

Astronomy Outreach As a Profession



Sze-leung CHEUNG 張師良

IAU International Outreach Coordinator



UNIVERSET
DIN OPLEVELSE



DET INTERNATIONALE
ASTRONOMIÅR
2009

UNDUR
ALHEIMSINS



ALPJÓÐLEGT ÁR
STJÖRNUFRÆÐINNAR
2009

DESCOBR E TEU
UNIVERSO



ANO INTERNACIONAL DA
ASTRONOMIA
2009

Вселенная
для Вас



Международный год
астрономии
2009

TUKLASIN
ANG KALAWAKAN



PANDAIGDIGANG TAON NG
ASTRONOMIYA
2009

ULIMWENGU WOTE
WAKO KUUVUMBUA



MWAKA WA KIMATAIFA WA
ASTRONOMIA
2009

НА ТЕБИ ЈЕ ДА ОТКРИЈЕШ
СВЕМИР



МЕЂУНАРОДНА ГОДИНА
АСТРОНОМИЈЕ
2009

EL UNIVERSO
PARA QUE LO DESCUBRAS



AÑO INTERNACIONAL DE LA
ASTRONOMÍA
2009

ΤΟ ΣΥΜΠΑΝ
ΔΙΚΟ ΣΟΥ ΝΑ ΤΟ ΑΝΑΚΑΛΥΨΕΙΣ



ΠΑΓΚΟΣΜΙΟ ΕΤΟΣ
ΑΣΤΡΟΝΟΜΙΑΣ
2009

OSCAIL DO SHÚILE D'IONTAIS NA
CRUINNE



BLIAIN IDIRNÁISIÚNTA NA
RÉALTEOLAÍOCHTA
2009

SVEMIR
NA VAMA JE DA GA OTKRIJETE



MEĐUNARODNA
ASTRONOMSKA GODINA
2009

الكون
حولك لتكتشفه



السنة الدولية لعلم
الفلك
2009



Amateur astronomers, Iran, 05.04.09



Star Party, Blackfoot Crossing Historical Park, Canada,
12.09.09



Galilean Nights, Kazim Karabekir, Turkey, 22.10.09



University lecture at the Eduardo Mondlane University, Maputo, Mozambique, July 2009

الكون
حولك لتكتشفه



السنة الدولية لعلم
الفلك
2009

الرابطة العراقية لهواة العلوم والمهويين
المنظم المحلي للسنة الدولية الفلكية ٢٠٠٩ العراق
مشروع ١٠٠ ساعة فلكية

E- iraqiscinorg@yahoo.com
E- jwad_elom@yahoo.com
WWW.iraqi11.yoo7.com

يوم بغداد

الله اكبر

بمناسبة السنة الدولية الفلكية ٢٠٠٩. يقم قسم الفلك
طية العلوم - جامعة بغداد وبالتعاون مع الرابطة العراقية
لهواة العلوم والمهويين اسمية فلكية على هوائيات
مسترة الزوايا. والدعوة عامة للجميع



Astronomical exhibit, Baghdad, Iraq, August 2009



100 Hours of Astronomy, China, 04.04.09



Drama depicting the life of Galileo Galilei, Taiwan,
21.03.09

Number of People Reached

815 million

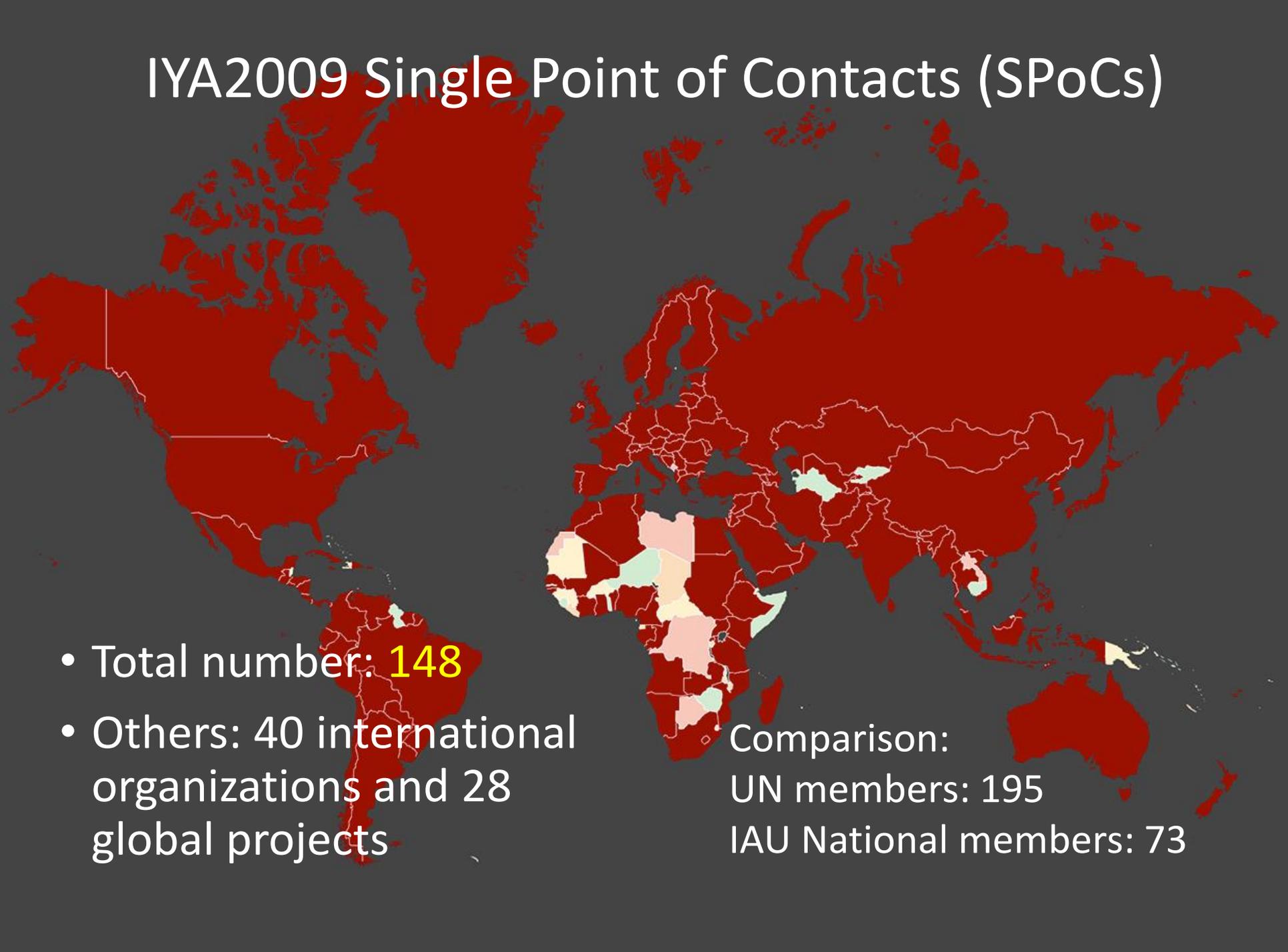
worldwide

~50% reports

IYA2009 Single Point of Contacts (SPoCs)

- Total number: **148**
- Others: 40 international organizations and 28 global projects

Comparison:
UN members: 195
IAU National members: 73







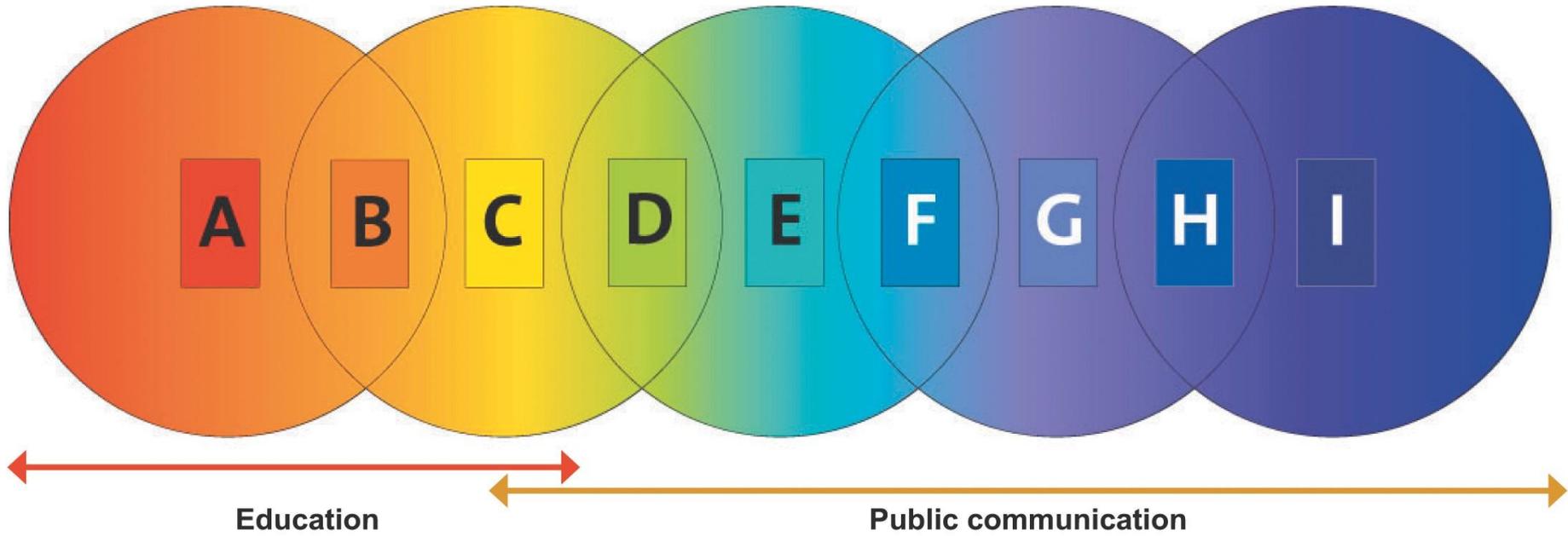
FORMAL
EDUCATION

INFORMAL
EDUCATION

PUBLIC
OUTREACH

PRESS
SUPPORT

BRANDING/PR
VIP SUPPORT



A: Curriculum-driven
B: Educational programmes
C: Museum exhibits , star parties,...
D: Planetariums shows, IMAX movies, public talks
E: TV /radio documentaries, podcasts, magazine articles

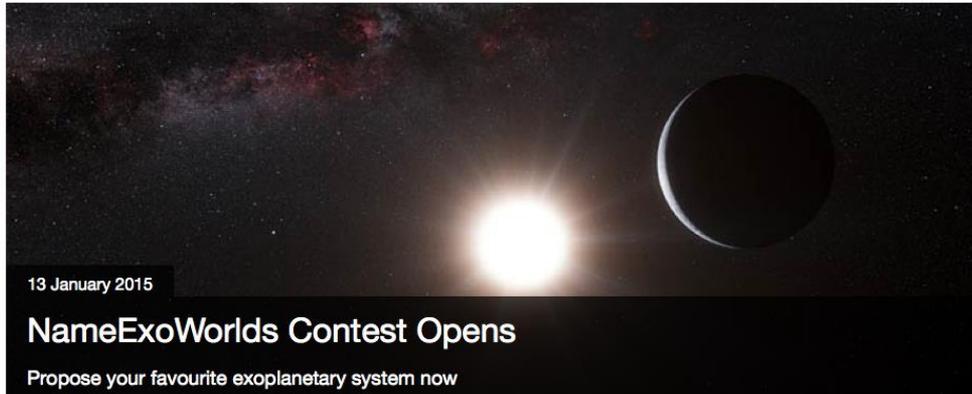
F & G: Press releases, press conferences, press kits, Video News Releases, media interviews, media courses for scientists ...
H: Exhibition booths, annual reports
I: Merchandise

Astronomy Communicators

- EPO staff in Universities/Institutes – Press Releases / Education programs / Produce resources
- Project developer/manager
- Science Centers/Planetariums staff
- Multimedia developer
- Broadcaster
- Science Journalists/Writers
- Bloggers
- Open your own Astronomy Business!

[Home](#) / [News](#) / [Press Releases](#) / [NameExoWorlds Contest Opens](#)

iau1501 — News Release

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13 January 2015

NameExoWorlds Contest Opens

Propose your favourite exoplanetary system now

[Click to Enlarge](#)

The first ever contest allowing members of the public to name ExoWorlds begins its first round today, offering the registered clubs and non-profit organisations the chance to nominate their favourite systems to take through to the next rounds.

As previously [announced](#), the IAU is organising a worldwide contest to give popular names to selected exoplanets along with their host stars, among [a list of hundreds of well-characterized exoplanets](#) it has offered for public naming. Today the IAU officially opens this NameExoWorlds contest. The first round of the competition allows all registered clubs and non-profit organisations to nominate up to 20 ExoWorlds (exoplanetary systems and their host stars) to be made available for the next stage of the contest, where names can be proposed for the most popular ExoWorlds.

Although people have been naming celestial objects for millennia, the IAU was delegated the task of assigning scientifically recognised names to newly discovered celestial bodies by its member countries. The NameExoWorlds contest is the first opportunity that the public will have to name not only exoplanets, but also, for the first time in centuries, to give popular names to stars — those that have known exoplanets in orbit around them.

To participate in the contest, clubs and non-profit organisations must first register with [the IAU Directory of World Astronomy](#). **The deadline for which has been extended to 23:59 UTC on 15 May 2015.**

The deadline for the first stage of the contest itself is at 23:59 UTC 15 February 2015, when nominations for 20 ExoWorlds to be named will close. In the next phase, once the most popular ExoWorlds have been identified, the stars and planets will be made available to all registered clubs and organisations to submit their desired names. Each club or organisation can then propose a name for one ExoWorld, with all submissions having to abide by the [IAU Exoplanet Naming Conventions](#) and be supported by a detailed argument for their choice. When this stage has concluded, the public worldwide will then be invited to vote on their favourite proposed names.

The final results are expected to be announced at a special public ceremony held during the [IAU XXIX General Assembly in Honolulu, USA](#), 3–14 August 2015.

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media



Images



[PR Image iau1501a](#)
Artist's impression of an exoplanet



[PR Image iau1501b](#)
Screenshot from the NameExoWorlds
web site



"You are Galileo!" Project

You are Galileo! Let's see the cosmos with Galileoscope

Top

Telescope kit

Events

Worksheets

Reports

Member

THE UNIVERSE
YOURS TO DISCOVER



BEYOND
INTERNATIONAL YEAR OF
ASTRONOMY



Worksheets and Observation Guides

[English Version.](#)

[Indonesian Version.](#)

[Thai Version.](#)

English

Please download from here.

Moon

- Worksheet
 - For telescopes with low magnification
 - [English PDF](#)
 - [English PDF 2014](#) **NEW!!**
 - For telescopes with higher magnification
 - [English PDF](#)
 - For another type of telescope (with x25/x50)
 - [English PDF 2012](#)
 - [English PDF 2014](#)

- Observation Guide
 - [English PDF](#)
 - [English PDF 2012](#)
 - [English PDF 2014](#) **NEW!!**

- Map
 - [English PDF \(Separate page ver.\)](#) **NEW!!**
 - [English PDF \(One page ver.\)](#) **NEW!!**

Venus

- Worksheet
 - [2011 English PDF](#)
 - [2008 English PDF](#)
- Observation Guide

<http://kimigali.jp>



International Year of Astronomy 2009 "You are Galileo!" Project
 Let's Observe Jupiter and the stars around it!

Observation & Sketch

Name _____

Address _____

Age _____

Galileo Galilei was an Italian scientist. He was the first person who observed Jupiter using his small hand-made telescope in 1610 and made a great discovery. What did he find? Let's experience his surprise by recreating his observations by yourself.



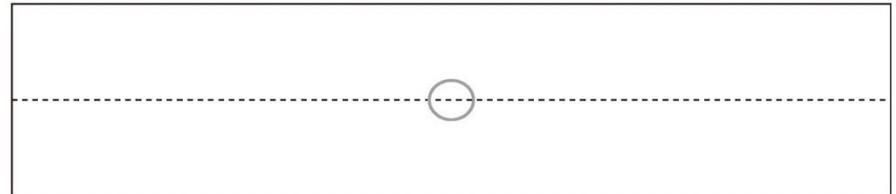
↑A hand written copy of a sketch of Jupiter made by Galileo Galilei on January 7, 1610.

First observation weather:

Date _____ Aperture of telescope _____ cm

Site _____ Magnification _____ x

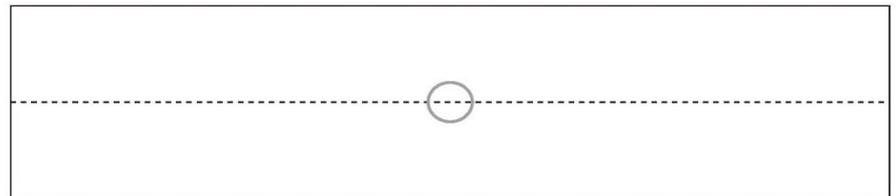
*The magnification of a telescope can be calculated as follows. "Focal length of telescope ÷ focal length of eye piece"



Second observation weather:

Date _____ Aperture of telescope _____ cm

Site _____ Magnification _____ x

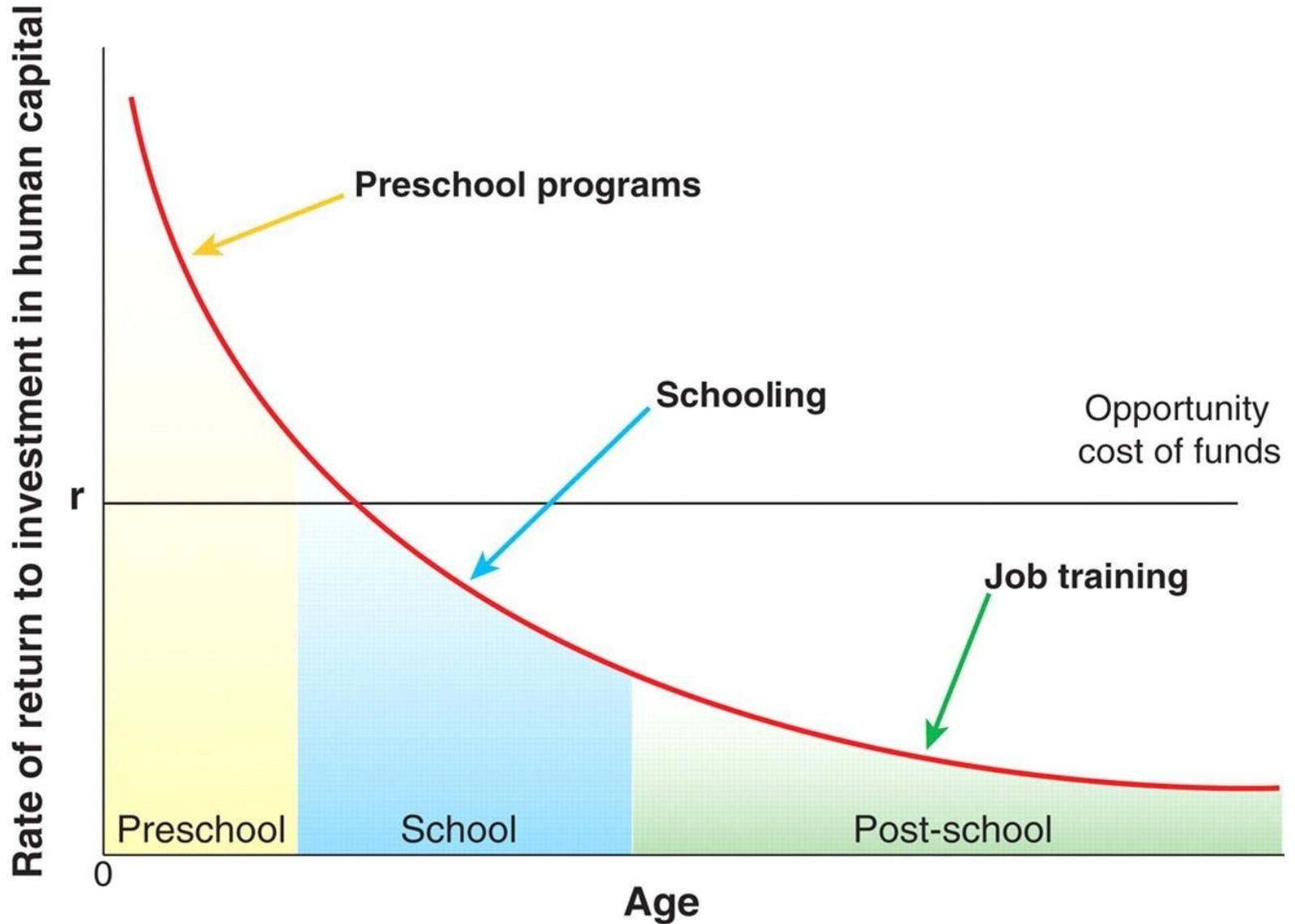


イラスト/藤井龍二



- Develop visuals
- Develop astronomical activities
- Source funding
- Project coordination
- Communicate your project

Rates of return to human capital investment



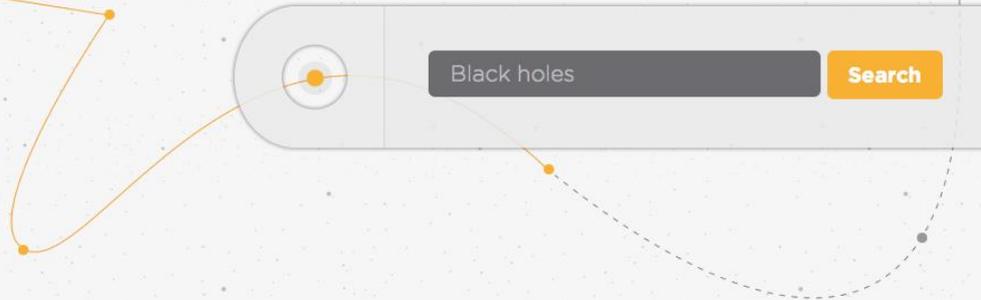


<http://www.unawe.org/>





PEER-REVIEWED ASTRONOMY EDUCATION ACTIVITIES



astroedu.iau.org

FEATURED ACTIVITIES

Blue Marble in Empty Space

DATE: 2015-02-05
BY: Erik Arends, UNAWA



Students are taken on a virtual journey to outer space to experience that we live on a tiny planet that floats in a vast and empty space.

THEME
People

AGE
6 - 10



The Fibre Optic Cable Class

DATE: 2015-02-05
BY: Ameer Hennig, Center for Integrated Access Networks



Learn about the amazing technology of fibre optics that has done so much for technology here on Earth and our study of what's above.

THEME
Technology

AGE
10 - 14



Build a Safe Sun Viewer

DATE: 2014-06-25
BY: Sarah Roberts, UNAWA



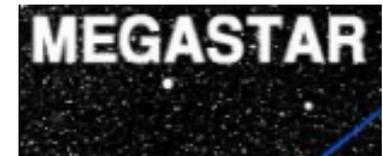
Build a safe Sun viewer using cheap household items and learn why it is dangerous to look directly at the Sun, even briefly.

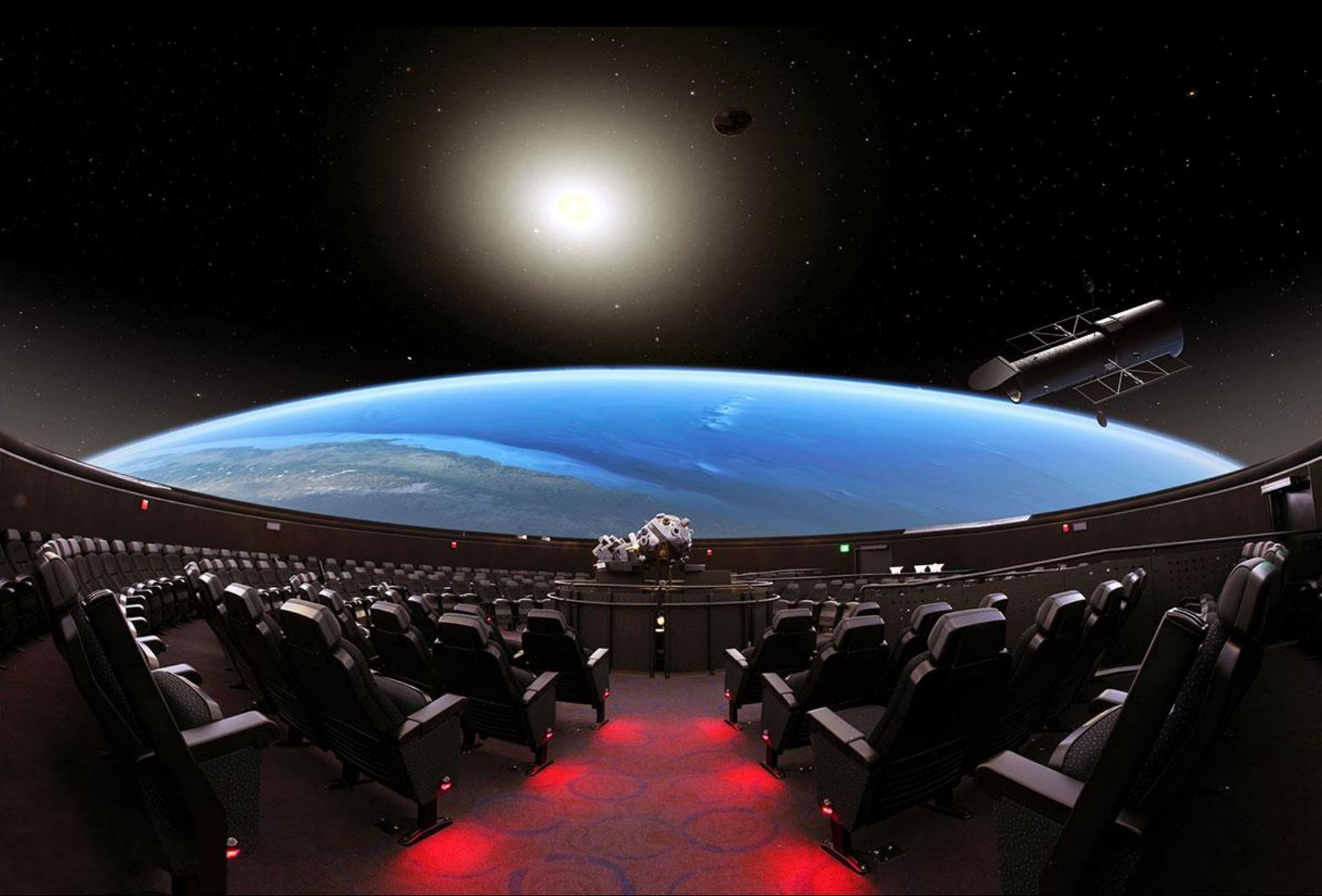
THEME
Sun

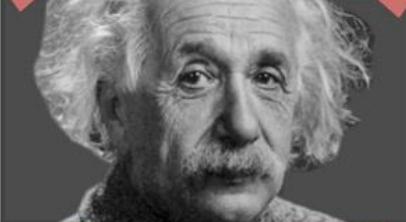
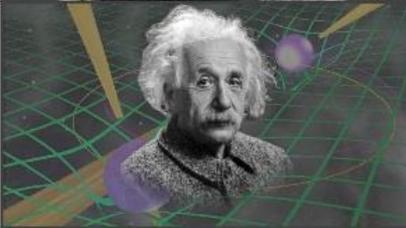
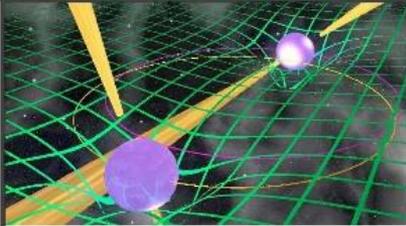
AGE
6 - 12

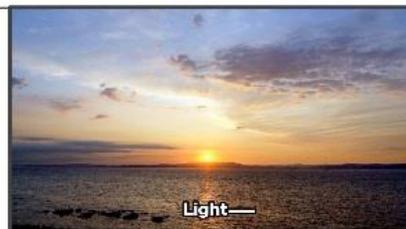








	<p>テロップ、インパクトを持って現れる</p>
	
	<p>アインシュタイン肖像、現れる</p>
	<p>バックに一般相対論イメージ振れる アインシュタイン、次第に小さく溶えてゆく</p>
	<p>カメラ、中心天体を周りの回り、 重力場のイメージを立体的にみせる</p>

	<p>水平線から昇る太陽——</p>
	<p>その雄大な姿</p>
	<p>夕暮れ</p>
	<p>満天の星空 (ゆったりと日周している)</p>
	<p>夜空を彩る星座たち (ゆったりと日周、木星が見えている)</p>



(((H)))[®]
Hubblecast
HD



Levels of Engagement





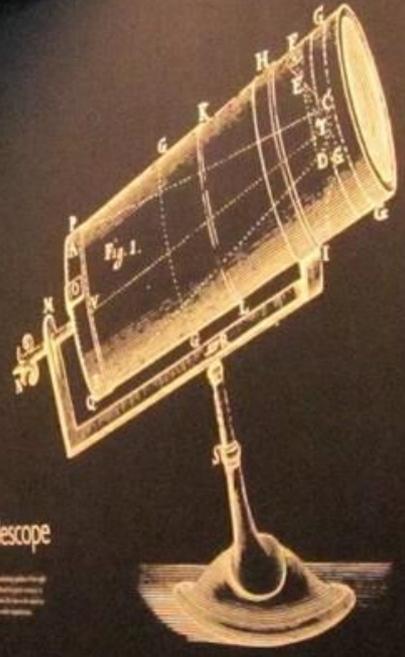






astronomy

The sky above—eternally yet intricate and mysterious—has long inspired human reverence and curiosity. Ancient records have survived, and new tools and new methods of the nature of the universe have grown more



the telescope



The Milky Way is just one of countless galaxies.



世界天文年フェア

～宇宙の神秘に触れてみよう～

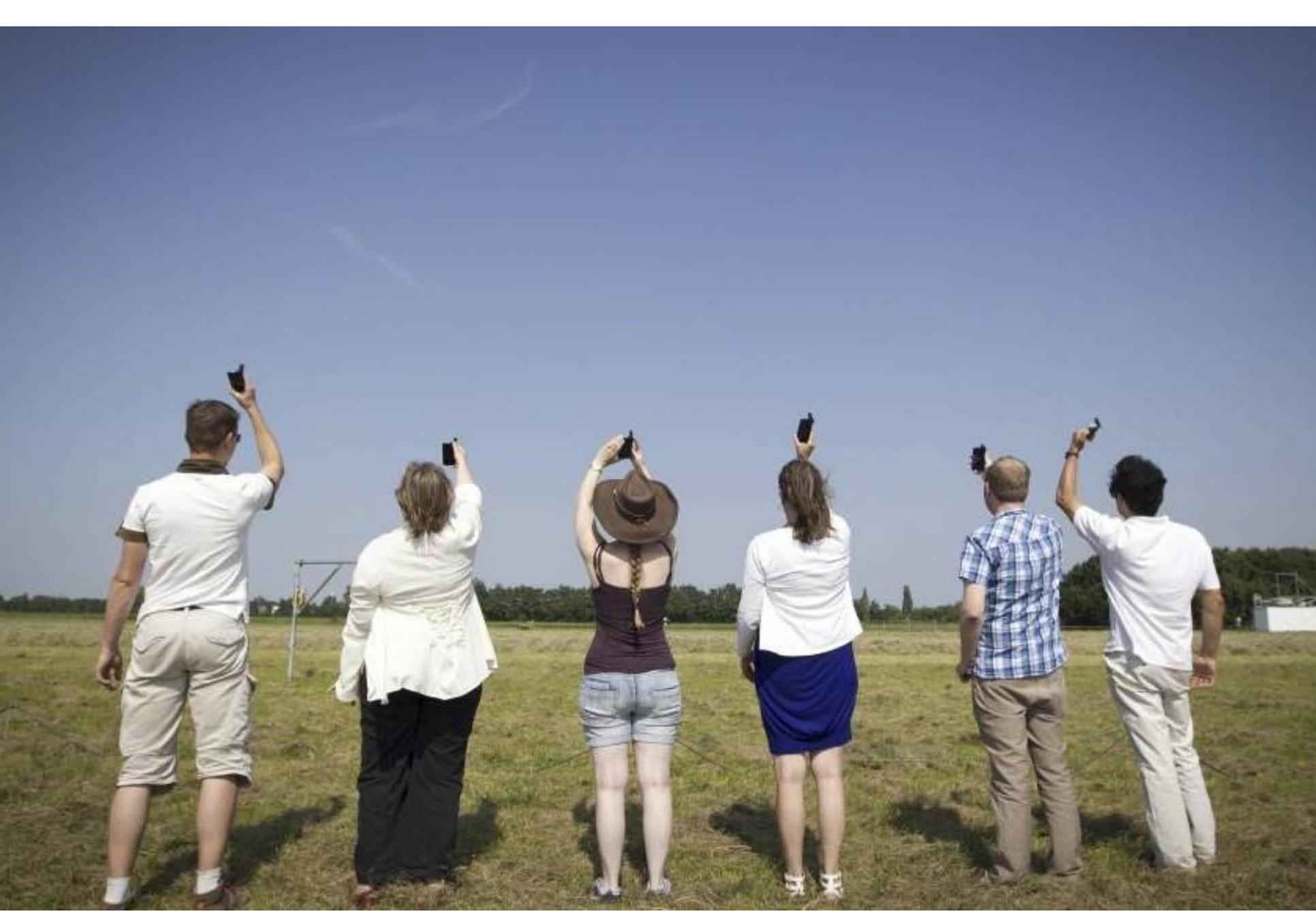
4月10日(土)～11日(日)

G14 フェア4階2

G15 フェア4階3

QC検定フェア





Galaxy Zoo is a **Zooniverse** project.

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[CLASSIFY](#)

[SCIENCE](#)

[STORY](#)



[ASTRONOMERS](#)

[DISCUSS](#)

[PROFILE](#)

Few have witnessed what you're about to see

Experience a privileged glimpse of the distant universe, observed by the Sloan Digital Sky Survey and Hubble Space Telescope



We are trying something new! Come help us understand a very specific type of galaxy and experience science from start to end. [Take part](#)

Classify Galaxies

To understand how galaxies formed we need your help to classify them according to their shapes. If you're quick, you may even be the first person to see the galaxies you're asked to classify.

[Begin Classifying](#)

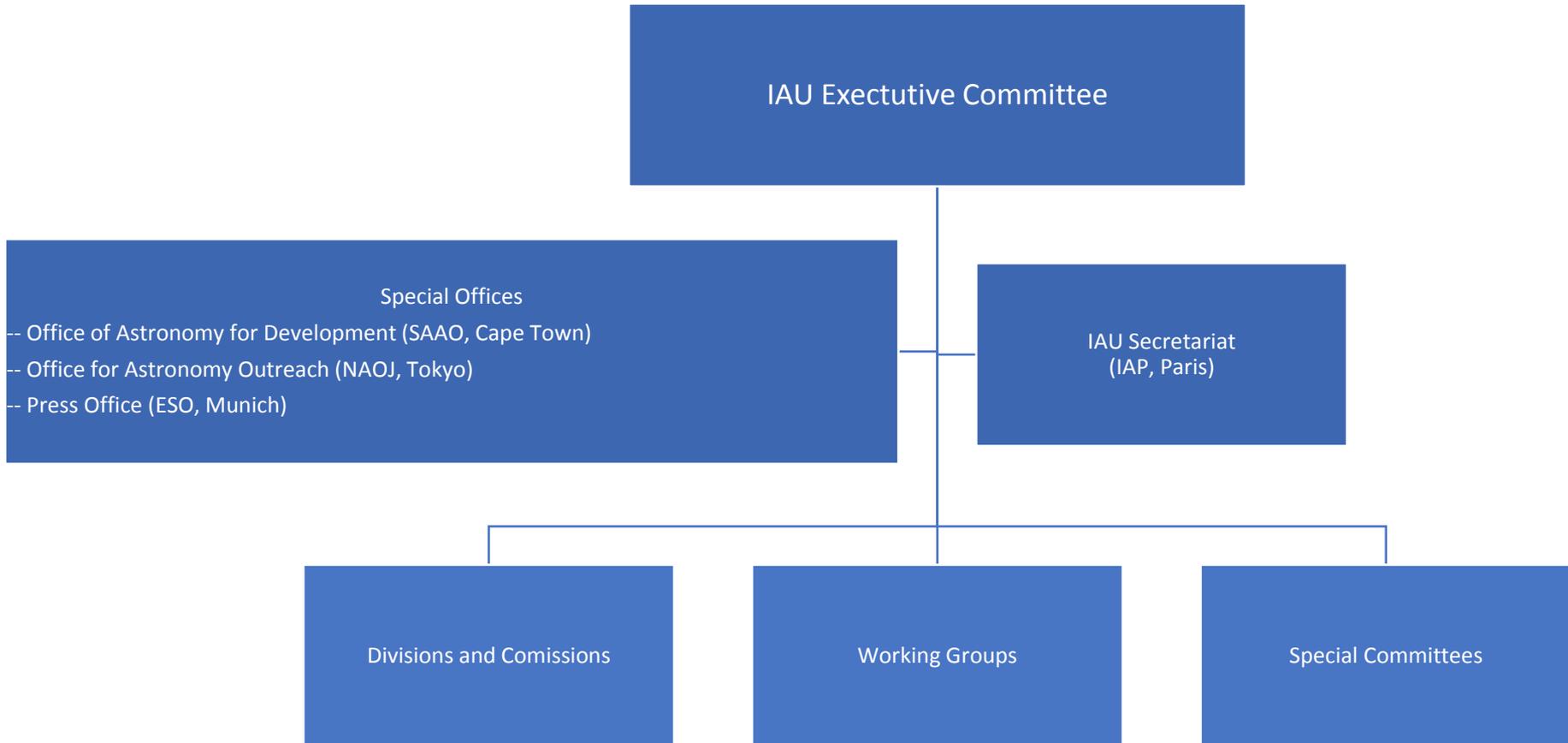




Innovations



Administration of the International Astronomical Union (IAU)

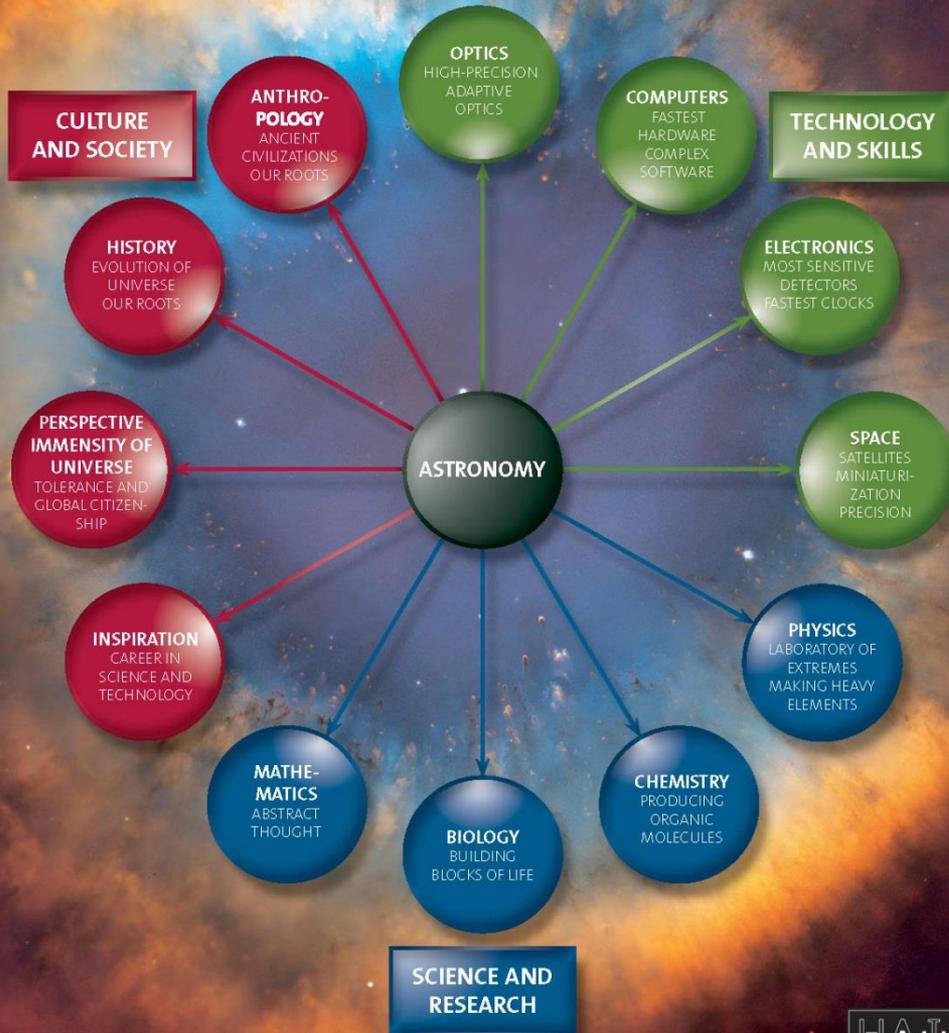


Astronomy for Development

Building from the IYA2009

Strategic Plan 2010–2020

with 2012 update on implementation



IAU

Office of Astronomy for Development (OAD)

To help further the **use of astronomy as a tool for development** by mobilizing the human and financial resources necessary in order to realize its scientific, technological and cultural benefits to society.

The background of the slide is a vast field of stars of various colors (yellow, orange, red, blue) against a black sky. Many of these stars have thin white lines representing elliptical orbits around them. Some orbits have small grey spheres representing planets. The overall scene is a rich, multi-colored stellar population with numerous planetary systems depicted.

Public Naming of Exoplanet Systems

NameExoWorlds.org



International Astronomical Union

ZOOIVERSE

NameExoWorlds

Help decide the names of planets orbiting other stars

For Public and Astronomy-Interested Organisations

To submit a naming proposal, register your club with the IAU.

Register

Sign In

For individuals

To vote, sign up, and we'll let you know when we're ready for you! (To be opened at Jun 2015)

Sign Up

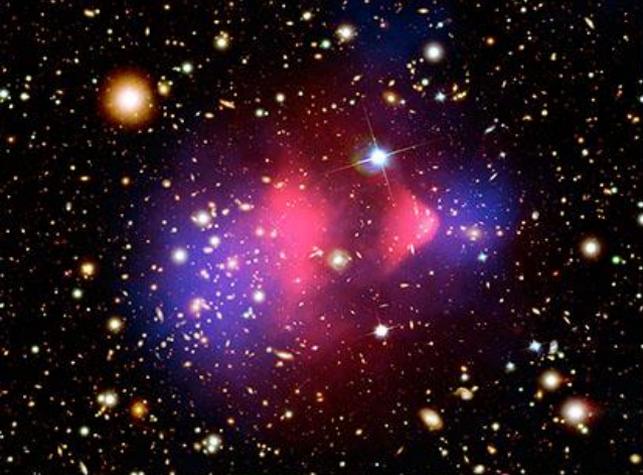


**INTERNATIONAL
YEAR OF LIGHT
2015**

COSMIC LIGHT



Sze-leung CHEUNG, IAU International Outreach Coordinator



LIGHT
Beyond the Bulb




INTERNATIONAL
YEAR OF LIGHT
2015

**COSMIC
LIGHT** IAU

 @IAU_org

 InternationalAstronomicalUnion



Light: Beyond the Bulb
Large Scale Exhibition



<http://lightexhibit.org>

Chair: Kimberly Kowal Arcand

The Galileoscope

Good quality telescope at a reasonable price



The image shows the box art for the Galileoscope 50-mm (2-inch) F/10 Refractor Kit. The box is white with various graphics and text. At the top, there is a warning label: "WARNING: CHOKING HAZARD - SMALL PARTS. NOT FOR CHILDREN UNDER 3 YEARS OLD." Below this is a "CAUTION" symbol. The top right shows two circular views of the moon. The center features the "GALILEOSCOPE" logo in large letters, followed by "50-MM (2-INCH) F/10 REFRACTOR KIT WITH 20-MM EYEPIECE (25X) & 2X BARLOW LENS". It also states "DEVELOPED BY LEADING ASTRONOMERS, OPTICAL DESIGNERS & EDUCATORS." and "FREE EDUCATION ACTIVITIES & OBSERVING GUIDES AVAILABLE ONLINE AT WWW.GALILEOSCOPE.ORG!". Logos for "AAS SPIE EPS" and "Teaching with Telescopes" are also present. The bottom left shows two circular views of the planets "PLUTON" and "SATURN". The bottom right shows another warning label: "WARNING: CHOKING HAZARD - SMALL PARTS. NOT FOR CHILDREN UNDER 3 YEARS OLD." and "CONTENTS: ONE GALILEOSCOPE KIT, ANOTHER ASSEMBLY INSTRUCTIONS ENCLOSED." The bottom of the box features the "GALILEOSCOPE" logo, a barcode with the number "98304 03681", the website "WWW.GALILEOSCOPE.ORG", and "MADE IN CHINA".

CAUTION

WARNING: CHOKING HAZARD - SMALL PARTS. NOT FOR CHILDREN UNDER 3 YEARS OLD.

GALILEOSCOPE

50-MM (2-INCH) F/10 REFRACTOR KIT
WITH 20-MM EYEPIECE (25X) & 2X BARLOW LENS

DEVELOPED BY LEADING ASTRONOMERS,
OPTICAL DESIGNERS & EDUCATORS.

FREE EDUCATION ACTIVITIES & OBSERVING GUIDES
AVAILABLE ONLINE AT WWW.GALILEOSCOPE.ORG!

AAS SPIE EPS

TEACHING WITH TELESCOPES

WWW.TEACHINGWITHTELESCOPES.ORG

PLUTON SATURN

WARNING: CHOKING HAZARD - SMALL PARTS. NOT FOR CHILDREN UNDER 3 YEARS OLD.

CONTENTS:
ONE GALILEOSCOPE KIT
ANOTHER ASSEMBLY
INSTRUCTIONS ENCLOSED.

GALILEOSCOPE

98304 03681

WWW.GALILEOSCOPE.ORG

MADE IN CHINA

Chair: Douglas N. Arion

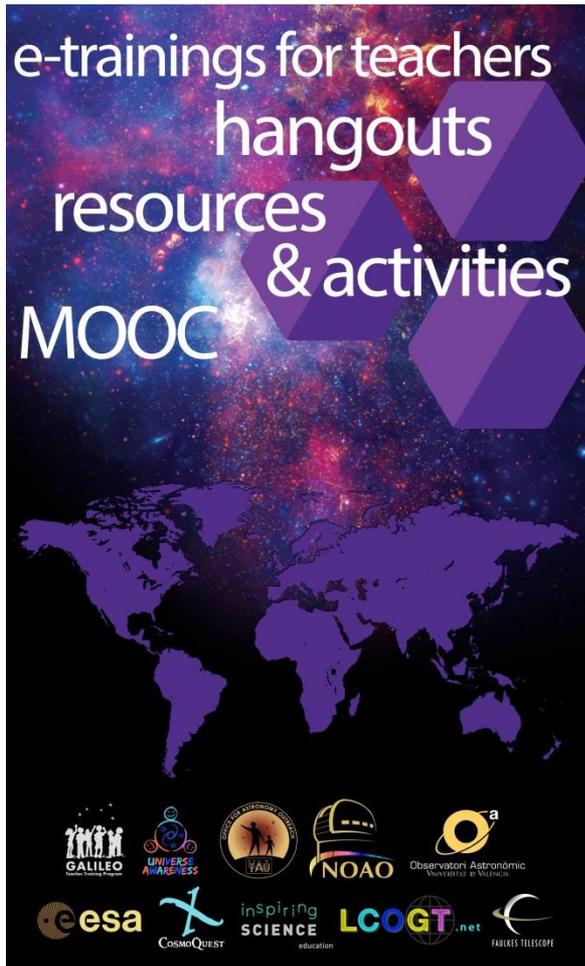
<http://galileoscope.org/>



A shipment of Galileoscopes arrives, USA, 23.11.09

Cosmic Light Awareness

Education Kit, Dark Sky Awareness, DarkSky Apps, Online Tutorials



Cosmic Light EDU kit

PI: Rosa Doran
Col: Pedro Russo



Online Tutorials



2015

January 11 to 20
February 9 to 18
March 11 to 20
April 9 to 18
May 9 to 18
June 8 to 17

July 7 to 16
August 5 to 14
September 3 to 12
October 3 to 12
November 2 to 11
December 2 to 11

WWW.GLOBEATNIGHT.ORG

Get Out and Observe the Night Sky!

Engage people worldwide in observing the nighttime sky.

Encourage students and families to participate in citizen-science with a hands-on learning activity.

Gather light pollution data from an international perspective to monitor sky brightness and its effects.

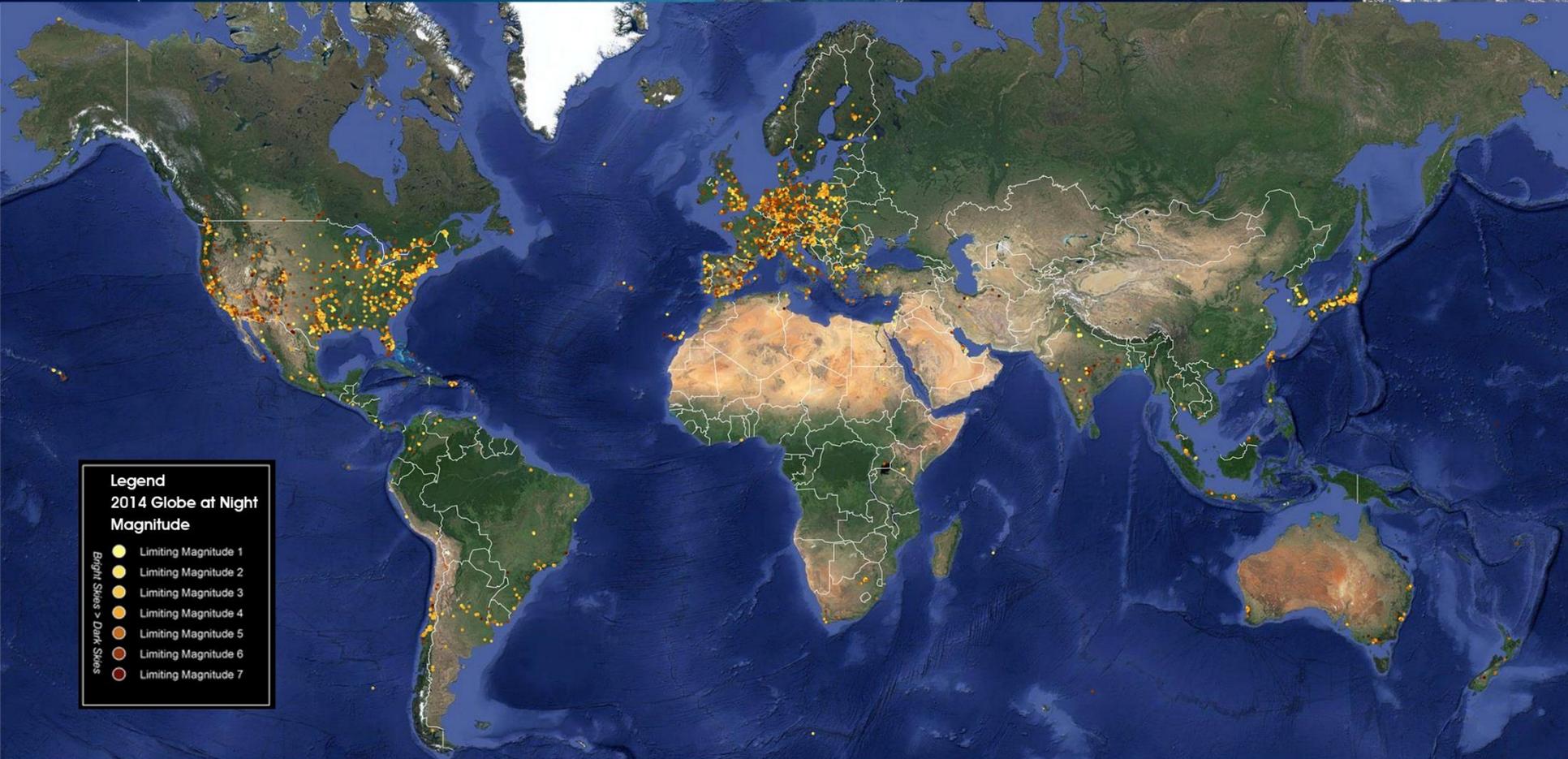
Can you see the stars?





GLOBE AT NIGHT

WWW.GLOBEATNIGHT.ORG



Shown above are the 17,500 observations from 94 countries during the 2014 campaign. Help us exceed these numbers in 2015!



DARK SKY METER

LIGHT2015 EDITION

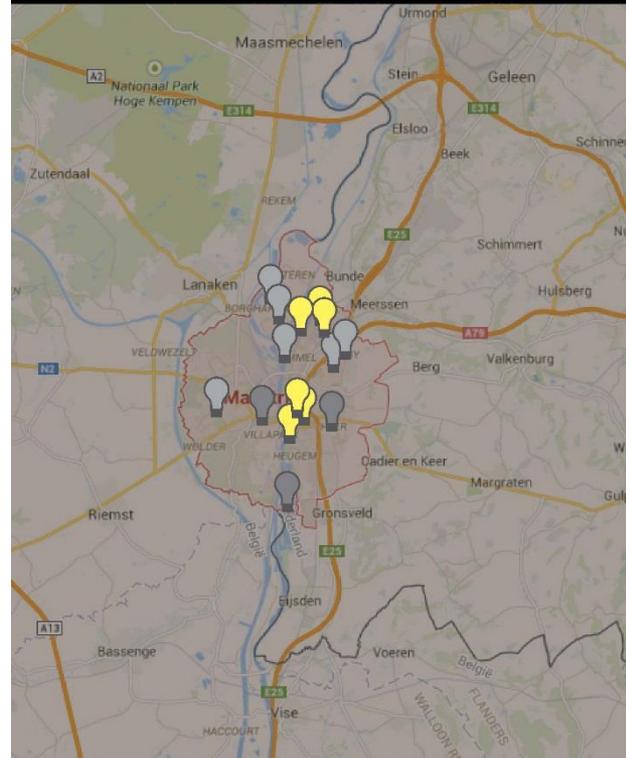


INTERNATIONAL YEAR OF LIGHT 2015

COSMIC LIGHT



MAP



City



Bright



Suburban



Rural



Dark



METER



MAP



IYL



HELP

HELP

How to use this app

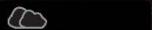
1 Cover camera and press 1

1
DARK

2 Uncover the camera and aim to the point right above your head. Press 2.

2
SKY

3 Enter if there are clouds. (optional)



Submit your
4 measurement to the IDA. (optional)

SUBMIT

Note: No personal details are submitted. The data is used for generating a live, light-pollution map and scientific use.



METER



MAP



IYL



HELP

9
Inner City sky

7
Suburban/urban
transition

5
Suburban sky

3
Rural sky

1
Excellent dark
sky site

Altair

Rasalhague

IC 33

IC 4665
Cebalrai

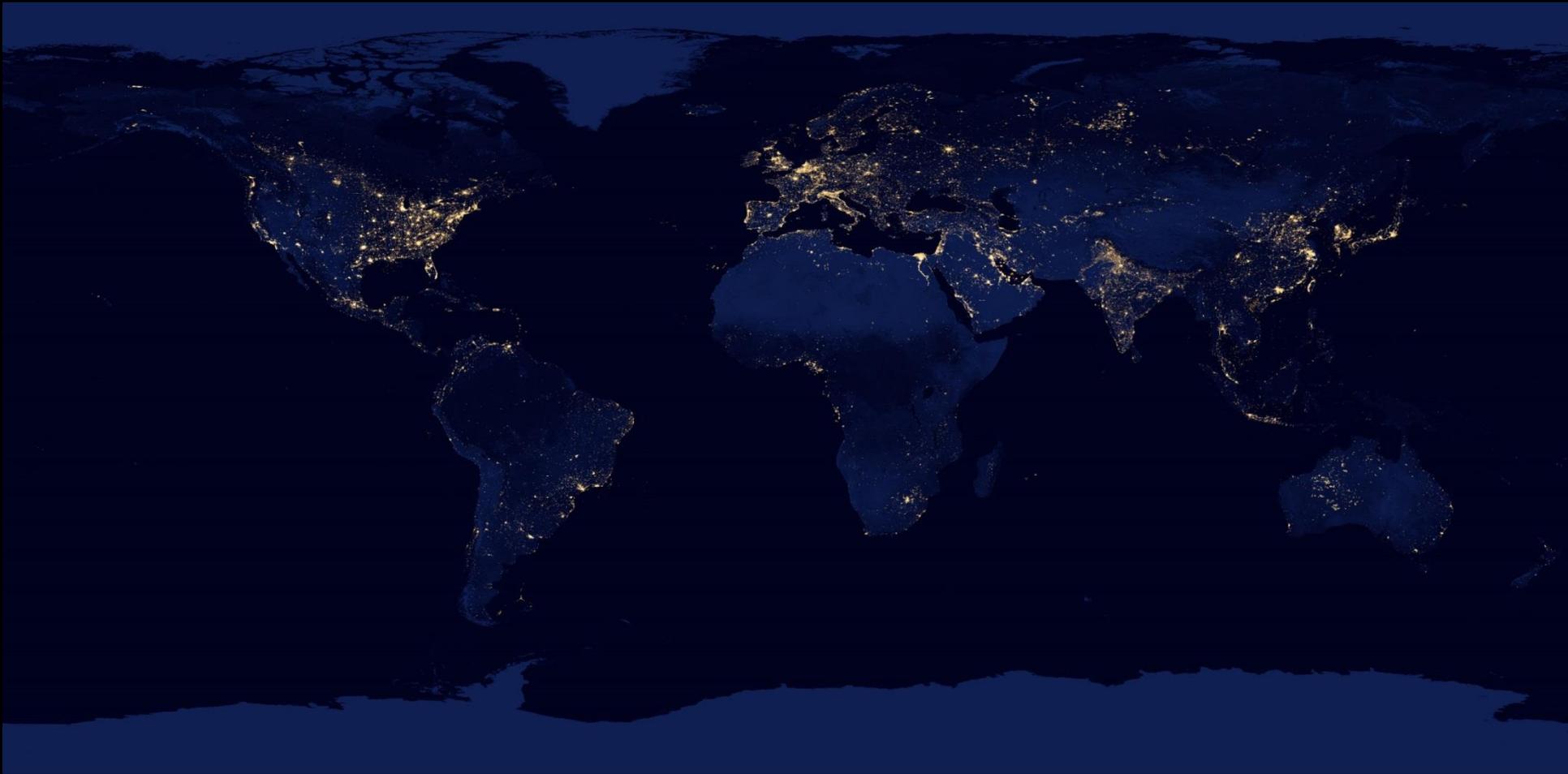
Sabik

Jupiter

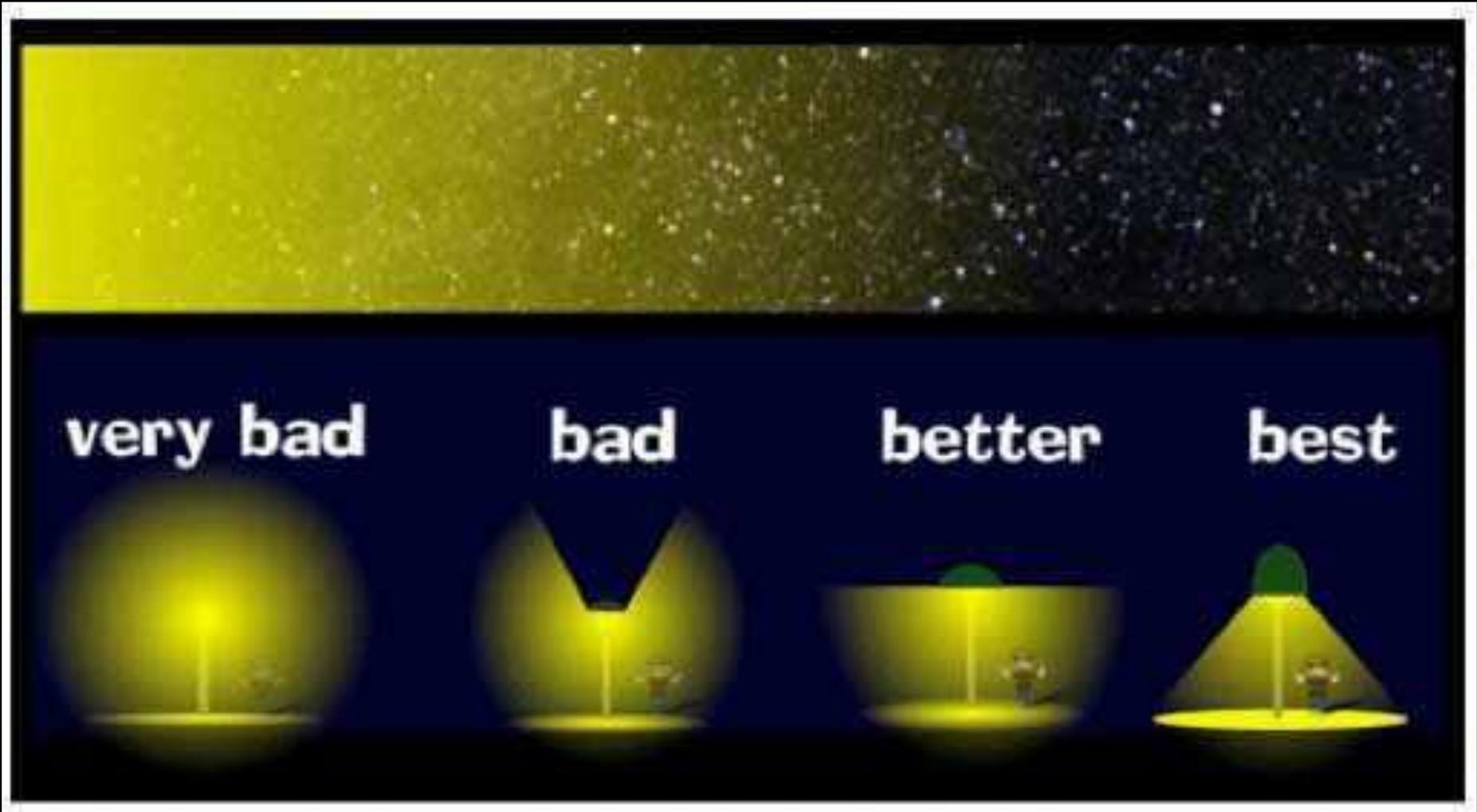
Nunki

IC 6530

Idia

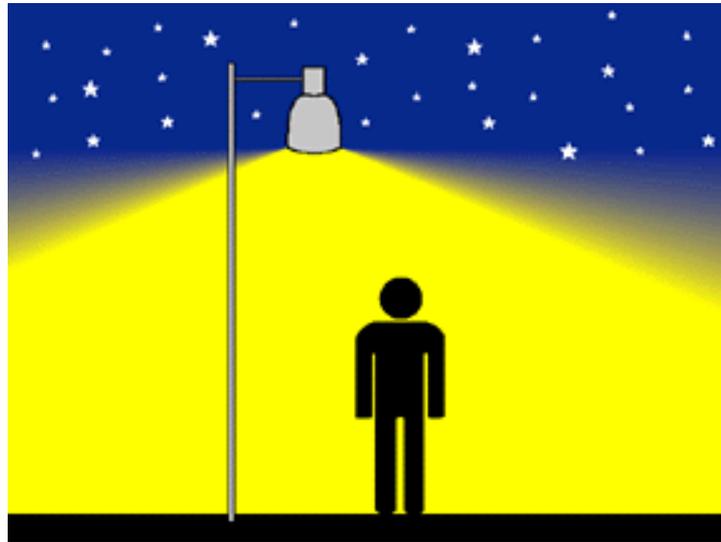
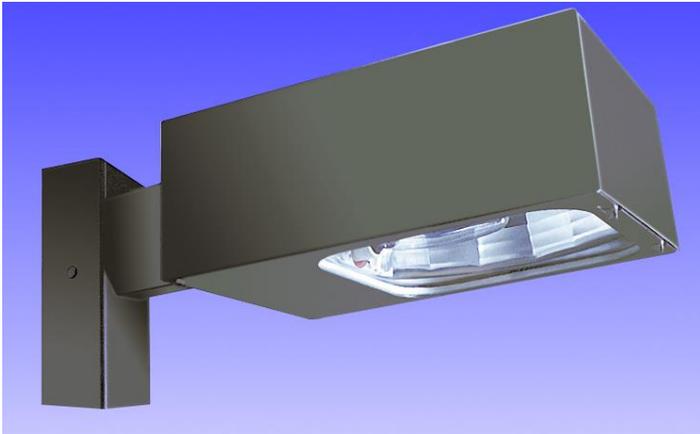


Shielding



Technical priorities for controlling the nightscape

- A. Use of Full cut-off fixtures

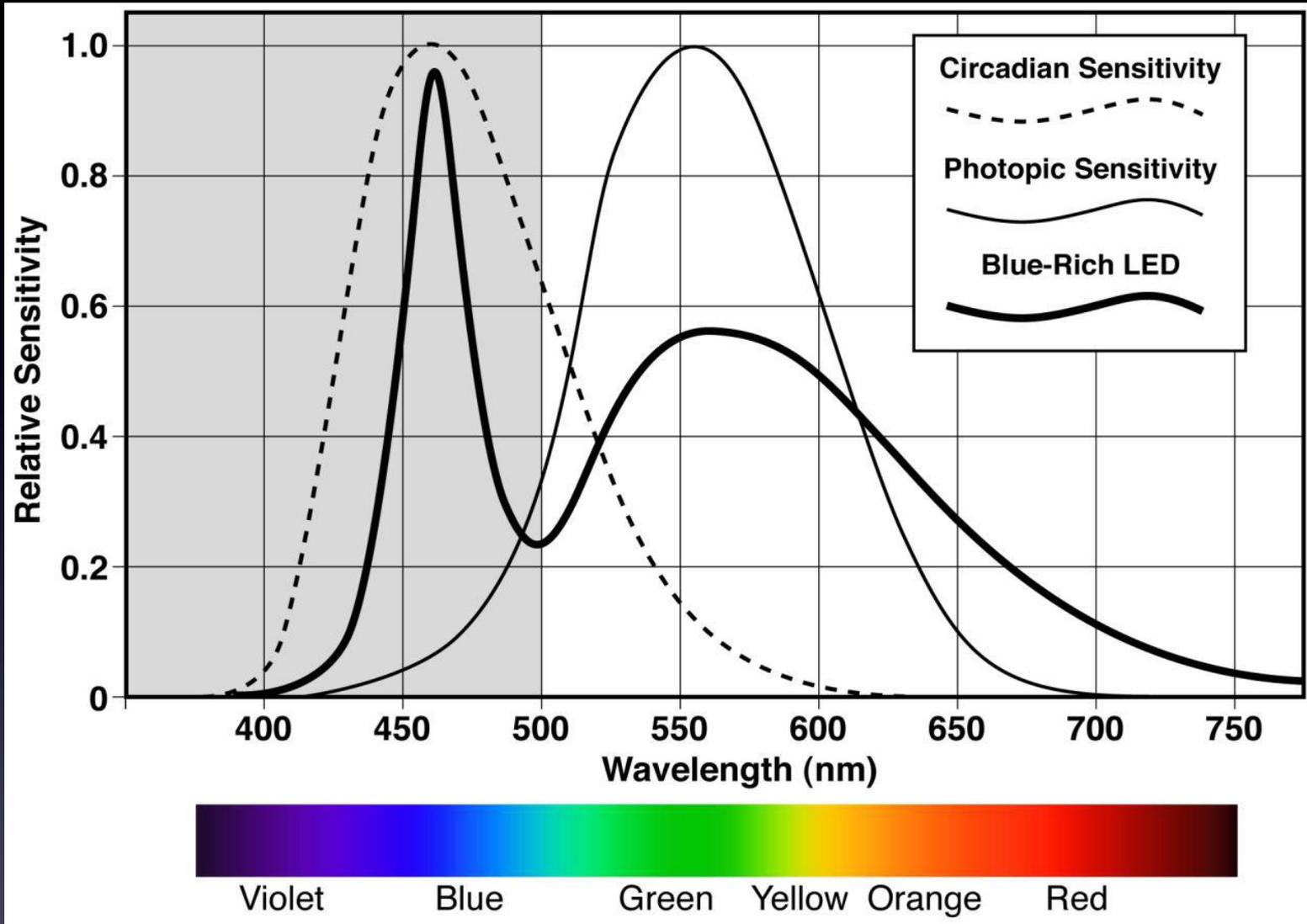


Glare bomb lighting a tree --
not doing a good job for the
parking lot

A full cutoff lighting fixture in the fog,
showing the excellent control of light
output.



Courtesy IDA



The graph shows the visible spectrum, the human photopic sensitivity, the human circadian sensitivity and the typical output of a blue-rich white-light LED light source.



Skills set

- Good understanding of the latest research
- Communication (written/oral)
- Multimedia
- Networking
- Event management
- Use of new technologies

Astronomy Communication
as your career?

Why not?

CAP Journal

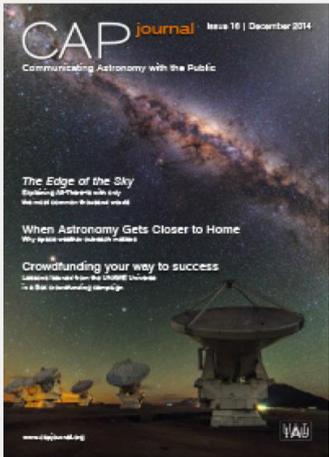


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Issues

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Issue 16 - December 2014



The Edge of the Sky
Reaching for the Stars in your Golden Years
Crowdfunding your way to success

[Index](#)

Download the entire 16th issue as a .pdf:
- low-res (4.6 MB)
- high-res (36.1 MB)

Issue 15 - July 2014



Tactile Sun
Reaching for the Stars in your Golden Years
A Do-it-yourself Guide

[Index](#)

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Issue 14 - January 2014



Astronomy in Everyday Life?
The Language of Visualisation
What Determines the Aesthetic Appeal of Astronomical Images?

[Index](#)

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- high-res (26.6 MB)

Communicating Astronomy with the Public Conference



CAP 2016

SAVE THE DATE

16–20 May 2016 // Medellín, Colombia



Contact us

outreach@iau.org
www.iau.org/public

facebook.com/InternationalAstronomicalUnion
Twitter: [@IAU_org](https://twitter.com/IAU_org)