space, availability of efficient reduction pipelines, development of analysis algorithms and access to databases around the world, contribute to produce a leap in this research field that has a strong European history.

More information at the symposium site: http://www.jenam2010.org/clusters

Contact: André Moitinho, Portugal (andre@sim.ul.pt)

SYMPOSIUM 6: Science Cases for Optical and Infrared Interferometry - Present and Future
Optical interferometry has entered a new era with the advent of VLTI in Europe and of other facilities opened to non-specialist communities in the US. The number of research areas has dramatically increased with the number of interferometer users. Originally devoted to stellar physics, extragalactic astronomy and solar system bodies are now part of the scope of interferometers. Interferometry is such a success in Europe that ESO has decided to start building a second generation of instruments for VLTI making interferometric imaging in the near- and mid-infrared domains a more common tool for astrophysics. These new instruments will open new scientific venues on important topics such as the disks of pre-main-sequence stars and the Galactic Centre.

Despite all these efforts and progress, there is still a long way to go to make interferometry relevant for some astrophysical science cases that would require higher quality imaging capabilities, higher spatial resolution and higher sensitivity. This calls for a next-generation facility which may be either a single facility or a multi-component facility like the ALMA array with a compact and a large array serving different purposes.

On the European side, success will require that the facility be identified as an ASTRONET priority. This workshop is a necessary step to build a community, establish science cases and discuss possible options or the design.

More information at the symposium site: http://www.lsw.uni-heidelberg.de/jenam2010/

Contact: A. Quirrenbach (A.Quirrenbach@lsw.uni-heidelberg.de)

SYMPOSIUM 7: The Square Kilometre Array: Paving the way for the new 21st century radio astronomy paradigm

The Square Kilometre Array (SKA) will provide more than one order of magnitude improvement in sensitivity compared with any existing radio telescope over a wavelength range of several hundred to one, from decametric to microwave wavelengths. It will revolutionise the study of the most abundant element in the Universe, hydrogen, from the epoch of reionisation to the present-day, probing the onset formation period of the very first stars, look in depth to proto-planets and, through the precision timing of pulsars, detect the distortions of space-time due to gravitational radiation.

SKA is a sensor machine spawning 3000km in extension and a collecting area of more than 1 square kilometre, using technologies of XXIst century. SKA will allow the study at radio wavelengths of a wide range of phenomena initially studied at other wavelengths as well as opening a new discovery window on new phenomena at radio wavelengths.

This Symposium is aimed at bringing these diverse opportunities to the attention of both theoretical and observational astronomers working at all wavelengths, including the potential for synergies with other facilities.

More information: http://www.jenam2010.org/index.php?option=com_content&task=view&id=38&Itemid=7

Contact: Domingos Barbosa, IT- Aveiro, Portugal (dbarbosa@av.it.pt)

Exhibition

An exhibition on subjects related to Astronomy and Space Science and Technologies will be open to the conference's participants and the general public during the whole week.

Exhibitors include major players in Astronomy and Space Sciences and Technologies, Scientific Publishers and members of the Instrumentation and Aerospace industry.

Confirmed exhibitors:

- European Space Agency (ESA)
- European Southern Observatory (ESO)
- RadioNet
- Astron
- Square Kilometre Array (SKA)
- Cambridge University Press
- Springer
- European Research Council (ERC)
- OPTICON
- AstroMundus
- ASTRONET
- European Astronomical Society (EAS)
- Portuguese Astronomical Society

Social Programme

A Welcome cocktail will take place on Sunday, 5 September, late afternoon in the garden of the City Museum (Museu da Cidade), located just next to the conference site.

The conference dinner will take place on Tuesday or Wednesday (to be confirmed).

Dossier de Imprensa JENAM 2010

Versão 1
6 Agosto 2010
(Este documento será actualizado à medida que novas informações estiverem disponíveis)

Sobre o Gabinete de Imprensa da JENAM 2010

A Sociedade Portuguesa de Astronomia (SPA) terá em funcionamento um Gabinete de Imprensa de 6 a 10 de Setembro, das 9h00 às 18h00. O Gabinete estará equipado com internet fixa e sem fios, impressora e telefone fixo, para uso dos jornalistas presentes na conferência.

Entrevistas com os participantes da conferência poderão ser facilitadas pelo Gabinete de Imprensa. Os assessores de imprensa, cientistas e representantes das instituições científicas participantes podem fornecer cópias de comunicados de imprensa, folhetos e materiais visuais, os quais o Gabinete de Imprensa terá todo o gosto em distribuir.

Os números de telefone do Gabinete de Imprensa estarão disponíveis em breve.

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Science Office

Acreditação de jornalistas

Os representantes dos *media* são convidados a participar. O Gabinete de Imprensa estará disponível durante o período da conferência, a partir das 9:00h de Segunda-feira, 6 de Setembro até às 17:00h de Sexta-feira, 10 de Setembro.

A acreditação é gratuita e pode ser feita online ou por correio electrónico para info@scienceoffice.org (a acreditação não é obrigatória, mas é incentivada).

Os *bloggers* de ciência e representantes dos novos *media* são igualmente bem-vindos a participar na conferência, ou a integrar a nossa lista de distribuição.

Sobre a JENAM 2010

A Joint European and National Astronomy Meeting (JENAM) 2010, uma das mais importantes reuniões científicas na área da astronomia na Europa, terá lugar na Faculdade de Ciências da Universidade de Lisboa, de 6 a 10 de Setembro de 2010.

A JENAM é organizada anualmente num país Europeu, numa colaboração entre a Sociedade Astronómica Europeia (EAS) e uma das sociedades astronómicas nacionais. O JENAM 2010 é a 18ª Reunião Anual da Sociedade Astronómica Europeia e a 20ª Reunião Portuguesa de Astronomia e Astrofísica.

Trata-se um importante evento científico, que abrange temas na linha de frente da astronomia, ciências espaciais e tecnologia, espalhados pelos Simpósios da EAS, Sessões Plenárias, Sessões Públicas, Sessões Especiais e Posters.

Foram submetidos mais de 400 artigos para apresentações orais e posters , e espera-se que mais 600 astrónomos de todo o mundo estejam presentes neste encontro.

Mais informações sobre a conferência podem ser encontradas no *site* oficial: http://www.jenam2010.org

O programa provisório da conferência pode ser encontrado em:
http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

Sessões Plenárias

As Sessões Plenárias da JENAM 2010 estarão centradas em temas de grande interesse para a comunidade astronómica europeia. O destaque vai para a apresentação dos resultados e actividades desenvolvidas pelos mais importantes cientistas e instituições de astronomia, ciência e tecnologias espaciais.

Uma série de oradores de prestígio está já confirmada:

Segunda-feira, 6 de Setembro
09:00h - Lançamento do prémio "Lodewijk Woltjer Lecture" da EAS. Lodewijk Woltjer fez contribuições significativas para a astrofísica teórica pelo seu trabalho fundamental sobre a Nebulosa do Caranguejo, os estudos sobre o equilíbrio hidromagnético e fontes de energia das Galáxias Rádio e Quasares. Sob a sua liderança enquanto Director Geral, o ESO assinou o contrato para o VLT e assumiu-se como um dos líderes mundiais em astronomia. Esta palestra inaugural será dada pelo próprio L. Woltjer.

Mais informações disponíveis no *site* da EAS: http://eas.unige.ch/woltjer_lectures.jsp

Terca-feira, 7 de Setembro
11:00h – Para além da Sessão Especial do Observatório Europeu do Sul (ESO) sobre a ciência do ALMA, o Director Geral Tim de Zeeuw fará uma apresentação sobre o ESO e o E-ELT, seguido pela responsável do ESO Survey Team, Magda Arnaboldi.

Quarta-feira, 8 de Setembro
14:30h - Assembleia Geral da Sociedade Astronómica Europeia (EAS), seguida pela Assembleia Geral da Sociedade Portuguesa de Astronomia.

Quinta-feira, 9 de Setembro
11:00h - Sessão Plenária da Agência Espacial Europeia (ESA). O Chefe do Departamento de Pesquisa e Apoio Científico da ESA, Mark McCaughrean, fará uma apresentação sobre o Programa de Ciência da ESA, seguido da apresentação de resultados recentes do Herschel por Göran Pilbratt e pela apresentação de resultados da Rosetta por Rita Schulz.

Sexta-feira, 10 de Setembro
11:00h – Apresentação por Richard Schilizzi, Director Global do SPDO, o SKA Office Project Development. Depois do ALMA, e juntamente com o E-ELT, o SKA é uma das próximas instalações a ter em atenção no mundo dos observatórios astronómicos terrestres.

SESSÕES ESPECIAIS

Durante a JENAM 2010 vão também decorrer várias Sessões Especiais, nas quais temas muito diferentes serão abordados, como por exemplo: técnicas de manipulação, processamento e análise de dados, planeamento da Astronomia na Europa, cooperação entre astrónomos profissionais e amadores, investigação sobre a antimatéria no CERN e novas tendências no ensino da astronomia mundial.

SESSÃO ESPECIAL 1: Desafios da Astronomia para Engenheiros e Cientistas de Computação

Esta sessão aborda os desafios na integração de técnicas novas e inovadoras, tais como ferramentas de diagnóstico e formas de acesso e operação das instalações, não só dos grandes telescópios em operação, mas também dos que estão em construção ou em projecto (como o Very Large Telescope, o Atacama Large Millimeter Array e o European-Extreme Large Telescope).

A integração de pesquisadores com formações muito diferentes nestas equipas é um grande desafio, pela necessidade de prepará-los e envolvê-los, desde o início de suas carreiras, na colaboração internacional e participação em equipas multinacionais e pluridisciplinares.

Contacto: Teresa Lago (mtlago@astro.up.pt)

Oradores confirmados:

Teresa Lago (Full Professor, FCUP/CAUP)
Bruno Leibundgut (Director for Science, ESO)
Andreas Kaufer (Director of La Silla Paranal Observatory, ESO)
Roberto Tamai (Director of Technology Division, ESO)
Xavier Barcons (Instituto de Física de Cantabria (CSIC-UC) & ALMA Board)
Roberto Gilmozzi (Director of Telescope Division, ESO)
Colin Cunningham (Director of UK ELT Programme)
Michèle Péron (Director of Engineering & Software Development, ESO)

Mais informação na página da Sessão:
http://www.jenam2010.org/index.php?option=com_content&task=view&id=21&Itemid=73

Esta Sessão Especial terá lugar no dia 6 de Setembro.

SESSÃO ESPECIAL 2: Radioastronomia na Península Ibérica

A Radioastronomia e suas técnicas são merecidamente reconhecidas como impulsionadoras do desenvolvimento científico e tecnológico em todo o mundo. Portugal e Espanha vão acolher um conjunto de instalações de radioastronomia que cobrem a maior parte do espectro radioeléctrico, abrindo terreno para uma nova geração de cientistas, com o potencial de promover a colaboração científica transfronteiriça a longo prazo.

Nesta sessão irão ser abordados, entre outros temas, a importância da cooperação bilateral entre Portugal e Espanha, aproveitando a existência de diversas instalações astronómicas de importância mundial em Espanha como o IRAM, Yebes, observatórios espaciais como Herschel, e projectos para um futuro próximo como o RAEGE nos Açores e o LOFAR.

Cientistas e engenheiros portugueses e espanhóis são convidados a trocar conhecimentos, apresentar linhas estratégicas de investigação e fomentar futuras colaborações para a cooperação em matéria de I & D, gestão do espectro e infra-estruturas.

Contacto: Domingos Barbosa (dbarbosa@av.it.pt)

SESSÃO ESPECIAL 3: Sessão Especial ESO: Ciência Inicial do ALMA - oportunidades e tutoriais

Até o final de Janeiro, o Atacama Large Millimeter Array (ALMA) irá iniciar a fase de Comissionamento e Verificação de Ciência, e é esperado que um convite à apresentação de propostas para Ciência Inicial seja lançado no final de 2010. É tempo para os futuros utilizadores europeus se prepararem para as primeiras observações ALMA.

Nesta sessão, será apresentada uma visão geral de todo o programa do ESO, com especial ênfase para o ALMA com uma apresentação sobre o estado actual da construção, o plano de desenvolvimento e suas oportunidades, bem como os planos de suporte ao utilizador dos Centros Regionais Europeus do ALMA, em preparação e durante a fase de Ciência Inicial.

Oradores confirmados:
W. Wild (ALMA Status)
J. Afonso (ALMA Science)
P. Klaassen (CASA tutorial)
L. Testi (ALMA Early Science)
M. Zwaan (ALMA support for European users - the ARC)
E. van Kampen (Observing Tool tutorial)

Contacto: Leonardo Testi (ltesti@eso.org)

SESSÃO ESPECIAL 4: Sessão Especial ESA- Elementos do programa de ciência para a JENAM2010
Esta sessão fornece uma visão geral do programa científico da ESA, destacando os seus resultados mais recentes. A sessão especial ESA incidirá sobre alguns temas seleccionados, com ênfase nas áreas da ciência abrangidas pelos simpósios programados para os dois primeiros dias da conferência. Haverá actualizações sobre o estado actual das missões em voo e em preparação e sobre o futuro do programa Cosmic Vision.

Contacto: Timo Prusti (tprusti@rssd.esa.int)

SESSÃO ESPECIAL 5: Planeamento da Astronomia na Europa - Rumo a uma Astronomia Europeia ainda mais forte
A Europa possui o observatório óptico mais poderoso do mundo – o VLT (Very Large Telescope) do ESO, em Cerro Paranal, no Chile. A Europa lançou também uma série de observatórios espaciais de primeira linha, tais como o MMX, o Herschel e o Planck. Estão previstas, ou em curso, infra-estruturas ainda maiores, tanto em astronomia óptica e radioastronomia, como em astronomia de partículas; algumas numa base puramente europeia, outras em participação conjunta em projectos globais. A astronomia Europeia percorreu um longo caminho, aprendendo a cooperar. O bom uso dos recursos humanos e financeiros nacionais é fundamental para a competitividade futura, se a Europa quiser continuar a fazer mais e melhor ciência.

A ASTRONET, uma rede de agências de financiamento para a astronomia europeias, foi criada, com o apoio da Comissão Europeia, para promover este progresso. A base deste trabalho foi estabelecida com o Roteiro "Visão da Ciência e Infra-estruturas" preparado em 2007-8 (ver http://www.astronet-eu.org). Com o contrato ASTRONET provavelmente a ser prorrogado até 2014, o momento é propício para começar a tomar medidas sobre estas recomendações, em cooperação com redes como a ASPERA, a OPTICON e a RadioNET.

O objectivo desta sessão é colocar a comunidade astronómica a par das actividades da ASTRONET em prol da astronomia europeia como um todo, e receber *feedback* sobre as melhores medidas a tomar num futuro próximo.

Contacto: Johannes Andersen (ja@astro.ku.dk)

SESSÃO ESPECIAL 6: Novas Tendências no Ensino Global da Astronomia
Apesar de as Ciências da Educação serem reconhecidas como um dos pilares dos sistemas de ensino modernos, não podemos contornar o facto de que o interesse das novas gerações em temas de ciência tem vindo a diminuir. É necessária uma mudança dos métodos tradicionais de ensino da ciência, e os fascinantes avanços da astronomia dos últimos anos podem ser um poderoso aliado para atingir este objectivo.

O recém-aprovado Plano Estratégico da IAU para os próximos 10 anos prevê o uso da astronomia como um impulsionador para o desenvolvimento em vários países. Isso só pode ser feito se houver um investimento constante em formação de educadores e na qualificação dos alunos com as ferramentas certas para enfrentar o mercado de trabalho.

Neste simpósio vamos discutir os recentes sucessos e desafios para o futuro das instituições educativas,

através da utilização de instrumentos modernos de ensino da ciência nas escolas europeias.

Contacto: Rosa Doran (rosa.doran@nuclio.pt)

SESSÃO ESPECIAL 7: Educação e Divulgação na Europa após o IAI2009
O Ano Internacional da Astronomia 2009 (IAI2009) foi responsável por dezenas de milhares de eventos em todo o mundo. Estes foram organizados e implementados por muitos profissionais, amadores e voluntários que fizeram do IAI2009 o projecto de educação e divulgação científica para o público de maior sucesso jamais realizado.

Esta sessão foca-se em dois aspectos fundamentais do IAI2009: a comunicação de astronomia ao público e o valor educativo da astronomia na atracção dos jovens para o estudo da ciência e tecnologia, na escola, e depois dela. Foram planeados vários eventos em toda a Europa e, por isso, todos são convidados a partilhar suas experiências. Este simpósio é uma excelente oportunidade para aprender com as experiências dos outros e obter novas ideias para eventos e projectos a realizar após o IAI2009.

Contacto: Pedro Russo (prusso@eso.org)

SESSÃO ESPECIAL 8: Astrónomos amadores e profissionais na Europa: como esta cooperação está a mudar a astronomia
Depois de vários anos a fazer observações, muitos astrónomos amadores querem ir mais longe, fazer uma contribuição significativa para a astronomia, seja através da divulgação ao público, da educação não formal, ou da investigação. O Ano Internacional da Astronomia 2009 foi a prova definitiva de que essa cooperação é não só possível mas também desejável, gerando resultados altamente valiosos. Na verdade, a astronomia é uma das poucas ciências onde os amadores podem contribuir para o conhecimento de ponta.

Durante esta sessão especial analisaremos o estado actual da cooperação entre profissionais e amadores e exploraremos os possíveis cenários futuros para uma plataforma comum para promover, ou mesmo reforçar, esta cooperação.

Contacto: Pedro Russo (prusso@eso.org)

SESSÃO ESPECIAL 9: 30 anos do IRAM
O ano de 2009 marcou o 30 º aniversário da criação do "Institut de Radioastronomie Millimétrique" (IRAM). Ambos os observatórios do IRAM, o telescópio de 30 metros no Pico Veleta em Espanha e o interferómetro no Plateau de Bure, em França, são importantes estruturas para a radioastronomia, sendo os observatórios mais poderosos que a operar hoje em dia em comprimentos de onda milimétrica.

A comemoração dos 30 anos do IRAM será uma oportunidade para examinar os novos horizontes científicos que serão abertos pela próxima geração de rádio telescópios, e para explorar o papel que o IRAM continuará a desempenhar neste novo cenário em rápida evolução.

Contacto: Pierre Cox (cox@iram.fr)

SESSÃO ESPECIAL 10: CERN
Nesta sessão especial dedicada à Organização Europeia para Investigação Nuclear (CERN), os seguintes temas serão abordados: Física Nuclear no Isolde e suas implicações para a Astrofísica Nuclear; Anti-matéria no CERN AD e a medição das constantes fundamentais; medições de referência para neutrinos e física de raios cósmicos com o NA61; o status do LHC (a confirmar).

SESSÃO ESPECIAL 11: Sessão de Formação de Professores
Esta sessão irá fornecer exemplos de boas práticas na utilização das novas tecnologias no ensino das ciências. Será promovida pela equipa do Galileo Teacher Training Program e irá apresentar aos participantes modernas ferramentas, tais como:
- *Software* de processamento de imagem;
- Actividades *Hands-on* de ciência: a construção de telescópios, espectroscópios, etc;
- Telescópios robóticos;

- Campanhas Científicas: International Asteroid Search Campaign, Supernova Campaign, Extra-Solar Planets Campaign;
- Dark Skies Awareness.

Contacto: Rosa Doran (rosa.doran@nuclio.pt)

Simpósios EAS

SIMPÓSIO 1: Da Variação das Constantes à Física Fundamental

A Natureza é governada por uma série de leis físicas e de acoplamentos fundamentais sem dimensão que determinam as propriedades do nosso universo físico, desde o tamanho de átomos, células e montanhas até ao destino final do Universo como um todo. No entanto, é espantoso o quão pouco sabemos sobre elas.

A constância das leis da física é um dos pilares do método de investigação científica, mas para os acoplamentos fundamentais esta é uma hipótese sem qualquer outra justificação que não a de um pressuposto histórico. Não há nenhuma "teoria das constantes", que descreva o seu papel nas teorias subjacentes e como elas se relacionam entre si ou quantas delas são realmente fundamentais. O estudo do comportamento destas grandezas ao longo da história do Universo é uma maneira eficaz de investigar a física fundamental. Isso explica por que a ESA e o ESO incluem as variações das constantes fundamentais nas suas áreas prioritárias de ciência fundamental na próxima geração de infraestruturas.

Mais informações no site do simpósio: http://www.astro.up.pt/vfc2010

Contacto: Carlos Martins, CAUP, Portugal (Carlos.Martins@astro.up.pt)

SIMPÓSIO 2: O Ambiente e a Formação de Galáxias: 30 anos depois

30 anos depois da obra seminal de Alan Dressler sobre a relação entre a morfologia e a densidade, que estabeleceu o ambiente como uma força motriz na formação e evolução de galáxias, sabemos que ambos os processos locais (natureza) e ambiente (estímulo) contribuem para a sua formação. No entanto, a ligação entre estes dois factores permanece ainda em aberto.

Este mini simpósio junta as observações e a teoria, com o propósito de estabelecer o papel do ambiente na formação de estrelas e galáxias. O encontro vai incluir uma sessão de mesa redonda onde os últimos resultados e ideias serão debatidos pelos peritos, sendo também incentivada a participação activa da plateia.

Mais informações no site do simpósio: http://www.mssl.ucl.ac.uk/~ipf/GF.html

Contacto: Ignacio Ferreras, MSSL/UCL (ferreras@star.ucl.ac.uk)

SIMPÓSIO 3: Galáxias Anãs: a chave para a Formação e Evolução das Galáxias

Apesar de muitas linhas de evidência realçarem o papel das galáxias anãs (GA) no cenário cósmico, enquanto possíveis elementos na construção de galáxias tipo Hubble e enquanto contribuidores importantes para o enriquecimento químico do Universo, a formação e evolução destes sistemas é apenas vagamente conhecida.

Este mini simpósio visa proporcionar um fórum tanto a observadores como a teóricos, motivando a troca de ideias e partilha de novos resultados sobre os diversos aspectos evolutivos das GA: o que aprendemos até agora, e quais são as principais oportunidades e desafios para o futuro próximo.

Mais informações no site do simpósio: http://www.astro.up.pt/investigacao/conferencias/dwarfgalaxies2010/

Contacto: Polychronis Papaderos, CAUP, Portugal (papaderos@astro.up.pt)

SIMPÓSIO 4: Trânsitos Estelares, do Macro ao Micro

Os trânsitos estelares fornecem-nos informações fundamentais sobre os planetas, as estrelas e as propriedades dos discos, tais como tamanhos geométricos, massas dinâmicas, massa específica, as

inclinações do eixo orbital em relação ao eixo de rotação, movimentos absidais e a estrutura do disco circum-estelar. Essas propriedades são ingredientes essenciais para a compreensão da formação e evolução das estrelas e dos sistemas planetários em torno delas.

Mais informações no site do simpósio: http://www.ucm.es/info/carmenes/lisboa/

Contacto: Eduardo L. Martín, Centro de Astrobiología, Spain (ege@iac.es)

SIMPÓSIO 5: Aglomerados Estelares na Era dos Grandes Rastreios
As estrelas formam-se principalmente em aglomerados. Ao longo do tempo, esses grupos evaporaram-se e/ou são perturbados, vindo a enriquecer a população estelar em geral. O tempo de vida destes aglomerados pode variar muito, desde alguns milhões, até milhões de milhões de anos.

Estimativas indicam que a Via Láctea tem cerca de 200 bilhões de estrelas, (o número cresce a cada poucos anos) e actualmente abriga ~ 10 ^ 5 ou mais aglomerados de estrelas. No entanto, apenas cerca de 2500 aglomerados foram identificados, e menos de metade deles foram realmente estudados.

Este simpósio será um ponto de encontro para promover a discussão sobre de que forma podem os grandes rastreios terrestres e espaciais, feitos recentemente e em planeamento, contribuir para dar um salto em frente nesta área de investigação, que tem uma forte história Europeia.

Mais informações no site do simpósio: http://www.jenam2010.org/clusters

Contacto: André Moitinho, Portugal (andre@sim.ul.pt)

SIMPÓSIO 6: Casos de Ciência para a Interferometria Óptica e no Infravermelho - Presente e Futuro
A interferometria óptica entrou numa nova era com o aparecimento do VLTI, na Europa, e de outras instalações abertas à comunidade não-especialista, nos E.U. O número de áreas de investigação aumentou exponencialmente com o número de utilizadores dos interferómetros. Originalmente dedicada à física estelar, a astronomia extragaláctica e os corpos do sistema solar são agora parte do âmbito de aplicação dos interferómetros. A interferometria é um tal sucesso na Europa que o ESO decidiu iniciar a construção de uma segunda geração de instrumentos para o VLTI, fazendo da imagem interferométrica nos domínios infravermelho curto e médio uma ferramenta mais comum para a astrofísica. Estes novos instrumentos vão abrir novos campos científicos.

Mais informações no site do simpósio: http://www.lsw.uni-heidelberg.de/jenam2010/

Contacto: A. Quirrenbach (A.Quirrenbach@lsw.uni-heidelberg.de)

SIMPÓSIO 7: O Square Kilometre Array: lançando as bases para o novo paradigma da radioastronomia no século XXI
O Square Kilometre Array (SKA) irá trazer avanços em mais do que uma ordem de magnitude na sensibilidade, em comparação com qualquer rádio telescópio existente, numa faixa de comprimento de onda que vai de várias centenas a um. Vai revolucionar o estudo do elemento mais abundante no Universo, o hidrogénio, a partir da época de reionização até aos dias presentes, sondando o período de início da formação das primeiras estrelas, olhando em profundidade para proto-planetas e, através da precisão dos pulsares, detectar as distorções do espaço-tempo devido à radiação gravitacional.

Mais informações no site do simpósio:
http://www.jenam2010.org/index.php?option=com_content&task=view&id=38&Itemid=7

Contacto: Domingos Barbosa, IT- Aveiro, Portugal (dbarbosa@av.it.pt)

Exposição

Uma exposição sobre temas relacionados com a astronomia, ciências espaciais e novas tecnologias estará aberta aos participantes da conferência e ao público em geral, durante toda a semana.

Entre os expositores estarão grandes instituições de Astronomia, Ciências Espaciais e Tecnologia, editores e membros da instrumentação e indústria aeroespacial.

Exibidores confirmados:

- European Space Agency (ESA)
- European Southern Observatory (ESO)
- RadioNet
- Astron
- Square Kilometre Array (SKA)
- Cambridge University Press
- Springer
- European Research Council (ERC)
- OPTICON
- AstroMundus
- ASTRONET
- European Astronomical Society (EAS)
- Sociedade portuguesa de Astronomia

Programa Social

Um cocktail de boas vindas terá lugar no Domingo, 5 de Setembro, ao fim da tarde, nos jardins do Museu da Cidade, junto ao local da Conferência.

O jantar da Conferência terá lugar na terça-feira, no restaurante "ESPAÇO TEJO". Mais informações serão fornecidas em breve.

Clipping:

Conferências Internacionais, Europa no Espaço, Portugal

Astronomia Europeia vem a Lisboa em Setembro

Semana Europeia de Astronomia e Ciências Espaciais

A ***Joint European and National Astronomy Meeting*** *(JENAM) 2010*, uma das mais importantes reuniões científicas na área da astronomia na Europa, terá lugar na Faculdade de Ciências da Universidade de Lisboa de 6 a 10 de Setembro de 2010.

Uma iniciativa da Sociedade Astronómica Europeia (EAS), este será um importante evento científico, abrangendo temas na linha de frente da astronomia, ciências espaciais e tecnologia, espalhados pelo Simpósios da EAS, Sessões Plenárias, Sessões Públicas, Sessões Especiais e Posters. O programa da JENAM 2010 irá abranger um grande número de assuntos que vão desde os aspectos evolutivos das galáxias anãs, o estudo dos agrupamentos estelares, Interferometria óptica e no infravermelho, o papel do ambiente na formação de estrelas e galáxias, o planeamento estratégico da Astronomia na Europa, colaboração entre astrónomos profissionais e amadores e as novas tendências na educação global da Astronomia
Nesta 18 ª edição da JENAM, grandes instituições científicas europeias como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA) irão apresentar os seus resultados mais actuais. Pela primeira vez, o CERN vai participar no JENAM com uma importante contribuição.

Mais de 400 artigos para apresentações orais e posters foram submetidos e espera-se que cerca de 600 astrónomos de todo o mundo estejam presentes neste encontro.

Esta é a segunda vez que a JENAM é realizada no nosso país e organizada pela Sociedade Portuguesa de Astronomia. Desde a sua última edição em Portugal, que teve lugar no Porto em 2002, a astronomia tornou-se a área mais competitiva da investigação científica em Portugal, segundo um estudo divulgado recentemente pelo Ministério da Ciência, Tecnologia e Ensino Superior (http://www.gpeari.mctes.pt/archive / doc/Producaocientificanacional_fev2010_aa.pdf).

Mais informações sobre a conferência podem ser encontrada no site oficial: http://www.jenam2010.org

O programa provisório da conferência pode ser encontrado em: http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

A JENAM 2010 é organizada pela Sociedade Portuguesa de Astronomia com o apoio da Fundação para a Ciência e Tecnologia (FCT),Fundação Calouste Gulbenkian, OPTICON, RadioNet, ESO e ESA.

Mais informações serão divulgadas antes e durante a conferência, incluindo notas de imprensa sobre as apresentações que podem ser de especial interesse (sujeito a embargo).

Acreditação de jornalistas

Os representantes dos meios de comunicação social são convidados a participar. Um Gabinete de Imprensa estará disponível durante o período da conferência, a partir das 09:00h de Segunda-feira 6 de Setembro até às 17:00h de Sexta-feira 10 de Setembro. O Gabinete dispõe de Internet sem fios.

A acreditação de jornalistas é gratuita, podendo um pré-registo ser feito online no website da conferência ou por correio electrónico para info@scienceoffice.org (a inscrição antecipada não é obrigatória, mas encorajada).

Bloggers de ciência são bem-vindos para participar da conferência ou para fazer parte da nossa *mailing list*.

Notas para os editores

A JENAM é organizada a anualmente num país Europeu, numa colaboração entre a Sociedade Astronómica Europeia (EAS) e uma das sociedades astronómicas nacionais. O JENAM 2010 é a 18ª Reunião Anual da Sociedade Astronómica Europeia e a 20ª Reunião Portuguesa de Astronomia e Astrofísica.

A Sociedade Astronómica Europeia (EAS) foi fundada em 1990 e sua finalidade é contribuir para e promover o avanço da astronomia na Europa, no seu sentido mais lato, proporcionando um fórum independente para a discussão de temas de interesse comum e pela disponibilização de meios pelos quais podem ser tomadas medidas sobre as questões que pareça ser desejável tratar a nível europeu. A EAS reúne 24 Sociedades Astronómica Europeias e mais de 700 astrónomos profissionais.

Ligações

JENAM: http://www.jenam2010.org

European Astronomical Society (EAS): http://eas.unige.ch/

Sociedade Portuguesa de Astronomia: http://www.sp-astronomia.pt/

Observatório Europeu do Sul (ESO): http://www.eso.org/public/

Agência Espacial Europeia: http://www.esa.int

Fundação para a Ciência e Tecnologia (FCT): http://alfa.fct.mctes.pt/

Fundação Calouste Gulbenkian:http://www.gulbenkian.pt

RadioNet: http://www.radionet-eu.org/

OPTICON: http://www.astro-opticon.org/

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European Astronomical Society

Joachim Krautter (president-eas@unige.ch)

Gabinete de Imprensa

The Science Office

Mariana Barrosa (mariana.barrosa@scienceoffice.org)

Posts relacionados:

Nouvelles

Conférence «Joint ... à Lisbonne, au Portugal

[Date: 2010-08-23]

La conférence JENAM 2010 («Joint European and national astronomy meeting») aura lieu du 6 au 10 septembre 2010 à Lisbonne, au Portugal.

Le thème de l'édition de cette année est «From varying couplings to fundamental physics» («Des couplages variés à la physique fondamentale»). La conférence aura pour objectif de discuter des lois de la physique et des couplages adimensionnels.

L'évènement rassemblera les chercheurs les plus actifs dans ce domaine pour débattre des derniers développements et explorer les moyens de stimuler les capacités uniques des divers groupes. Il visera également à permettre aux chercheurs de travailler sur des équipements tels que le Très grand télescope (VLT) de l'UE et le télescope géant européen (E-ELT), ainsi que les satellites Herschel et Planck et ALMA (fruit du partenariat Atacama Large Millimeter/submillimeter Array).

JENAM est organisée chaque année par l'European Astronomical Society (EAS) et une société nationale d'astronomie. Cette année, la rencontre se déroulera parallèlement à la Portuguese Meeting of Astronomy and Astrophysics.

Pour de plus amples informations, consulter:
http://www.jenam2010.org/ [http://www.jenam2010.org/]

Catégorie: Évènements
Source des informations: European Astronomical Society
Référence du Document: D'après une annonce de l'évènement
Codes de Classification de l'Index des Sujets: Coordination, coopération; Sciences de la terre; Recherche scientifique

RCN: 32445

SPACE SCOPES

European Astronomy Comes To Lisbon In September

by Staff Writers
Lisbon, Portugal (SPX) Aug 10, 2010


File image.

The Joint European and National Astronomy Meeting (JENAM) 2010, a major European astronomy meeting, will take place at the Faculty of Sciences of the University of Lisbon, Portugal, from Monday 6 September to Friday 10 September 2010.

This is an initiative of the European Astronomical Society (EAS) and will be an exciting scientific event, spanning front line topics in Astronomy, Space Sciences and technologies spread by the EAS Symposia, Plenary, Public and Special Sessions and posters.

The programme for JENAM 2010 will cover a vast number of subjects ranging from the evolutionary aspects of Dwarf Galaxies, the study of Star Clusters in the era of Large Surveys, optical and infrared Interferometry, the role of environment in star and galaxies formation, Astronomy Planning in Europe, professional and amateur astronomers collaboration to new trends in Global Astronomy Education

Again, on this 18th edition of JENAM, main European astronomy infrastructures such as the European Southern Observatory (ESO) and the European Space Agency (ESA) will present their topical results. For the first time, CERN will participate at a JENAM with a major contribution.

More than 400 abstracts for oral presentations and posters have been submitted and around 600 astronomers from around the world are expected to attend.

This is the second time JENAM is held in Portugal and organised by the Portuguese Astronomical Society. Since its last Portuguese edition in Porto in 2002, astronomy has become the most competitive scientific area of research in Portugal, according to a study recently released by the Ministry of Science and Technology

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Russia To Launch Moon Probe In 2012
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HobbySpace Blog

European Week of Astronomy and Space Science - Lisbon, Portugal, Sept 6-10, 2010

10 Aug 2010, 14:15 UTC

(200 words excerpt, click title or image to see full post)

An announcement in the mail:

European Astronomy comes to Lisbon in September
The European Week of Astronomy and Space Science

9 August 2010, Lisbon: The Joint European and National Astronomy Meeting (JENAM) 2010, a major European astronomy meeting, will take place at the Faculty of Sciences of the University of Lisbon, Portugal, from Monday 6 September to Friday 10 September 2010.

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Note: All formatting and links have been removed - click title or image to see full article.

Semana Europeia de Astronomia e Ciências Espaciais

A astronomia europeia vem a Lisboa em Setembro.

Por Graziela Costa | gcosta@mundouniversitario.pt

De 6 a 10 de Setembro de 2010, a Faculdade de Ciências da Universidade de Lisboa recebe a Joint European and National Astronomy Meeting (JENAM) 2010, uma das mais importantes reuniões científicas na área da astronomia na Europa.
Esta é uma iniciativa da Sociedade Astronómica Europeia (EAS)e abrange áreas como a astronomia, ciências espaciais e tecnologia, espalhados pelos Simpósios da EAS, Sessões Plenárias, Sessões Públicas, Sessões Especiais e Posters.
Os aspectos evolutivos das galáxias anãs, o estudo dos agrupamentos estelares, a Interferometria óptica e no infravermelho, o papel do ambiente na formação de estrelas e galáxias, o planeamento estratégico da Astronomia na Europa, a colaboração entre astrónomos profissionais e amadores e as novas tendências na educação global da Astronomia são alguns dos temas que vão ser discutidos nesta 18.ª JENAM.
Para saberes mais sobre esta conferência consulta: http://www.jenam2010.org.

10.08.2010

Urbana-Champaign
Nov. 5-7, 2010

2nd Int. IAA Conf. on Private Human Access to Space
Arcachon, France
May 30-June 1, 2011

European Week of Astronomy and Space Science - Lisbon, Portugal, Sept 6-10, 2010

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Details of the conference can be found on the official website: http://www.jenam2010.org

A draft programme can be found at:
http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=13&Itemid=26

Further information will be circulated before and during the meeting, including press notices on presentations that may be of special interest (subject to embargo).

JENAM 2010 is organised by the Portuguese Astronomical Society with the support of the Portuguese Foundation

for Science and Technology (FCT), the Calouste Gulbenkian Foundation, OPTICON, RadioNet, ESO and ESA.

Posted 08/10/10 | 09:15:54 by TopSpacer | Filed under: Astronomy

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Note: Trash talking and name calling, especially in anonymous comments, won't be tolerated.

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Curso de Astronomia para Iniciantes 2010 (CE)

Inscrições - 18 a 27/09 - VAGAS LIMITADAS - 20 h/a - R$ 120,00 ou 1 + 2 de R$ 40,00 - COM CERTIFICADO. Informações: Fernando Leão: (85) 4006 7726 / Hercilda (85) 4006 7902 - Fortaleza/CE

Projeto De Olho na Lua (CE)

22/9 - 18:00 - Colégio 7 de Setembro (Centro) - Fortaleza/CE [GRÁTIS]

VIII EREA - Encontro Regional de Ensino de Astronomia - Foz do Iguaçu (PR)

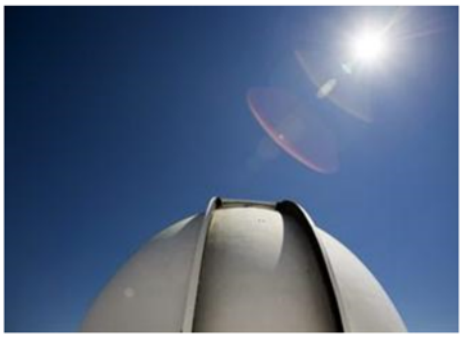
22 a 25/09 - Polo Astronômico Casimiro Montenegro Filho, Instalado no Parque Tecnológico Itaipu (PTI). Informações com José Mauro Palhares (jmpalhares@gmail.com) e Janer Vilaça (janer@pti.org.br)

PALESTRA - "Relatividade" , "História do Calendário" (CE)

06/09/2010

Encontro internacional sobre Astronomia vai realizar-se em Lisboa esta semana

A Astronomia mundial vai estar reunida em Lisboa onde mais de 600 investigadores vão partilhar informação em áreas como os planetas extra solares ou a formação do Universo.



(Público - Portugal) Entre segunda e sexta-feira, Portugal será anfitrião de uma das mais importantes reuniões científicas na área da astronomia mundial, a "Joint European and National Astronomy Meeting" (JENAM) 2010, que decorrerá na Faculdade de Ciências da Universidade de Lisboa.

Trata-se de uma iniciativa da Sociedade Astronómica Europeia, considerada pelos especialistas um "importante evento científico" que abrange temas na linha de frente da astronomia, ciências espaciais e tecnologia.

Um dos especialistas que participará no evento é Rui Agostinho, director do Observatório Astronómico de Lisboa e membro do Centro de Astrofísica da Universidade de Lisboa, para quem Portugal terá oportunidade de demonstrar a "forte participação que tem em projectos de grande pioneirismo".

Rui Agostinho explicou que, actualmente, existem duas grandes áreas de saber na astronomia em que a comunidade científica está empenhada: a busca de outros planetas extra solares e o conhecimento das primeiras etapas da evolução ("Big Bang").

Trata-se de temas em que "Portugal está fortemente envolvido, com pessoas de excelente qualidade a trabalhar", disse.

Nos próximos cinco dias estarão em Lisboa algumas das maiores referências na área da astronomia. Esta é a 18.ª edição do JENAM, em que participarão grandes instituições científicas europeias como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA). Portugal já tinha acolhido a JENAM, em 2002, num encontro que decorreu no Porto.

às 22:40

0 comentários:

Postar um comentário

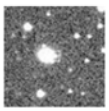
Comente

ATUALIZAÇÕES DOS NÚCLEOS

METRO (Meteorologia)
Instituto Nacional de Meteorologia publica novo atlas climático do Brasil
1 hora atrás

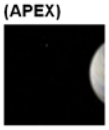
Araújo - Núcleo de Astronáutica

Astronautas perdem as unhas das mãos mais facilmente
3 horas atrás

MIRA Núcleo de Estudos de Variáveis

Supernova 2010ia (Taurus)
3 horas atrás

HABITAT

Nuvens têm composição diferente de acordo com nivel de poluição
3 horas atrás

Acompanhamento de Planetas EXtrassolares (APEX)

Planeta como a Terra em 2011 (AstroPT)
18 horas atrás

TORQUEMADA

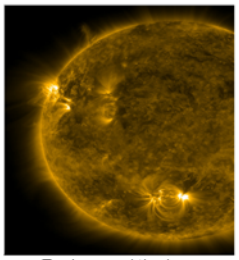
Correção de rota
20 horas atrás

AsSisS

A caminho do asteroide Vesta
1 dia atrás

RUBENS Núcleo de Estudos da Lua
China planeja pisar pela primeira vez a Lua em 2025
1 dia atrás

IMAGEM ASTRONÔMICA DO DIA (APOD)


Equinox and the Iron

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HORA LEGAL (UT -3)

UT (GMT)

ESTRUTURA

REGRAS NÚCLEOS

CONHEÇA NOSSOS NÚCLEOS DE TRABALHO

TRECHOS DO REGIMENTO INTERNO

EVENTOS COM O GaeA
Curso de Observação do Céu

CORREIO da manhã

Quinta-feira, 23 de Setembro de 2010 - 16:19

Director: Octávio Ribeiro Directores-adjuntos: Armando Esteves Pereira e Eduardo Dâmaso

Encontro debate busca de novos planetas e conhecimento da origem do Universo

600 astrónomos debatem a origem do Universo

Lisboa reúne a partir de hoje e até sexta-feira cerca de 600 astrónomos provenientes de todo o Mundo, na 18ª Edição do JENAM (Joint European and National Astronomy Meeting).

06 Setembro 2010 *Nº de votos (0)* *Comentários (0)*

Rui Agostinho, director do Observatório Astronómico de Lisboa e membro do Centro de Astrofísica da Universidade de Lisboa, sublinha que o encontro, que decorre na Faculdade de Ciências da Universidade de Lisboa, visa "debater, sobretudo, os progressos alcançados na busca de novos planetas e o conhecimento das primeiras etapas da origem do Universo [Big Bang]". O cientista entende que "Portugal tem forte participação em projectos pioneiros nestas duas áreas".

A iniciativa, da responsabilidade da Sociedade Astronómica Europeia, conta com a participação da Agência Espacial Europeia.

Daniel Aguilar/Reuters

Portugal possui forte participação em projectos espaciais pioneiros

Outras Notícias de Ciência/Tecnologia

Google Chrome disponível para telemóvel
21 Setembro 2010 *Comentários (0)*

Portugal candidata-se a centro de alerta de tsunamis
17 Setembro 2010 *Comentários (0)*

Morreu peixe-lua do Oceanário
16 Setembro 2010 *Comentários (2)*

COMENTÁRIOS A ESTA NOTÍCIA 0

MAIS RECENTES ***MAIS ANTIGAS*** | ***MAIS VOTADAS*** ***MENOS VOTADAS***

ÚLTIMAS NOTÍCIAS

14h24 **Salva tripulação de navio sequestrado na Nigéria**

14h16 **Apanhada rede que roubava portagens e supermercados**

14h05 **Bill Gates é o mais rico dos EUA há 17 anos**

13h02 **'Museu do Ouro': Testemunhas têm medo de represálias**

12h51 **Conselho de Justiça da FPF retira sanção a Queiroz**

12h24 **Taxas euribor recuam em todos os prazos**

12h15 **Palmela: Escola vandalizada**

12h11 **Michael Douglas em nova crise financeira**

12h04 **'Rua Sésamo' censura seios de Katy Perry**

Nacionais

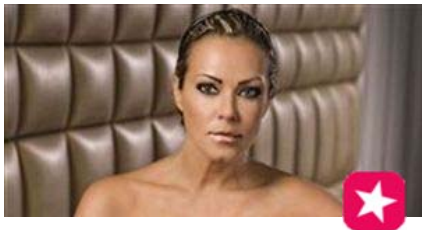
Dinheiro é uma paixão para Irina (Actualizada com fotogaleria)

Comentários (10)

A Ferver

Gravidez: Yannick filma enjoos de Luciana (Nova actualização com fotogaleria)

Comentários (26)



Nacionais: Elsa Raposo tem novo namorado

Elsa Raposo está apaixonada por um empresário francês, Patrick Haillot, 55 anos de idade, com quem já vive. No entanto, ainda não tem planos para

Portugal quer atrair turistas chineses

Campanha de promoção arranca hoje na Expo 2010, em Xangai
Sócrates prevê um ano de recuperação no sector do turismo

O secretário de Estado do Turismo, Bernardo Trindade, inicia hoje em Xangai uma campanha de promoção de Portugal na China, país que esta década deverá tornar-se a maior fonte mundial de turistas. A iniciativa decorre durante dois dias no Pavilhão de Portugal na Expo 2010.

Segundo os organizadores, a campanha "surge em coerência com o Plano Estratégico Nacional de Turismo, no qual a China é identificada como um mercado de diversificação para o turismo nacional".

"Este é um ano de recuperação do sector (…) As indicações mais recentes vindas das regiões turísticas mais importantes, o Algarve, Lisboa e a Madeira apontam para um ano turístico muito positivo o que é muito importante para a recuperação da economia", disse o primeiro-ministro, José Sócrates, na passada sexta-feira.

47
milhões de chineses viajaram para fora em 2009. Segundo a Organização Mundial de Turismo, serão 100 milhões em 2010

A Expo 2010, dedicada ao tema "Better City, Better Life" (Melhores Cidades, Maior Qualidade de Vida), decorre até 31 de Outubro numa área de 528 hectares (dez vezes a Expo 98, em Lisboa). É a maior exposição universal de sempre, com a participação de cerca de 240 países e organizações internacionais.

AFP

▶ Expo 2010 está construída numa área dez vezes maior do que a da Expo 98 em Lisboa

Lisboa enche-se de estrelas

SXC.Hu

▶ Astronomia em debate

Portugal recebe, a partir de hoje, uma das mais importantes reuniões científicas na área da astronomia mundial.

A Joint European and National Astronomy Meeting (JENAM) 2010 decorre na Faculdade de Ciências da Universidade de Lisboa até sexta-feira. No total serão 600 investigadores, entre eles algumas das maiores referências na área da astronomia.

Esta é a 18.ª edição do JENAM que vai mais uma vez tratar a busca de planetas extra solares e a formação do universo.

Estas são, aliás, das áreas que os astrónomos mais investigam. Esta é uma iniciativa da Sociedade Astronómica Europeia (EAS), considerada pelos especialistas um "importante evento científico" que abrange temas na linha da frente da astronomia, ciências espaciais e tecnologia.

Portugal já tinha acolhido a JENAM, em 2002, num encontro que decorreu no Porto.

PSD critica compra de carros do Estado

O presidente do PSD criticou ontem a compra de 2.500 viaturas pelo Estado português no valor de 35 milhões de euros, assinalando que em Inglaterra a política é pôr os ministros a andar de transportes públicos. Pedro Passos Coelho falava no encerramento da Universidade de Verão do PSD, em Castelo de Vide. E respondeu ainda à promessa do primeiro-ministro, José Sócrates, de não deixar cair o tema da revisão constitucional, acusando o PS de mudar de posição.

Desaparecidos vêm de instituições

A maioria das pessoas desaparecidas são adolescentes institucionalizados, jovens que chegam a fugir mais do que uma vez dos centros educativos e que acabam quase sempre por ser encontrados pela Polícia Judiciária (PJ).

Nos primeiros oito meses do ano desapareceram 856 pessoas, das quais 623 são adolescentes entre os 12 e os 18 anos, disse à Lusa Ramos Caniço, director da Unidade de Informação de Investigação Criminal, da PJ de Lisboa.

Norte a Sul

PCP rejeita instabilidade

AVANTE. O líder do PCP, Jerónimo de Sousa, disse ontem, no encerramento da Festa do Avante, na Quinta da Atalaia, que não aceita a "instabilidade social e injustiças" de quem está contra o Orçamento. Num discurso de 55 minutos, saudou ainda o candidato presidencial Francisco Lopes.

Médico pode ser suspenso

LAGOA. A Ordem dos Médicos pode suspender preventivamente o médico holandês dono de uma clínica em Lagoa onde três pacientes ficaram cegos. Quem o garantiu foi a ministra da Saúde, Ana Jorge.

Eco radar

O NOVO SÍMBOLO DOS PRODUTOS BIOLÓGICOS

SARA CAMPOS
SARACAMPOS
@QUERCUSANCN.PT

Eurofolha. É este o nome do novo logótipo que passa agora a identificar obrigatoriamente todos os produtos alimentares biológicos pré-embalados na União Europeia. Em vigor desde o passado mês de Julho, esta medida comunitária traz uma garantia de segurança para os consumidores europeus visto que, até então, o anterior símbolo (selo circular) era utilizado de forma voluntária. Com a chegada da Eurofolha, isso só acontecerá nos produtos não pré-embalados ou importados do exterior. Identificar este novo logótipo é fácil: tal como o nome indica, o símbolo apresenta, num fundo verde, o contorno de uma folha feito pelas 12 estrelas que estão presentes na bandeira da União Europeia. Um novo design mais apelativo que saiu vencedor do concurso lançado pela Comissão Europeia em 2008, no qual participaram mais de 3.400 estudantes europeus de Arte e Design. Também renovadas foram as regras de rotulagem para este tipo de produtos, que passam a exigir agora a indicação do local de cultivo dos ingredientes e do código do organismo de controlo. A implementação destas medidas respeitará um período de transição de dois anos, passando aí a vigorar em pleno para uma maior segurança alimentar e ambiental.

Saiba mais no site: *ec.europa.eu/agriculture/organic/eu-policy/logo_pt*

Soldados da Paz

O Presidente da República, Cavaco Silva, homenageou ontem os bombeiros portugueses em Armamar, onde inaugurou um monumento em honra dos soldados da paz.

AO online
Acoriano Oriental

Director:
Paulo Simões
Director-Adjunto:
Pedro Lagarto

Quinta-feira, 23 de Setembro de 2010

Outras notícias:

Documentário faz uma viagem à geração pós-25 de Abril

Chico Buarque e Pilar del Río homenageiam Saramago em São Paulo

Polícias em vigília em São Bento a partir de hoje

PSD questiona Governo sobre contas públicas

Igreja e historiadores reúnem-se hoje para esclarecer mitos da República

Encontro mundial de Astronomia em Lisboa sobre temas em que Portugal está "fortemente envolvido"

Nacional | 2010-09-05 13:45

A busca de planetas extra solares e a formação do universo são das áreas que os astrónomos mais investigam e nas quais Portugal tem forte participação, como se verá na segunda feira, em Lisboa, onde 600 investigadores partilharão saberes.

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Tem sentido dificuldades financeiras para comprar medicamentos?

- Sim
- Não

Votar | Ver resultados

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César muda directores regionais e presidentes da Atlânticoline e Lotaçor

Famílias das Sete Cidades aguardam promessa eleitoral

Resgatado corpo de pescador na zona dos Fenais da Ajuda

Setembro 2010

D	S	T	Q	Q	S	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
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« Agosto 2010 Outubro 2010 »

AO online
Acoriano Oriental

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Paulo Simões
Director-Adjunto:
Pedro Lagarto

Quinta-feira, 23 de Setembro de 2010

Congresso Internacional de Astronomia arranca hoje em Portugal

Nacional | 2010-09-06 06:22

Portugal é entre hoje a sexta feira anfitrião de uma das mais importantes reuniões científicas do mundo na área da astronomia: 600 investigadores estão em Lisboa para falar de assuntos como a busca de planetas extra solares e a formação do universo.

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Grupo Ocidental	Grupo Central	Grupo Oriental
		

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« Agosto 2010 Outubro 2010 »

Astronomia: Encontro mundial em Lisboa sobre temas em que Portugal está "fortemente envolvido"

Informação - Portugal e Comunidades

Domingo, 05 Setembro 2010 16:57

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(Lusa)

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Se deseja ver publicado o seu comentário, por favor identifique-se com nome e apelido e, no final do texto que escrever, coloque a sua localidade. Os comentários são sujeitos a validação, sendo excluídos todos os conteúdos racistas, xenófobos, difamatórios e atentatórios da boa imagem dos visados.

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Jornal de Notícias

23 Setembro 2010

Astrónomos de todo o Mundo reunidos em Lisboa

2010-09-06

Portugal é entre hoje, segunda-feira, e a próxima sexta-feira anfitrião de uma das mais importantes reuniões científicas do Mundo na área da astronomia: 600 investigadores estão em Lisboa para falar de assuntos como a busca de planetas extra solares e a formação do universo.

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> Estudo diz que portugueses bebem pouco e muito menos água
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Plus de 600 astronomes réunis à Lisbonne pour débattre des progrès en astrophysique

(/picture/279149)

Plus de 600 astronomes se sont donné rendez-vous à Lisbonne à l'occasion de la 18è édition de la Conférence internationale JENAM 2010 (Joint European and national astronomy meeting) qui s'est ouverte lundi à Lisbonne pour débattre des progrès en astrophysique.

Placée sous le thème "des couplages variés à la physique fondamentale", cette rencontre annuelle organisée par l'European Astronomical Society (EAS) est destinée à faire le point sur les progrès en astrophysique et débattre des derniers développements en matière d'astronomie et des lois de la physique et des couplages adimensionnels.

Les participants et les chercheurs les plus actifs dans le domaine de l'astronomie devront également explorer les différents sujets ayant trait à la recherche des planètes extra solaire et la formation des univers.

Cette rencontre de cinq jours, vise également à permettre aux chercheurs de travailler sur des équipements tels que le Très grand télescope (VLT) de l'UE et le télescope géant européen (E-ELT).

MAP

Dernière mise à jour : 06.09.2010 à 22:02

CiênciaHoje®
Jornal de Ciência, Tecnologia e Empreendedorismo
Diretor: Jorge Massada
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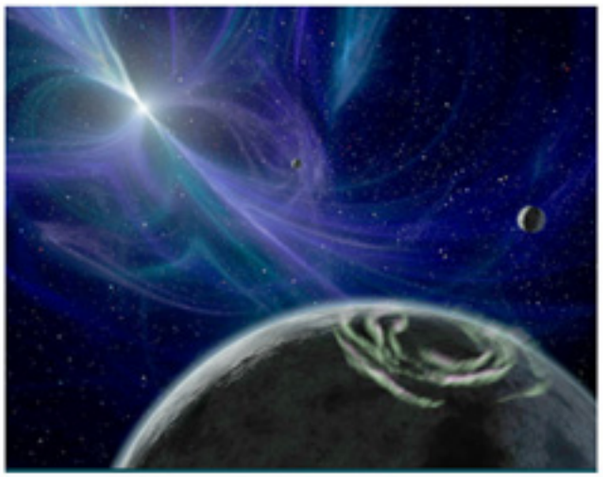
Centenas de cientistas reúnem-se para discutir astronomia e ciências espaciais

Faculdade de Ciências da Universidade de Lisboa recebe, entre 6 e 10 de Setembro, o JENAM 2010

2010-09-01



A procura de exoplanetas é um dos temas principais deste encontro internacional

Um grupo de 600 astrónomos vai reunir-se em Lisboa, a partir de dia 6, para a edição de 2010 da Joint European and National Astronomy Meeting (JENAM 2010). Nesta iniciativa da Sociedade Europeia de Astronomia (EAS) serão discutidos os temas proeminentes da astronomia, das ciências espaciais e das novas tecnologias para o Espaço.

A procura de planetas semelhantes à Terra, os mais recentes resultados sobre a formação e evolução de estrelas e galáxias e do próprio Universo, os últimos desenvolvimentos em interferometria óptica e no infravermelho são os temas principais que se vão discutir na Faculdade de Ciências da Universidade de Lisboa.

Durante a semana da conferência, o público está convidado a visitar uma exposição sobre temas relacionados com a astronomia, com a presença da ESA (Agência Espacial Europeia), do ESO (Observatório Europeu do Sul) e SKA (Square Kilometre Array).

Redes europeias como a RadioNet, OPTICON e o European Research Council, companhias nacionais que operam na área das tecnologias aeroespaciais como a Edisoft, Deimos e GMV, também marcam a sua presença.

Outras propostas de acesso livre são as palestras dos astrónomos portugueses João Magueijo (Imperial College London) - «**A anarquia e as leis da Física**» (terça-feira, 18h30) - e de Paulo Freire (Max-Planck-Institut für Radioastronomie) - «**Pulsares – os Relógios do Cosmos**» (sexta-feira, 19h00).

André Moitinho de Almeida, Presidente da Sociedade Portuguesa de Astronomia, entidade que organiza pela segunda vez o JENAM em Portugal, salienta alguns pontos altos desta conferência: **"Temos algumas sessões imperdíveis, como a palestra do Raymond Wilson, um dos pais da óptica activa"**. Durante o JENAM, o investigador vai receber o Prémio Tycho Brahe 2010.

O presidente salienta ainda a sessão especial do CERN (Organização Europeia para a Pesquisa Nuclear), que pela primeira vez participa nesta conferência. **"Serão debatidos os futuros resultados de física de altas energias obtidos com o acelerador de partículas - *Large Hadron Collider* - e o impacto destes resultados na astrofísica"**, esclarece.

Outro ponto central da conferência será as palestras de «**Jovens Investigadores Notáveis**»: Enric Palle (IAC) irá abordar «**A Terra como um planeta distante**» e Catherine Heymans (ROE) falará sobre «**Mapear**

Correio do Minho

Quinta, 23 de Setembro de 2010

Director: Paulo Monteiro
Webmaster: Filipe Ferreira

Astronomia: Encontro mundial em Lisboa sobre temas em que Portugal está 'fortemente envolvido'

Nacional

Lusa

autor
Lusa

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*** Este texto foi escrito ao abrigo do novo Acordo Ortográfico ***

domingo, 5 de Setembro de 2010 | 13:21 Imprimir Enviar por Email

Encontro mundial em Lisboa sobre Astronomia segunda-feira

A busca de planetas extra solares e a formação do universo são das áreas que os astrónomos mais investigam e nas quais Portugal tem forte participação, como se verá na segunda feira, em Lisboa, onde 600 investigadores partilharão saberes.

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- Contentores: Ampliação do TCA é «muito útil» - CML

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LIVROS

Moser: «Hoje até os traficantes lêem Clarice Linspector»
Benjamin Moser, 35 anos, apaixonou-se por Clarice Lispector quando leu «A Hora da Estrela» na faculdade. Desde então a sua vida mudou. Percorreu o Mundo durante cinco anos para escrever a sua biografia, «Clarice Lispector – Uma Vida» (Civilização).

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ASTRONOMIA

Encontro internacional arranca hoje em Lisboa

06 | 09 | 2010 08.11H

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DESTAK/LUSA | DESTAK@DESTAK.PT

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MAIS ARTIGOS DE LISBOA

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- 26 feridos por mês nas passadeiras de Lisboa em 2009
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- Ligação fluvial entre Trafaria e Porto

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Planetas extra-solares e a formação do Universo são temas fortes

Encontro internacional sobre Astronomia vai realizar-se em Lisboa esta semana

05.09.2010 - 12:53 Por Lusa

- 1 de 1 notícias em Ciências

Na próxima semana, a Astronomia mundial vai estar reunida em Lisboa onde mais de 600 investigadores vão partilhar informação em áreas como os planetas extra solares ou a formação do Universo.

Durante cinco dias a discussão sobre o Universo vai ser em Lisboa (Rui Gaudêncio (arquivo))

Entre segunda e sexta-feira, Portugal será anfitrião de uma das mais importantes reuniões científicas na área da astronomia mundial, a "Joint European and National Astronomy Meeting" (JENAM) 2010, que decorrerá na

Faculdade de Ciências da Universidade de Lisboa.

Trata-se de uma iniciativa da Sociedade Astronómica Europeia, considerada pelos especialistas um "importante evento científico" que abrange temas na linha de frente da astronomia, ciências espaciais e tecnologia.

Um dos especialistas que participará no evento é Rui Agostinho, director do Observatório Astronómico de Lisboa e membro do Centro de Astrofísica da Universidade de Lisboa, para quem Portugal terá oportunidade de demonstrar a "forte participação que tem em projectos de grande pioneirismo".

Rui Agostinho explicou que, actualmente, existem duas grandes áreas de saber na astronomia em que a comunidade científica está empenhada: a busca de outros planetas extra solares e o conhecimento das primeiras etapas da evolução ("Big Bang").

Trata-se de temas em que "Portugal está fortemente envolvido, com pessoas de excelente qualidade a trabalhar", disse.

Nos próximos cinco dias estarão em Lisboa algumas das maiores referências na área da astronomia. Esta é a 18.ª edição do JENAM, em que participarão grandes instituições científicas europeias como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA). Portugal já tinha acolhido a JENAM, em 2002, num encontro que decorreu no Porto.

Encontro mundial em Lisboa sobre Astronomia, área em que Portugal está "fortemente envolvido"

por Marta F. Reis com Agência Lusa , Publicado em 05 de Setembro de 2010

Fotografia

A busca de **planetas** extra **solares** e a formação do **universo** são das áreas que os astrónomos mais investigam e nas quais **Portugal** tem forte participação, como se verá na segunda feira, em Lisboa, onde 600 **investigadores** partilharão saberes.

Entre segunda e sexta feira, **Portugal** será anfitrião de uma das mais importantes reuniões científicas na área da **astronomia mundial**, a **Joint European and National Astronomy Meeting** (JENAM) 2010, que decorrerá na Faculdade de Ciências da Universidade de Lisboa.

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Rui Agostinho explicou à Lusa que, atualmente, existem duas grandes áreas de saber na astronomia em que a comunidade **científica** está empenhada: a busca de outros planetas extra solares e o conhecimento das primeiras etapas da **evolução** ("big bang").

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*** Este texto foi escrito ao abrigo do novo Acordo Ortográfico ***

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Evento

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Estrelas da Astronomia reúnem-se em Lisboa para a Semana da Astronomia Ciências Espaciais e o público é convidado a participar.

lunes, 06 de septiembre de 2010 — viernes, 10 de septiembre de 2010 Ciência Viva - Agência Nacional para a Cultura Científica e Tecnológica

- **Lugar:** Lisboa, Portugal
- **Lugar:** Faculdade de Ciências da Universidade de Lisboa.

É já no próximo dia 6 de Setembro que começa a Joint European and National Astronomy Meeting (JENAM 2010), uma das mais importantes reuniões científicas na área da astronomia na Europa, e que decorrerá durante uma semana, na Faculdade de Ciências da Universidade de Lisboa.

Nesta iniciativa da Sociedade Europeia de Astronomia (EAS), onde estarão presentes cerca de 600 astrónomos de todo o mundo, serão discutidos temas na linha de frente da astronomia, ciências espaciais e tecnologias associadas, abrangendo um grande número de assuntos que vão desde a busca e estudo de planetas semelhantes à Terra até aos mais recentes resultados sobre a formação e evolução de estrelas e galáxias e do próprio Universo. De grande relevo serão também as sessões de carácter mais tecnológico que tratarão dos últimos desenvolvimentos em interferometria óptica e no infravermelho e a uma das próximas grandes infra-estruturas como o E-ELT – European Extremely Large Telecope e o projecto de rádio-astronomia Square Kilometer Array (SKA).

Durante toda a semana em que decorre a conferência, o público está convidado a visitar, na Faculdade de Ciências da Universidade de Lisboa, uma exposição sobre temas relacionados com a astronomia, ciências espaciais e novas tecnologias, com a presença de grandes organizações científicas como a ESA, o ESO e SKA, redes europeias como a RadioNet, OPTICON, e o European Research Council, e também de algumas companhias nacionais que operam na área das tecnologias aeroespaciais como a Edisoft, Deimos e GMV.

Também de acesso livre ao público serão as palestras dos astrónomos Portugueses João Magueijo (Imperial College London), "*A anarquia e as leis da Física*", na terça-feira, dia 7, pelas 18:30h e de Paulo Freire (Max-Planck-Institut für Radioastronomie), "*Pulsares – os Relógios do Cosmos*", na sexta-feira, dia 10, pelas 19:00h.

André Moitinho de Almeida, Presidente da Sociedade Portuguesa de Astronomia, entidade que organiza pela segunda vez o JENAM no nosso país, salienta alguns pontos altos desta conferência: "*Penso que temos algumas sessões imperdíveis, como a palestra do Raymond Wilson, um dos pais da óptica activa e que vai receber durante o JENAM o Prémio Tycho Brahe 2010 e as sessões especiais do Observatório Europeu do Sul (ESO) E da Agência Espacial Europeia (ESA) que vai apresentar resultados recentes da missão Rosetta e do Telescópio Espacial Herschel bem como uma visão das futuras missões da ESA no âmbito do programa Cosmic Vision*."

André Moitinho de Almeida salienta ainda a Sessão Especial do CERN (Centro Europeu de Pesquisa Nuclear) que pela primeira vez participa nesta conferência: *" serão debatidos os futuros resultados de física de altas energias obtidos com o acelerador de partículas - Large Hadron Collider - e o impacto*

destes resultados na astrofísica".

O Observatório Europeu do Sul (ESO) estará presente com uma apresentação sobre o E-ELT (European Extremely Large telescope) proferida por Bruno Leibundgut , Director Cientifico do ESO.O ESO irá igualmente ter uma sessão especialmente dedicada ao ALMA (Atacama Large Millimiter Array).

Outro ponto central desta conferência será as *Palestras de Jovens Investigadores Notáveis:* na terça-feira 7 de Setembro, Enric Palle (IAC) irá falar sobre "*A Terra como um planeta distante*". Na quinta-feira, 9 de Setembro, do lado oposto na escala espacial astronómica, Catherine Heymans (ROE) vai falar-nos sobre "*Mapear o Universo escuro*".

Mas nem só de ciência pura e dura se falará durante o JENAM. Também temas como o planeamento estratégico da Astronomia na Europa, a colaboração entre astrónomos profissionais e amadores, as novas tendências na educação global da Astronomia e o futuro do ensino e divulgação da Astronomia serão abordados.

"*Penso que o JENAM contribui para promover o avanço da astronomia na Europa. É também uma boa oportunidade para os cientistas se reunirem e discutirem seus projectos e resultados e, finalmente, fornece um importante fórum de discussão para os temas mais prementes na astronomia moderna* ", afirma Joachim Krauter, presidente da Sociedade Europeia de Astronomia." *Estamos muito contentes por este encontro se realizar em Portugal, um país que tem uma longa história na astronomia que remonta ao século XV e que apresenta nos últimos 30 anos uma impressionante evolução no que se refere à astronomia moderna*", termina Joachim Krauter.

http://www.jenam2010.org

- **Publicado en:** miércoles, 01 de septiembre de 2010 15:49

Space

European Week of Astronomy and Space Science Next Week in Lisbon

Adjust text size: A- A+

September 2nd, 2010, 06:53 GMT| By **Smaranda Biliuti**

The latest in astronomy and space science will be discussed during the week of September 6-10 2010, at the Joint European and National Astronomy Meeting – JENAM, at the Faculty of Sciences of the University of Lisbon, Portugal.

At the event are expected nearly 600 astronomers from all around the world, who will discuss about the cutting edge topics of astronomy, space science and related technologies, going from the search and research of Earth-like planets to the formation and evolution of stars, galaxies and the Universe.

The participants will attend technical sessions, approaching subjects like the latest progress in optical interferometry and the next big thing in radio astronomy, the Square Kilometer Array (SKA).

The President of the Portuguese Astronomical Society, André Moitinho de Almeida, is very excited about organizing JENAM for the second time in Portugal, and he gives some details about the conference:

"I think we will have some very interesting sessions, such as the lecture by Raymond Wilson, one of the fathers of active optics and who will receive the Tycho Brahe Award 2010 during JENAM and the special sessions of the European Southern Observatory (ESO) and the European Space Agency (ESA) which will present recent results on the Rosetta Mission and Herschel Space Telescope, as well as an overview of future ESA missions within the Cosmic Vision Program."

He points out the Special Session dedicated to the CERN – a first-time-participant at this conference- saying that "in this session we will discuss future results of high energy physics obtained with the Large Hadron Collider and the impact of these results on astrophysics."

Joachim Krauter, the President of the European Astronomical Society says "we believe JENAM greatly contributes to promote the advancement of astronomy in Europe. It is also a good opportunity for scientists to meet and discuss their projects and results and, finally, it provides an important forum of discussion for the most pressing topics in modern astronomy."

At the event will also take part the European Southern Observatory (ESO) which will present the E-ELT, European Extremely Large Telescope, made by the Director of ESO's Office for Science, Bruno Leibundgut.

The ESO will also have a special session that will focus on ALMA, the Atacama Large Millimeter Array, AlphaGalileo reports.

The Plenary Sessions will include the Highlight Talks by Young Outstanding Researchers, with Enric Pallé (IAC) talking about "The Earth as a distant planet" (Tuesday, September 7) as well as Catherine Heymans (ROE) who will talk about "Charting the dark Universe" (Thursday, September 9).

The JENAM is organized each year in one of the European countries with the support of the European Astronomical Society (600) and of one of the national astronomical societies.

The 2010 edition taking place in Lisbon, will be the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

Details of the conference can be found on the official website: http://www.jenam2010.org

TAGS: astronomy | Lisbon | European Astronomical Society | Herschel Space Telescope | conference

Breves

Nacional

"Jackpot" no Totoloto de 2,4 milhões

Não houve totalistas no sorteio 36/2010 do Totoloto, pelo que haverá "jackpot" de 2 400 000 euros na próxima semana, anunciou ontem a Santa Casa da Misericórdia de Lisboa.
No sorteio realizado no sábado, foram apurados: um segundo prémio, no valor de 47 498,22 euros; 70 terceiros prémios, no valor de 1180,08 euros cada; 4219 quartos prémios, no valor de 21,04 euros cada; e 79 767 quintos prémios, no valor de 3,90 euros cada.
A chave do Totoloto sorteada foi: 4 – 17 – 21 – 31 – 38 – 49. O número suplementar foi o 27.
Estava em jogo um primeiro prémio de "jackpot" no valor de 1.991.875 euros.

Astrónomos reunidos em Lisboa

A busca de planetas extra solares e a formação do universo são das áreas que os astrónomos mais investigam e nas quais Portugal tem forte participação, como se verá hoje, em Lisboa, onde 600 investigadores partilharão saberes.
Entre hoje e a próxima sexta feira, Portugal será anfitrião de uma das mais importantes reuniões científicas na área da astronomia mundial, a Joint European and National Astronomy Meeting (JENAM) 2010, que decorrerá na Faculdade de Ciências da Universidade de Lisboa. Trata-se de uma iniciativa da Sociedade Astronómica Europeia (EAS), considerada pelos especialistas um "importante evento científico" que abrange temas na linha de frente da astronomia, ciências espaciais e tecnologia. Um dos especialistas que participará no evento é Rui Agostinho, diretor do Observatório Astronómico de Lisboa e membro do Centro de Astrofísica da Universidade de Lisboa, para quem Portugal terá oportunidade de demonstrar a "forte participação que tem em projetos de grande pioneirismo".

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Lisboa recebe grandes nomes da astronomia

06 Setembro *2010*

Astronomia A busca de planetas extra-solares e a formação do universo são das áreas que os astrónomos mais investigam e nas quais Portugal tem forte participação, como se verá hoje, em Lisboa, onde 600 investigadores partilharão conhecimentos. Até sexta feira, a Faculdade de Ciência da Universidade de Lisboa acolhe uma das mais importantes reuniões científicas na área da astronomia mundial, o Joint European and National Astronomy Meeting (JENAM) 2010. Um dos especialistas presentes no evento é Rui Agostinho, director do Observatório Astronómico de Lisboa, para quem o País terá oportunidade de demonstrar a "forte participação que tem em projectos de grande pioneirismo", nomeadamente relativos à busca de planetas extra-solares e à expansão do universo .

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Encontro internacional de astronomia reúne 600 investigadores em Lisboa

NACIONAL

06/09/10, 08:48
OJE/Lusa

Portugal é entre hoje a sexta-feira anfitrião de uma das mais importantes reuniões científicas do mundo na área da astronomia: 600 investigadores estão em Lisboa para falar de assuntos como a busca de planetas extra solares e a formação do universo.

A Joint European and National Astronomy Meeting (JENAM) 2010, que decorrerá na Faculdade de Ciências da Universidade de Lisboa, é uma iniciativa da Sociedade Astronómica Europeia (EAS), considerada pelos especialistas um "importante evento científico" que abrange temas na linha de frente da astronomia, ciências espaciais e tecnologia.

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23/09/10, 08:19
Cáritas Portuguesa defende fixação de tectos máximos nos preços
A Cáritas Portuguesa defende a intervenção do Estado na fixação de tectos máximos nos preços, nas margens de

22/09/10, 19:21
Santarém quer carros do lixo movidos a electricidade
A câmara de Santarém quer passar a ter os camiões do lixo movidos a energia eléctrica já a partir de 2011 e

22/09/10, 18:15
Prevenção da Corrupção clarifica conflito de interesses entre público e privado
O Conselho de Prevenção da Corrupção (CPC) está a "desenvolver iniciativas" no sentido de clarificar os

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Astrónomo amador açoriano foi um dos primeiros a registar impacto de corpo celeste em Júpiter
17/09/09, 09:33

Nacional
Dois milhões de euros canalizados para diversificar Festival dos Oceanos 2009 em Lisboa
08/05/09, 10:45

Nacional
Coimbra projecta para 2013 museu da ciência único a nível mundial
13/04/09, 10:45

Nacional
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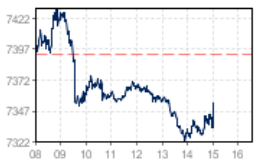

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23/09/10, 14:41

País deve abandonar "alguns projectos grandiosos", diz Cavaco Silva
23/09/10, 14:29

Ampliação do terminal de Contentores de Alcântara "é muito útil", defende António Costa
23/09/10, 14:00

Moçambique distribui 145 mil euros pelos distritos urbanos para combate à pobreza
23/09/10, 13:50

Empresa na Hora chega a mais cinco concelhos
23/09/10, 13:42

Indemnizações compensatórias não saem do erário público, diz secretário de Estado dos Transportes
23/09/10, 13:29

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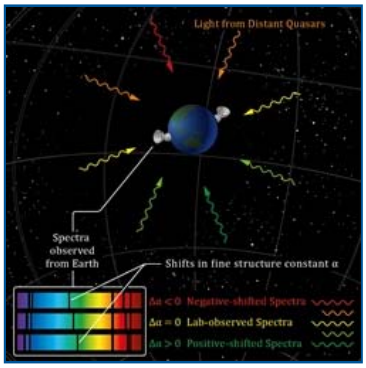
News

Fundamental constant might change across space

Research results currently under peer review imply that the fine-structure constant, which characterizes the strength of the electromagnetic force, might have different values depending on which direction scientists are looking in the sky.

Provided by the JENAM 2010, Lisbon, Portugal

September 7, 2010



New research suggests that the supposedly invariant fine-structure constant, which characterizes the strength of the electromagnetic force, varies from place to place throughout the universe. The finding could mean rethinking the fundaments of our current knowledge of physics. These results were presented September 7 during the Joint European and National Astronomy Meeting in Lisbon, Portugal, and the scientific article has been submitted to the *Physical Review Letters Journal*.

A team of astronomers led by John Webb from the University of New South Wales, Australia, has obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their center. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from Earth.

Webb's results imply that the fine-structure constant, which characterizes the strength of the electromagnetic force, might have different values depending on which direction scientists are looking in the sky, thus being not so "constant" after all.

"The precision of astrophysical measurements of the fine-structure constant, or alpha, dramatically increased about a decade ago when Victor Flambaum and I introduced the 'Many-Multiplet Method,' and since then evidence started mounting, suggesting this crucial physical quantity might not be the same everywhere in the universe," said Webb.

The results obtained by Webb's team suggest that if there is any time variation, it may be much less than the variation with position in the universe. If correct, the new data indicates that new physics will be required to explain something so fundamental. The implications of these results are so resounding that they are likely to cause controversy in the scientific community.

Using two world-class observatories, the Keck Telescope and the European Southern Observatory's Very Large Telescope, Webb and his team observed the very energetic radiation coming from the most luminous objects in the universe: quasars. Although quasars are incredibly far away, scientists can detect them from Earth due to the sheer quantity of electromagnetic radiation that they emit, likely caused by material falling into supermassive black holes at their centers.

"The interaction of the light from the quasars with the gas clouds provides an impressive opportunity to investigate the physical conditions when the Universe was just a fraction of its current age," said Ph.D. student Julian King, who played a major role in this research. "It is exciting that we have the technology to be able to measure the laws of physics in the early universe so precisely."

The new results collected by Webb and his team can be explained if our universe is in fact exceptionally or indeed infinitely large, with fundamental quantities and "constants" possessing different values from patch to patch. In such a scenario, we would exist in just a tiny part with correspondingly small changes in the physical constants.

This view raises a whole series of new questions on how "alpha" and the other "constants" have been so finely-tuned, in our local patch of the universe, to develop physics and chemistry as we know them, and along them, life on Earth.

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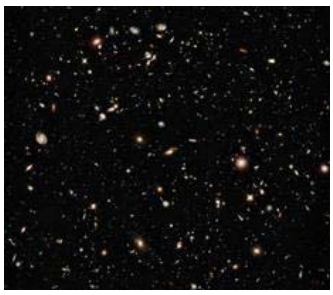
Constantes inconstantes criam revolução na física?

Gonçalo Figueira
1:37 Sábado, 11 de Setembro de 2010

Resultados recentes de observações astronómicas parecem pôr em causa um dos pilares fundamentais da física moderna: o de que as chamadas constantes fundamentais da natureza são... bem, constantes. Pode parecer um simples pormenor matemático, mas longe disso: se as medições estiverem correctas, o Universo é muito mais misterioso e complexo do que aquilo que pensamos - e, por mero acaso, nós vivemos numa pacífica vizinhança cósmica em que as constantes parecem ter os valores ideais.



NASA/ESA

Mas esta conclusão está longe de ser consensual, e os resultados estão a causar grande controvérsia na comunidade de astrofísicos. De facto, a serem verdade obrigariam a uma reformulação completa da famosa teoria da relatividade de Einstein, que assenta precisamente no princípio de que as leis da física são iguais em todo o Universo. E esta teoria, testada com sucesso vezes sem conta, é uma das bases mais sólidas do nosso conhecimento actual.

Desde que Newton viu a maçã a cair e teve a inspiração que o levou a formular a teoria da gravitação universal que os físicos sabem que a natureza é regulada por um conjunto de "números mágicos": constantes fundamentais que têm valores universais (isto é, iguais em todo o Universo), e cujos valores não podem ser deduzidos por cálculos, mas apenas medidos experimentalmente. Encontram-se entre estas a constante da gravitação universal, que determina a força com que, por exemplo, as estrelas e os planetas se atraem, ou a constante da estrutura fina (conhecida por alfa), que governa a interacção entre a luz e a matéria. Ninguém sabe por que estas grandezas têm os valores que têm, mas sabe-se que se fossem ligeiramente diferentes o resultado seria caótico: por exemplo, se alfa tivesse um valor apenas 4% diferente, as estrelas não seria capazes de sintetizar carbono e oxigénio - e, logo, a vida como a conhecemos não seria possível. Assim, alfa - que curiosamente tem um valor de cerca de 1/137 - é um dos números-chave mais importantes da natureza.

Mas um artigo agora publicado pelo físico John Webb , da Universidade da Nova Gales do Sul em Sydney, Austrália, vem sugerir que alfa tem um valor um pouco diferente em regiões remotas do Universo. Ainda mais surpreendente é a conclusão de que a suposta variação do valor de alfa tem uma orientação específica: aumenta para um lado do Universo, e diminui para o outro. No meio estamos nós, onde alfa tem o valor "certo". No quadro da física moderna, esta hipótese é uma autêntica heresia!

Webb e os seus colaboradores retiraram estas conclusões da análise de centenas de observações astronómicas obtidas com o Very Large Telescope (VLT) no Chile. Já há uma década atrás, Webb tinha-se baseado em resultados obtidos no telescópio Keck no Havai para propor que alfa teria variado no tempo, ao observar linhas espectrais da luz emitida por quasares longíquos, há 12 milhares de milhões de anos atrás. Com este novo resultado, a polémica atingiu um ponto escaldante.

Orfeu Bertolami, astrofísico do Instituto Superior Técnico em Lisboa, está céptico em relação ao trabalho de Webb, e explica os seus motivos: "A independência das leis da física da posição no espaço é um dos pilares fundamentais da teoria da relatividade geral de Einstein, e que, até ao presente, é consistente, com grande precisão, com todos os factos observacionais conhecidos. O resultado das observações de Webb e colaboradores contradiz directamente este preceito basilar da teoria de Einstein."

Carlos Herdeiro, da Universidade do Porto, partilha esta opinião: "A presente observação, a confirmar-se, traz uma novidade algo revolucionária. O paradigma da cosmologia é o 'princípio cosmológico': podemos escolher instante de tempo de modo a que o Universo é essencialmente igual em todo o lado, para um dado tempo. Contudo a presente alegação é que o Universo não é exactamente semelhante em todo o lado, isto é, a física depende da posição espacial."

Bertolami foi um dos participantes no recente simpósio "From Varying Couplings to Fundamental Physics" que decorreu em Lisboa no início de Setembro no contexto do Joint European and National Astronomy Meeting (JENAM 2010), e em que Webb participou através de vídeo-conferência desde a Austrália. Segundo refere, as suas dúvidas e as de muitos outros colegas não foram esclarecidas com esta interacção: "A questão mais preocupante refere-se aos erros sistemáticos inerentes à instrumentação utilizada (os telescópios VLT e Keck) e a dificuldade na selecção das linhas espectrais."

Na sua opinião, estes novos resultados são apenas uma variação da controvérsia iniciada há uma década, com a hipótese da variação de alfa no tempo: "Assistimos agora aos capítulos iniciais da 'novela' da variação espacial. Naturalmente, só a repetição das observações e a reprodução dos resultados por outros grupos de astrónomos poderá confirmar a validade desta alegada dependência." Herdeiro acrescenta: "Os resultados (de há dez anos) têm pouco significado estatístico e, após muitas re-análises dos dados, a inexistência de variação encontra-se ainda dentro da barra de erro. Ainda assim, as consequências de uma tal medição seriam tão importantes que muito trabalho teórico e observacional se seguiu às primeiras observações de Webb."

Mas e se Webb estiver correcto e, de facto, algumas constantes universais não o forem? Quais seriam as consequências para a nossa visão do Universo? "Como físico teórico, não vejo nada de particularmente extraordinário acerca da possibilidade de que alfa varie de sítio para sítio no Universo," afirma Bertolami. "É uma hipótese perfeitamente admissível que pode ser acomodada no contexto de muitas teorias mais gerais que a de Einstein." Herdeiro concorda: "Embora haja modelos de física de altas energias onde as constantes fundamentais aparecem naturalmente como campos dinâmicos (como a Teoria de Cordas), a comunidade científica é céptica relativamente a esta hipótese."

Contudo, segundo Bertolami, admitir esta possibilidade significa também reconhecer a nossa incapacidade de progredir em direcção a uma compreensão mais abrangente da natureza: "Até ao conhecimento detalhado desta teoria presumivelmente mais fundamental, teremos que abdicar da magnífica possibilidade de compreender a física do Universo, pois sem esta não sabemos o valor noutros sítios do Universo de grandezas que assumimos terem o mesmo valor em todas as partes. Assim, sem a teoria mais fundamental, a física fica reduzida ao estatuto aristotélico de descrever apenas acontecimentos cosmicamente locais. Uma perspectiva que eu julgo ser muito pouco auspiciosa."

Palavras-chave **física** **astronomia** **universo**

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Sobre a natureza dipolar do observado...

jpafonso (seguir utilizador), 1 ponto , 18:31 | Domingo, 12

Este é um texto deveras interessante. A constante da estrutura fina relaciona-se funcionalmente com outras constantes... se de facto ela apresentar variações, qual é a outra ou as outras que também a acompanhará/ão nas variações? A constante de Planck? A carga do electrão? Eu apostaria na permissividade do vácuo, mesmo que esta afecte a velocidade da luz no mesmo... não me parece que esta atire abaixo os pressupostos da relatividade, até porque a luz move-se de facto a diferentes velocidades em diferentes meios. Só teríamos que admitir a existência de diferentes tipos de vácuo.

Ou seriam todas? O início do texto sugere que todas poderão estar em causa, e com elas a universalidade da Física. Duvido. Estas "constantes" são parâmetros de funcionamento da física e seu valor não invalida as leis elaboradas excepto onde elas contarem implicitamente com certos valores fixos. Espera-se inclusive que a relação entre as forças fundamentais varia com a escala de energias... isto não é incongruente com esperar um valor constante para alfa?

Pontos interessantes: John Webb especulou antes numa variação de alfa com o tempo, porque antes observava o passado. Mas a especulação actual são tb variações no espaço, porque ele continua a olhar para o passado mas em direcções diferentes. É interessante que esta especulação não se tenha afirmado da primeira vez... porque será?

Segundo ponto, a natureza dipolar das variações. É impossível não se pensar logo num "efeito Doppler" para isso.

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Miguel Martins, Editor de Multimédia do Expresso

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FORSCHUNG AKTUELL

08.09.2010

Feinstrukturkonstanten: Das, was die Welt im Innersten zusammenhält. (Bild: NASA/Galex)

Fein aber oho

Astronomen beobachten Veränderung der Feinstrukturkonstante

Von Guido Meyer

Astronomie.- In Lissabon findet derzeit die Konferenz JENAM 2010 statt, das Joint European and National Astronomy Meeting. Dort hat ein australisches Astronomenteam nun seine Beobachtung vorgestellt, die auf eine Veränderung der sogenannten Feinstrukturkonstanten hindeuten.

Besser ein Ende mit Schrecken als ein Schrecken ohne Ende. Der anwährende Schrecken, das ist in diesem Fall die Ungewissheit über das Wesen der Feinstrukturkonstanten. Sie ist das, was - frei nach Faust - die Welt im Innersten zusammenhält, indem sie die Stärke der elektromagnetischen Wechselwirkung angibt. Darauf baut letztlich die Zusammensetzung der Atome und damit die der Materie auf. Doch seit sie vor fast 100 Jahren in die Physik eingeführt wurde, ist die Frage unbeantwortet, ob es sich bei ihr wirklich um eine Konstante handelt.

Nein, sagt John Webb von der Schule für Physik der Universität von New South Wales in Sydney. Gemäß den Messungen dieses australischen Astronomenteams verändere sie sich, je weiter man hinaus ins All und damit in die Zeit zurückblickt. Mit dem Keck Teleskop auf Hawaii und dem europäischen Very Large Telescope in Chile haben die Wissenschaftler bis zu zwölf Milliarden Jahre hinausgeschaut. Dort haben sie beobachtet, wie das Licht von Quasaren von Staubwolken im All absorbiert wird - minimal anders, als es gemäß der Vorhersagen der Feinstrukturkonstanten geschehen sollte.

Dort draußen sei eine Abweichung festgestellt worden, die jedoch weniger als ein Tausendstel Prozent des vermuteten Wertes ausmache. Tut jedoch nichts zur Sache, denn veränderlich ist veränderlich und eben nicht konstant.

"Die moderne Kosmologie basiert auf dem kosmologischen Prinzip. Es sagt, dass das Universum überall homogen, isotrop und gleichförmig ist - egal, in welche Richtung man blickt oder wo man sich aufhält. Jedes physikalische Experiment sollte in jedem Winkel des Weltalls das gleiche Ergebnis liefern. Damit lassen sich unsere Beobachtungen jedoch offenbar nicht in Einklang bringen."

In den letzten Milliarden Jahren scheint die Feinstrukturkonstante allmählich größer geworden zu sein. Würde sie - in einer fernen Zukunft - zu groß, wäre letztlich der innere Zusammenhalt der Atome gefährdet; die Materie könnte schlicht zerfallen. Einen Zeitpfeil wollen die australischen Astronomen in der Tat entdeckt haben:

"Wenn wir ins Universum blicken, wird die Feinstrukturkonstante in der einen Richtung größer, in der entgegengesetzten nimmt ihr Wert ab. Rechtwinklig davon jedoch stellen wir keine Veränderung fest."

Aus diesen Beobachtungen könnte nunmehr das Ende mit Schrecken folgen, dass nämlich die Einsteinsche Relativitätstheorie überdacht werden muss. Julian King, ebenfalls von der School of Physics der University of New South Wales.

"Die Tatsache, dass wir eine kontinuierliche Veränderung der Feinstrukturkonstanten beobachten, legt die Schlussfolgerung nahe, dass wir nur einen kleinen Teil des Weltraums einsehen können und das Universum viel, viel größer ist als der von uns beobachtbare Teil. Denn wir haben keinen Grund zu der Annahme, dass wir uns an einem herausgehobenen, besonderen Punkt des Alls befinden sollten. Offensichtlich nimmt der Wert dieser vermeintlichen Konstanten ganz andere Werte an, wenn man sich nur weit genug entfernt."

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Fundamental Constant Might Change Across Space

Source: University of New South Wales Posted Monday, September 6, 2010

New research suggests that the supposedly invariant fine-structure constant, which characterizes the strength of the electromagnetic force, varies from place to place throughout the Universe. The finding could mean rethinking the fundaments of our current knowledge of physics. These results will be presented tomorrow during the Joint European and National Astronomy Meeting in Lisbon, Portugal, and the scientific article has been submitted to the Physical Review Letters Journal.

A team of astronomers led by John Webb from the University of New South Wales, Australia, have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their center. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth.

Webb's results imply that the fine-structure constant, which characterizes the strength of the electromagnetic force, might have different values depending on which direction we are looking in the sky, thus being not so 'constant' after all.

"The precision of astrophysical measurements of the fine-structure constant, or alpha, dramatically increased about a decade ago when Victor Flambaum and I introduced the 'Many-Multiplet Method', and since then evidence started mounting, suggesting this crucial physical quantity might not be the same everywhere in the Universe," says Webb.

The results obtained by Webb's team suggest that if there is any time-variation, it may be much less than the variation with position in the Universe. If correct, the new data indicates that new physics will be required to explain something so fundamental. The implications of these results are so resounding that they are likely to cause controversy in the scientific community.

Using two world-class observatories, the Keck Telescope and the European Southern Observatory's Very Large Telescope, Webb and his team observed the very energetic radiation coming from the most luminous objects in the universe: quasars. Although quasars are incredibly far away, we can detect them from the Earth due to the sheer quantity of electromagnetic radiation that they emit, likely caused by material falling into supermassive black holes at their centers.

"The interaction of the light from the quasars with the gas clouds provides an impressive opportunity to investigate the physical conditions when the Universe was just a fraction of its current age," says PhD student Julian King, who played a major role in this research. "It is exciting that we have the technology to be able to measure the laws of physics in the early Universe so precisely," he added.

The new results collected by Webb and his team can be explained if our Universe is in fact exceptionally or indeed infinitely large, with fundamental quantities and 'constants' possessing different values from patch to patch. In such a scenario, we would exist in just a tiny part with correspondingly small changes in the physical constants. This view raises a whole series of new questions on how 'alpha' and the other 'constants' have been so finely-tuned, in our local patch of the Universe, to develop physics and chemistry as we know them, and along them, life on Earth.

# # #

Disclaimer: Please note that this result has not been published in a scientific journal, and it is currently in the peer review process.

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Scientific Paper: http://arxiv.org/abs/1008.3907

Professor Webb will present his work remotely from Australia during JENAM 2010 and his talk will be available via streaming on the conference's website at 9:00h, GMT +1 tomorrow. The talk will be recorded and will be available for viewing on the JENAM website.

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Text and image: http://www.jenam2010.org/index.php?option=com_content&task=blogcategory&id=3&Itemid=34

Caption and credit: A team of astronomers have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their center. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth. Credit: Dr. Julian Berengut, UNSW, 2010.

JENAM is organized each year in one of the European countries jointly by the European Astronomical Society (EAS) and one of the national astronomical societies. JENAM 2010 is the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

The European Astronomical Society (EAS) was founded in 1990 and its purpose is to contribute to and promote the advancement of astronomy, in its broadest sense, in Europe, by providing an independent forum for the discussion of subjects of common interest and by providing means whereby action can be taken on those matters which appear desirable to be handled at the European level. EAS brings together 24 European Astronomical Societies and more than 700 professional astronomers.

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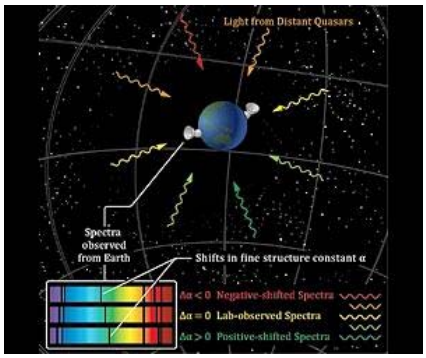
TIME + SPACE

Fundamental Constant Might Change Across Space

by Staff Writers
Lisbon, Portugal (SPX) Sep 07, 2010

New research suggests that the supposedly invariant fine-structure constant, which characterizes the strength of the electromagnetic force, varies from place to place throughout the Universe. The finding could mean rethinking the fundaments of our current knowledge of physics.



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This view raises a whole series of new questions on how 'alpha' and the other 'constants' have been so finely-tuned, in our local patch of the Universe, to develop physics and chemistry as we know them, and along them, life on Earth.

JENAM is organized each year in one of the European countries jointly by the European Astronomical Society (EAS) and one of the national astronomical societies. JENAM 2010 is the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

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Experiments Offer Tantalizing Clues As To Why Matter Prevails In The Universe

Washington DC (SPX) Aug 17, 2010

A large collaboration of physicists working at the Fermilab Tevatron particle collider has discovered evidence of an explanation for the prevalence of matter over antimatter in the universe. They found that colliding protons in their experiment produced short-lived B meson particles that almost immediately broke down into debris that included slightly more matter than antimatter. The two t ... read more

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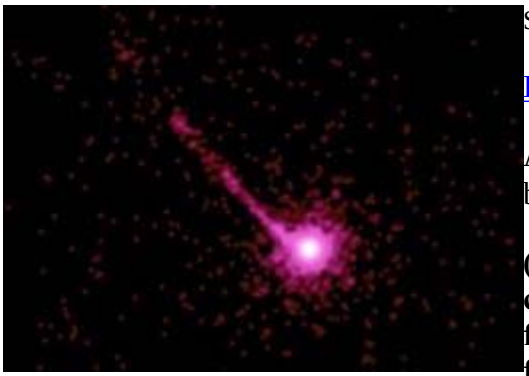
Variations in fine-structure constant suggest laws of physics not the same everywhere



September 6, 2010 by Lisa Zyga

Enlarge

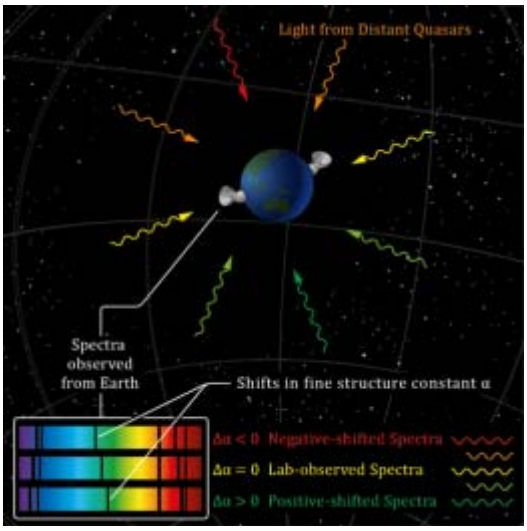
An X-ray image of the quasar PKS 1127-145, located about 10 billion light-years from Earth. Credit: NASA.

(PhysOrg.com) -- One of the most controversial questions in cosmology is why the fundamental constants of nature seem fine-tuned for life. One of these fundamental constants is the fine-structure constant, or alpha, which is the coupling constant for the electromagnetic force and equal to about 1/137.0359. If alpha were just 4% bigger or smaller than it is, stars wouldn't be able to make carbon and oxygen, which would have made it impossible for life as we know it to exist. Now, results from a new study show that alpha seems to have varied a tiny bit in different directions of the universe billions of years ago, being slightly smaller in the northern hemisphere and slightly larger in the southern hemisphere. One intriguing possible implication is that the fine-structure constant is continuously varying in space, and seems fine-tuned for life in our neighborhood of the universe.

The physicists, John Webb from the University of New South Wales and his coauthors from Swinburne University of Technology and the University of Cambridge, used data from two telescopes to uncover the spatial dependence of the fine-structure constant. Using the north-facing Keck telescope in Mauna Kea, Hawaii, and the south-facing Very Large Telescope (VLT) in Paranal, Chile, the researchers observed more than 100 quasars, which are extremely luminous and distant galaxies that are powered by massive black holes at their centers.

By measuring the quasar spectra, the researchers could gather data on the frequency of the electromagnetic radiation emitted by quasars at high redshifts, corresponding to a time about 10 billion years ago. During the time the light traveled through space to reach the telescopes, some of it was absorbed at specific wavelengths by very old gas clouds that today can reveal the chemical composition of the clouds.

The cloud compositions could help the scientists determine the fine-structure constant in those areas of the universe at that time, since alpha is a measure of the strength of the electromagnetic force between electrically charged particles. As the coupling constant for the electromagnetic force, it is similar to the constants for the other three known fundamental forces of nature: the strong nuclear force, the weak nuclear force, and gravitational force. Among its important implications, alpha determines how strongly atoms hold on to their electrons.



Enlarge

Illustration of the dipolar variation in the fine-structure constant, alpha, across the sky, as seen by the two telescopes used in the work: the Keck telescope in Hawaii and the ESO Very Large Telescope in Chile. Copyright Dr. Julian Berengut, UNSW, 2010. May be used with appropriate attribution.

By combining the data from the two telescopes that look in opposite directions, the researchers found that, 10 billion years ago, alpha seems to have been larger by about one part in 100,000 in the southern direction and smaller by one part in 100,000 in the northern direction. The data for this “dipole” model of alpha has a statistical significance of about 4.1 sigma, meaning that that there is only a one in 15,000 chance that it is a random event.

At first, the data surprised Webb and his colleagues, since it seemed to contradict previous results that the scientists had published in 1999. At that time, the scientists had used the north-facing Keck telescope to find that alpha became slightly smaller the further away (and older) the quasars were. So when the scientists first looked at equally distant quasars from the southern hemisphere using the VLT, they were surprised to find the slight increase in alpha. After eliminating any possible bias, though, they realized that they were looking at hemispherical differences of alpha.

While the data from just one telescope seemed to suggest that alpha varies in time, data from the two telescopes show that alpha also seems to vary in space. Such a discovery could have major implications, starting with shattering the basic assumption that physical laws are the same everywhere in the universe. The results also violate the Einstein Equivalence Principle, and suggest that the universe may be much

larger than currently thought - or even infinite in size. Right now, the scientists want to confirm the results with other experimental methods, and see if the fine-structure constant could truly lead scientists to a very different understanding of our universe.

This video shows the path of light as a beam as it travels from the quasar, through an intervening galaxy and then to the Earth where we capture it with our telescopes. The inset shows the quasar spectrum as it is redshifted (due to the expansion of the universe as it travels) and as it is imprinted with the absorption signature of the intervening galaxy.

More information: J. K. Webb, et al. "Evidence for spatial variation of the fine structure constant." Submitted to *Physical Review Letters.* Available at arXiv:1008.3907v1 [astro-ph.CO]

beyond the cradle

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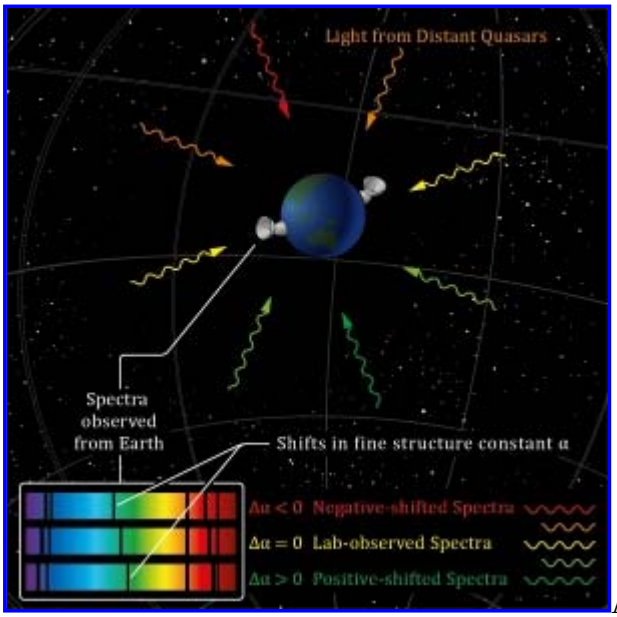
When fundamental constants change over space — rethinking physics as we know it [JENAM 2010 Press Release]

Lisbon, 6 September 2010: New research suggests that the supposedly invariant fine-structure constant, which characterises the strength of the electromagnetic force, varies from place to place throughout the Universe. The finding could mean rethinking the fundaments of our current knowledge of physics. These results will be presented tomorrow during the Joint European and National Astronomy Meeting in Lisbon, Portugal, and the scientific article has been submitted to the Physical Review Letters Journal.



A team of astronomers led by John Webb from the University of New South Wales, Australia, have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their centre. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth.

Webb's results imply that the fine-structure constant, which characterises the strength of the electromagnetic force, might have different values depending on which direction we are looking in the sky, thus being not so 'constant' after all.

"The precision of astrophysical measurements of the fine-structure constant, or alpha, dramatically increased about a decade ago when Victor Flambaum and I introduced the ´Many-Multiplet Method´, and since then evidence started mounting, suggesting this crucial physical quantity might not be the same everywhere in the Universe" says Webb.

The results obtained by Webb's team suggest that if there is any time-variation, it may be much less than the variation with position in the Universe. If correct, the new data indicates that new physics will be required to explain something so fundamental. The implications of these results are so resounding that

they are likely to cause controversy in the scientific community.

Using two world-class observatories, the Keck Telescope and the European Southern Observatory's Very Large Telescope, Webb and his team observed the very energetic radiation coming from the most luminous objects in the universe: quasars. Although quasars are incredibly far away, we can detect them from the Earth due to the sheer quantity of electromagnetic radiation that they emit, likely caused by material falling into supermassive black holes at their centres.

"The interaction of the light from the quasars with the gas clouds provides an impressive opportunity to investigate the physical conditions when the Universe was just a fraction of its current age," says PhD student Julian King, who played a major role in this research. "It is exciting that we have the technology to be able to measure the laws of physics in the early Universe so precisely," he added.

The new results collected by Webb and his team can be explained if our Universe is in fact exceptionally or indeed infinitely large, with fundamental quantities and 'constants' possessing different values from patch to patch. In such a scenario, we would exist in just a tiny part with correspondingly small changes in the physical constants. This view raises a whole series of new questions on how 'alpha' and the other 'constants' have been so finely-tuned, in our local patch of the Universe, to develop physics and chemistry as we know them, and along them, life on Earth.

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Disclaimer: Please note that this result has not been published in a scientific journal and it is currently in the peer review process.

Professor Webb will present his work remotely from Australia during JENAM 2010 and his talk will be available via streaming on the conference's website at 9:00h, GMT +1 tomorrow, September 7. The talk will be recorded and will be available for viewing on the JENAM website.

Image caption and credits: "Quasars Spectra sifts imply variation of fine-structure constant: A team of astronomers have obtained new data by studying quasars, which are very distant galaxies hosting an active black hole in their centre. As the light emitted by quasars travels throughout the cosmos, part of it is absorbed by a variety of atoms present in interstellar clouds, providing astronomers with a natural laboratory to test the laws of physics billions of light-years away from the Earth". Credits: Dr. Julian Berengut, UNSW, 2010

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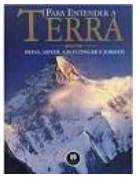

Para Entender a Terra

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Plantão

Ano Internacional da Astronomia chegou a quase um bilhão de pessoas

Mariana Barrosa - Sociedade Portuguesa de Astronomia - 08/09/2010

O relatório final de 1.300 páginas do Ano Internacional da Astronomia 2009 (AIA2009) foi divulgado hoje (8/9) na Semana Europeia de Astronomia e Ciências Espaciais, em Lisboa.

O documento mostra que pelo menos 815 milhões de pessoas em 148 países participaram naquele que é o maior evento científico em nível mundial das últimas décadas.

Números astronômicos

Este relatório é uma compilação dos resultados dos 216 participantes no Ano Internacional da Astronomia 2009 (AIA2009): 148 países, 40 organizações internacionais e 28 projetos globais. É um registro do legado desta surpreendente celebração internacional da astronomia e demonstra o entusiasmo, empenho e dedicação da comunidade astronômica mundial.

Cerca de metade das organizações participantes no AIA2009 dão conta, neste documento, do número de pessoas atingidas pelos eventos que organizaram, bem como do orçamento que tiveram disponível para levar a cabo as suas atividades.

Estima-se que o equivalente a pelo menos 18 milhões de euros tenha sido alocado a atividades do AIA2009. Este investimento financeiro foi complementado por contribuições em dinheiro de astrônomos amadores e profissionais, educadores e entusiastas que ajudaram a organizar os eventos.

O relatório conclui também que pelo menos 815 milhões de pessoas participaram ou foram de algum modo atingidas pelo AIA2009, em todo o mundo. Festas de estrelas, debates, palestras, exposições, programas escolares, livros, eventos artísticos, documentários e desfiles em homenagem à astronomia e as suas realizações, fizeram do AIA2009 o maior evento de ciência das últimas décadas.

Astronomia no mundo

Os valores mais elevados de participação vêm da Índia, onde se estima que mais de 700 milhões de pessoas tenham participado em atividades do AIA2009.

No Brasil, um orçamento equivalente a 2 milhões de euros ajudou os organizadores a atingir 2,2 milhões de pessoas, com mais de 16.600 eventos em todo o país.

A Coreia do Sul foi um dos países mais ativos no AIA2009, com mais de 500 eventos que atingiram cerca de 11 milhões de pessoas. No Reino Unido, os organizadores usaram um orçamento de mais de 1 milhão de euros para chegar a mais de um milhão de pessoas.

Em Portugal o AIA também foi um sucesso. Ao orçamento nacional de 160.000 euros, proveniente das organizações Ciência Viva, Fundação Calouste Gulbenkian e Fundação para a Ciência e Tecnologia, juntaram-se outras contribuições provenientes de instituições que organizaram atividades a nível local. Com um total de cerca de 500.000 euros foram organizadas mais de 4.000 atividades em todo o país, que chegaram a cerca de 2 milhões de pessoas.

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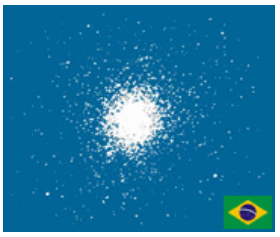

Encerrado o Ano Internacional da Astronomia YIA2009

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Novo Tópico Responder **Página 1 de 1** [2 Mensagens]

Autor	Mensagem
MARCO.SERTAOZINHO Curioso  **Msgs:** 25 **Registro:** 13/05/2010 **Localização:** SERTÃOZINHO,SP offline	**Encerrado o Ano Internacional da Astronomia YIA2009** por **MARCO.SERTAOZINHO** » Dom, 12/09/2010, 03:51h Um Relatório de 1300 páginas celebrou o final do Ano Internacional da Astronomia-YIA2009 na Semana Européia de Astronomia e Ciência Espacial, realizada em Lisboa, Portugal. O Relatório mostra que pelo menos 815 milhões de pessoas em 148 países participaram do maior evento de ciências nas últimas décadas ! 😎😃 Participaram tambem 40 organizações internacionais e 28 projetos globais. Depois de 40 anos que o homem pisou na Lua em 1969, que teve a audiência de 1 bilhão de pessoas, nenhum outro evento, trouxe uma audiência de massa sobre a astronomia e espaço. Somente com o YIA2009 isto foi possível, com a participação de astronomos amadores, educadores e organizadores que ajudaram a executar os eventos. As maiores participações foram da Índia, com 700 milhões de pessoas que viram os trabalhos dos astrônomos indianos pela TV, no dia da República de Nova Delhi. No Brasil, o evento atingiu 2,2 milhões de pessoas, com mais de 16600 eventos em todo o Brasil, como a Olimpíadas de Astronomonia e Astronáutica, exposições, encontros regionais para o ensino de astronomia e observações astronômicas. Houve um grande foco na educação, com a distribuição de livros de astronomia e 20000 Galileoscopes sendo distribuidos. Na Coréia do Sul, com mais de 500 atividades, atingiu um público de 11 milhões de pessoas. O eclipse parcial do Sol na Coreia, foi difundido para mais de 400000 pessoas, visto até pelo Presidente da Coréia do Sul. Nos projetos do Ano Internacional da Astronomia, 2 projetos foram muito bem sucedidos do que se previa inicialmente. As 100 Horas de Astronomia em Abril 😀 As Noites de Galileu em outubro. 😀 3 Milhões de Pessoas foram envolvidas. Para muitos, a primeira experiência de ver o céu pela primeira de um telescópio ou luneta, foi uma experiência de mudança de vida para muitos. O projeto Cornerstone levou a astronomia para lugares inesperados como shoppings, estações de metrô, bibliotecas, parques, etc. Mais de 10 milhões de pessoas viram estas exposições em mais de 70 países. Como parte do legado do YIA2009, a IAU implantou um programa de levar a astronomia para os países em desenvolvimento. O Observatório Sul Africano foi escolhido pela IAU para ser o local do OAD-Instituto de Desenvolvimento da Astronomia. O OAD irá estimular atividades para desenvolver a astronomia em todo o mundo. PARABÉNS A TODOS OS ASTRÔNOMOS QUE FIZERAM ESTE ANO DE 2009 BRILHANTE 😃 Mais sobre o Ano Internacional da Astronomia http://www.astronomy2009.org/ http://www.astronomy2009.org/resources/ ... al_report/ QUEM PARTICIPOU JÁ ESTÁ SENTINDO MUITA SAUDADE...


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India's participation highest during International Year of Astronomy 2009

Washington, Sep 8 (ANI): A 1300-page final report for the International Year of Astronomy 2009 has been released which revealed that the highest of participation came from India.

The report was released at the European Week of Astronomy and Space Science in Lisbon, which showed that at least 815 million people from 148 countries participated in the world's largest science event in decades.

The report is a compilation of the achievements of the 216 IYA2009 stakeholders -- 148 countries, 40 international organizations and 28lobal projects.

The highest participation figures came from India, where over 700 million people were reported as being reached by IYA2009 events. This was mainly due to Indian astronomers proudly showcasing their work at the Republic Day parade in Delhi.

With 30,000 people watching in person and an estimated 700 million watching on television, this was by far the biggest single event in the IYA2009 program.

Catherine Cesarsky, chair of the IYA2009 Working Group, and the IAU's President for most of IYA2009, said: "As this report clearly shows, IYA2009 was an immense success. We can see that the variety and quality of projects around the world touched the lives of literally millions of people. It's the first time that such a huge network has been put together to promote a single science communication project, so IYA2009 was also a learning process for everyone involved.

"This report, and the lessons we have drawn from IYA2009, will be a big help to anyone organizing in a similar project in future."

Robert Williams, the current IAU President, concluded: "Looking back at the activities and events and the popular reaction, we are able to truly gauge how often and how deeply IYA2009's motto, The Universe, Yours to Discover, was fulfilled during the Year." (ANI)

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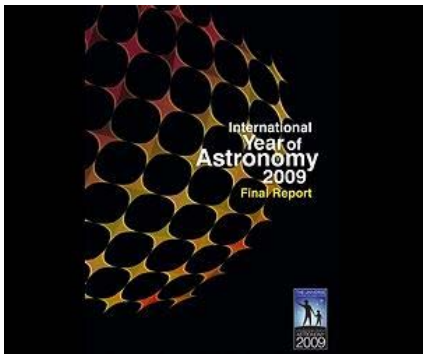
SKY NIGHTLY

International Year Of Astronomy 2009: Final Report Released

by Staff Writers
Paris, France (SPX) Sep 08, 2010



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We have to go back more than 40 years, to the Apollo Moon programme, to find another science event that has engaged the public as much as the International Year of Astronomy 2009 (IYA2009). At its peak in 1969, Neil Armstrong and Buzz Aldrin's first steps on the Moon reached an audience of more than a billion. Forty years later, IYA2009 has brought space back to a mass audience once again.

The report is a compilation of the achievements of the 216 IYA2009 stakeholders - 148 countries, 40 international organisations and 28 global projects. The report shows the excitement, engagement and community involvement engendered by IYA2009. The report is intended to stand as a record of the legacy of this astonishing international celebration of astronomy.

In the report, about half of the stakeholder organisations discuss the number of people reached by the events they organised, as well as the budgets they had available to implement their activities.

Funds equivalent to at least 18 million euros were devoted to IYA2009 activities - and this financial investment was complemented by enormous in-kind contributions from the amateur and professional astronomers, educators and organisers who helped to run the events.

Reports from the IYA2009 network show that at least 815 million people worldwide were reached by IYA2009 activities. Star parties, public talks, exhibits, school programmes, books, citizen-scientist programmes, science-arts events, IYA2009 documentaries and parades honouring astronomy and its achievements made IYA2009 the largest science event so far in this century.

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In Brazil, a budget equivalent to 2 million euros helped the organisers to reach 2.2 million people, with more than 16 600 events around the country, from national Olympiads of astronomy and astronautics to exhibitions and regional meetings on astronomy teaching. There was a big focus on education, with educational astronomy kits being produced, and 55 000 astronomy books and 20 000 Galileoscopes

being distributed to state schools.

South Korea was one of the most active countries in IYA2009, with more than 500 activities reaching some 11 million people. A partial solar eclipse on 22 July was the highlight of the year, with viewing events widely held across the nation in 45 locations with over 400 000 people reached, from kindergarten children to the President of the Republic of Korea.

In the United Kingdom, the organisers used a budget of more than 1 million euros to reach over one million people: 300 000 at local star-parties, 300 000 at IYA2009 planetarium shows and the 400 000 people who attended the global exhibition project, From Earth to the Universe.

Catherine Cesarsky, chair of the IYA2009 Working Group, and the IAU's President for most of IYA2009, says: "As this report clearly shows, IYA2009 was an immense success. We can see that the variety and quality of projects around the world touched the lives of literally millions of people.

It's the first time that such a huge network has been put together to promote a single science communication project, so IYA2009 was also a learning process for everyone involved. This report, and the lessons we have drawn from IYA2009, will be a big help to anyone organising in a similar project in future."

The global IYA2009 projects have also been more successful than anyone initially dared to imagine. Two worldwide star parties were held in 2009: 100 Hours of Astronomy in April, and Galilean Nights in October. In total more than three million people were involved, with many members of the public seeing night-sky objects such as the planets and the Moon through a telescope for the very first time - a life-changing experience for many.

The IYA2009 Cornerstone project, From Earth to the Universe, is a worldwide exhibition that brought the striking beauty and intriguing science of astronomy images to the public. It was staged in unexpected and accessible locations such as parks, metro stations, shopping malls, hospitals, libraries and even prisons.

From Earth to the Universe has been exhibited in about 1000 locations in about 70 countries and 40 languages throughout the world in 2009 and has been viewed by at least 10 million people. The exhibition continues in venues around the world to this day.

Several IYA2009-affiliated movies were released during IYA2009, and received critical acclaim. More than 450 000 DVDs of Eyes on the Skies, a film documenting the history of the telescope, were distributed worldwide in 33 languages.

The film received a MEDEA 2009 Jury Award. Another IYA2009 film, 400 Years of the Telescope, a 1.8 million euro production, has been seen by over ten million individuals. The film has garnered four peer-reviewed Telly awards, for animations, writing, cinematography and production.

The astronomy Indiana Jones-style movie BLAST!, a 385 000 euro production, has been seen by 1.2 million people and has recently been broadcast on BBC World News, reaching over a million households around the world.

In the framework of the IYA2009 Cornerstone project, Developing Astronomy Globally, more than five thousand telescopes have been distributed to over 30 developing countries, to help promote astronomy education and outreach there.

As part of the IYA2009 legacy, the IAU has initiated and is now implementing Astronomy for the Developing World, a pioneering ten-year plan to exploit astronomy in the service of education and capacity building in the developing world.

The IAU has recently chosen the South African Astronomical Observatory as the location for its Office for Astronomy Development (OAD). The OAD will coordinate a wide range of activities designed to stimulate astronomy throughout the world.

The examples above are just a few of the many IYA2009 highlights that during 2009 helped the citizens of the world to rediscover their place in the Universe and to engage in a personal sense of wonder and discovery.

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SKY NIGHTLY

Seven Decades Of Astronomy At Your Fingertips

Palm Coast FL (SPX) Aug 17, 2010

Humanity's understanding of astronomy has changed profoundly during the past 70 years. Now, scientists, journalists, and astronomy enthusiasts can quickly and easily follow the course of astronomical discovery and space exploration by using the new DVD digital archive containing every printed page of Sky and Telescope magazine from the premier issue in November 1941 through the December 2009 iss ... read more

International Year of Astronomy Claims Record Numbers of Citizen Stargazers

by Sarah Reed on 8 September 2010, 1:50 PM | Permanent Link | 1 Comments

The International Year of Astronomy (IYA) 2009 is the biggest public science outreach event ever, with more than 815 million people in 148 countries taking part, says its concluding report released yesterday at the Joint European and National Astronomy Meeting in Lisbon. Organizers say its decision to focus IYA2009's €18 million budget on communicating astronomy to the public, rather than splitting funding between outreach and research, and appointing a global coordinator to oversee the project, is a successful model that should be adopted by future public science outreach events.

Since 1959, the United Nations has been sponsoring International Year events to throw the spotlight on topics of global importance. But previous science International Years haven't managed to engage the public to the level that IYA2009 has achieved, says project coordinator Pedro Russo of the International Astronomical Union.

"The World Year of Physics 2005 and the International Year of Planet Earth in 2008 involved both public outreach events and supporting new research, but this split the attention and funding, making it difficult to create an impact in either area," Russo says. The International Astronomical Union decided from the outset to take a different approach with IYA2009: The sole aim was to communicate the importance and excitement of astronomy to the general public. "Given how many people from around the world that IYA2009 has reached, it was clearly a very good approach," says Russo.

Having a central go-to contact in Russo was vital to enable developing countries to participate in IYA2009, says astronomer Ian Robson of the Royal Observatory, Edinburgh, who headed up the United Kingdom's involvement in the project. "You need a global coordinator to fight for and to distribute funding and resources for developing countries," says Robson. Instead of starting from scratch, countries could use resources that were already in place for the 12 so-called cornerstone projects, he says.

Of the cornerstone projects, Russo thinks the Galileoscope project—in which more than 180,000 low-cost 70mm telescopes were distributed to 96 countries, including 17 developing countries—will be IYA2009's greatest legacy. "Most of these small telescopes are now in classrooms, including remote schools in developing countries, and will be used by many generations of pupils," he says.

Many other projects have continued beyond 2009, including *She is an Astronomer* , which is raising awareness of the fact that very few astronomy professors are female, and the worldwide exhibition *From Earth to the Universe*. The exhibition showcases astronomical images in unexpected locations around the world, such as metro stations, airports, shopping malls, and prisons.

We Hear That

International Year of Astronomy 2009 reached hundreds of millions of people: final report released

By Physics Today on September 7, 2010 4:02 PM | No Comments | No TrackBacks

07 September 2010, Paris: A 1300-page final report for the International Year of Astronomy 2009 was released today at the European Week of Astronomy and Space Science in Lisbon, Portugal. The report shows that at least 815 million people in 148 countries participated in the world's largest science event in decades.

We have to go back more than 40 years, to the Apollo Moon programme, to find another science event that has engaged the public as much as the International Year of Astronomy 2009 (IYA2009). At its peak in 1969, Neil Armstrong and Buzz Aldrin's first steps on the Moon reached an audience of more than a billion [1]. Forty years later, IYA2009 has brought space back to a mass audience once again.

The report is a compilation of the achievements of the 216 IYA2009 stakeholders -- 148 countries, 40 international organisations and 28 global projects. The report shows the excitement, engagement and community involvement engendered by IYA2009. The report is intended to stand as a record of the legacy of this astonishing international celebration of astronomy.

In the report, about half of the stakeholder organisations discuss the number of people reached by the events they organised, as well as the budgets they had available to implement their activities. Funds equivalent to at least 18 million euros were devoted to IYA2009 activities -- and this financial investment was complemented by enormous in-kind contributions from the amateur and professional astronomers, educators and organisers who helped to run the events.

Reports from the IYA2009 network show that at least 815 million people worldwide were reached by IYA2009 activities. Star parties, public talks, exhibits, school programmes, books, citizen-scientist programmes, science-arts events, IYA2009 documentaries and parades honouring astronomy and its achievements made IYA2009 the largest science event so far in this century.

The highest participation figures came from India, where over 700 million people were reported as being reached by IYA2009 events. This was mainly due to Indian astronomers proudly showcasing their work at the Republic Day parade in Delhi. With 30 000 people watching in person and an estimated 700 million watching on television, this was by far the biggest single event in the IYA2009 programme.

In Brazil, a budget equivalent to 2 million euros helped the organisers to reach 2.2 million people, with more than 16 600 events around the country, from national Olympiads of astronomy and astronautics to exhibitions and regional meetings on astronomy teaching. There was a big focus on education, with educational astronomy kits being produced, and 55 000 astronomy books and 20 000 Galileoscopes being distributed to state schools.

South Korea was one of the most active countries in IYA2009, with more than 500 activities reaching some 11 million people. A partial solar eclipse on 22 July was the highlight of the year, with viewing events widely held across the nation in 45 locations with over 400 000 people reached, from kindergarten children to the President of the Republic of Korea.

In the United Kingdom, the organisers used a budget of more than 1 million euros to reach over one million people: 300 000 at local star-parties, 300 000 at IYA2009 planetarium shows and the 400 000 people who attended the global exhibition project, From Earth to the Universe.

Catherine Cesarsky, chair of the IYA2009 Working Group, and the IAU's President for most of IYA2009, says: "As this report clearly shows, IYA2009 was an immense success. We can see that the variety and quality of projects around the world touched the lives of literally millions of people. It's the first time that such a huge network has been put together to promote a single science communication project, so IYA2009 was also a learning process for everyone involved. This report, and the lessons we have drawn from IYA2009, will be a big help to anyone organising in a similar project in future."

The global IYA2009 projects have also been more successful than anyone initially dared to imagine. Two worldwide star parties were held in 2009: 100 Hours of Astronomy in April, and Galilean Nights in October. In total more than three million people were involved, with many members of the public seeing night-sky objects such as the planets and the Moon through a telescope for the very first time -- a life-changing experience for many.

The IYA2009 Cornerstone project, From Earth to the Universe, is a worldwide exhibition that brought the striking beauty and intriguing science of astronomy images to the public. It was staged in unexpected and accessible locations such as parks, metro stations, shopping malls, hospitals, libraries and even prisons. From Earth to the Universe has been exhibited in about 1000 locations in about 70 countries and 40 languages throughout the world in 2009 and has been viewed by at least 10 million people. The exhibition continues in venues around the world to this day.

Several IYA2009-affiliated movies were released during IYA2009, and received critical acclaim. More than 450 000 DVDs of Eyes on the Skies, a film documenting the history of the telescope, were distributed worldwide in 33 languages. The film received a MEDEA 2009 Jury Award. Another IYA2009 film, 400 Years of the Telescope, a 1.8 million euro production, has been seen by over ten million individuals. The film has garnered four peer-reviewed Telly awards, for animations, writing, cinematography and production. The astronomy Indiana Jones-style movie BLAST!, a 385 000 euro production, has been seen by 1.2 million people and has recently been broadcast on BBC World News, reaching over a million households around the world.

In the framework of the IYA2009 Cornerstone project, Developing Astronomy Globally, more than five thousand telescopes have been distributed to over 30 developing countries, to help promote astronomy education and outreach there. As part of the IYA2009 legacy, the IAU has initiated and is now implementing Astronomy for the Developing World, a pioneering ten-year plan to exploit astronomy in the service of education and capacity building in the developing world. The IAU has recently chosen the South African Astronomical Observatory as the location for its Office for Astronomy Development (OAD). The OAD will coordinate a wide range of activities designed to stimulate astronomy throughout the world.

The examples above are just a few of the many IYA2009 highlights that during 2009 helped the citizens of the world to rediscover their place in the Universe and to engage in a personal sense of wonder and discovery.

Robert Williams, the current IAU President, concludes: "Looking back at the activities and events and the popular reaction, we are able to truly gauge how often and how deeply IYA2009's motto, The

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Universe, Yours to Discover, was fulfilled during the Year."
Notes

[1] For more information about the Apollo 11 TV audience please see: "Apollo 11 Turns Out as Biggest Show on Earth" *Broadcasting*, 1 September 1969, p 50.

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International Year of Astronomy: 815 million participated

Lisbon - At least 815 million people in 148 countries participated in the International Year of Astronomy 2009, the world's largest science event in decades.

The 1300-page final report for the International Year of Astronomy 2009 (or IYA2009 for short) was released today at the European Week of Astronomy and Space Science, according to a media release issued by the International Astronomical Union (IAU) on 7 September.

Star parties, public talks, exhibits, school programmes, books, citizen-scientist programmes, science-arts events, IYA2009 documentaries and parades honouring astronomy made IYA2009 the largest science event so far this century.

"We have to go back more than 40 years, to the Apollo Moon programme, to find another science event that has engaged the public as much as the International Year of Astronomy 2009 (IYA2009)," says the report.

"At its peak in 1969, Neil Armstrong and Buzz Aldrin's first steps on the Moon reached an audience of more than a billion. Forty years later, IYA2009 has brought space back to a mass audience once again."

The report details the achievements of the IYA2009 stakeholders -148 countries, 40 international organisations and 28 global projects, making 216 in total and shows the excitement, engagement and community involvement engendered by IYA2009.

Catherine Cesarsky, chair of the IYA2009 Working Group, and the IAU's President for most of IYA2009, says: "As this report clearly shows, IYA2009 was an immense success. We can see that the variety and quality of projects around the world touched the lives of literally millions of people. It's the first time that such a huge network has been put together to promote a single science communication project, so IYA2009 was also a learning process for everyone involved. This report, and the lessons we have drawn from IYA2009, will be a big help to anyone organising in a similar project in future."

Robert Williams, the current IAU President, agrees: "Looking back at the activities and events and the popular reaction, we are able to truly gauge how often and how deeply IYA2009's motto, The Universe, Yours to Discover, was fulfilled during the Year."

Funds equivalent to at least 18 million euros were devoted to IYA2009 activities — and this financial investment was complemented by enormous in-kind contributions from the amateur and professional astronomers, educators and organisers who helped to run the events.

Some examples of the activities during IYA2009:

* The IYA2009 Cornerstone project, *From Earth to the Universe*, a worldwide exhibition, brought the striking beauty and intriguing science of astronomy images to the public. It was staged in unexpected and accessible locations such as parks, metro stations, shopping malls, hospitals, libraries and even prisons: it was seen in about 1000 locations in about 70 countries and 40 languages throughout the world in 2009 and has been viewed by at least 10 million people. The exhibition continues in venues around the world.

* Two worldwide star parties were held in 2009: 100 Hours of Astronomy in April, and Galilean Nights in October. In total more than three million people were involved, with many members of the public seeing night-sky objects such as the planets and the Moon through a telescope for the very first time — a life-changing experience for many.

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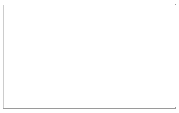

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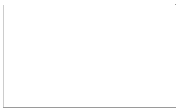

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the inevitable
life stumbling from its
slumber
it was in such a period of
change in 1905
that the House of Physics
would see its Newtonian
axioms
of an ordered universe
collapse
into a new frontier
where the divisions of time
and space
matter and energy
were to blend as rain and
wind
in a storm that broke
loose
within the mind of Albert
Einstein
where Brownian motion
danced
seen and unseen, a
random walk
that became his papers
marching through science
reshaping the very fabric
of the universe
we have come to know
we all share a common
ancestor
a star long lost in the eons
of memory
and yet in that
commonality
nature demands a
permutation
a perchance genetic roll of
the dice
which births a new vision
lifting us temporarily from
the mystery
exposing some of the
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only to raise a plethora of
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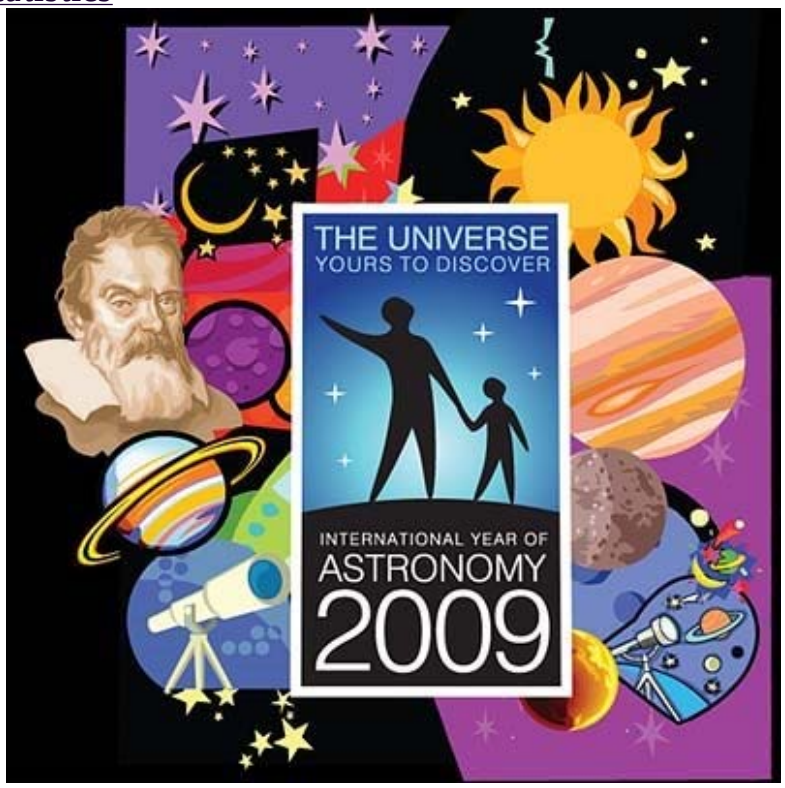
Remarkable--International Year of Astronomy 2009 statistics



"International Year of Astronomy: 815 million participated"

by

Lee Labuschagne

September 7th, 2010

DIGITAL JOURNAL

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Kosmisch dagboek gepresenteerd

7 september 2010
International Astronomical Union

De Europese Zuidelijke Sterrenwacht (ESO), de Internationale Astronomische Unie (IAU) en UNESCO hebben vandaag het boek *Postcards from the Edge of the Universe* gepresenteerd. Dit Engelstalige boek, dat gratis als pdf-bestand kan worden gedownload, geeft een overzicht van de meest brandende kwesties waar astronomen zich momenteel mee bezighouden - van zonnevlekken tot zwarte gaten, planeten bij andere sterren, supernova's en donkere materie.

Postcards bestaat uit een selectie van artikelen die zijn geschreven voor de astronomische weblog *Cosmic Diary*, een van de twaalf grote internationale projecten die in het kader van het Internationaal Jaar van de Astronomie 2009 werden georganiseerd. In 24 korte, rijk geïllustreerde artikelen geven de auteurs op toegankelijke wijze hun persoonlijke kijk op het onderzoeksgebied waar zij zich mee bezighouden.

Postcards is ook in een papieren versie te bestellen.

© Eddy Echternach (www.astronieuws.nl)

Links:

- Cosmic Diary Anthology Released as a Free Book
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Log on to www.postcardsfromuniverse.org to send e-postcards from space to family, friends

Washington, Sep 8 (ANI): Visitors to the website of a book that features articles from astronomers around the world about the hottest astronomical topics of the moment can now send an electronic postcard from space to family and friends-the only postal service that makes light-speed deliveries.

All they have to do is log on to www.postcardsfromuniverse.org.

The book, titled 'Postcards from the Edge of the Universe', is a legacy of the International Year of Astronomy 2009 Cornerstone project Cosmic Diary.

It was launched at the European Week of Astronomy and Space Science in Lisbon, Portugal.

Postcards from the Edge of the Universe is available as an electronic book for free download from the website and can be ordered in hardcopy form from ESO's shop .From sunspots to black holes, planets around other stars, supernovae and dark matter, the book unveils the mysteries of today's research, looking at cutting-edge astronomy from around the world.

Articles by 24 frontline astronomers from all corners of the globe explain their science in accessible language.

This book is based on a hand-picked selection of the best posts and science writing from the astronomy blog Cosmic Diary, one of the twelve Cornerstone projects of the International Year of Astronomy 2009 (IYA2009).

The contributions have been compiled into an edited anthology that gives an enthralling snapshot of contemporary astronomy.

The four-page popular-science articles all have a personal flavour, as each contributor has selected their own research topic, giving the reader a personal insight into work at the forefront of astronomy.

"The strengths of the Cosmic Diary are all here in this book:

modern science, accessible writing and fascinating topics. The diverse areas covered mean there's something for everyone, whatever their level of space science knowledge. We're very happy to be offering this as a legacy of the International Year of Astronomy 2009," said Lee Pullen, one the book's editors.

Catherine Cesarsky, chair of the IYA2009 Executive Committee, added: "Releasing this book means that the spirit of IYA2009 and the Cosmic Diary endures, allowing people all over the world easy access to modern astronomical research as presented by the scientists themselves." (ANI)

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Postcards from the Edge of the Universe – Free ebook

8 Sep 2010, 13:30 UTC

(200 words excerpt, click title or image to see full post)

This book, Postcards from the Edge of the Universe, is based on the science carried out by a hand-picked selection of the best bloggers from the Cosmic Diary, one of the 12 Cornerstone projects of the International Year of Astronomy 2009. From sunspots to black holes, planets around other stars, supernovae and dark matter, Postcards [...]

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Nauka dla gospodarki

Politechnika Kijowska i Euro-Centrum planują wspólne projekty

2010-09-23 00:43

Widokówki z krańców Wszechświata

Międzynarodowa Unia Astronomiczna, ESO i UNESCO udostępniły darmowe elektroniczne kartki pocztowe z pięknymi zdjęciami kosmosu. Dostępna jest także bezpłatna książka z artykułami popularnonaukowymi napisanymi przez astronomów-bloggerów.

Wśród elektronicznych kartek pocztowych do wyboru są zdjęcia pochodzące z Kosmicznego Teleskopu Hubble'a oraz z wielkich teleskopów Europejskiego Obserwatorium Południowego ESO. Z kolei książka zatytułowana "Postcards from the Edge of the Universe" (czyli: "Kartki z krańca Wszechświata") to zbiór artykułów popularnonaukowych napisanych przez astronomów-bloggerów piszących w "Kosmicznym Pamiętniku" ("Cosmic Diary").

Każdy z 24 autorów skupił się na jednym zagadnieniu astronomicznym. Wśród poruszonych tematów są: życie w obserwatorium astronomicznym, jak się wybiera miejsce na budowę obserwatorium, meteoryty, dlaczego umieszczamy teleskopy poza Ziemią, nasza gwiazda dzienna Słońce, plamy słoneczne, Układ Słoneczny, astrometria, narodziny układów planetarnych, planety pozasłoneczne, gwiezdne żłobki, jak powstała Droga Mleczna, czarne dziury, soczewkowanie grawitacyjne i inne zagadnienia z badań współczesnej astronomii.

Książka "Postcards from the Edge of the Universe" została wydana przez Międzynarodową Unię Astronomiczną, Europejskie Obserwatorium Południowe ESO oraz UNESCO.

"Kosmiczny Pamiętnik" to plon Międzynarodowego Roku Astronomii 2009, jeden z głównych projektów tej ogólnoświatowej inicjatywy. Astronomowie z różnych krajów opisywali na nim swoją pracę i życie. Zgromadził wpisy od 60 astronomów z 35 krajów, którzy napisali ponad 1500 blogowych postów. Witrynę odwiedziło 220 tysięcy osób.

Elektroniczną kartkę można wysłać za darmo ze strony www.postcardsfromuniverse.org. Na witrynie jest do pobrania również książka "Postcards from the Edge of the Universe" w postaci pliku PDF. Blog "Kosmiczny Pamiętnik" dostępny jest pod adresem www.cosmicdiary.org. CZA

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Lifestyle e web Web Siti web – Cartoline dallo Spazio per promuovere il libro Postcards from the Edge of the Universe

Giovedì 09 Settembre 2010, 12:10

Le cartoline che arrivano dallo Spazio

Per gli amanati delle stelle.

Il cosmo interessa, attira, fa sognare. I viaggi nello spazio stanno diventando una realtà per chi se li può permettere, per gli altri non resta che accontentarsi dell'invio di una cartolina dallo spazio "conto terzi"…

> "Spedire una cartolina dallo spazio non costa niente ed è un pensiero carino per chi ama le stelle"

Promozione spaziale - Marketing. Si tratta di una trovata per promuovere il libro Postcards from the Edge of the Universe, e tutto sommato è un'idea carina. Il libro tratta di macchie solari e buchi neri, di pianeti che ruotano intorno al sole o ad altre stelle, di supernovae e materia oscura, e alla fine ci scappa pure un souvenir fotografico in arrivo dallo spazio .

Figli delle stelle – Il libro può essere scaricato gratuitamente dal sito web Postcards from Universe o acquistato in versione cartacea sul sito ESOshop al prezzo di 9,90 euro. ESO, ovvero European Southern Observatory, è un'organizzazione astronomica internazionale di cui fanno parte tredici nazioni dell'Unione Europea. Per tornare alla questione delle cartoline, basta cliccare sull'immagine che ti piace di più, inserire i dati del destinatario, scrivere un breve testo, e premere "send message". Niente di "spaziale", ma un'idea simpatica per gli amanti delle stelle .

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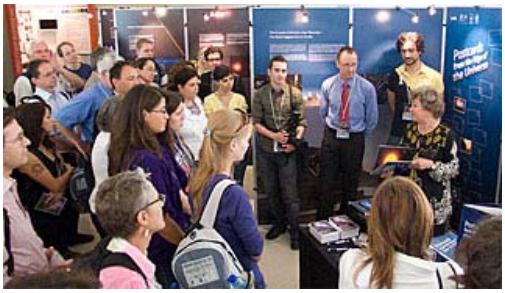
INTERNATIONAL ASTRONOMICAL UNION

The launch of the Postcards From the Edge of the Universe book at JENAM 2010



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The launch of the *Postcards From the Edge of the Universe* book at JENAM 2010. In the photo, Catherine Cesarsky, Chair of the International Year of Astronomy 2009 (IYA2009) Working Group, is seen holding a copy of the book. Also seen are several of the book authors and editors: David Barrado y Navascués, Joana Ascenso, Salim Ansari, Lee Pullen, Mariana Barrosa and Lars Lindberg Christensen. In the back, the IYA2009 coordinator Pedro Russo is seen.

Credit:

ESO

Log on to www.postcardsfromuniverse.org to send e-postcards from space to family

Published: Wednesday, Sep 8, 2010, 15:28 IST
Place: Washington, DC | Agency: ANI

Visitors to the website of a book that features articles from astronomers around the world about the hottest astronomical topics of the moment can now send an electronic postcard from space to family and friends—the only postal service that makes light-speed deliveries.

All they have to do is log on to www.postcardsfromuniverse.org.

The book, titled 'Postcards from the Edge of the Universe', is a legacy of the International Year of Astronomy 2009 Cornerstone project Cosmic Diary.

It was launched at the European Week of Astronomy and Space Science in Lisbon, Portugal.

Postcards from the Edge of the Universe is available as an electronic book for free download from the website and can be ordered in hardcopy form from ESO's shop

From sunspots to black holes, planets around other stars, supernovae and dark matter, the book unveils the mysteries of today's research, looking at cutting-edge astronomy from around the world.

Articles by 24 frontline astronomers from all corners of the globe explain their science in accessible language.

This book is based on a hand-picked selection of the best posts and science writing from the astronomy blog Cosmic Diary, one of the twelve Cornerstone projects of the International Year of Astronomy 2009 (IYA2009).

The contributions have been compiled into an edited anthology that gives an enthralling snapshot of contemporary astronomy.

The four-page popular-science articles all have a personal flavour, as each contributor has selected their own research topic, giving the reader a personal insight into work at the forefront of astronomy.

"The strengths of the Cosmic Diary are all here in this book: modern science, accessible writing and fascinating topics. The diverse areas covered mean there's something for everyone, whatever their level of space science knowledge. We're very happy to be offering this as a legacy of the International Year of Astronomy 2009," said Lee Pullen, one the book's editors.

Catherine Cesarsky, chair of the IYA2009 Executive Committee, added: "Releasing this book means that the spirit of IYA2009 and the Cosmic Diary endures, allowing people all over the world easy access to modern astronomical research as presented by the scientists themselves." (ANI)

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Astronomia Amadora, Conferências Internacionais, Educação

JENAM 2010 – educação

Já tínhamos falado do JENAM 2010, neste post.
O Pedro Russo escreveu um texto bastante completo, neste post.
E o JENAM 2010, comunicou sobre o AIA2009, neste post.

Podem também ler o PDF com os abstracts, onde se inclui os programas de educação, clicando aqui.

Vejam também a palestra do Pedro Ré sobre as actividades pro-am em Portugal, clicando aqui.

Agora trago-vos um **Comunicado de Imprensa**, do JENAM 2010, sobre **educação**:

Novos rumos para a educação das ciências na Europa discutiram-se esta semana em Lisboa, na Semana Europeia da Astronomia e Ciências Espaciais

Durante a Semana Europeia da Astronomia e Ciências Espaciais que decorre esta semana na Faculdade de Ciências da Universidade de Lisboa, vários astrónomos de todo o mundo discutiram os recentes sucessos e desafios para o futuro das instituições educativas, através da utilização de instrumentos modernos de ensino da ciência nas escolas europeias.

Apesar de as Ciências da Educação serem reconhecidas como um dos pilares dos sistemas de ensino modernos, é impossível contornar o facto de que o interesse das novas gerações em temas de ciência tem vindo a diminuir.
É necessária uma mudança dos métodos tradicionais de ensino da ciência.
Os fascinantes avanços da astronomia dos últimos anos podem ser um poderoso aliado para atingir este objectivo.

O recém-aprovado Plano Estratégico da União Astronómica Internacional (UAI) para os próximos 10 anos prevê o uso da astronomia como um impulsionador para o desenvolvimento em vários países.
Isso só pode ser feito se houver um investimento constante em formação de educadores e na qualificação dos alunos com as ferramentas certas para enfrentar o mercado de trabalho.

Um pouco por todo o mundo têm vindo a ser desenvolvidas várias acções na área de formação de professores em novas tecnologias no ensino das ciências, através do ensino da astronomia.
Portugal não é uma excepção.

O Galileo Teachers Training Program (GTTP), um projecto internacional iniciado no âmbito do Ano Internacional da Astronomia 2009 (AIA 2009), está a criar uma rede de formadores a nível mundial, dotando-os de conhecimentos sobre os melhores recursos e ferramentas para a educação em astronomia.

Estas técnicas são, posteriormente, transmitidas a professores, através de workshops, acções de formação e ferramentas de ensino online, entre outros.
Tudo para que, no final, estes novos conhecimentos sejam aplicados nas salas de aula, designadamente através da utilização de novas tecnologias, motivando os alunos para a ciência e astronomia.

Como no resto do mundo, o GTTP é já um caso de sucesso em Portugal.
O nosso país foi um dos que teve mais professores participantes (350) durante o AIA2009 e, nas palavras da coordenadora nacional deste programa, Rosa Doran, "notou-se em 2009 um acréscimo na participação e interesse dos professores, já que houve muita divulgação e as próprias escolas se preocuparam mais em fazer chegar a informação aos docentes".

Esta formação teve três níveis: Introdução à Astronomia, Introdução à utilização dos Telescópios e GTTP – Novas Tecnologias, e foi levada a cabo com o apoio de várias instituições no país.
Ao longo da formação, os professores aprenderam a usar software astronómico, telescópios robóticos, a fazer processamento de imagem, entre outros recursos.

Rosa Doran considera que há três grandes mais-valias deste projecto: Para além do investimento nas novas tecnologias no ensino e da promoção de um trabalho interactivo com os alunos, também o facto de os professores "terem sempre a quem recorrer para tirar dúvidas, através da rede de professores certificados" é um factor diferenciador em relação às acções de formação mais convencionais.
São, inclusivamente, promovidos encontros e campanhas nas quais os professores estão convidados a participar, usando o que aprenderam na sua formação.

O GTTP é apoiado, a nível internacional, pelo Global Hands on The Universe (GHOU) e organizado, no nosso país, pelo NUCLIO – Núcleo Interactivo de Astronomia.

O NUCLIO foi recentemente certificado como entidade formadora pelo Conselho Científico-Pedagógico da Formação Contínua, e os cursos que ministra estão também em vias de certificação para o ano lectivo 2010/2011, o que significa que os professores que fizerem esta formação obtêm créditos.

Durante esta semana, a propósito da Semana Europeia da Astronomia e Ciências Espaciais, foi organizada uma destas acções de formação para professores que contou com cerca de 30 participantes oriundos de escolas nacionais.
Esta formação contou com alguns formadores de gabarito internacional e que têm tido um papel preponderante no sucesso da implementação do GTTP a nível mundial, como Connie Walker, cientista do Office of Education and Public Outreach do National Optical Astronomy Observatory (E.U.A.) e Anita Heward, assessora de imprensa do Europlanet.

Leonor Cabral, da Escola Secundária da Cidaleda em Cascais, uma das professoras presentes na formação, entende que "é muito importante apostar neste tipo de iniciativas, pois elas motivam a troca de novos conhecimentos, e só assim é possível avançar para novos patamares".
Nélson Correia, professor de Física e Química na Escola Secundária Maria Lamas em Torres Novas também vê vantagens na implementação de programas como o GTTP: "estas formações permitem-nos aprender a usar novos recursos e a dinamizar as aulas, motivando os alunos para a astronomia", explica.
Rosa Doran espera agora "que estas novas gerações de professores a receber formação vão 'contaminando' mais e mais professores e alunos" de forma a continuar o sucesso do programa.

O GTTP vai já colhendo os seus frutos no terreno, mas falta agora chegar a interlocutores no Ministério da Educação, de forma a poder incluir esta formação nos programas curriculares das escolas, à semelhança do que vai acontecendo em outros países europeus.

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14 Sep 2010 Carlos Oliveira

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Science News

First Detailed Image of Disc Around Young Star

ScienceDaily (Sep. 10, 2010) — New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the inner disc of matter around a young star. Stéphanie Renard of the Laboratoire d'Astrophysique de Grenoble and colleagues used the ESO VLT Interferometer to probe the secrets of the star HD 163296.

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Young stars are surrounded by discs of dust and gas and scientists believe that it is in these discs that planets are born. Dusty grains in the disc stick to each other to make larger lumps that in turn also aggregate together. This growth is expected to continue until rocky bodies about the size of the Earth are formed.

"The power of the VLT Interferometer to probe very fine details now allows us to see the inner region very close to the star where there is not expected to be any dust. The new images reveal the ring-shaped structure of this very elusive region," said Renard.

No single telescope currently in operation has vision acute enough to study such tiny and distant objects. The size of the region of the disc observed corresponds to 150 million kilometres -- about the distance between the Earth and the Sun, but located at 360 light-years from Earth.

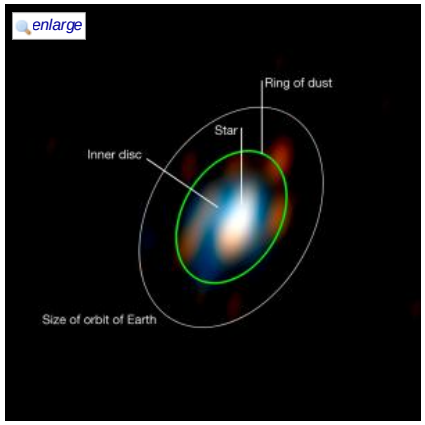
These very tiny details have an angular size of around 10 milliarcseconds -- equivalent to trying to pick out small features on a road map held up 40 kilometres away. These minute angles are far smaller than any single telescope now operating can resolve.

To be able to image the inner part of the disc of matter close to the star, the team used a technique known as interferometry, in which sophisticated instrumentation combines the light from several telescopes into one observation. This increases the level of detail in the resulting pictures dramatically, although it does have some drawbacks: the results have to be reconstructed using complex mathematical algorithms because interferometry does not produce unambiguous images. But this difficult work is worthwhile as the resulting pictures tease out details far beyond the capabilities of the individual telescopes.

The team used data from the Very Large Telescope Interferometer, located at ESO's Paranal Observatory, for the bulk of their work on this star. The facility includes four 8.2-metre Unit Telescopes and four 1.8-metre Auxiliary Telescopes, which can be used in several different combinations to produce interferometric observations. The data was thoroughly analysed earlier this year but, now, for the first time, the astronomers have been able to reconstruct an image of such a young object, with minimal assumptions, thanks to a powerful mathematical algorithm developed by team member Eric Thiébaut. The resulting image has the detail you would normally expect from a telescope with a mirror over 130 metres across, far bigger than any currently in existence. To gain further precision, the team combined the VLT Interferometer observations with data from CHARA, Keck and IOTA interferometers.

"This is the first time that an image with such a level of detail has been achieved of a young star surrounded by a disc -- a system that could represent how the Solar System formed 4.5 billion years ago," said co-author Fabien Malbet. "We are eager to improve these images to understand the fundamental mechanisms that drive planetary formation better."

"Creating an image of this star has really pushed back the boundaries of what is possible with current technology. It's a showcase for what can be achieved when you combine the



New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the disc of matter around a young star. Stéphanie Renard of the Laboratoire d'Astrophysique de Grenoble and colleagues used the ESO VLT Interferometer to probe the secrets of the inner part of the disc around the star HD 163296. This image shows the reconstruction of images in two parts of the near-infrared spectrum (H and K). The green ellipse traces the location of the newly discovered ring inside which the dust was found. The white ellipse represents the orbit of the Earth around the Sun placed in this system in order to show the scale of the picture and the extraordinarily fine details that are revealed in this image. (Credit: ESO/S. Renard)

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power of some of the most advanced observatories in the world," concludes co-author Myriam Benisty. "Interferometry has definitely entered the world of images and the Very Large Telescope Interferometer is a crucial part of it."

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Journal Reference:

1. M. Benisty, A. Natta, A. Isella, J-P. Berger, F. Massi, J-B. Le Bouquin, A. Mérand, G. Duvert, S. Kraus, F. Malbet, J. Olofsson, S. Robbe-Dubois, L. Testi, M. Vannier, G. Weigelt. **Strong near-infrared emission in the sub-AU disk of the Herbig Ae star HD 163296: evidence of refractory dust?** *Astronomy and Astrophysics*, 2010; 511: A74 DOI: 10.1051/0004-6361/200912898

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First detailed image of disc around young star

September 10, 2010

New research carried out using ESO telescopes has, for the first time, allowed astronomers to reconstruct a detailed picture of the inner disc of matter around a young star -- HD 163296. Young stars are surrounded by discs of dust and gas and scientists believe that it is in these discs that planets are born. Dusty grains in the disc stick to each other to make larger lumps that in turn also aggregate together. This growth is expected to continue until rocky bodies about the size of the Earth are formed.

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ASTRONET pretende diminuir o fosso científico e tecnológico na Europa

2010-09-09

José Bonfim e Jean-Marie Hameury durante a entrega do documento. (Imagem: Lee Pullen/Science Office)

A Fundação para a Ciência e Tecnologia (FCT), a cargo de promover o avanço do conhecimento científico e tecnológico em Portugal, aderiu esta semana à ASTRONET, a rede Europeia de Agências de Financiamento da Astronomia – o que permitirá uma maior aposta na investigação nesta área no nosso país.

A ASTRONET foi criada em 2005 por um grupo de agências de financiamento europeias com o objectivo de estabelecer um plano a longo prazo para o desenvolvimento da astronomia europeia, consolidando e reforçando a sua posição de liderança mundial. Ao reunir as principais unidades de investigação europeias, bem como o Observatório Europeu do Sul (ESO) e a Agência Espacial Europeia (ESA), procura desenvolver um planeamento estratégico para a astronomia europeia.

Esta manhã, José Bonfim, da FCT, e Mário Amaral, coordenador do Space Office, também da FCT, estiveram na sessão especial dedicada ao Planeamento Estratégico da Astronomia na Europa a decorrer no âmbito da Joint European National Astronomy Meeting 2010 (JENAM2010), onde entregaram o documento de adesão, assinado a 1 de Setembro pelo presidente da fundação, José Sentieiro. Presentes nesta sessão estavam também Jean-Marie Hameury e Johannes Andersen, representantes da ASTRONET.

Outro dos actores fundamentais neste processo foi a Sociedade Portuguesa de Astronomia (SPA). O seu presidente André Moitinho de Almeida, afirmou: **"Esta entrada coloca Portugal no centro das decisões estratégicas do planeamento dos critérios de investimento e áreas científicas a apoiar. Será certamente um passo em frente no desenvolvimento da investigação em astronomia feita no nosso país"**.

Um dos objectivos da ASTRONET para os próximos quatro anos é o de diminuir o fosso científico e tecnológico entre as diferentes nações europeias. O presidente da SPA acredita também que **"Portugal pode desempenhar um papel importante, pela partilha das experiências e especificidades de fazer investigação ao mais alto nível num país com limitações em termos de recursos"**. A adesão entra em vigor já na próxima segunda-feira.

SKY NIGHTLY

Astronomer Unveils Mysteries Of "Green Pea" Galaxies

by Staff Writers
Lisbon, Portugal (SPX) Sep 13, 2010

File image: Green pea galaxy.

Ricardo Amorin has presented a talk at the Joint European and National Astronomy Meeting (JENAM 2010) explaining the nature of strange so-called Green Pea galaxies. First discovered in 2007 by amateur stargazers, it has now been shown that these extraordinary and extremely compact star cities have low amounts of complex elements after being diluted by streams of gas and strong supernova winds. This announcement will be celebrated by the amateurs who first discovered Green Pea galaxies.

Lead scientist Ricardo Amorin says, "This Green Pea discovery is a fabulous example of how normal citizens, 'astronomy lovers', can help scientists with their collective efforts. They discuss the science with professional astronomers, and have written an excellent Wikipedia entry about Green Pea galaxies which presents a lot of information to people of the world."

Green Pea galaxies were first classified by hobby stargazers. The online project Galaxy Zoo and Galaxy Zoo 2 asked interested members of the public to help sort through a vast depository of night sky images produced by the Sloan Digital Sky Survey. Categorizing galaxy types is both important to learn about the evolution of the Universe, and also difficult because of the ambiguous shape of many.

Astronomers turned to the online community for help, and citizen scientists flocked to sift through the images and look for galaxy types. Within 24 hours of launch the site was receiving an astonishing 70,000 classifications an hour.

These citizen scientists discovered a strange type of galaxy that did not fit with previously known types. Small in size and green in color, they were soon named "Green Pea" galaxies. They appear to be compact low-mass galaxies undergoing intense star formation, and being around 1.5 to 5 billion light-years distant indicates that this is a brief but extreme stage of their evolution.

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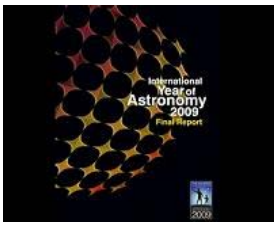

Paris, France (SPX) Sep 08, 2010
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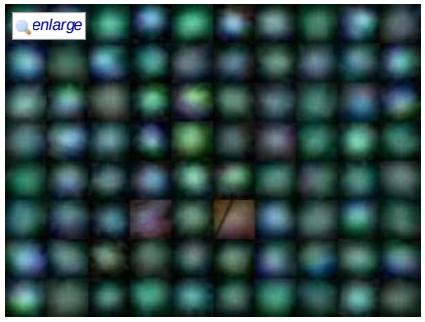
Astronomer Unveils the Mysteries of 'Green Pea' Galaxies

ScienceDaily (Sep. 12, 2010) — First discovered in 2007 by amateur stargazers, the strange so-called Green Pea galaxies have now been shown to be extraordinary and extremely compact star cities that have low amounts of complex elements after being diluted by streams of gas and strong supernova winds.



The work of citizen scientists was invaluable in documenting Green Pea galaxies. Amateurs worked alongside professional astronomers to gather and analyse data. (Credit: Sloan Digital Sky Survey and Richard Nowell)

See Also:

Space & Time
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Presenting at the Joint European and National Astronomy Meeting (JENAM2010), lead scientist Ricardo Amorin said: "This Green Pea discovery is a fabulous example of how normal citizens, 'astronomy lovers', can help scientists with their collective efforts. They discuss the science with professional astronomers, and have written an excellent Wikipedia entry about Green Pea galaxies which presents a lot of information to people of the world."

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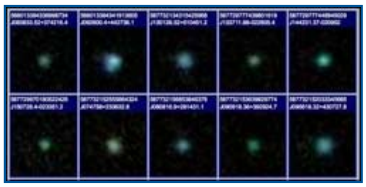
Astronomer unveils the mysteries of "Green Pea" galaxies

These extremely compact star cities discovered by citizen scientists appear to have low amounts of complex elements after being diluted by streams of gas and strong supernova winds.

Provided by JENAM 2010, Lisbon, Portugal

September 13, 20101



On September 10 at the Joint European and National Astronomy Meeting (JENAM 2010), Ricardo Amorin of the Instituto de Astrofisica de Andalucia presented a talk explaining the nature of strange so-called Green Pea galaxies. First discovered in 2007 by amateur stargazers, scientists are now discovering that these extraordinary and extremely compact star cities have low amounts of complex elements after being diluted by streams of gas and strong supernova winds.

Lead scientist Amorin said, "This Green Pea discovery is a fabulous example of how normal citizens, 'astronomy lovers', can help scientists with their collective efforts. They discuss the science with professional astronomers, and have written an excellent Wikipedia entry about Green Pea galaxies, which presents a lot of information to people of the world."

Hobby stargazers first classified this new type of galaxies. The online project Galaxy Zoo and Galaxy Zoo 2 asked interested members of the public to help sort through a vast depository of night sky images produced by the Sloan Digital Sky Survey. Categorizing galaxy types is important to the understanding of the evolution of the universe but also difficult because of the ambiguous shape of many. Astronomers turned to the online community for help, and citizen scientists flocked to sift through the images and look for galaxy types. Within 24 hours of launch, the site was receiving an astonishing 70,000 classifications an hour.

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Green Pea galaxies are now known to be "metal-poor" — metals in this astronomical sense meaning any element other than hydrogen and helium. The study presented September 10 suggests that gas gravitationally attracted from the outskirts of the Green Pea galaxies or beyond, combined with shockwaves from supernova explosions, are likely causes. Amorin explained, "Discovering Green Pea galaxies has opened a new window to investigate galaxy evolution and star formation in the early universe."

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Green Pea Galaxies - Another Win For Citizen Science

By News Staff | September 12th 2010 03:00 AM | 2 comments | Print | E-mail | Track Comments

SCIENTIFIC BLOGGING
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News Staff

Strange so-called Green Pea galaxies were first discovered in 2007 by citizen scientists and it has now been shown that these extraordinary and extremely compact star cities have low amounts of complex elements after being diluted by streams of gas and strong supernova winds.

Green Pea galaxies were discovered by participants in Galaxy Zoo, which grew out of the need to provide more help to astronomers with a huge number of night sky images produced by the Sloan Digital Sky Survey.

These citizen scientists discovered a strange type of galaxy that did not fit with previously known types. Small in size and green in color, they were soon named "Green Pea" galaxies. They appear to be compact low-mass galaxies undergoing intense star formation, and being around 1.5 to 5 billion years distant indicates that this is a brief but extreme stage of their evolution.

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A selection of Green Pea galaxies discovered by the Galaxy Zoo citizen scientists. Credit: Richard Nowell.

Green Pea galaxies are now known to be "metal-poor"; metals in this astronomical sense meaning any element other than hydrogen and helium. A study on Green Pea galaxies was presented Friday at the Joint European and National Astronomy Meeting (JENAM2010) by Ricardo Amorin which suggested that gas gravitationally attracted from the outskirts of the Green Pea galaxies or beyond, combined with shock waves from supernova explosions, are likely causes. Amorin said, “Discovering Green Pea galaxies has opened a new window to investigate galaxy evolution and star formation in the early Universe.”

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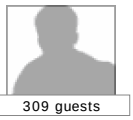

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'Green Pea' galaxies' mystery unveiled

ANI
Washington, September 11, 2010

First Published: 13:17 IST(11/9/2010)
Last Updated: 14:30 IST(11/9/2010)

An astronomer has unveiled the mysteries of strange so-called 'Green Pea' galaxies. First discovered in 2007 by amateur stargazers, it has now been shown that these extraordinary and extremely compact star cities have low amounts of complex elements after being diluted by streams of gas and strong supernova winds.

And the latest announcement will trigger celebrations among amateurs who first discovered Green Pea galaxies.

Ricardo Amorin will present a talk explaining the nature of strange so-called Green Pea galaxies.

"This Green Pea discovery is a fabulous example of how normal citizens, 'astronomy lovers', can help scientists with their collective efforts. They discuss the science with professional astronomers, and have written an excellent Wikipedia entry about Green Pea galaxies which presents a lot of information to people of the world," said lead scientist Ricardo Amorin.

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Amorin explained: "Discovering Green Pea galaxies has opened a new window to investigate galaxy evolution and star formation in the early Universe."

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The latest incarnation of Galaxy Zoo uses data provided by the famous Hubble Space Telescope, to peer deeper into the Universe than before.

The findings of the study were presented at the Joint European and National Astronomy Meeting (JENAM 2010).

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News

'Green Pea' galaxies: updates, and a tribute to citizen science

[Date: 2010-09-13]

A contribution to this year's edition of the Joint European and National Astronomy Meeting (JENAM2010) in Lisbon, Portugal has provided updates on the nature of the so-called Green Pea galaxies and acknowledged the crucial role of amateur astronomers in their discovery.

Green Pea galaxies were first spotted in 2007 by volunteers enrolled in the online project Galaxy Zoo. Members of the online community had replied to the project's request for help in sifting through a profusion of night sky images produced by the Sloan Digital Sky Survey. Participants were asked to classify galaxies according to a series of criteria, a task that requires human appraisal as the answers are not always clear-cut. Over a quarter million people have taken part in the project so far.

Citizen scientists from around the world responded with enthusiasm and were quick to flag up a volley of galaxies with a difference. Small and green, these came to be known as 'Green Peas'. They appear to be compact, low-mass galaxies at a brief, intense stage of their evolution which features high rates of star formation - fertile sources of stars in the making, at a distance of approximately 1.5 to 5 billion light years.

Prior to his presentation on 10 September 2010, Ricardo Amorin of the Instituto de Astrofísica de Andalucía in Granada, Spain, said: 'This Green Pea discovery is a fabulous example of how normal citizens, "astronomy lovers", can help scientists with their collective efforts. They discuss the science with professional astronomers, and have written an excellent Wikipedia entry about Green Pea galaxies which presents a lot of information to people of the world.'

The classification of galaxies contributes to a body of knowledge which enables researchers to take a closer look at our planetary past. 'Discovering Green Pea galaxies,' said Mr Amorin, 'has opened a new window to investigate galaxy evolution and star formation in the early universe.' Recent findings indicate that these galaxies are poor in elements other than helium and hydrogen, which could be due to dilution by streams of gas and strong supernova winds.

In terms of surprises, Galaxy Zoo and Galaxy Zoo 2 (an improved version) have delivered more than Peas. An object noted by a Dutch volunteer in 2007, for example, defied explanation for several years until it was tentatively interpreted as a phenomenon caused by a supermassive black hole in June 2010.

Mr Amorin's update on Green Pea galaxies was announced through the media centre of the Europlanet RI ('European planetology network research infrastructure') project, which the EU supports with a contribution of EUR 6 million under the Seventh Framework Programme (FP7). Europlanet RI promotes greater cooperation and synergies in the field of planetary sciences by providing researchers and research organisations with access to state-of-the-art infrastructures, data and networking opportunities. It also conducts extensive dissemination and outreach activities to keep stakeholders informed of the work of Europe's planetary science community and raise the field's profile among the general public.

The Galaxy Zoo adventure continues with new imagery provided by the Hubble Space Telescope, offering hobby astronomers a fresh chance to make their mark on planetary science.
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Mysteries of ‘Green Pea’ galaxies unveiled

September 11th, 2010 SindhToday

Washington, Sep 11 (ANI): An astronomer has unveiled the mysteries of strange so-called 'Green Pea' galaxies.

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The latest incarnation of Galaxy Zoo uses data provided by the famous Hubble Space Telescope, to peer deeper into the Universe than before.

The findings of the study were presented at the Joint European and National Astronomy Meeting (JENAM 2010). (ANI)

[NF]

Science News

Dwarf Galaxy Evolution: Reionization Alone Is Not Able to Stop Star Formation, Research Shows

ScienceDaily (Sep. 13, 2010) — A team of astronomers has provided evidence suggesting that reionization alone is not able to stop star formation in dwarf galaxies, as had been expected.

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- Galaxies
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The results were presented during the European Week of Astronomy and Space Sciences.

The Big Bang model predicts that the universe started out as completely ionized plasma, which later cooled and allowed all of the atoms to recombine into neutral atoms. The first generation of stars and galaxies formed from this neutral material and produced high energy radiation which then ¨reionized¨ the universe. This period of reionization ended approximately 1 billion years after the Big Bang.

The Local Cosmology from Isolated Dwarfs (LCID) project, led by Carme Gallart of the Instituto de Astrofisica de Canarias (Tenerife, Spain), has used over 100 orbits of the Hubble Space Telescope (HST) observing time with the ACS camera in order to obtain detailed star formation histories for six Local Group dwarf galaxies, which include details about early star formation.

"All the galaxies in the sample, including those that ended star formation very early on, such as the Cetus dSph galaxy, formed most of their stars after reionization was complete. This demonstrates that reionization alone is not able to stop star formation in the smallest galaxies, as had been expected," says Gallart, who has been working with a team of about a dozen people for five years on this project.

The smallest galaxies represent important probes of the conditions of the early Universe, since their early star formation can be strongly influenced by cosmic reionization. The most common prediction of models of dwarf galaxy evolution is that the early ionization of the gas in these galaxies by the cosmic UV background should have halted and prevented any subsequent star formation in them after about 12.5 Gyr ago.

The paper was published in the *Astrophysical Journal*.

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1. M. Monelli, S. L. Hidalgo, P. B. Stetson, A. Aparicio, C. Gallart, A. E. Dolphin, A. A. Cole, D. R. Weisz, E. D. Skillman, E. J. Bernard, L. Mayer, J. F. Navarro, S. Cassisi, I. Drozdovsky and E. Tolstoy. **The ACS LCID Project. III. The Star Formation History of the Cetus dSph Galaxy: A Post-reionization Fossil**. *Astrophysical Journal*, 2010; DOI: 10.1088/0004-637X/720/2/1225

Portion of the Cetus dSph galaxy as imaged by the HST. (Credit: NASA/LCID)

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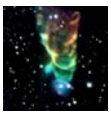

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STELLAR CHEMISTRY

New Results On Dwarf Galaxy Evolution

by Staff Writers
Lisbon, Portugal (SPX) Sep 13, 2010


File image: dwarf galaxy.

The 'Local Cosmology from Isolated Dwarfs (LCID)' team showed their most recent results that suggest that reionization alone is not able to stop star formation in Dwarf Galaxies, as had been expected. The results were presented during the European Week of Astronomy and Space Sciences.

The Big Bang model predicts that the universe started out as completely ionized plasma, which later cooled and allowed all of the atoms to recombine into neutral atoms.

The first generation of stars and galaxies formed from this neutral material and produced high energy radiation which then "reionized" the universe. This period of reionization ended approximately 1 billion years after the Big Bang.

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The smallest galaxies represent important probes of the conditions of the early Universe, since their early star formation can be strongly influenced by cosmic reionization.

The most common prediction of models of dwarf galaxy evolution is that the early ionization of the gas in these galaxies by the cosmic UV background should have halted and prevented any subsequent star formation in them after about 12.5 Gyr ago.

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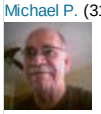

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25 September 2010

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