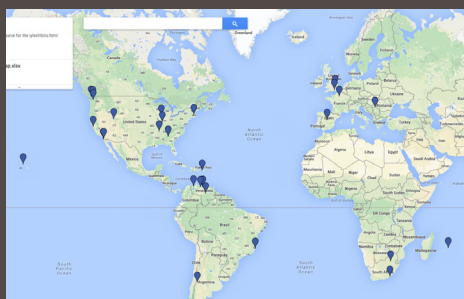
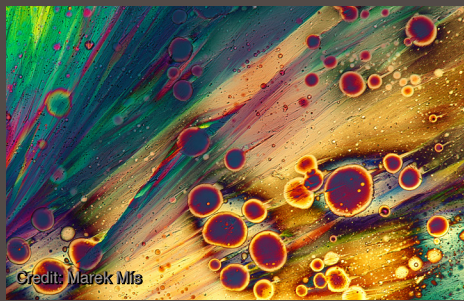


# LIGHT

## Beyond the Bulb



**LIGHT: Beyond the Bulb** (LBTB) is a robust online repository of high-quality, beautiful images—accompanied by short, informative and engaging captions—that convey some of the amazing things light can do.

The 75 images, ranging in topic and scale from microbiology to astronomy, were gathered from calls to scientific communities and photographers as well as targeted searches so that a broader range of the electromagnetic spectrum could be covered. The peer-reviewed multidisciplinary content creates connections with physics, optics, photonics, atmospheric and earth sciences, astrophysics, etc.

The LBTB team has worked with individuals and organizations as well as both private and public institutions. Librarians, teachers, parents, scientists, community organizers, artists, science societies, etc. As of December 29, 2014, over 40 locations are signed up to host an LBTB exhibit, from Paris to Puerto Rico, and from Venezuela to Victoria, Canada. Location types will include libraries, schools, malls, parks, airports and science centers.

US highlights include a 40-image light-weight bilingual (English/Spanish) exhibit sponsored by the Chandra X-ray Center that will travel to over a dozen public locations, a 20-image portable exhibit sponsored by SPIE that will travel to numerous scientific, professional and public locations, and a 50-image semi-permanent exhibit at the highly trafficked O'Hare International Airport in Chicago that will be viewed by millions of travelers. Exhibits will launch in January at the AAS meeting in Seattle and at the IYL2015 Opening Ceremonies in Paris, and continue throughout 2015. See the growing list of venues at:

<http://lightexhibit.org/iylexhibits.html>

# LIGHT

## Beyond the Bulb

### How to Host AN EXHIBIT

**STEP 1: Figure out what you can afford**

<b>\$</b> 0 - 5k Do it yourself spirit!	<b>\$\$</b> 5 - 25k Large professional prints	<b>\$\$\$</b> 25 - 100k Full on installation
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approach organizations • appeal to corporations • partner with printers  
connect with cultural organizations • research sponsorship options

**STEP 2: Pick a place to host**

### LIGHT Beyond the Bulb

Thanks to the massive quantities and all many types of light, by extending the variety of light through different wavelengths, astronomers can observe the universe in ways that are invisible to the human eye. Light is the key to understanding the universe, and it is the key to understanding the universe.

MEASURING THE MASS OF DARK MATTER: Measuring the mass of dark matter.

ASTRONOMY OBSERVING: An optical light image from Earth.

HTTP://LIGHTEXHIBIT.ORG

SPIE CHANDRA COSMIC LIGHT

### LIGHT Beyond the Bulb

### LIGHT Beyond the Bulb

About The Images Create an Exhibit

Welcome!

"LIGHT Beyond the Bulb" is an exciting open-access international exhibition program to showcase the incredible variety of light-based science being researched today across the electromagnetic spectrum, across scientific disciplines, and across technological platforms. The world's premier and cutting-edge images are being shared around and beyond national borders for science, education, and inspiration. High-quality, high-contrast, high-resolution, stunning images and audio to engage members of the public who might not regularly seek out science.

View the Image Collection  
View the Exhibit Location

Produced by the Chandra X-ray Center  
International Year of Light 2015

lightexhibit.org chandra.edu

### LIGHT Beyond the Bulb

**Procedure:**  
To demonstrate moon phases –  
Use the same light and screen set-up as the first activity.  
Get the room as dark as possible. If not possible, place a black screen on either side of the area between the light source and the opaque white screen. Clip the Earth globe into a holder using an orange clip. Place the Earth between the light ("the Sun") and the screen. Turn on the Sun and revolve the moon on a stick around the Earth. Observe what parts of the "Moon" are illuminated when it's at different angles compared to the "Sun."

Supporting materials created for exhibit hosts include visual how-to guides, simple educational hands-on activities, video, multimedia and additional free, printable informative materials. You can find them here:

<http://lightexhibit.org/handouts.html>

January 1st will see the launch of the "Light Image of the Day" web feature that will continue throughout 2015. Social media promotion and web site resources will continue to be added over the course of the project.

Language translations are in progress in several languages by our volunteer networks including Spanish, French, Portuguese, Brazilian Portuguese, Afrikaans and others.

For the astronomy community, connections will be made with the Hubble 25th anniversary, with anniversary images being included in the online repository and the Chandra traveling exhibit. Chandra will also be releasing 5 new multiwavelength images to celebrate IYL in January, some of which will be on the web site and in the exhibit. LBTB handout and web site materials were reviewed by the NASA Product review and ranked outstanding with recommendation for broad distribution.

Together with **SPIE** (the international society for optics and photonics), the **Chandra X-ray Center**/Smithsonian Astrophysical Observatory are leading **Light: Beyond the Bulb** for the International Year of Light 2015 (IYL2015). Light: Beyond the Bulb is a cornerstone project for the **International Astronomical Union**. IYL2015 was declared by the United Nations and is supported by UNESCO.

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